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Virtual Network Computing - Android

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ABSTRACT

The motive behind the project is to access the desktops of remote computer systems with the use of an android based cellular phone. This process will be carried out using Virtual Network Computing based architecture. A user will be able to access and manipulate the desktops of remote computers through a VNC viewer that will be provided on the user's cell-phone. The user can access and manipulate the desktop within the Wi-Fi range irrespective of various operating systems.

Keywords : Remote, Access, Virtual Network Computing, Wi-Fi

I. INTRODUCTION

RFB ("Remote Frame Buffer") is an open simple protocol for remote access to graphical user interfaces. Because it works at the framebuffer level it is applicable to all windowing systems and applications, including Microsoft Windows, Mac OS and the X Window System. RFB is the protocol used in Virtual Network Computing (VNC) and its derivatives. By default, a viewer/client uses TCP port 5900 to connect to a server (or 5800 for browser access) but can also be set to use any other port. Alternatively, a server can connect to a viewer in "listening mode" (by default on port 5500). One advantage of listening mode is that the server site does not have to configure its firewall/NAT to allow access on the specified ports; the burden is on the viewer, which is useful if the server site has no computer expertise, while the viewer user would be expected to be more knowledgeable.

Although RFB started as a relatively simple protocol, it has been enhanced with additional features (such as file transfers) and more sophisticated compression and security techniques as it has developed. To maintain seamless cross-compatibility between the many different VNC client and server implementations, the clients and servers negotiate a connection using the best RFB version, and the most appropriate compression and security options that they can both support.

In computing Virtual Network Computing (VNC) is a graphical desktop sharing system that uses the Remote Frame Buffer protocol (RFB) to remotely control another computer. It transmits the keyboard and mouse events from one computer to another, relaying the graphical screen updates back in the other direction, over a network. Android-VNC-Viewer uses this RFB protocol and lets us use Android mobile device to view and access the desktop.

II. RELATED WORK

In the paper ,Remote Desktop Access through Android Mobile Phones and Reverse, the process to access the remote desktop of computer system using android mobile phones is experimented . This will be carried out using Wi-Fi network. A user will be able to access and manipulate the remote desktop of

computer system using IP address provided by the network. There are several functions provided to quickly access the desktop of computer system. Also user can access android mobile phones on browser of remote desktop. It handles mobile phones camera, messages, music player and provides live images to browser. It supports various platforms like windows, mac, linux etc. The major goal is to communicate with the remote system and have control on the mobile phone. This module describes in accessing multiple computer through a single mobile phone via Internet (or) Wi-fi. Few significant modules are Desktop sharing, Pointing & Clicking, File Transfer, Email, Control Keyboard. The algorithm processed in this paper is of SHA-1 algorithm. It also describes that the VNC architecture is based on multiple desktop access. Certain services are represented as Viewing screenshot, Keyboard control, Mouse control, Messaging. The advantages carried away in this paper are of highly secured and also provides optimized response. Whereas, the pitfall is like it can easily break the security mechanism.

Similarly in paper, Remote Desktop Handling using Android Mobile Phone the process to access the desktops of remote computer systems with the use of a android mobile phone is established. This process will be successfully carried out by using virtual network computing based architecture. A user will be able to access as well as manipulate the desktops of remote computers through a VNC viewer that will be provided on the user's android phone. Conditions that must be followed that a VNC server must be installed on the personal computer which be monitored and it must be connected to a internet connection. This system will be implemented on Android software stack. The goal of this paper is to View, Manage, Manipulate a computing desktop on a mobile phone through the network. This also helps to access multiple computer in a single mobile phone as well as to control it. The modules generated are of Desktop Sharing, Panning & Zooming, Pointing & Clicking, Tight and Representation of pixel data. The algorithm used in this is Hierarchical region detection. The architecture invokes Mobile VNC architecture with enhanced coding techniques. This manages the services like Debug android mobile phone, View process, Status and service, Execute the server based service. The major advantages are Fast transmission and Improved system performance. When it comes to downside Speed is required since RFB protocol is used.

The Cross-site Virtual Network in Cloud Computing is demonstrated in the paper and has the interconnection of different geographically dispersed cloud infrastructure that is a key issue for the fog technology. Although most existing cloud providers and platforms offer some kind of connectivity services to allow the interconnection with external networks, these services exhibit many limitations and are not suitable for fog computing environments. The goal is to make the Virtual network computing using Cloud and Fog computing and also to define a hybrid fog and cloud Interconnection framework to enable the simple, efficient, and automated provision and configuration of virtual networks to interconnect different geographically distributed fog and cloud sites. Similarly, this can access multiple computer using Fog technology with additional services. Desktop sharing and configuration are the two modules built over. The algorithm generated in this paper called Load balancing, which processes HFC framework architecture. It can also implement services like Extra computing capacity, Large database management, Offline data processing for business intelligence. The advantages are Multitenancy & isolation, Heterogeneity, Scalability and also the drawbacks like Independent of network protocol, Natively support mobility and migration.

III. EXISTING SYSTEM

VNC provides the access to desktops of remote computer systems with the use of an android based cellular phone. This process will be carried out using Virtual Network Computing based architecture. A user will be able to access and manipulate the

desktops of remote computers through a VNC viewer that will be provided on the user's cell-phone. The image of the desktop is compressed before it is transmitted to the cellular phone. There are several functions provided so as to ease the viewing on cell-phones.

VNC involves the process to access the desktops of remote computer systems with the use of an android based cellular phone. This process will be carried out using Virtual Network Computing based architecture. A user will be able to access and manipulate the desktops of remote computers through a VNC viewer that will be provided on the user's cell-phone.

Remote Access take using IP address, by taking this type of remote access full control go to client window without access in server side. If interrupt the server machine remote connection will disconnect it. Server side did not know what client-side changes done.

IV. PROPOSED SYSTEM

Virtual Network Computing is a graphical desktop Sharing system providing remote control via network. It supports a controlling functionality by usage of a graphical screen update from a controlled device and capturing a mouse and/or a keyboard. VNC system is based on RFB (Remote Frame Buffer) protocol to transmit all information between connected devices. VNC system required two types of application for a proper work - server application for a machine under control and client - for a supervisor (controlling) device. Client side is called viewer because of its functionality. Controlling machine is responsible for viewing a shared desktop (or screen in general) and capturing and converting all user activity into the RFB protocol Messages.

On the other side, server must to interpret all events received from client and inject them into self-system. Server should also response to graphic screen update request by sending back a desktop view to connected client.

The cellular user can see and manipulate the desktop on the cellular phone. The same cellular phone to talk someone, the user must terminate the network connection.

V. RESULTS

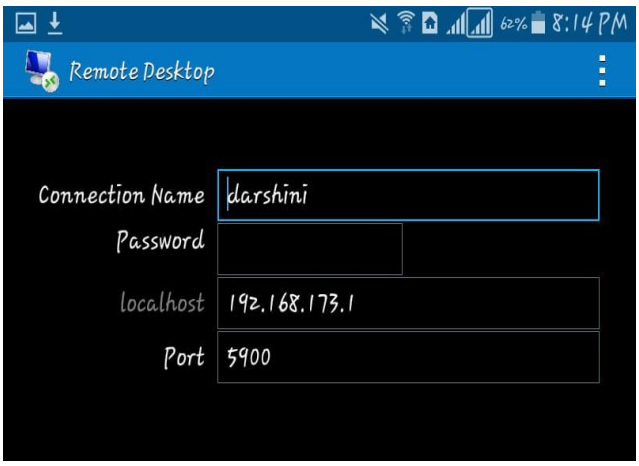

Fig. 1.Remote Desktop Login

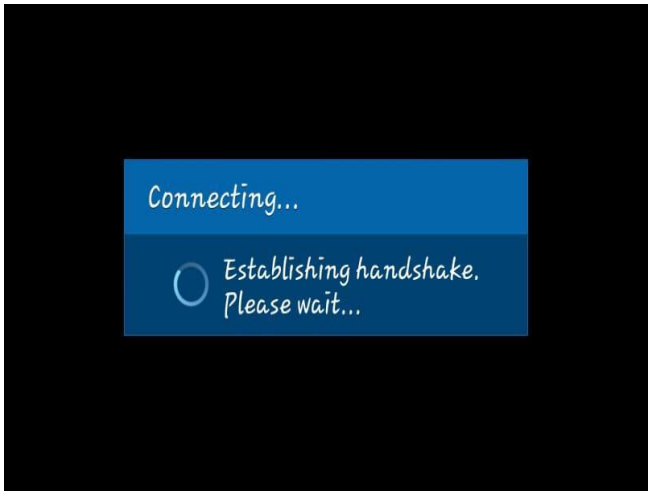

Fig.2.Establishing Connection

Fig.3.Remote Desktop View

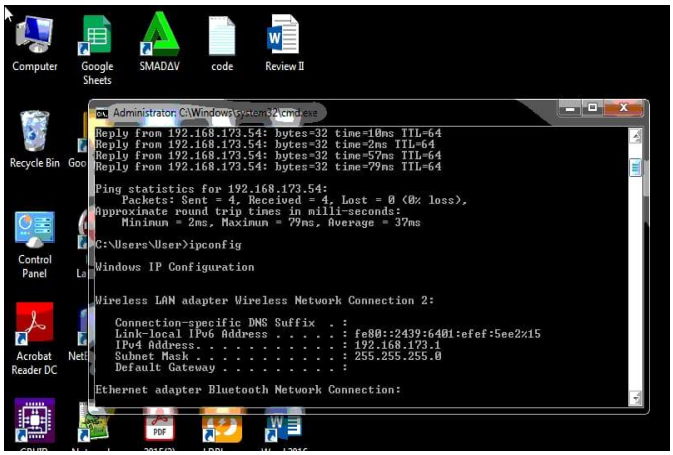

Fig.4.Accessing the system over Mobile phone

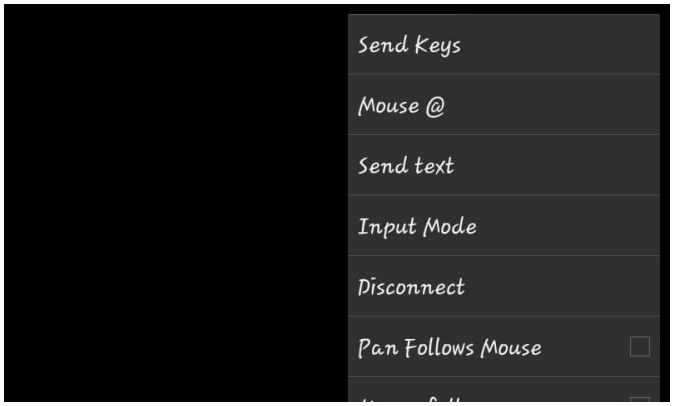

Fig.5. Keys to access the system function

VI. APPLICATION

VNC can be effectively used by people who need to access work files from their office computer. It is also great for people who happened to forget to bring their presentation to work. They can use VNC to connect to their home computer in order to retrieve any files. This type of program is often used by system administrators, IT support, and help desks. It can also be used in the classroom by teachers. Teachers may take advantage of this program in order to allow students to view what is happening at the teacher's computer. This can help teachers teach their students easily and more effectively.

VII. CONCLUSION

VNC access through android phones application will provide assistance to the system administrator in monitoring the tasks and also provides file transfer. Due to wide usage of android devices, this system is developed for tablets and other handheld devices. It provides mobility for users for controlling their computer desktops over Wi-Fi network. More facilities and features embedded in the application can be used for running on the remote desktop from mobile handheld devices is provided.

This system can be used in colleges for sharing the remote desktop by students during practical. In case, a user deploys any application to any non-technical person & if a problem arises, then at that time it is not possible to go that place immediately. So, in such case, the person is instructed to on the hotspot & click on connect button. Then he can easily access the person's laptop that saves time, money charge etc. As it supports multiple connections, it can be used effectively for collaborative work. It can be used for educational purposes. For example, students in a distributed group can view the computer screen which is been manipulated by the instructor. Thus, the extended scope of this system provides mobility and access the remote desktop through the internet.

VIII. ACKNOWLEDGEMENT:

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