

ShopWorks



Microsoft Terminal Services White Paper

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This white paper is intended to be an overview of Microsoft Terminal Services and how it can be implemented to allow remote connections use of ShopWorks Onsite.

External Connection Software

Microsoft Terminal Services is one particular type of what we will call "External Connection" software. This type of software allows external users to connect and use applications on your internal corporate network (LAN – Local Area Network). There are 2 different sub-categories of External Communication software:

1. Remote Control – Examples include PC Anywhere, Timbuktu and VNC Viewer among others. This type of software requires that you have a dedicated machine at your main office for each corresponding user that logs in externally. Each of these users "takes control" of the computer at the main office and accesses applications via that computer.
2. Virtual Computer – Examples include Microsoft Terminal Services and the Citrix family of products. This type of software requires a server at the main office that can host multiple "virtual computers". When users login they are seeing a virtual computer being maintained by this server. Obviously, for a multiple external users this method requires much less hardware.

In both methods above, the only information passed between the computer doing the controlling and the computer being controlled is video data (what shows on the monitor), keyboard strokes, and mouse motion and clicks.

OnSite is a client/server application. A server is used to store data files that are "served" to client computers. In this model there is a lot of information passed between the server and the client. This information travels over whatever connection you have between the server and the client.

Generally, in an office environment you have a Local Area Network (LAN) where data can travel at speeds at 10, 100, or even 1000 megabits per second. If you compare this to internet speeds, which generally max out at 1.5 megabits per second you can see that the speed of data transfer on your LAN is much faster than what you could have over the internet. When you have computers that are actually connected to your network through the internet this would be described as a Wide Area Network (WAN). So, it is possible to have both local and remote computers on the same network, some on the LAN and some on the WAN.

OnSite can run over a WAN just like it does on a LAN. External users would install FileMaker and access OnSite just like a user at the main office. The problem with this method is that the amount of data that is transferred between the server and the client will take much, much longer over the slower speeds of the WAN. So slow in fact, that it is not practical to use. This is precisely where the External Connection software can be a benefit. Because you are controlling a computer (real or virtual) that is on the LAN, the data between the client and server runs at LAN speeds and the only data that needs to run over the WAN is the video, keyboard, and mouse. This is a much smaller set of data.

What is Microsoft Terminal Services?

Microsoft Terminal Services is a software product that than runs on your Windows Server and allows remote users to login and run independent sessions. Because the Terminal Services server is on your LAN, you can have multiple people in different locations login and work directly on your network at the same time on the same computer. This differs from other remote connection software because you are not connecting to a workstation directly and taking over the machine; rather you are connecting and running an independent session on the Terminal Services server. For more information on what Terminal Services is: or how to implement it at your business visit the following website...

<http://www.microsoft.com/windowsserver2003/techinfo/overview/termserv.mspx>

Equipment purchases, setup and maintenance should be handled by your local network/hardware people.

How does it work?

The server is setup to receive connections from remote clients. The client simply opens a Remote Desktop Connection (RDC) from their machine and logs in. The client will need to have the RDC client installed on their machine. This comes standard on XP Pro operating systems. If the remote machine is an older operating system you can get more information on installing it from this website ...

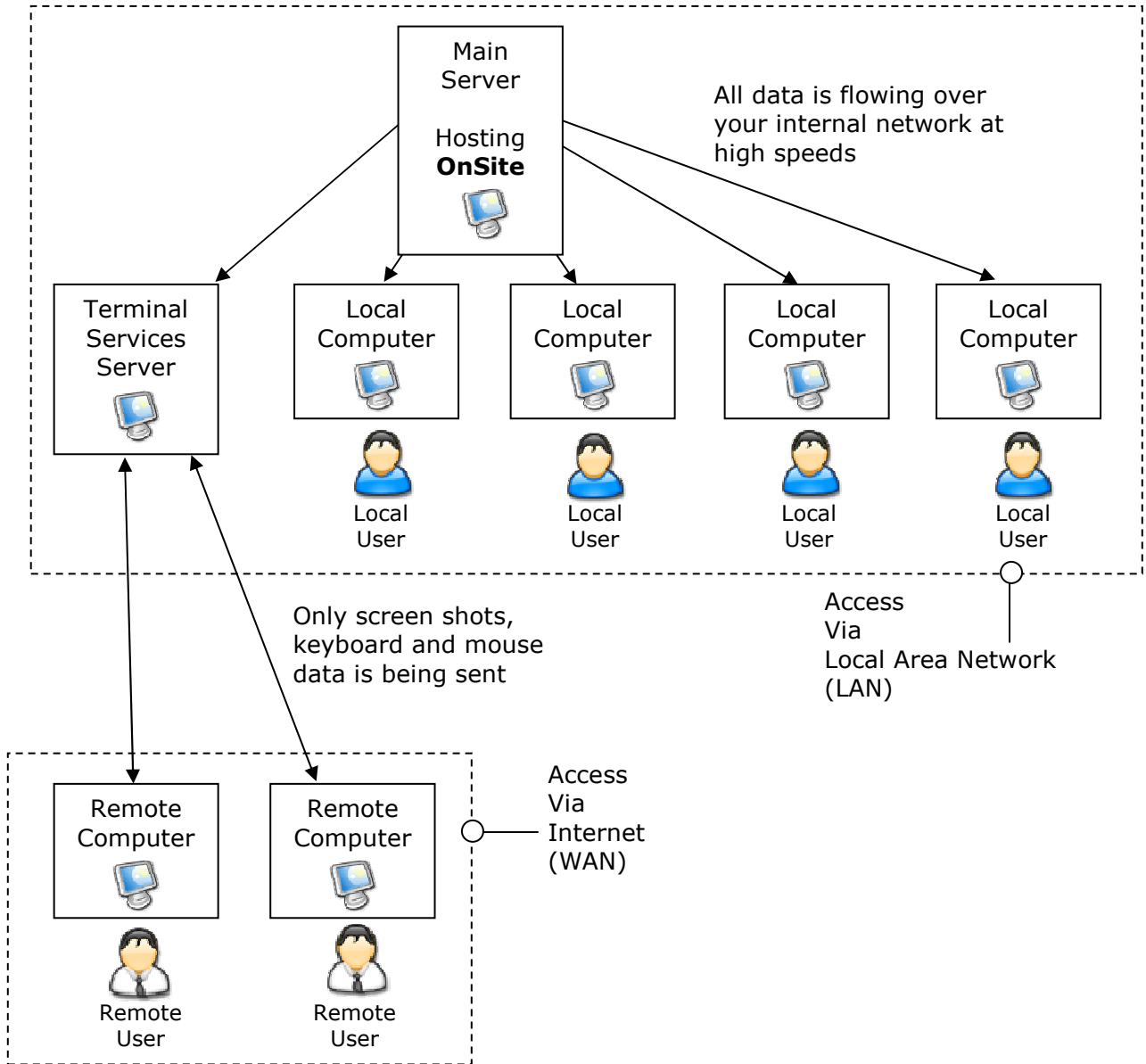
<http://www.microsoft.com/windowsxp/using/mobility/getstarted/remoteclient.mspx>

Why should I use it?

Imagine your company has outside salespeople, distributed across the country, that need access to customer and order entry information. Or maybe you like the idea of being able to work from home. Users can simply login remotely and be able to access and work on anything that your company has on the network including Onsite. You control which users have access and can change access at anytime. With good bandwidth at your office and with the remote user, performance will be very good.

How does Onsite work with Terminal Services?

Once you have logged in using a remote connection then Onsite works just like sitting at a computer at the office. Just like a workstation computer at the office, you have a desktop with icons and shortcuts. One of those shortcuts is Onsite. Click the shortcut and OnSite will open. Once you have the Terminal Services server setup we can help you get OnSite installed properly. Below is a diagram of how hosted data flows through the network.



Remote users connect using the Remote Desktop Connection (RDC) software and run a local session on the Terminal Server.

Is it Safe?

Like many issues concerning security in the computer world, Terminal Services is as safe as you set it up to be. It will be up to your local computer professionals to ensure your system has a security level you are comfortable with.

The two main issues of concern are...

1. The security of the connection between the Remote User and the Terminal Server. Generally, the most secure connection is an encrypted Virtual Private Network (VPN) between the two computers.
2. The security of the user names and passwords for client access. This is controlled by on the Windows Server (or Terminal Server).

Consult your local computer professional for more information.

Summary

This document was written to help you understand how Terminal Services can be beneficial to your business. Installing and maintaining a Microsoft Terminal Server is not very difficult or expensive. Consult with your local computer/network professional for more information and costs on setting this up.