

# GSM BASED LAN MONITORING SYSTEM

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**Abstract**— The management and control of computer networks is to be done by the system admin .The system administrators of these computing networks need remote administration so that they can be managed and controlled . This paper provides a method which enables the admin to control their LAN network from remote place through text messages thus providing portability to the control and management of the computer networks.

**Index Terms**—GSM, Monitoring, Remote Administration WLAN.

## I. INTRODUCTION

The aim of this proposed system is to develop a system for remote management of the clients in a LAN using a username, password (mobile no.) login provided to the administrator of the system. This enables the organization to keep track of the user activities in remote machine through a message based interface.

This system provides LAN monitoring through GSM. This system designed for controlling and monitoring LAN network ,includes a mobile terminal which is connected to the server system through a GSM modem. Initially the admin will send a SMS to the server machine connected to the modem asking for control of the network .The server machine will in turn ask for a 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 .Now the user admin can control and monitor the network through SMS commands.

## II. SYSTEM DESIGN

This GSM based system is composed of three modules: Client module, GSM Server module and Administrator .

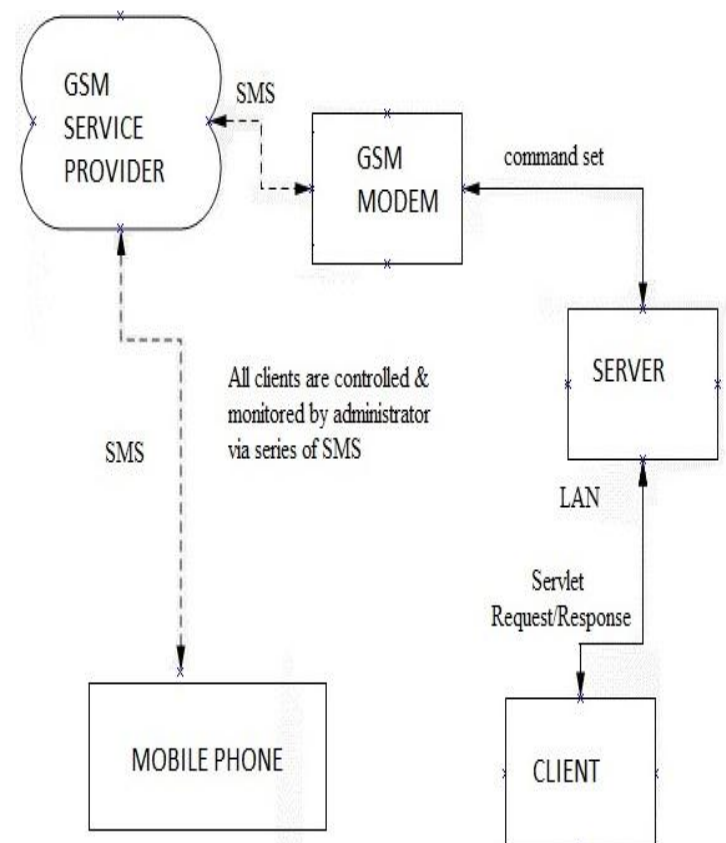
- Administrator: Admin is the one carrying the cell phone through which the control commands are sent.
- Client: The clients are the secondary modules which are to be controlled by the server.

- GSM Server: The commands from the admin are received and analyzed by the server. Then server identifies the command and performs the respective action .

## III. SYSTEM IMPLEMENTATION

Here aim is to build a user interface , through which all the computer devices connected in LAN can be monitored and controlled by sending a SMS remotely by a cell phone carried by the admin .This application will be running on both the server as well as the client machines. The server application which will run as a major process and provide services to administrator for management of the LAN. The client application will run as a background process on the machine and will control the activities of the client and also provide a feedback to the server.

The architecture of the system is shown below:



Suppose administrator wants to restart any client in the LAN. For this the admin will be required to send SMS to the server in the network. Server checks for any new SMS every 10 seconds and if a new SMS is received then command provided in that SMS will be read and performed accordingly by the server. Here a restart command given by the admin to the server will be executed and accordingly the server will restart the stated computer. A wide range of control operations can be performed by admin which are as follows:

1. System Management:
  - Shut Down
  - Restart
  - Log Off
2. Process Management:
  - View all the running processes
  - Kill a particular process
3. File Management:
  - Delete
  - Open
  - Rename
3. User Management:
  - New User
  - New Admin

#### IV. 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.

#### V. 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/she cannot be present there.

#### VI. CONCLUSION

This proposed system provides a remote administration tool for management and control of a LAN network. Using this system the need for the admin to be present at the system site at all times has been overcome. Since GSM is used, the monitoring range of the system becomes vast as GSM itself is a very vast and easily accessible network. Hence the LAN network can be easily monitored even if the admin is very far away from it. Also the cost of setting up the system and its maintenance is very low. The use of an initial password required for authentication of the admin makes the system secure. Thus overall GSM based LAN monitoring system can be viewed as a cost effective and secure, remote administration tool providing a much improved service as compared to the existing system.

#### VII. ACKNOWLEDGMENT

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