Hybrid LAN Monitoring and Controlling

Ms. Sarika Dadasaheb Lokhande
M.E. Computer Engineering
ARMIET College, Asangaon,
Maharashtra, India.
Sarika15.l@gmail.com

Abstract—Hybrid LAN Monitoring and Controlling is based on the client-server technology which is computer architecture. Client-server technology separates the applications functions into two or more distinct parts. This technology divides function into client and server subsystems for standard communication. Network clients make request to a server by sending messages and server respond to their clients by acting on each request and producing results. With this application each time that you open a file from Windows Explorer or from a standard open/save dialog box, the name of the file that you opened is recorded by the operating system. This utility save name of file into Recent folder and also in Registry.

Keywords-*computer architecture;operating system;technology*

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I. INTRODUCTION

Hybrid LAN Monitoring and Controlling is used as a software application which is used to overview or verify activities performed by various users on computer system with LAN connection. Client server technology is the key feature of Hybrid LAN Monitoring and Controlling. Monitoring and Controlling are the basic idea behind this system.

Data link library file Network Connection.dll is downloaded for the reason of network Monitoring. The dll file contains various classes and properties that required getting all details of client and server also.it contains class like Node-type, Server, Client and socket Data object etc. Whenever we save file to a specific location on Mac, OS X save this file location in a "Recent places" which will be available for the next time any one save another file. Because of this feature it is easily possible to get quick access to the folder recently used and also saves a lot of required time.

Automatically the list of recent places will display the past most recently accessed folder/file. Every single time that open a file from Windows Explorer or from standard open/save dialog box, the name of the file accessed is get recorded by the operating system. Some of the names are saved into place called Recent folder and others are saved into the Registry.Now, while this may be convenient but it becomes very difficult when need to delete an item or entire list.

This facility display the list of all recently accessed files, and allows deleting unwanted filename entries in recent places. Also save list of file name into text/html/xml file. The System.Data.Odbc namespace is used for database connectivity. ODBC (Open Data Base Connectivity) connection is required for database connectivity. ODBC is used to make it possible to access required file/folder from any application, regardless of which DBMS is used for managing the information stored in system. In 1992 Open Data Base Connectivity is standard database access method developed by SQL Access group.

VB.Net is a utility used for accessing various namespaces. The System namespaces is imported because it consist of various fundamental classes and base classes that define commonly used values and references data types, events and event handlers, interface, attributes and processing exceptions etc.

II. LITERATURE SURVEY

Computer network is a collection of hardware peripherals and computers systems interconnected by communication channels that allows sharing and accessing all available resources and information. Computer networking is considered as a unavoidable part of computer science, electrical engineering, telecommunication, and also information technology since it depends on both theoretical and practical application. Communication protocols are set of rules and data format used for sharing and exchanging information in computer network [13].

Many social behaviors seen in today's Internet applications were described in the 19th century.

In 1940s, teletype machine was used for sending instructions for problem set for model at Dartmouth college in New York.[7]

In 1950s, early networks of communicating computers included the military radar system Semi-Automatic Ground Environment (SAGE).

In 1960s, the commercial airline reservation system semi-automatic business research environment (SABRE) which went online with two connected mainframes.

In 1964, researchers at Dartmouth developed the Dart mouth Time Sharing System for distributed users of large computer systems.

In 1965, Thomas Merrill and Lawrence G. Robert created the first wide area network. The first widely used telephone switch that used true computer control was introduced by Western Electric in 1965 only.

In 1969 , the university of California at Los Angeles, the stand ford Research Institute , University of California at Santa Barbara , and the University of Utah were connected as the beginning of the ARPANET network using 50 k bit/s circuits.

In 1972, Commercial services using X.25 were deployed and later used as an underlying infrastructure for expanding TCP/IP network.

III. NETWORK ADMINISTRATOR

Network administrator is a person with important responsibility for maintenance of computer peripherals and software which build a computer network. He is a person chosen from highly qualified technical staff who is less involved with customer or user in an organization.

The network administrator is answerable for the overall integrity of the network, server deployment, security and check for the network connectivity of organization's network infrastructure.

The role of Network Administrator will vary in various circumstances but will commonly include activities like, assignment of routing protocols, network address assignment and routing table configuration as well as configuration of authentication and authorization(directory services) [1].

Network administrator may be technically involved in an administration and maintenance of peripherals like server, printers, desktop computers, routers, switches, firewalls, phones, smart phones, software deployment, security updates, patches and vast array of additional technologies including hardware and software both[14].

IV. RECENT FILES/FOLDER

Every time whenever you open a file or folder from Windows Explorer or from standard open/save dialog box, the name of the file or folder which you opened recently is recorded by the existing operating system. Among them some of the names are saved into the Recent folder application. And remainingfile names are saved into the Registry.This utility store file list into text/html/xml file.This facility display the list of all recently accessedfiles, and allows removing all unwanted filename entries.

The recent opened files list is stored in 2 places:

a) Recent Folder: - The recent folder is usually available at location with path C:\Documents and Settings\[Your Profile]\Recent (The path is different

under Windows Vista), and it contains shortcuts for the recently accessed files and folders.

b) Registry:-Each time that a file is selected in save/open dialog-box, the name of that file is recorded to the fileslistunderHKEY_CURRENT_USER\Software\Microsoft\Windows\CurrentVersion\Explorer\ComDlg32\OpenSaveMRU.

V. PROPOSED SYSTEM

Hybrid LAN Monitoring and Controlling application is contains two parts as Server and Client. The server should be installed in Windows XP or greater than Windows XP computer configuration. The server software application is consists of main features to fetch and retrieve information from network.

To build a client system, will install Client Response Agent Software application. For making a connection there is need to write the IP Address of Computer where Server Agent is already installed. So whenever request comes from client Agent, Server computer replay by providing the required data or information from available sources.

The different Network related functions facilities provided by this application software are

- Remote Desktop Application
- User friendly environment
- Remote Task Manager
- Record of Activities in Recent folder and Registry
- Hybrid Network Support
- Real time Operating System
- Application Authentication
- Control on Shutdown/Restart/Log off
- Attractive Visual Interface
- Chat window system
- Shows Recently opened files
- No need of separate server OS, etc.

VI. AIM OF PROPOSED SYSTEM

This Monitoring and Controlling system is established to satisfy most of the possible aims like following:

- It should be accessible in the problem where there is a network failure condition. It supports Communication Service requirements as well as network security and monitoring.

- Because of Hybrid quality, people pays only for what they uses, that's why system performance has direct impact on cost requirements. Thus efficient system performance is an important requirement to save money.

- Handling more network nodes should not affect functionality of software. The system must be able to

carry very large amount of traffic on network with low latency as well as high request rate.

• Recovery from a failure should be easier without losing any data or updatesfrom recently performed activities.

• The system must satisfy change in application requirement in both directions and gracefully respond to this change in requirements and recover the system to its normal state.

• Last log record must displayed by the system. As the earlier accessed files names must be saved by system and display these records as per requirement of the Network Administrator.

• It maintains functionality in various circumstances.

Objective of Hybrid LAN Monitoring and Controlling:

• To provide the view of client or peer computers in the form of videos which helps us to easily understand the activities of the user.

• To monitor the clients or peers in efficient manner by getting the view of the activities/actions performed by the user.

• To provide the written scenario of the applications running on the client/peer side.

• To store the applications in the database as per the requirements. For example if an administrator is unable to monitor due to some reasons.

• To provide the facility to take over the user's desktop in a critical situation.

VII. METHODOLOGY

Hybrid LAN Monitoring and Controllingprovides the Network Administrator withproviding Network facilities and features. Itdeals with establishing a Networking Software. This system is build using 2-tier network approach, which has database as backend andthe front end client as Visual Studio 2010. This contains implementation technologies such as Visual studio.NET, VB.NET as a programming language, SQL Server, Access as Relational Database. It is a Real time Operating System which will be used to check Run Time Error.This software uses following technologies for front end and back end.

FRONT END:
VB.NET programming language is used for designing all the GUI interfaces with the program Logic Embedded in VB.NET code.
BACK END:
SQL Server 2008 is used to manage all required information also used for storing and retrieving data from the databases as per requirement of user.

1. Software:

• Environment --- VB .NET
TCP/IP Drivers

• Requirement---.Net Framework 3.5

2. Hardware :

• Environment ---
  • Windows XP
  • LAN
  • Computer systems(min 2)
  • Wireless Router

• Requirement ---
SERVER:
  • Pentium4 processor
  • 1GB RAM
  • 2GB HDD
  • 2Server Board

CLIENT:
  • Pentium2 processor
  • 512 RAM
  • 1GB HDD

3. Modules :
  • Server
  • Client

4. System Actors and Functionality :
a) Server :
   a. Authentication
   b. Control activities of client
   c. Updates user
b) Client :
   a. Take authenticity from server
   b. Request service from server
   c. Send and receive messages
c) Recent places:
   a. View recently opened files in Recent folder.
   b. Record a Log file in Registry.

VIII. ADVANTAGES

•Hybrid LAN Monitoring and Controlling is more reliable as compared to peer-to-peer network.

•Hybrid LAN Monitoring and Controlling Software provide the high level or enhance security.

• The requirements for this software are quite basic.

•Most of the LAN monitoring software's available require a technical staff to monitor them. But this software will simplify monitoring due to which even people from the non-technical background will be able to run it with an ease.

•Because of this system Backing up of data is easier.

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•This software application is very flexible.

•This software is very flexible and also contains basic requirements.

IX. CONCLUSION

This software helps to make a use of various required resources in an effective and efficient ways. Centralized administration software is created for Monitoring and controlling various computers of organization. Thus it removes drawbacks of earlier system and developed a user friendly environment. Record as well as View recent activities on client's computer system. Also creates separate LOG files for records which enhance the performance and security.

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