Android Based Mobile Application for Wireless LAN Monitoring System

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Abstract - **Now a day's Android is more secured operating system and also has the biggest market share. Android phone can be used to monitor and control the network .To control the office LAN network from outside the office is difficult. Software application with Android phone is made that allows an administrator to remotely monitor his LAN network, when administrator is away from office or goes out of station.With the help of GPRS or Wi-Fi, this application is used to provide all the important details of the network to the admin on their android phone. To connect the mobile phone to LAN server we use internet connectivity such as GPRS or Wi-Fi.**

Keywords – *Android, Control LAN, GPRS, LAN Monitoring, Server.*

I.INTRODUCTION

In businesses and new enterprises rapid growth is there in recent times, so it is essential to find out the new solutions to manage and control the various technical setups used in such organizations. Each organization has its own set of communication networks which can be used for the information sharing , either with other companys or within that organization. So there us demand for efficient system system to control and monitor the various activities of the network. Thus we are developing a system where the administrator can execute various commands to control and monitor the activities of the network even when he is out of station or not present at the actual site by using a mobile based application (running on ANDROID O.S.)[2]. The administrator would enter the various commands through the ANDROID application , which would be sent to a remote server for the further functions.. The various commands would be forwarded to remote the server through the internet connectivity such as GPRS.

Communication between particular client and the administrator is achieved through a central monitoring server[1]. Android is a modern mobile platform that is designed to be truly open source[1]. Android applications use advanced level of hardware and software, as well as local and server data, exposed through the platform to bring innovation and value to consumers. To ensure security of user data, information, application and network android platform must have security mechanism[4].Android is designed with multilayered security that provides flexibleness which is needed for an open platform. Android includes an operating system, middleware and core applications[5].Android applications are also designed with focused on user's perspective. Users can view how applications work, and want to manage those applications.

II. PROBLEM DEFINITION AND SCOPE

A. Problem Statement

Android based application to monitor and control the wireless LAN using smart phone.

B. Scope

Today the deployment of various softwares to a new or existing client computers became the the most challenging and costly. Currently, organizations spend a great deal of time and expense planning, designing, and rolling out the latest version of the operating system.It is very hectic to controlling remote activity of clients. For this purpose, we develop software application and to control the clients remotely.Software application is developed to do the tasks remotely on the client machine through server. Using this application, administrator can roll out new version of the operating system to any number of clients[5].This processing is done from remote location.

While WLANs were once used to offer network access to guests or employees in common areas, they are now often extended to reach every laptop and desktop in the enterprise. What's more, they also support both corporate and personal smart phones and tablets, as well as embedded Wi-Fi devices, such as copy machines and surveillance cameras[6]. With all these users and clients, network managers must implement granular WLAN access control and network authorisation.

III.MODULES

This application can be installed on the server machine.

A. Server

It receives the commands from the administrator.For performing the desired functions these request commands are processed.

B. Client

Client keeps track of the processes and instructions are executed coming from the server.

C. Mobile Application

This software application installed on the administrator's cell phone which can control and monitor the activities of the network.
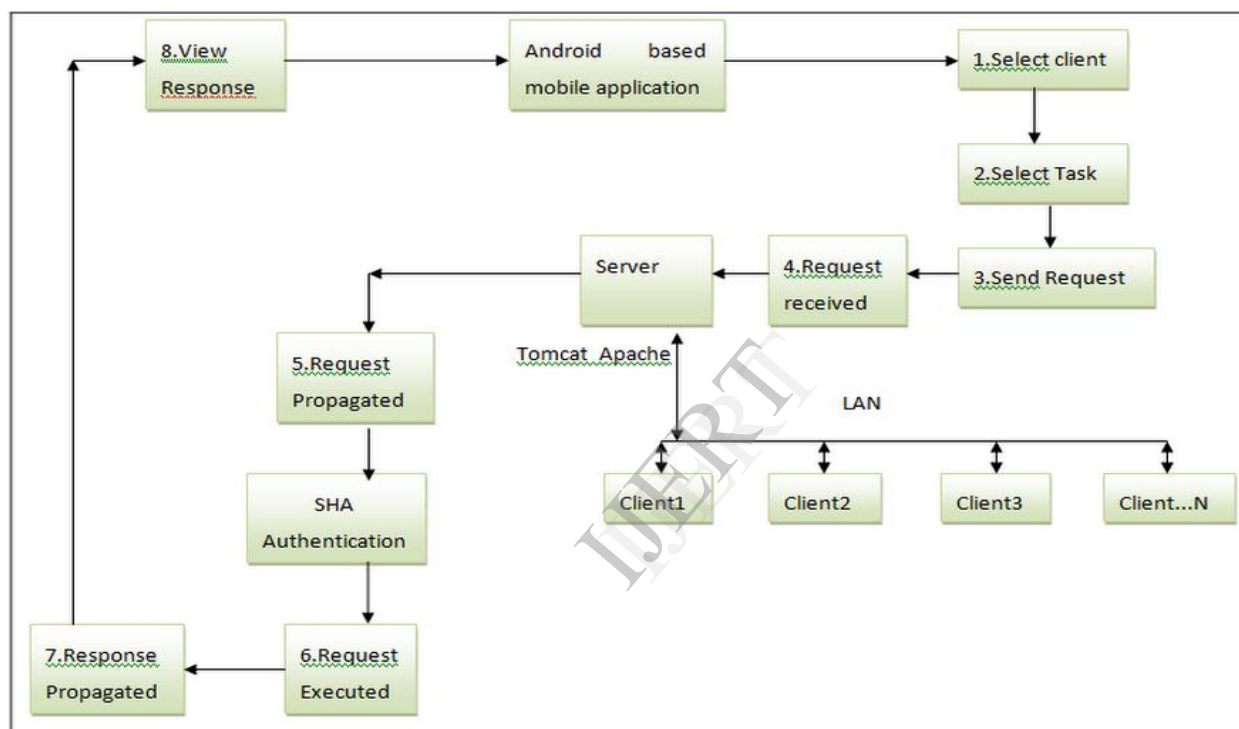

Fig.1: Block Diagram of System Using Cell Phone
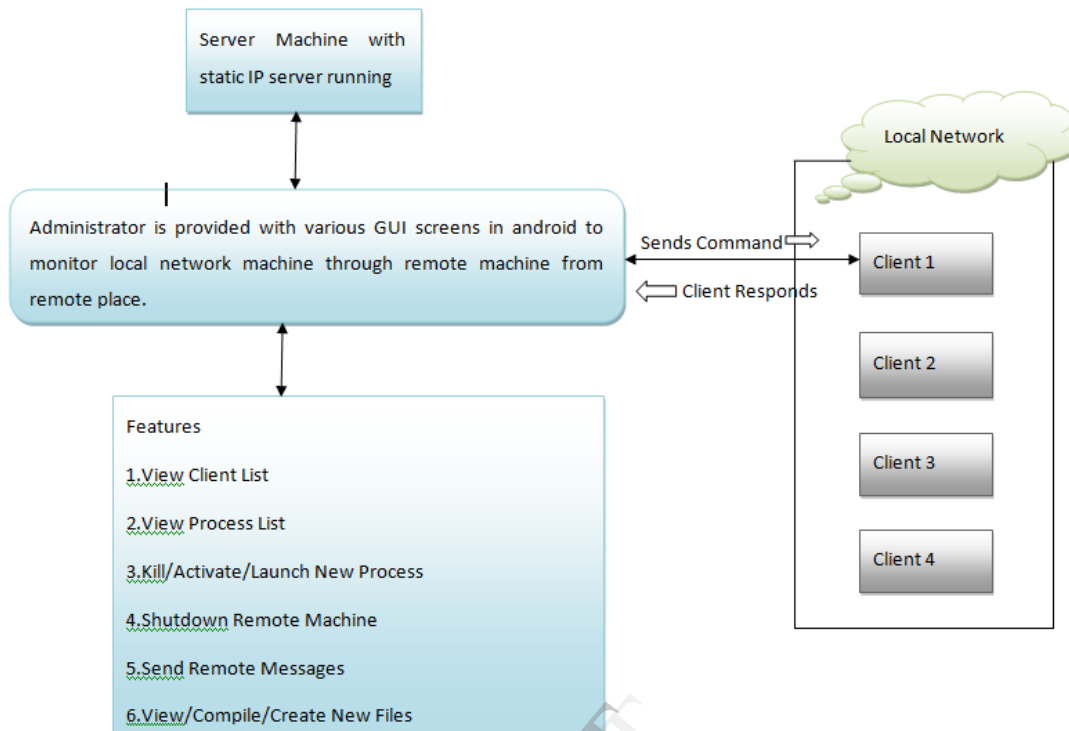
IV.NETWORK MONITORING

Fig.2: Block Diagram of WLAN monitoring

Network monitoring describes about the use of a system that constantly monitors a computer network for failing or slow components and notifies the network administrator through email or SMS in case of outages[4]. To manage and control the activities of the network from the outside of the office becomes difficult task.Communications must be assured in every place of the facility and this must be done in a more reliable, fast and secure way.Wireless communications offer many advantages as scalability, mobility,reduced costs,ease of maintenance.

V. WIRELESS LAN MONITORING USING ANDROID

The main objective of this system is to provide maximum information and details about the network to the administrator on their android phones when administrator is away from office or goes out station. There are number of protocols, which are used to monitor and control the network using android phone; it can be android protocols and network management protocols or combination of them[3].Features are user can control WLAN using cell phone, can control multiple PC's by cell phone.

VI. CONCLUSION AND FUTURE WORK

The Android based LAN monitoring system is very secure and convenient.It reduces the cost of communication.Whenever the administrator is away from the server room the android system gives detail information of the network just by starting application using WiFi or GPRS.However, as long as wireless communications are involved, security becomes critical. In addition, a particular application of this technology has been presented.

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