System Handling using Email

K. D. Yesugade, Shital Dane, Rajani Jadhav, Priyanka Sakhare

Abstract: Handling a system or a network is a tedious job involving a series of tasks that need to be completed impeccably. Remote system access and handling in legacy system is done by an administrator who sits at computer directly connected to the network i.e. through LAN. So if the system needs to be managed it is imperative for the administrator to be sitting at the machine that is the server for the entire system or network. Our project attempts to remove this obligation of physical presence of the administrator being imperative. In previous system operation performs are only the create and deletion of the documents here we add some other functions are like updating or attaching files, block particular computer, initiate keyboard control and fetch the number of process on any particular client machine.

Keywords: web server, window server, remote access, e-mail

I. INTRODUCTION

"System handling using E-mail" is windows based application developed using Java. Using this application a system or a network administrator can access and manage a system or network remotely. This system essentially removes the obligation of the physical presence of the administrator on the server machine. The administrator can send an e-mail to a mail server that's connected to the network and is constantly monitored by the handling server. Any e-mail sent to a specific account is retrieved, checked if it is a relevant message concerning commands for managing the system or network. If it is then necessary course of action is executed. Access to network from anywhere on the network is an important facet of the application being developed. Consider a scenario where the organization requires some data or access to some information in case on some critical situation for instance an urgent meeting with the client. If the requirement is not fulfilled the organization may incur some loss. Thus in such cases the network administrator can use this tool to connect himself to either the server machine or any required machine in the organization and immediately furnish the required details.

The network administrator holds all the access rights to grant access to his peers in the organization. Therefore it is his responsibility to maintain information security. If he is not present in the organization for official reasons like a business meeting or so then this tool allows him to work in coordination with his peers in order to achieve any task that would be stranded otherwise.

II. REMOTE ACCESS

Remote data access system allows the user to monitor, control and use the site or computer from any remote location over an internet.

User access data by using modules or servlets that will prevent the providers operating system from being directly accessed, eliminating, modifications or alterations by user.

There is problem regarding the remote access of data that, when the unauthorized person may access the data, so that purpose we are using the technique called data encryption. System uses the several access levels through the use of access codes to prevent unauthorized access from use. Software uses at least one servlet as an interface between the users and the providers software to prevent direct access to the software. Remote units have monitoring devices such as sensors that communicate with remote equipments receiving status data from the equipment. Each remote unit has capability to receive data from multiple pieces of equipment for forwarding to the provider software. Servlets are written in java or any other language that interacts with server database platform. The servlets function as a firewall between the user, data and remote equipment and the system. The link between web sites and the remote equipments is most advantageous through satellite link. The centralized computer is connected via wireless technology to the satellite system provider's server.

Remote access is the ability to get access to a computer or a network from remote distance. In corporations, people at branch offices, telecommuters, and people who are travelling may need access to the corporation's network. Home users get access to the Internet through remote access to an Internet service provider (ISP). Dial-up connection through desktop, notebook, or handheld computer modem over regular telephone lines is a common method of remote access. Remote access is also possible using a dedicated line between a computer or a remote local area network and the "central" or main corporate local area network. A dedicated line is more expensive and less flexible but offers faster data rates. Integrated Services Digital Network (ISDN) is a common method of remote access from branch offices since it combines dial-up with faster data rates. Wireless, cable modem, and Digital Subscriber Line (DSL) technologies offer other possibilities for remote access.
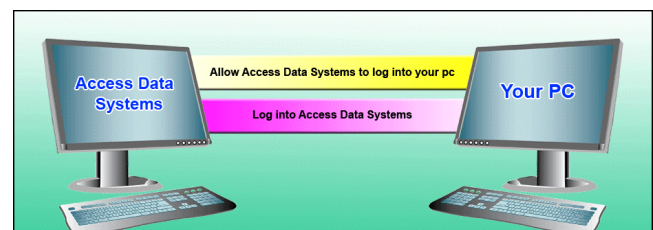

Fig 1: Remote Access

Prof. **K.D.Yesugade**, Computer Department, Bharati Vidyapeeth's College of Engineering for Women, University of Pune, Pune, India.
Miss **Shital Dane**, Computer Department, Bharati Vidyapeeth's College of Engineering for Women, University of Pune, Pune, India.
Miss **Rajani Jadhav**, Computer Department, Bharati Vidyapeeth's College of Engineering for Women, University of Pune, Pune, India.
Miss **Priyanka Sakhare**, Computer Department, Bharati Vidyapeeth's College of Engineering for Women, University of Pune, Pune, India.

A remote access server is the computer and associated software that is set up to handle users seeking access to network remotely. Sometimes called a communication server, a remote access server usually includes or is associated with a firewall server to ensure security and a router that can forward the remote access request to another part of the corporate network. A remote access server may include or work with a modem pool manager so that a small group of modems can be shared among a large number of intermittently present remote access users.

III. SYSTEM ARCHITECTURE

Creating a tool that allows people from an organization avail Remote Access Services and carry out their roles efficiently even if they are not physically present in the organize. The remote administrator sends e-mail to the server which contains information about the operation to be carried out for instance file operation commands, system handling commands, monitoring the LAN and granting access permissions. Depending upon the access permissions granted by the LAN server the clients perform their individual tasks. The Tool allow

- Authenticate the user
- Interpret and Execute instructions
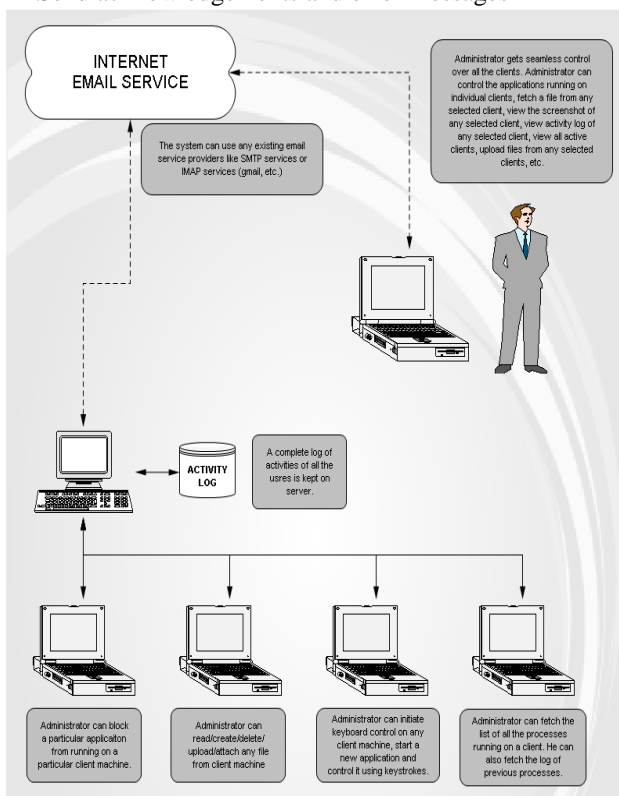- Send acknowledgements and error messages

Fig 2: System Architecture

A system and method for delivering electronic mail to the user at a previously defined remote location which also allows the user to reply to the email from such remote location is disclosed. An application program operates at the users home electronic mail communication system, typically a desktop PC, forwarding electronic mail messages through the internet to a central system, which contains user profile information and acts as a forwarding server. An email system includes a server and client applications operatively coupled to the server. Each application operates on behalf of a given email

address and the server forwards message among the applications based on email addresses specified for the messages. When a recipient application that assumes a recipient email address has a status change in its message receiving and handling mode, that change is communicated from the recipient application to the server and is recorded in a status table indexed under email addresses.

IV. SYSTEM REQUIREMENTS

A system can have some functional and non-functional requirements. Functional requirements describe the functionality of a system while non-functional describe attributes like performance, safety security, etc.

The functional requirements of system can be:

1. Download and split mail: In this module the mail sent by the remotely placed administrator is received and saved in the inbox automatically. The system will download this mail and authenticate its sender and format. If the authentication fails then the mail will remain in the inbox but will not be used by the tool for further modules. If the authentication process is a success then the mail is split into n-parts separated by the colon.

2. Extract and Execute command: In this module the command from the downloaded and split mail is extracted. This is done by checking the format of the command by matching it with the format specified in the tool. If a match is found then the command can be executed. Also it must be checked if the command is to be executed on the server, client or a resource like a printer. The functions are broadly classified as remote file handling operations and remote system handling operations.

Remote file handling operations:

- File copy
- File Transfer
- File deletion

System handling functions:

- Shut-down
- Restart
- System Lock, System logoff.
- Start and stop a running process.
- Start and stop a service.

3. Acknowledgement: The network administrator must know if the operation he wanted was performed or not. On successful or unsuccessful implementation of the function or desired operation the acknowledgement will be sent to the network administrator.

The non-functional requirements are:

1. Performance Requirements: The extent to which a mission or function must be executed; generally measured in terms of quantity, quality, coverage, timeliness or readiness. During requirements analysis, performance requirements will be interactively developed across all identified functions based on system life cycle factors; and characterized in terms of the degree of certainty in their estimate, the degree of criticality to system success, and their relationship to other requirements.

2. Safety Requirements: Systems comprised of electrical and/or electronic elements have been used for many years to perform safety functions in most application sectors.

Computer-based systems (generically referred to as programmable electronic systems) are being used in all application sectors to perform non-safety functions and, increasingly, to perform safety functions.

3. Security Requirements: Only authorized users will be able to send the command entering the correct login name and corresponding password.

V. CONCLUSION

As the main purpose of this project is the ability to access the computer or a network from a remote distance. This will remove the physical presence of the person on the server machine. This application used at the corporations, people at the branch offices, telecommuters' and the people who are travelling may need to access the corporation's network and home users also get the access to the network which is at the remote distance. When administrator is not physically present at any organization then it can be solve it using by e-mail. By only firing the command through the e-mail the operations can be performed on the particular machine which is connected to the network.

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