

User Controlling System Using LAN

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Abstract - The project aims to develop various network utilities which are required to effectively monitor a user activities using LAN network. It aims to develop an integrated software solution that allows a network administrator to remotely monitor his users and their daily activities through LAN[1].

This function allows obtaining detailed information about the activities your employees are engaged into during their working hours, and also create statistical reports with important data. For a more detailed observation of the activities occurring on user computers, Software takes snapshots at pre-set intervals inconspicuously for the user and saves them into a database chronologically[2]. A quick gallery view of these snapshots gives full information about all users activities.

INDEX TERMS - J2EE, LAN, FTP, RMI, REMOTE CONTROL.

I. INTRODUCTION

The primary goal of the project is to remotely handle the monitoring system of client pc connected in the LAN [9]. With the ever growing computer networks it has become challenging job for an IT professional to manage the network resources and the monitoring. In such environments, it becomes an administrative task to

carefully manage the task for every client with using the snapshot. Remote monitoring system and LAN Controlled user in client pc with the help of user client some of the existing services that may already be deployed and in use within an organization, as well as adds some additional services that one may or may not be familiar with. Monitoring of the system can be used to deploy Operating system and requested software's by the clients on their PC from the server without even interrupting the client after processing their request. An administrator can roll out a new version of the operating system to hundreds, even thousands of users at one time, and do so from its remote location. LAN Controlled can be used to handle Remote processes and remote operation of clients [15].

With the ever growing computer networks it has become challenging job for an IT professional to manage the network resources and monitoring all system is very difficult task. In such environments, it becomes a administrative task of monitoring system of need. The Remote Host Monitoring System is an Application Software, which help us to monitoring the users remotely on LAN. The main benefit of this software is that an administrator can sit on server computer and can view the details about the user's computer connected to his system. In propose system the server is provided with the privileges to monitor

any of its client systems with the help of snapshot[10].

The Design of proposed system is to be used on the remotely handle monitoring and is used to monitor and record user activity [12].

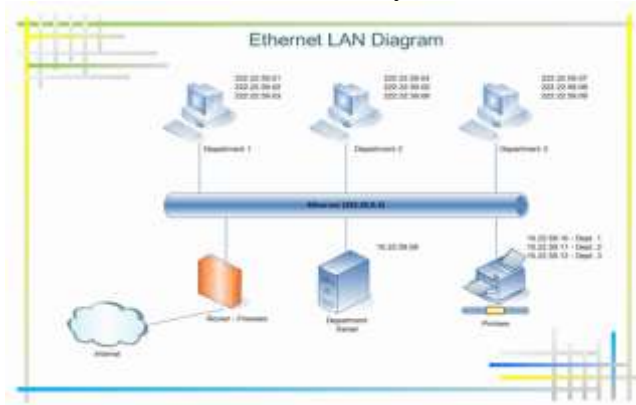


Figure 1: LAN Architecture

II. FEATURES CONTROLLED BY SYSTEM

A. Snapshot:

Capture the snapshot of user desktop and transfer it to server.

Server takes the snapshots and stores the snapshots in separate directory automatically.

B. Process View:

Get the lists of all processes running in the remote machine Also admin has an authority to control all the processes and he can add new process if needed or kill the unauthorized process[14].

C. PC Control:

Admin can control the user pc remotely

Server has authority to restart, hibernate, shutdown the user computer.

D. Message Passing:

Admin can send message to the user computer

The message is appear like the popup

The message is either broadcast or sends to particular user only.

E. Remote Desktop Access:

The server can access the user desktop remotely

It has only select the user IP address and access the user desktop. Admin can watch the user activity directly to server side[14].

III. ARCHITECTURE OF PROPOSED SYSTEM

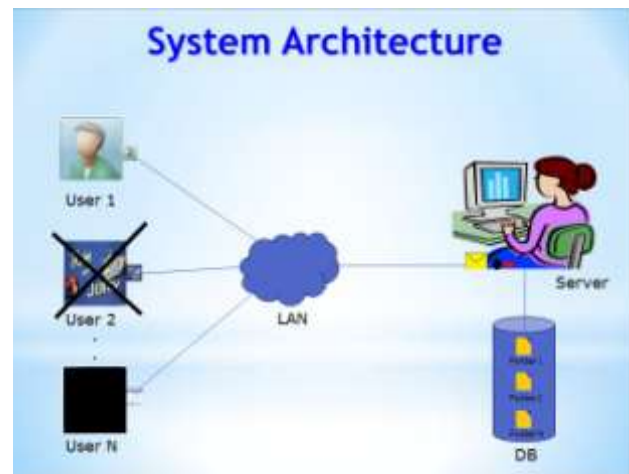


Figure 2: Architecture of proposed system

In the above system architecture number of client in same LAN network connected to the centralize server that is main server of our system. And also storage server connected to the main server[13]. The UMS access the user data remotely with the help of remote control logic. The Admin which have a controls of all functionality of UMS is present at the server side only[6].

The following are list of conventions and acronym used in this document and the project.

User: user who will connect in the LAN

Interface: LAN is used to communicate across different sides[3].

UMS: User Monitoring System

LAN-UMI: User Monitoring Interface[3].

SRS: Software Requirements Specification

User: User of the system such as customer, client, employee, visitor. Anyone who can interact with the system using the user interface layer (LAN).

IV. BLOCK DIAGRAM OF PROPOSED SYSTEM

From the block diagram of proposed system we see that from user side SNAPSHOT is send to server through LAN network[5]. At server there is a individual directory in which the each snapshot is save after the seleted time. All the active user list is available to the server always[11]. Server can manages the monitoring time and user by conidering their IP address. At the user side every individual user must have to login and accept the server connection request at beginning. After the selected time period the snapshot are saved at server and he is able to access them any time during monitoring[6]. The above mentioned features are provided for every server side installation at server only. This block diagram of UMS is gives basic idea regarding the system flow[5].

There is no any database maintained there is only one temporary database or we can say file. Through database we get the data we needed.

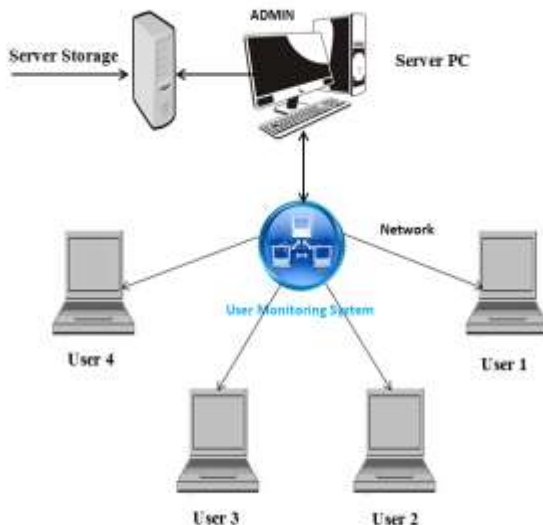


Figure 3: Blockdiagram of propose system

V. TECHNOLOGY USED IN PROPOSED SYSTEM

In User Monitoring System we use technology like

A. FTP/LAN:

By using FTP protocol in these system we communicate with client and server[4].

B. Net Beans: For better and efficient programming we use net beans for designing this system.

C. Process Builder: This class is used in this system which is very important to create operating system processes [7].

D. Abstract Window Toolkit: This is java's toolkit used for windowing sets, graphics and graphical user interface creation for this system[12].

E. J2EE: It is collection of java programming API's used for java platform based programs which is used to program this system.

VI. INTERFACES

A. User Interface

- Every user must connect to LAN and having own IP address.
- Must keep the Allow remote access settings ON.
- Provide the access from firewall to trust the network[3].

B. Software Interface

- It's an client server architecture software
- Two different installations are required at both client and server site.
- Authentication is must require for server machine.
- None of activity is performed by user for start monitoring[6].
- It's a combination of different java programs which require the operating system support for running the application.

C. Hardware Interface

- Standalone system
- Processor : Dual Core

- RAM : Minimum 1 GB
- HDD : Minimum 80 GB
- LAN connection Switches and Hubs

VII. FUTURE WORKS

The future enhancements in the system include LAN monitoring and control whenever the administrator is not present at station. This application decrease the time as well as efforts of administrator.

VIII. APPLICATIONS OF PROPOSED SYSTEM

- Totally unaware from the user.
- It's always connected so that information is available every time.
- High integrity and security[9].
- Ability to incorporate fresh and newly available data.
- It is user friendly
- Speed and accuracy is increased
- Fully automated.
- Security is provided with user authentication
- Duplication of information is curbed.
- No need of Internet for monitoring.
- Required very less storage according to previous monitoring systems[8].
- Provides various controls of user system.
- Additional functionality of Message send/broadcast.

IX. CONCLUSIONS

The project aims to develop various network utilities which are required to effectively monitor a user activities using LAN network. Thus we aim to develop an integrated software solution that allows a network administrator to remotely monitor his users and their daily activities through LAN in our USER MONITORING SYSTEM[11].

X.RESULT

By using User Monitoring System it is possible to automatically capture the any user screen which is connected in the LAN. Also this system provide you the facility to backup all captured information of each and every individual user on sever machine [3]. When any user doing the unauthorized task or activity in the network then we simply block or turn off his machine through server. We will also provide the security privileges to individual users in the network. It is also possible to send the any message to individual user or all users which are connected in the network[4]. This system will automatically detects the users which are connected in the LAN i.e. it not necessary to manually add the new user entry on server. This system is very useful in colleges, in university departments etc.

XI.ACKNOWLEDGMENT

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XII.REFERENCES

- [1] IEEE TRANSACTIONS ON PARALLEL AND DISTRIBUTED SYSTEMS, VOL. 21, NO. 5, MAY 2010 (GLOBAL SNAPSHOT ALGORITHM IEEE PAPER LINK)
- [2] IEEE TRANSACTIONS ON PARALLEL AND DISTRIBUTED SYSTEMS, VOL. 21, NO. 9, SEPTEMBER 2010 (EFFICIENT SNAPSHOT ALGORITHM FOR LARGE SCALE DISTRIBUTED SYSTEM)
- [3] NETWORK MANAGEMENT SUPPORT
<http://www.pacnog.org/pacnog6/presentations/linux-network/network-management.pdf>
- [4] LAN MANAGEMENT SYSTEM INFO
http://www.cse.unr.edu/~dascalus/LNCS3126_JK.pdf
- [5] BASIC USECASE DESIGN INFORMATION
http://www.google.com/static/use_case_example.html
- [6] ALL UML DIAGRAM BASIC . <http://www.visual-paradigm.com/VPGallery/diagrams/Sequence.html>
- [7] PAPER SUPPORT AND INTRODUCTION
http://www.cse.unr.edu/~dascalus/LNCS3126_JK.pdf

- [8] IEEE Computer Society LAN MAN Standards Committee Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications. In IEEE Std 802.11-1999, 1999.
- [9] Y. Xiao, "IEEE 802.11n: Enhancements for Higher Throughput in Wireless LANs," IEEE Wireless Comm., vol. 12, no. 6, pp. 82-91, Dec. 2005.
- [10] IEEE Std 802.11n-2009, Part 11: Wireless LAN Medium Access Control(MAC) and Physical Layer (PHY) Specifications - Amendment 5: Enhancements for Higher Throughput, IEEE, pp. c1-502, 2009.
- [11] E. Perahia, "IEEE 802.11n Development: History, Process, and Technology," IEEE Comm. Magazine, vol.46, no. 7, pp. 48-55, July2008.
- [12] P. Bahl and V. Padmanabhan, "RADAR: An In-Building RF-Based User Location and Tracking System," Proc.
- [13] L.Cai, X. Ling, X. Shen, J. Mark, and H. Long, "Capacity Analysis of Enhanced MAC in IEEE 802.11n," Proc. First Int'l Conf. Comm and Networking in China(ChinaCom), pp. 1-5, Oct. 2006.
- [14] W.-J. Kim, Kun Ji, and A. Ambike, "Real-time Operating environment for networked control systems," IEEE Trans. Autom. Sci. Eng. , vol. 3, no. 3, pp. 287-296, Jul. 2006.
- [15] IEEE/ASME Transactions Mechatronics, vol.18,no.1, Feb.2013.