

# READY NET GO ... NEWS

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## Tip of the Month

### MS Word Tips – Bullets

#### A) Spacing bulleted lists

Have you ever created a bulleted list in Word where each bullet had more than one sentence or paragraph? If you hit **Enter** after the end of the first sentence to start a new paragraph, Word automatically creates a new bullet on the next line even though you may not want it to. How frustrating!

Well, there's an **easy solution** to this problem that **works quite well!**

When you get to the end of the line and want to start a new paragraph, hold down **Shift - Enter** and Word will remove the bullet (and automatically indent the line). If you want to start the bullets again, just hit **Enter** and the bullets will resume on the next line.

#### B) Customizing bullets

Are you tired of the standard disc, square and arrow bullets? Try something new and use one of the many **custom bullets** included in MS Word 2003.

- 1) Open or create a Word document
- 2) Type your bulleted list and select the text
- 3) Choose **Bullets and Numbering** from the **Format** menu
- 4) Click the **Bulleted** tab and then the **Customize ...** button
- 5) Click the button **Picture...**
- 6) Scroll through the list and choose the bullet you want
- 7) Click **OK** twice and your bullets will change to the new selection

## Setting Up a Terminal Server and Remote Desktop Connection

Last month, we discussed the benefits of Virtual Private Networks. Closely aligned to VPN's are a Terminal Server and Remote Desktop Connection. For this newsletter, we'll describe what these terms mean, discuss the overall benefits and give suggestions when you should use these connections on your office network.

### What is a Terminal Server? [see *Figure 1* on p. 4]

A Terminal Server is a server running Windows 2000 or 2003 Server edition that has the terminal services component configured in Application Mode. **Terminal Services** allows client computers to **remotely access applications on the server**. Instead of loading software on individual PCs, users can access applications and modify documents as if they were installed on their PCs. **Multiple PCs can access the server simultaneously**. If the server is not sized properly, system performance may be hindered with many users accessing the system concurrently or if users are engaging in resource-demanding applications.

### What is a Remote Desktop Connection?

Remote Desktop Connection (RDC) software installed on a client computer allows a user to **remotely access another computer's resources** or to remotely access a Terminal Server. Remote Desktop Connection must be installed and configured on each client PC before gaining access to system resources. Access is granted by username and password authentication. Only mouse and keyboard strokes are transferred from the host to the remote computer which decreases bandwidth requirements on the network and increases cross platform usability (i.e. data can be transferred between different Operating Systems).

## WWW (Websites Worth Watching)

1. <http://gethuman.com/us/> - Need to talk to a real person at a company? Look up the number and follow the prompts given on this list. Over 400 companies listed.
2. [www.pandora.com](http://www.pandora.com) – Listen to music online; the service will suggest similar sounding artists for you to explore.

## Benefits of a Terminal Server and Remote Desktop Connection Software

- 1) **Any operating system**, including Mac and Linux, can connect to a server running Terminal Services.
- 2) **PDA's** as well as PCs can connect to a terminal server.
- 3) Individual clients can connect to other computers either on the network or remotely using Remote Desktop Connection – **access to all files and even the desktop** – no server is needed.
- 4) **Reduced** administration **costs** due to centralized management – update the server rather than clients. Administrators also can update client computers remotely rather than visiting each individual workstation when problems arise. Contact us to learn more about the Remote Desktop feature of Terminal Services for administration purposes.
- 5) Built-in **encryption** method ensures data is transferred securely.
- 6) Remote access can be accomplished locally on the LAN as well as through an Internet connection using a VPN.

## When to Use Remote Connections (see Figure 1, page 4)

- A computer in your office has a specific software application you need to access but the computer is located on another floor and you can't leave your desk. Initiate a remote desktop session from your computer to access the program on the other computer without leaving your chair.
- Your office has 30 computers running a variety of Operating System's such as Win 98SE, Win XP and Linux. Install any Windows application on the terminal server and then all of the **computers can access the program through Remote Desktop** (with the proper licenses installed) even if the program cannot be installed on the individual client computers (such as a Macintosh using MS Publisher 2003).
- If you are looking to **reduce administrative costs**, install a Terminal Server so that desktop clients on the network can access any applications installed on the server. This scenario decreases network administrative costs because updates only need to be installed on one computer (the server) rather than on individual clients. In addition, if problems arise, troubleshooting can be narrowed down to one location.
- As we mentioned in last months newsletter, VPNs can also be set up to access files remotely. One of the main differences between setting up a remote desktop connection and a VPN is that with a **VPN connection**, all remote computers need to have **each software application installed locally** to view data files. With a remote desktop connection, you are looking at screen shots of an application running on the Terminal Server and do not need to have the software installed on your computer.
- **MS Access will not run effectively over a VPN** so if multiple users need remote access to this software, set up a Terminal Server and Remote Desktop Connection Software on client PCs (ensure you properly license the server and PCs) and individuals can use this program.
- Use a Remote Desktop Connection when you need to **access proprietary software** that you are unable to install on your remote PC.

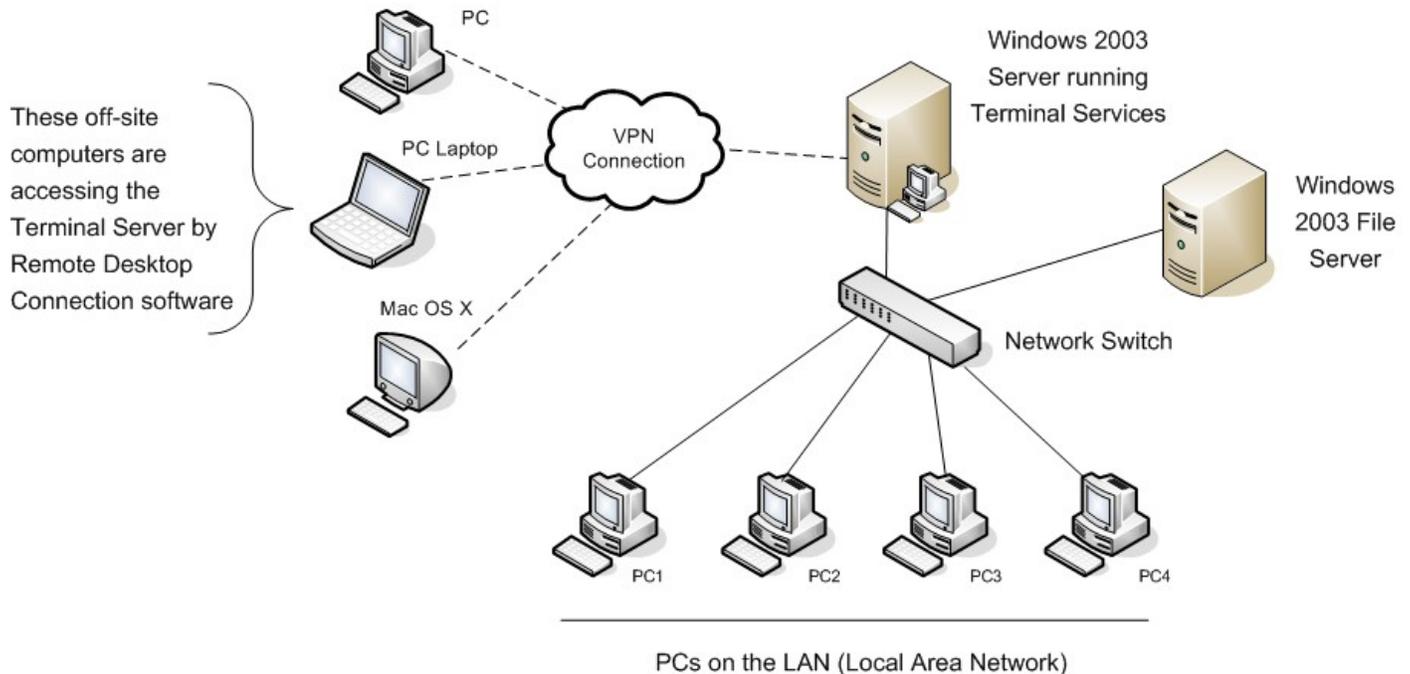
**Things to keep in mind:**

- 1) Running terminal services on a server requires a fast processor and a lot of memory – basically you need a **top notch server** to process the applications effectively. Figuring out the number of concurrent users will be a determining factor in the server's specifications.
- 2) A Terminal Server uses a remote desktop protocol (RDP) to communicate between client and server. RDP works across a TCP/IP connection, such as a local area network (LAN), wide area network (WAN), dial-up connection, Integrated Services Digital Network (ISDN), digital subscriber line (DSL), or virtual private network (VPN) connection.
- 3) If you set up a Terminal Server, **licenses** must be purchased **for the Server as well as clients** that will be accessing the server. Proper licensing means obtaining a Windows server license plus a group of CALs (Client Access Licenses) which enables a certain number of PCs to access the server. In addition to the server licenses, individual workstations will also need terminal services licenses (if they will be accessing the terminal server) and application CALs (such as MS Office 2003 or Adobe Acrobat). *Remember: even if software is not installed on a PC, you still need to obtain a license in order to access software from that PC.*
- 4) Some businesses reap **monetary benefits by switching to a Terminal Server** to host their applications. Since licensing requirements for a terminal server are different from a traditional server, you may find that moving applications to a Terminal Server will reduce costs. Cost/benefit analyses favor businesses with multiple desktop clients that require access to the same application(s). If you only have one or a few computers that need access to an application and they are on the local LAN, it may be more prudent to stay with the traditional client/server operation.
- 5) If you access the Terminal Server via a web connection, you will need to **install and use an ActiveX** component on your computer. ActiveX components can only be run in Internet Explorer.
- 6) Terminal Server in Application Mode **will not run** on Microsoft Small Business Server. If you already have an SBS server, you must have another server with MS Windows 2000 or 2003 Server edition installed to use Terminal Services.
- 7) Terminal Server needs to run in a **single use environment**. It should not be installed on a server hosting another application, such as SQL Server, or on a server acting as a Domain Controller.
- 8) Terminal Services runs well on a **low bandwidth** connection such as a 56K dial-up modem — only the screen shot is transferred rather than the data itself which greatly reduces the bandwidth needed for file transfers.
- 9) Clients must have Remote Desktop Connection installed (**included in all versions of Windows XP and CE** – other Operating Systems can download the software via Microsoft's site).
- 10) If two Windows XP computers want to connect, open a Remote Desktop Connection session. A Windows Terminal Server does not need to be configured for you to gain access to another computer.

**Requirements for a Remote Desktop Connection Session?**

Both computers must have access to the same network, both computers must be turned on, and the PC being remotely controlled cannot be used by someone else at the same time (i.e., only one person can be logged on a Windows XP or 2000 PC at a time).

**Figure 1.** Diagram of a network where clients access data from three locations: locally from a file server, PC to PC through remote desktop connection, and locally and remotely through a Terminal Server.



### Network Connection Scenarios:

- 1) PC1 needs to access a program on PC2. PC1 initiates a remote desktop session to PC2. **The user on PC2 must log off so that PC1 can access system resources** (Note: only one person is permitted to be logged onto a PC at any given time). PC1 accesses the system and when complete, terminates the session. The individual at PC2 may now log back in and resume work.
- 2) An individual at home needs to access work files but she has Mac OS X instead of Windows XP. No problem since there is a terminal server set up at work. The Mac user establishes a VPN connection and logs in using a remote desktop connection. She can now **access files** through the server (by viewing screen shots of the documents), make any necessary edits, and save her work even if she **does not have the software application installed on her Mac**. After closing the files, other individuals on the network can open these documents and view any changes.
- 3) Your office has 30 PCs and all users need access to MS Office 2003 both locally and remotely. Instead of installing and configuring Office on each workstation, **install Office 2003 on a Terminal Server**. If the Server and workstations have the proper licenses, users will be able to access Office whenever and wherever they need.

**NOTE:** For this example, proper licensing includes Windows 2003 Server plus a minimum of 30 CALs (Client Access Licenses). You will also need to purchase terminal services CALs and MS Office 2003 CALs for each workstation.

**\*\* When did you last backup your data? \*\***