

GSM Based LAN monitoring System and Controlling

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ABSTRACT

The most highly demanding task in the field of IT industries is the efficient computer network management. There are many urgent issues or requests related to such network which network manager need to solve immediately for avoiding the any kind of interruptions. Sometimes, network admin may be situated at different places, so in such cases there is not possible to resolve any urgent issues with the office network tasks. To solve such problem in this project we describe the architecture of novel tool for network management using mobile devices. In concern, computers are grouped together to for a LAN and to manage and control the activities of the LAN while in office is an easy task. But, while you are moving away form server, it is difficult to monitoring and controlling network? But however you can always cell phone serve the purpose. Just load the project on server, machine log in anytime to the application and see what going on LAN network. Consider the LAN set up where entire computer are connected with central network and the server continuously sends the data to the web server. The user of the application can call any command from cell phone and see the various activity on the LAN network.

Keyword : - LAN, GSM, SMS, J2SE, WWW, MODEM

1. INTRODUCTION

The aim of this proposed system is to develop a system for remote management of the clients in a LAN using Username and password. Login provided to the administrator of the system. This enables the organization to keep track of the user activities in the remote machine through a message based interface. This system provide LAN monitoring through GSM. This system designed for controlling and monitoring LAN network includes a mobile. Initially the admin will send a SMS to the server machine connected to the modem asking for controlling of the network. The server machine will in turn ask for password to the user of the mobile terminal for authentication. As the user sends the specific password, it results in authentication. After authentication the user will be handed the control of the LAN network. SMS commands. today the of the user admin can control and monitor the network through SMS command. Today the world is rapidly changing the statement "We are in the World" to "World is Our hand". the main aim our project is to control and monitoring the network from our wireless handheld device. Sitting at home you want to learn the LAN status. You can do so by storing this project in your cell phone and executing the same. In era of project mobile device, wireless devices are widely use and it has penetrated every part of our life but remote monitoring of network through mobile device is a still a mirage, this project is an effort to make this mirage a reality and this is where the genesis of this project lies consider a LAN setup with the server machine connected to GSM service provider via GSM modem. The interaction between the clients and the wireless media happens through the server. A small text file residing any of the client or server machine can be open in our cell phone. Is there any way so that we utilize the mobile devices to track the devices connected to each other via mobile cell phones.

2. FEATURES CONTROL BY SYSTEM

2.1 Net View

Cell phone the list of entire clients in LAN. Keep pinging every time to check latest status of the PCs.

2.2 Process View

Get the list of all processes running in the remote machine.

2.3 Activate Process

Activate different processes either the server or the client.

2.4 Kill Process

Kill the desired process from either server or from client.

2.5 Read process

Read the process on client or server from cell phone.

2.6 Open file

A small text files residing in any of the client or the server. Can be open in your cell phone.

2.7 Broadcast Message

Broadcast the message to client from server using mobile.

2.8 New File

Create a new file on server or any client machine.

2.9 Shutdown

Shutdown any client machine in the LAN

2.10 Administrative Control and sharing

Provide a administrative control and file sharing.

3. EXISTING SYSTEM

There is lot of research is going on wireless network and its security faults. The networks in various fields are being monitored by old techniques which has various security concerns. People are not aware of the faults and threats in existing system.

3.1 LAN monitoring in school and colleges:

In college and schools there is a central server which is responsible for monitoring the whole network. The name of machine is visible to administrator and by sitting at server side administrator controls the activities done by students. Administrator can enable or disable any services through the central sever. But for doing monitoring administrator always needs to be sitting in front of central server. If admin is away from central server then the monitoring is not possible and students can misbehave with the system.

3.2 GSM based monitoring system:

In this system the administrator can monitor the network irrespective of distance, but by using GSM modem. The cell phone of the administrator is connected with LAN server with the help of GSM service provider. And the LAN server is connected with clients in the network. The administrator can monitor the network irrespective of distance. So an efficient way must be provide to overcome problem in the existing system.

4 ARCHITECTURE OF PROPOSED SYSTEM

Administrator sends his request through SMS using his phone via GSM modem to the server. Server then recognizes the client machine which administrator is supposed to monitor and extract data from locally cached data buffer where latest 15 sec data of every machine is updated or stored and sends this info to the administrator as response.

Administrator is provided with a GUI based application in J2ME to send command message instantly without the need to retype message instantly without the need to retype message every time. Server sends command to the clients like start process, shutdown process, kill process, create, delete, send task list, compile code.

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.

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.

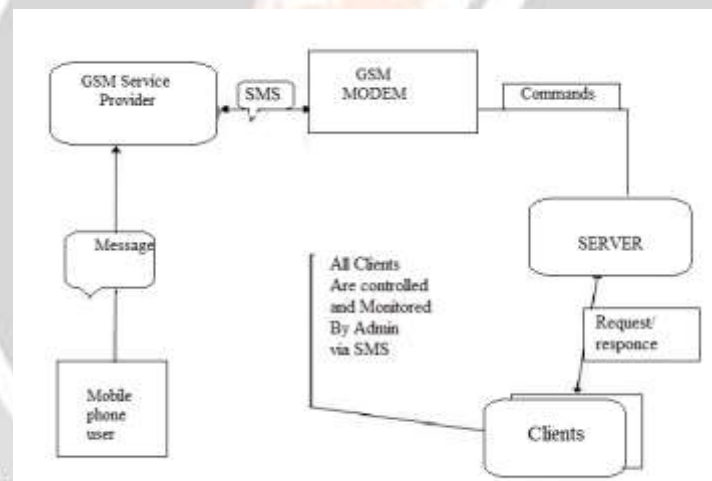


Fig -1 Architecture of The Proposed system

The mobile used can be any mobile having GSM facility in it. Also the administrator can check the network load on the LAN by typing only a command. In this also serial USB interface and set of commands is used for administrator to communicate to clients.

The efforts that have been made regarding developing a LAN monitoring system are everyday. But a lot of them are still in their initial stages. One of the software that are available in the market is Active Experts SMS clients connected to server all clients have name given to it. Below we see the block diagram of GSM based LAN monitoring.

5. ADVANTAGES

1. A large network consisting of a maximum 64 devices can be managed.
2. This system provides portability for the control and management of the network.

3. It provides a monitoring system that is very convenient and secure.
4. a large number of functions required to administrate the LAN remotely can be performed.
5. system is easily understandable to user and also easy to implement.

6. APPLICATIONS

1. LAN monitoring required at the university level can be used for monitoring , logging, user activity, etc.
2. LAN monitoring at the office level can be used to monitor the office LAN by the administrator. The admin does not have to depend on any third party information regarding the LAN and can instead check the LAN status himself using his mobile.
3. LAN monitoring at the malls is used to monitor all information of malls by administrator at any time if at particular time he be present there.

7. CONCLUSION

Although a conclusion may review the main points of the paper, do not replicate the abstract as the conclusion. A conclusion might elaborate on the importance of the work or suggest applications and extensions. Authors are strongly encouraged not to call out multiple figures or tables in the conclusion—these should be referenced in the body of the paper.

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