Managing Terminal Service Features within a Classroom Environment

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Managing Terminal Service Features within a Classroom Environment

Before you begin:

Have you ever wondered what your students were actually doing while working in the computer lab?

While using the lab have you ever felt that too much instructional time was wasted on jumping around from computer to computer in an effort to ensure students were on track?

Have you ever felt overwhelmed and pressed for time while working with students in the computer lab?

If you answered yes, to any of these questions than this instructional guide is designed just for you!

Understanding Terminal Services and being able to manipulate the various features of the software, is a critical step in decreasing classroom management time while increasing faculty instructional time while in the computer lab.

After completing this instruction, you will very pleased with the monitoring side of the software as it enables you to keep an eye on what was happening on the computers in the lab without having to walk to the different computer areas. Just having the program running keeps those students with a tendency to move off task on task because they know that they maybe being remotely monitored. This prevents them from accessing alternative sites/programs, so they are less likely to become distracted.

Understanding the benefits of the software is also very useful when dealing with an individual or small group of pupils who may need individualized instruction within the main lab. This instructional program is packed with useful, easy-to-understand information and clear, step-by-step instructions.

Let's Get Started

The first piece of instruction that you need to know are the features available to you as Terminal Services Manager Software user. Below you will find key concepts and terms that will lay the foundation for later instruction over how to use certain management features of the software.

Concepts Terms and Definitions:

Terminal Server: Provides multiple users access to one central computer. Once properly logged in the terminal server, you can run programs, save files, and use network resources from a remote computer location as if the resources were installed on the computers your class is using.
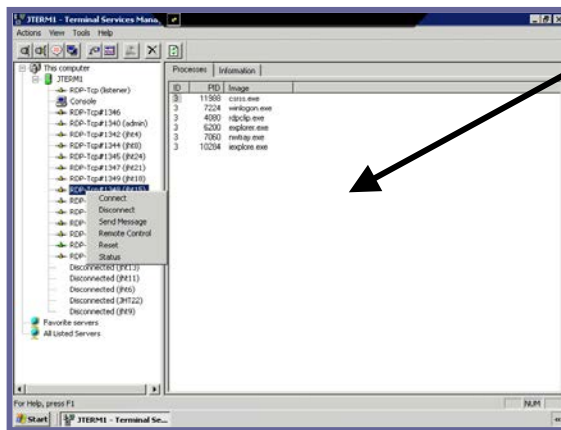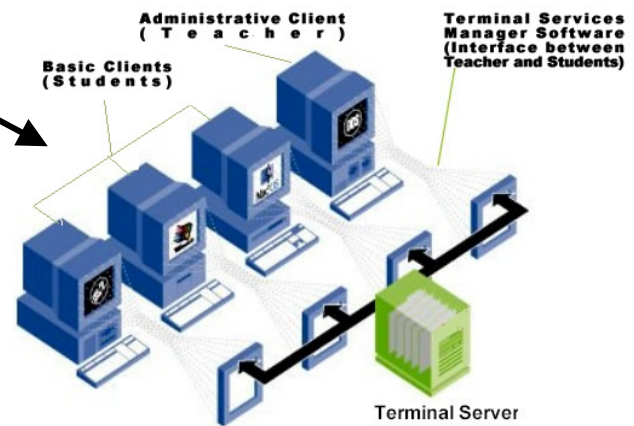
Terminal Services Manager Software: With this pre-installed software and your administrative server password, you have access, from the administrative client (your computer), to various software features. Features are used to manage sessions, users, and processes for each basic client (student computer) connected to the terminal server in the class.

Six Terminal Server Services Management Software Features:

1. Connect
2. Disconnect
3. Send Messages
4. Remote Control
5. Reset
6. Status
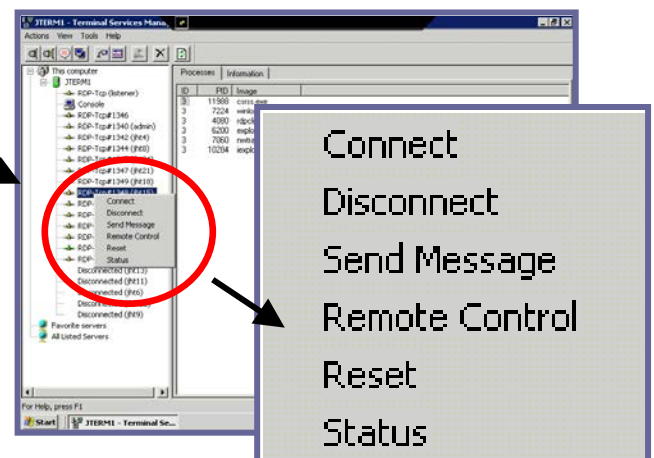
Features	Capabilities
Connect	Connect to another client's session from within an existing session. Connecting client assumes full control of all applications running on the server. Connecting user is logged in under their username and password.
Disconnect	Disconnect an active session, the session remains attached to the terminal server in a disconnected state and applications continue to run. The applications remain running until the session is reconnected, no loss of data.
Send Messages	Send text messages to client users whose sessions are in the active or connected state.
Remote Control	Administratively control a computer from virtually any computer on your network. Take over all features of the control computer including mouse and keyboards functions.
Reset	Client session is immediately deleted from the server, ending all open applications, and all unsaved data is immediately deleted.
Status	Client session's status information is displayed including time and application log and other usage statistical data related to session.

The six Terminal Services Management Software features in the table above will be the main tools used to assist you effectively managing the lab environment. Not all the capabilities for each feature could be mentioned, so there is room for you to explore and adapt the software features to fit your specific instructional needs.

Keep in mind the capabilities of each feature, as you continue through your instruction!

Practice What You Learned

In the chart below, write how you might incorporate each feature into their instruction.

Features	Incorporation
Connect	
Disconnect	
Send Messages	
Remote Control	
Reset	
Status	

Now that you learned the features of the Terminal Server Services Manager, we are ready to learn the how to access the Terminal Services Manager.

Check Your Practice

In the chart below are some possible ways you might
incorporate each feature into your instruction.

Answers will vary depending on instructor and situation!

| Features	Incorporation
Connect	Different instructors are collaborating on a real time project or application from different locations. Instructors can exchange sessions without interpreting applications.
Disconnect	For instructors who may have a particular application running and have to disconnect for a short period and return to the lab. During lunch, end of the class, and passing periods.
Send Messages	Notify students of impending disconnection, server status, or other system information. To answer student questions and to provide instructions.
Remote Control	Demonstrate procedures and applications troubleshoot and resolve technical issues, access computer hard drive, and configure software and hardware.
Reset	Used in extreme circumstances such as when the connection to the sever stops responding, freezes, or a client is running a restricted application.
Status	Used to monitor programs or application students are running. Assist in determining network security violations.

Accessing the Terminal Services Manager

In next section of instruction, you will learn how to access the Terminal Services Manager Software. The Terminal Services Manager is the program that you will use to manage the six features you learned about in the previous section.

Steps to Access the Terminal Services Manager Software

Step 1:
Log into the Terminal Server using your pre-assigned administrative terminal server username and password.
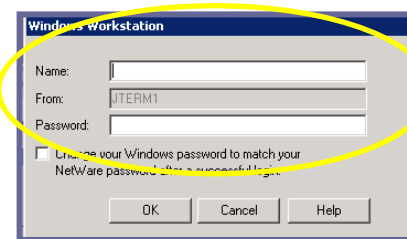
Terminal Server Login Box

Step 2:
Wait for the Windows administrative desktop to load.
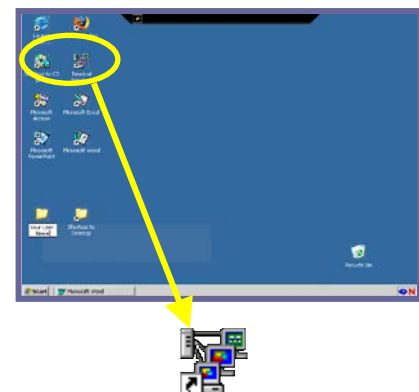
Administrative Desktop

Audio Checkpoint:
When you stop hearing the Windows boot-up audio and see the Windows desktop it is finished loading.

Visual Checkpoint:
You will know when you are properly logged into Terminal Server as an administrative client when you see the Terminal Services Manager Icon.
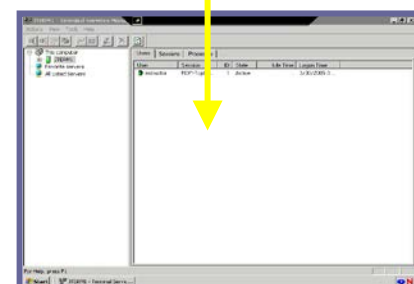
Terminal Services Mana

Step 3:
Place mouse cursor on the Terminal Services Manager Icon and double click the left mouse button on top of the icon to execute.

Terminal Services Mana

Wait approximately 3-5 seconds for Terminal Services Manager Desktop to open.

Visual Checkpoint:
You will know when the Terminal Services Manager Desktop is loaded when you see the Terminal Services Manager Desktop.

Practice What You Learned

Complete the chart below by answering the questions about how to properly open the Terminal Services Manager.

Use any cues provided to assist you in figuring out any proceeding steps!

Steps to Access the Terminal Services Manager Software

Write Step 1:
_____
_____
_____
_____

= Sound Checkpoint

Answer Step 2: Describe how you will know when you are properly logged into the Terminal Server: _____
_____
_____

= Visual Checkpoint

Write Step 3:
_____
_____
_____
_____

Checkpoint Notes:
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Keep practicing this exercise until you completely understand how to properly open the Terminal Server Manager!

Check Your Practice

Review the chart below by reviewing a sample answer to the questions about how to properly open the Terminal Services Manager.

The cues consist of sounds and visual devices that you should be familiar with since you have already used Microsoft Windows Operating Systems in the past!

Steps to Access the Terminal Services Manager Software

Write Step 1:
Login to the Terminal Server using my username and password. Wait for the Windows startup music to stop playing and take me to the desktop.

= Sound Checkpoint

Checkpoint Notes:
Must have my username and password to enter it into the login box.

The desktop will load just like when I log into the network in my classroom, but there is a key difference because I now have an additional icon.

Click on the now icon and wait for the desktop of the software manager to load.

Answer Step 2: Describe how you will know when you are properly logged into the Terminal Server: When you see the Terminal Services Manager Icon on the Windows desktop.

= Visual Checkpoint

Write Step 3:
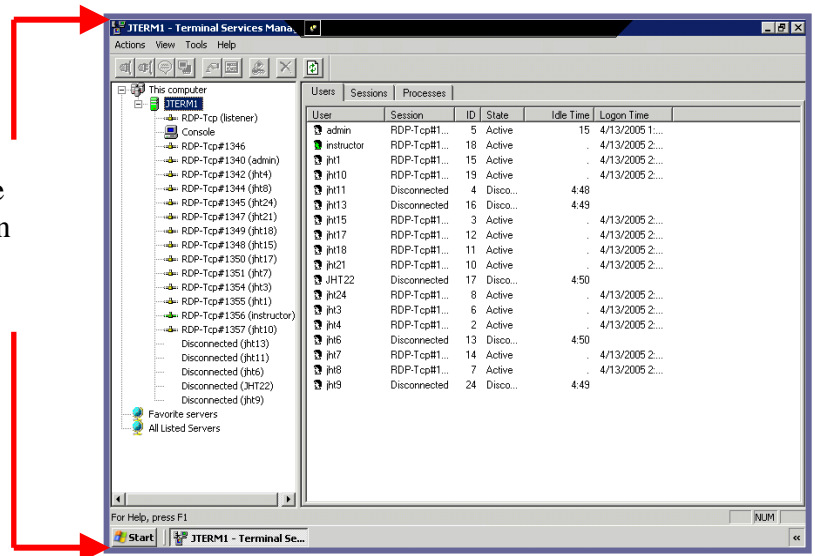When the Terminal Services Manager Desktop.

Great Job!
Keep it up throughout the remainder of your instruction.

The Terminal Services Manager Desktop

The Terminal Services Manger Desktop contains a toolbar and several panes you must know in order to quickly locate and execute the features you learned in earlier sections.
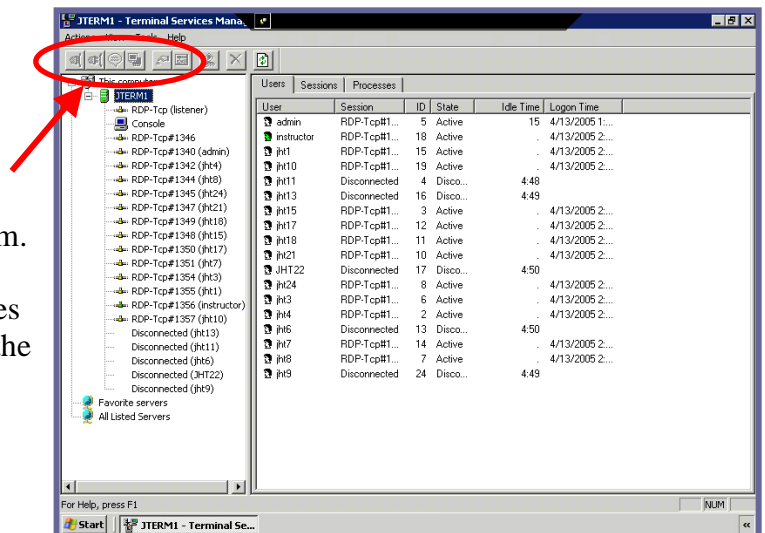
Concepts Terms and Definitions:

Console Window Desktop: In regards to the Terminal Services Manger, it is the on-screen work area on which windows, icons, menus, and dialog boxes appear.


Toolbar: A row, column, or block of on-screen buttons or icons often known as graphical user interface. When clicked, these buttons or icons activate certain functions, or tasks, of the program.

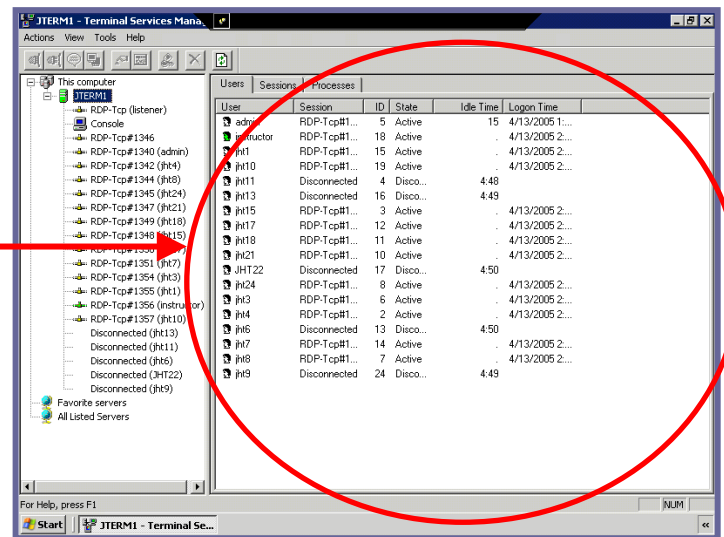For example, the toolbar on the Terminal Services Manger Desktop contains buttons for accessing the features.

Concepts Terms and Definitions:

Console Tree Pane: The left pane that displays the clients connected to a terminal session. By default, it is the left pane of a console window, but it can be hidden. The items in the console tree and their hierarchical organization determine the capabilities of a console.
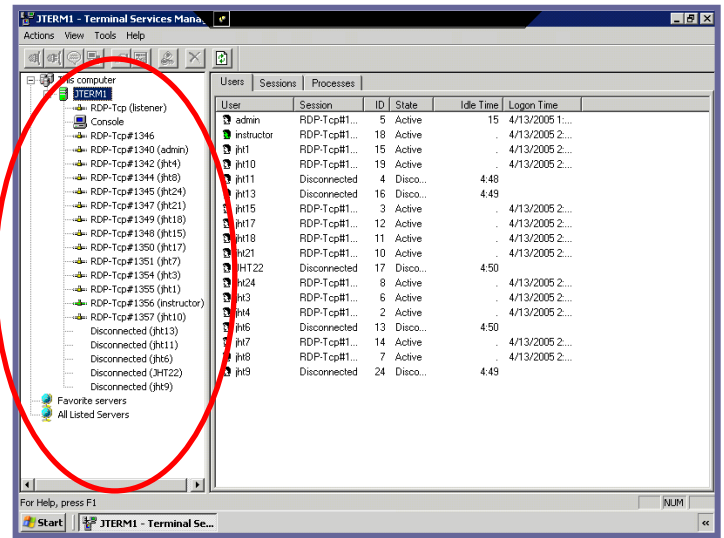

Details Pane: The large center pane of the Terminal Services Manger Desktop that displays the details for the selected client in the console tree. The details can be a list of items or they can be administrative properties, services, and events.

Putting the Terminal Services Manager to Use

On this page, you will see how the feature toolbar, console tree pane, and details pane are central to being able to manipulate the features of Terminal Services Manger Software.
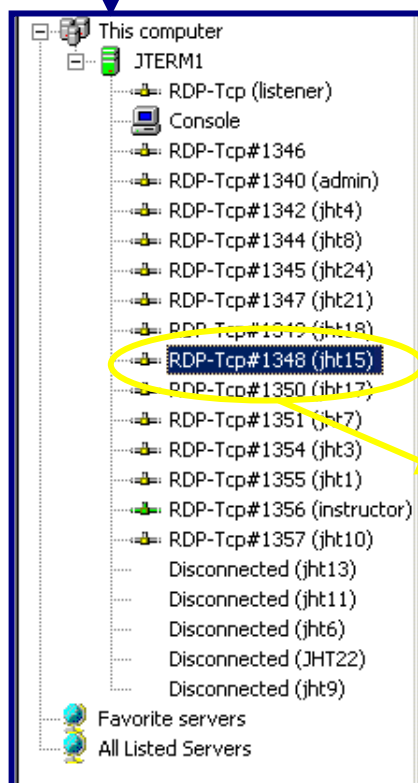
Feature Toolbar
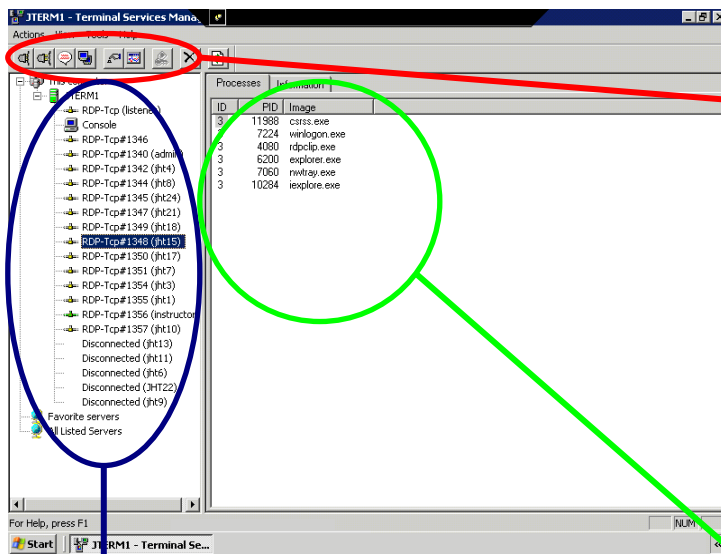
Feature Access Buttons

1 2 3 4 5 6

Use access buttons to execute the Six Terminal Services Management Features discussed earlier:

1. Connect
2. Disconnect
3. Send Messages
4. Remote Control
5. Reset
6. Status

To the left in the console tree pane are all the clients (students) that are connected to a session.

As the administrator of the session, you have complete control while logged they are in the connected state.

The yellow circled client **RDP-Tcp#1348 (jht15)** will be use throughout the remainder of your instructions.

In the next session, you will learn how to use the two most used management features.

Above is a closer look at the details pane. Since client **RDP-Tcp#1348 (jht15)** is highlighted in blue in the console tree pane all of the active processes that are currently open and running are displayed. This is an easy way to monitor what your students are doing.

For example, if they were logged into AOL Instant Messenger than aol.exe would be displayed in the pane as well.

Practice What You Learned

In the space provided below, practice matching which aspect of the Terminal Services Manger Desktop would be used toolbar, access panel, and status panel to provide you with the information.

Information Needed	Toolbar, Tree Pane, or Details Pane
You want to find out which clients are connected to a particular terminal server session.	
You are interested in viewing the active processes that a particular client has open and running.	
You are interested in using the status feature to display information about a client computer.	
You are trying to determine when a particular client a particular application.	
You are trying to determine a clients JHT#.	
You need to let client **RDP-Tcp#1348 (jht15)** know that their session will be reset.	
You are wanting to find out detailed information on when certain clients logged on the session.	
You want to determine if any clients are running AOL Instant Messenger.	

Now that you learned the features of the Terminal Server Services Manager, we are ready to learn the how to access the Terminal Services Manager.

Let's Move on to the Last Section of your Instruction!

Check Your Practice

Compare your answers to the ones below. Review any sections that you
are having difficulty with before moving on to the next section.

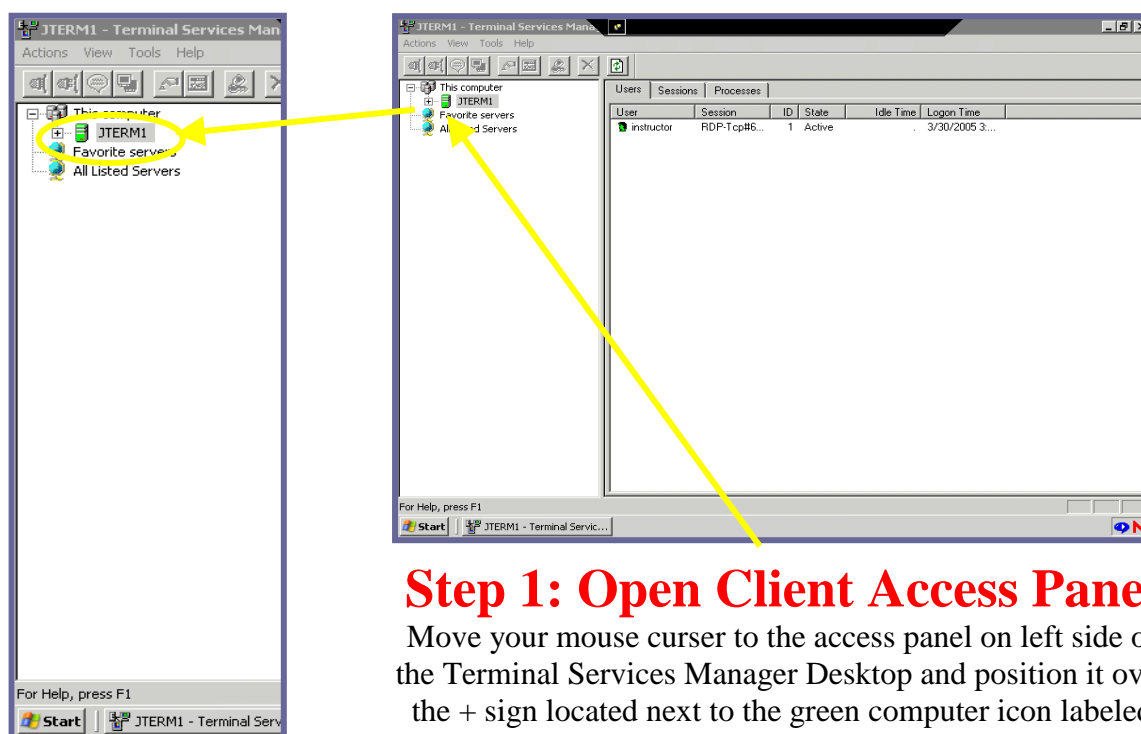| Information Needed	Toolbar, Tree Pane, or Details Pane
You want to find out which clients are connected to a particular terminal server session.	Tree Pane
You are interested in viewing the active processes that a particular client has open and running.	Details Pane
You are interested in using the status feature to display information about a client computer.	Toolbar
You are trying to determine when a particular client : a particular application.	Details Pane
You are trying to determine a clients JHT#.	Tree Pane
You need to let client **RDP-Tcp#1348 (jht15)** know that their session will be reset.	Toolbar
You are wanting to find out detailed information on when certain clients logged on the session.	Details Pane
You want to determine if any clients are running AOL Instant Messenger.	Details Pane

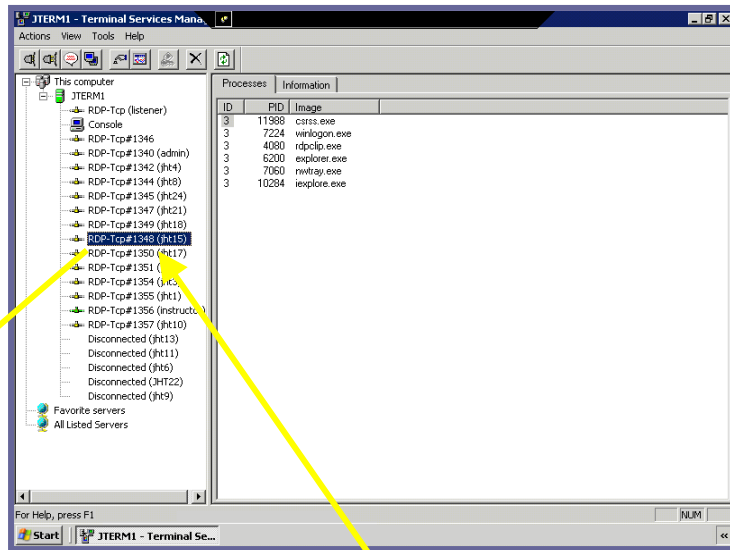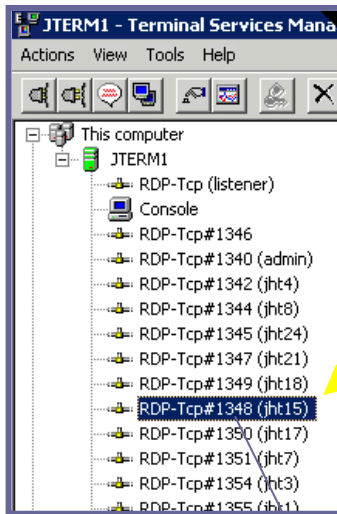# Execute the Send Message and Remote Control Feature

The last piece of instruction covers how to execute the send message and remote control features using the Terminal Services Manager. After completing this section, you will be able to operate the two main features you will be using in a classroom environment.

Here is a quick review of the two features you will learn how to execute in this section!

| Send Messages	Send text messages to client users whose sessions are in the active or connected state.
Remote Control	Administratively control a computer from virtually any computer on your network. Take over all features of the control computer including mouse and keyboards functions.

Executing the Send Messages Feature

Step 1: Open Client Access Panel

Move your mouse curser to the access panel on left side of the Terminal Services Manager Desktop and position it over the + sign located next to the green computer icon labeled JTERM1 and press the left-click mouse button.
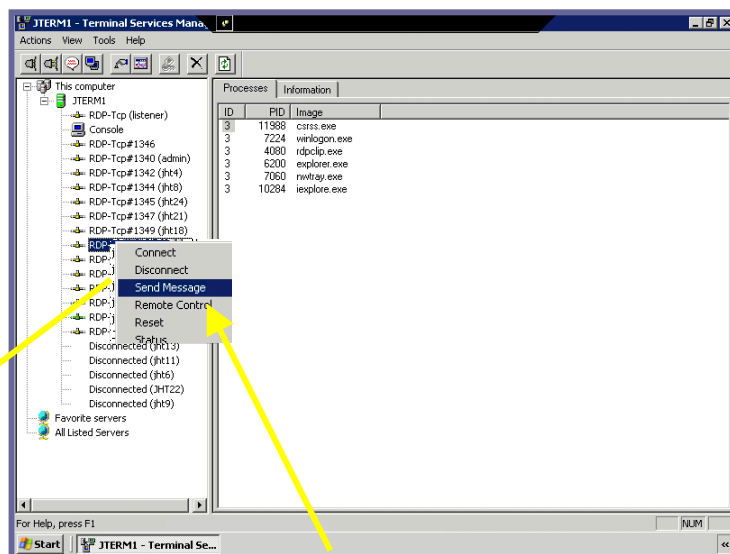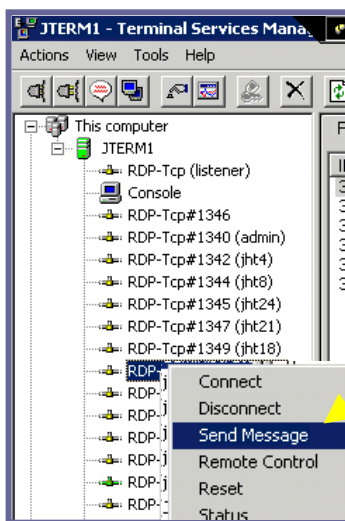
Step 2: Select Client to Send Message
Right-click on the JHT # which corresponds with client computer to which you want to send a message.
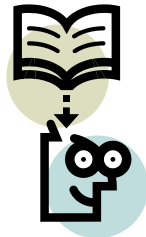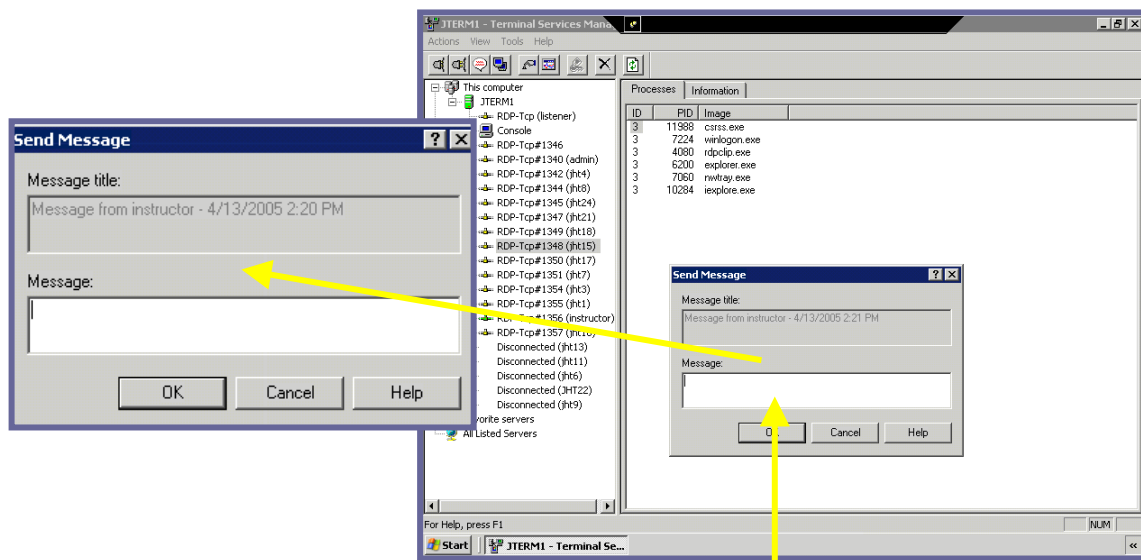
Keep in Mind: Connected clients can only be referenced by JHT #, so a class seating chart maybe needed to know exactly who is logged on the server from a specific client computer. JHT # can be seen in parenthesis following the RDP-Tcp#.
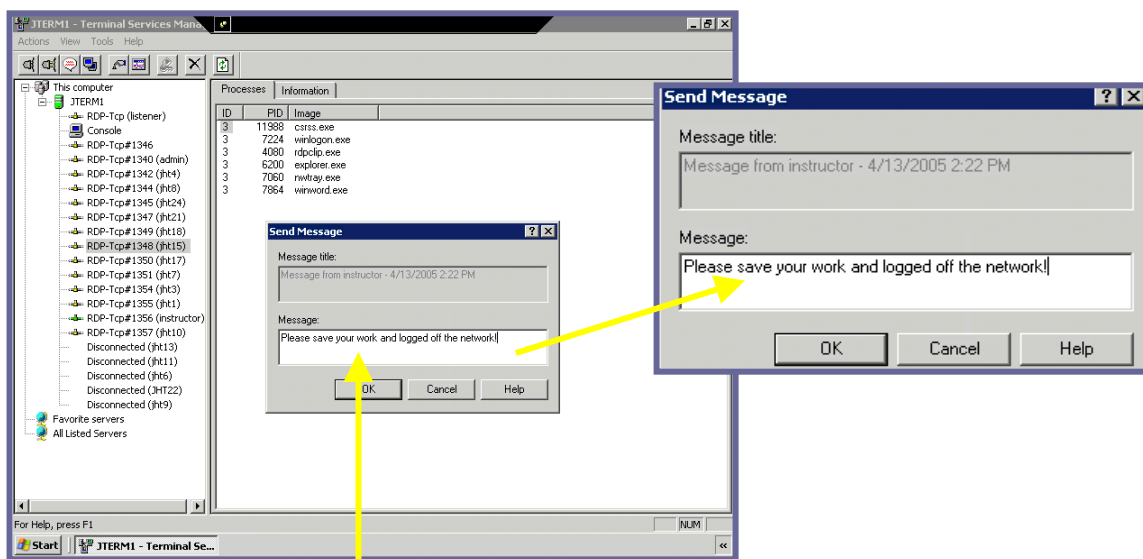
Step 3: Select Send Message
Left-click on highlighted send message text in the interactive dialog box.

Cue

Wait 2 seconds for the send message dialog
box to appear in a details pane.

Step 4: Type Message

Place curser in the message input box, left-click and
type the information you want to send to the
designated client (student).

Note: To start a new paragraph within the same message, press CTRL+ENTER on the keyboard and continue typing message.
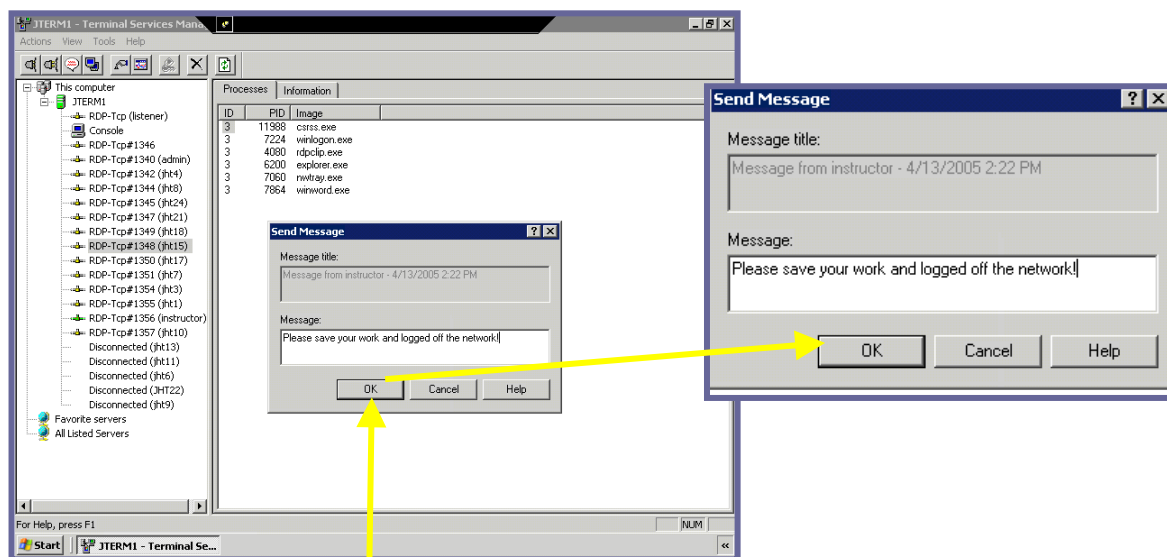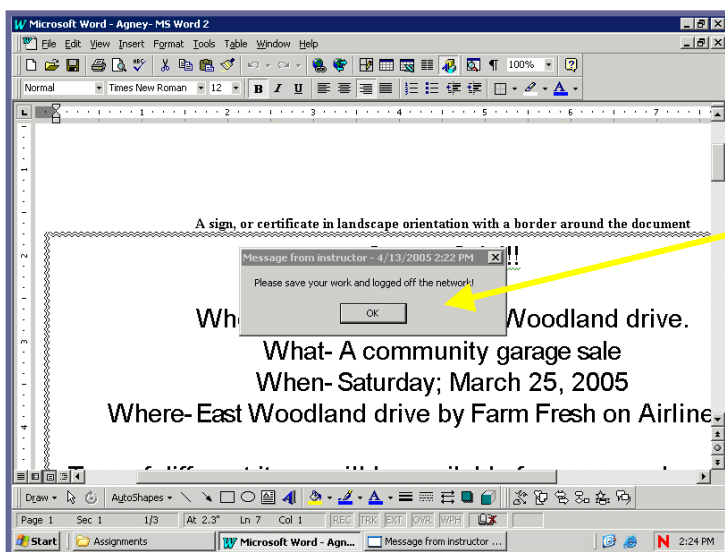
Step 5: Send Message

To send the message, move mouse curser over the
OK button; located on the bottom of the message
dialog box and click the left mouse button.

Note:
1. Messages sent to client computers via the send message feature can only be viewed,
client computers can not respond to messages.

2. Messages can only be sent to clients whose sessions are in the active or connected state.

Step 6: Message Received

This is a screenshot of client (student) **RDP-Tcp#1348 (jht15)** receiving the message.

Executing the Remote Control Feature

The first three steps to execute the remote control feature are the same as the send message feature. Once you get to the third step it changes, but only in regards to which feature you select. In this case, you will be selecting the remote control feature so you will highlight the remote control text in the interactive dialog box.
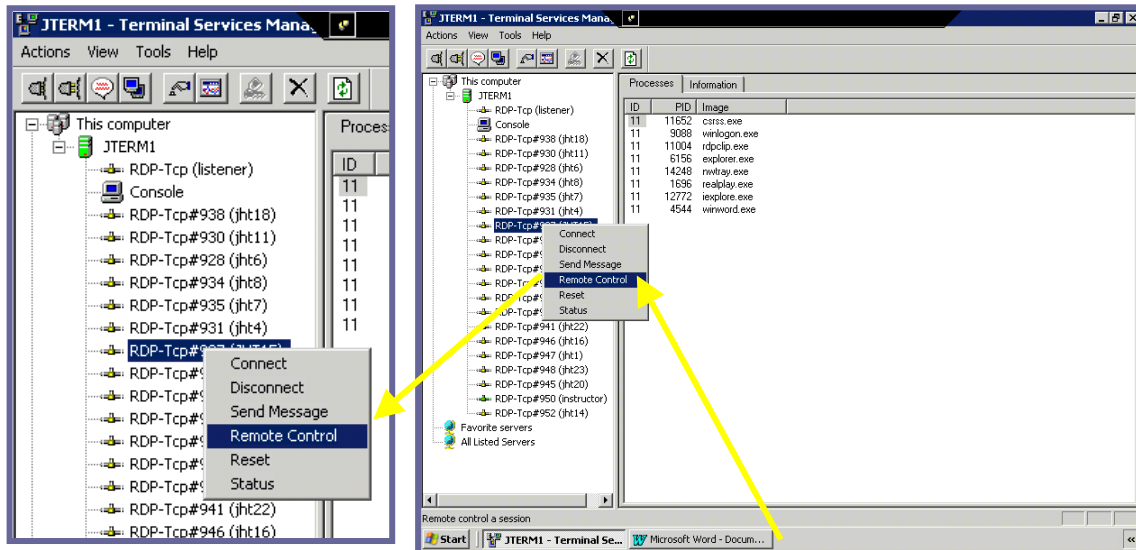
Step 3: Select Remote Control
Left-click on highlighted remote control
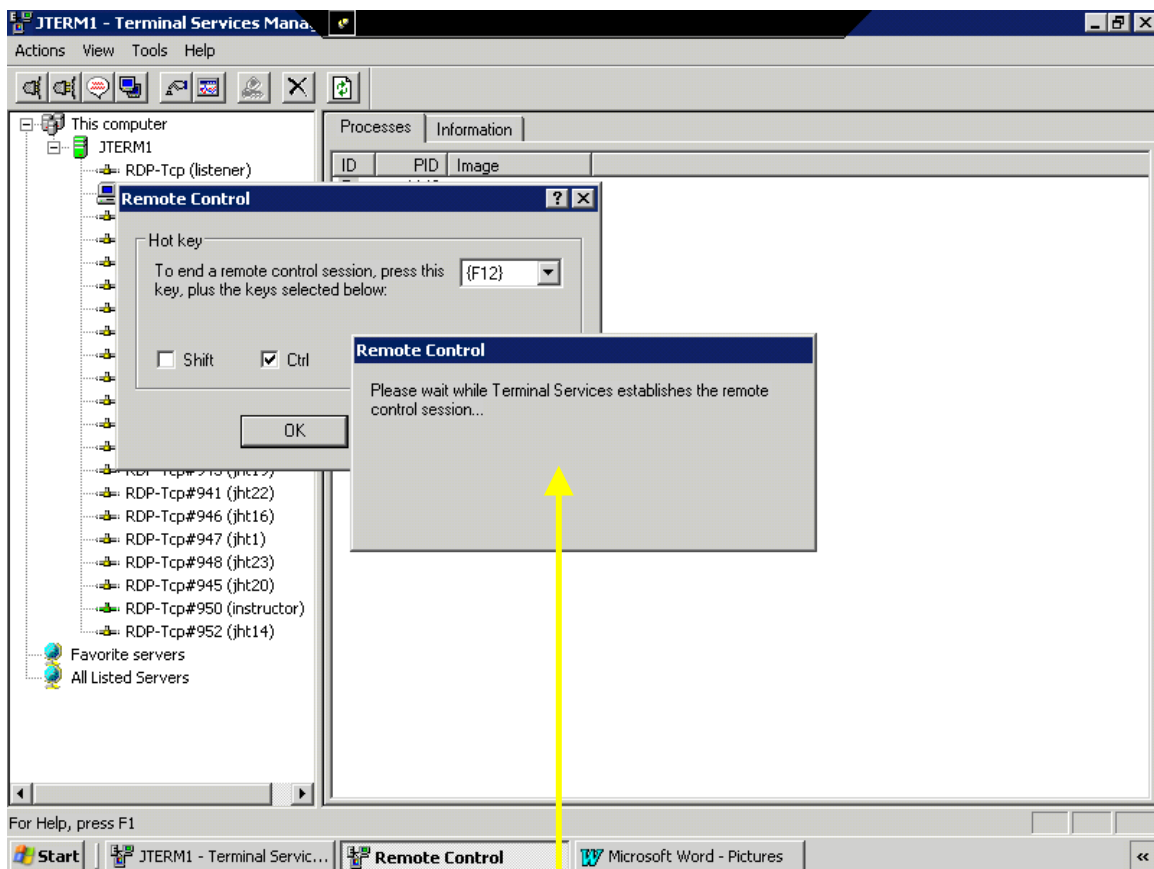text in the interactive dialog box.
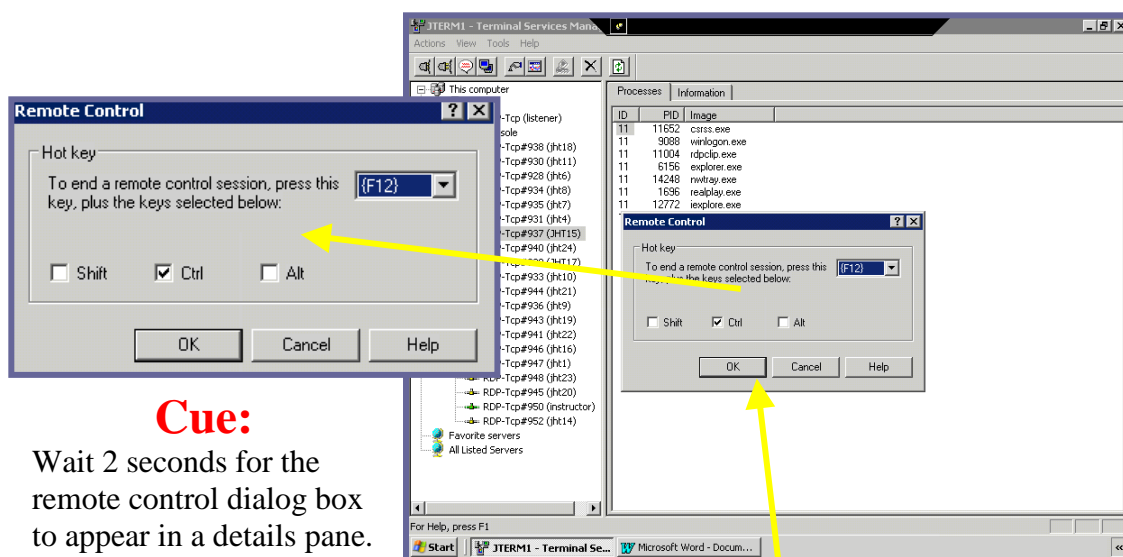
Cue:
Wait 2 seconds for the
remote control dialog box
to appear in a details pane.

Step 4: Establish the Connection
To establish the connection, move mouse curser over
the OK button; located on the bottom of the message
dialog box and click the left mouse button.

Step 5: Connecting to the Client Computer

After left clicking the OK button, the administrative client computer may appear to be frozen for a few seconds, while it connects to the basic client computer.

Note:
1. Before monitoring begins, the server warns the user that the session is about to be remotely controlled, unless this warning is disabled.

2. While using the remote control feature, the initiating client shares every input and output with the session you are monitoring.
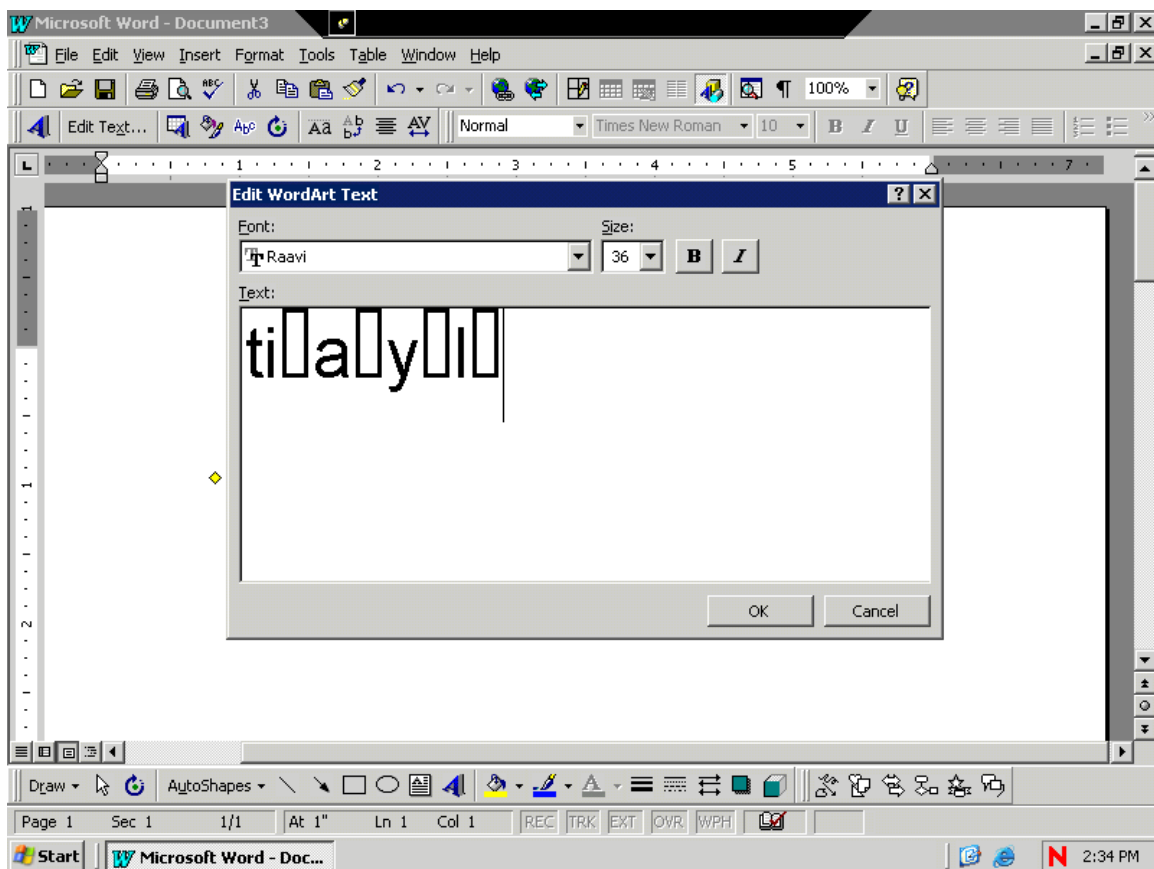
Step 6: Remote Control Established

Once connected, you will be viewing and have full control over
the exact screen that the client (student) is seeing.

Note:
1. To disconnect from a remote control session with a basic client computer, press the CTRL button + the hot key you have defined from the dialog box when remote control session was first initiated.

2. Once properly disconnected from a remote control session, the administrative client computer will be returned to the main Terminal Services Manager Desktop.

Practice What You Learned

In the boxes below each screenshot, practice arranging the pictures in proper order from 1-6 according to how you would see them while using the send message feature.
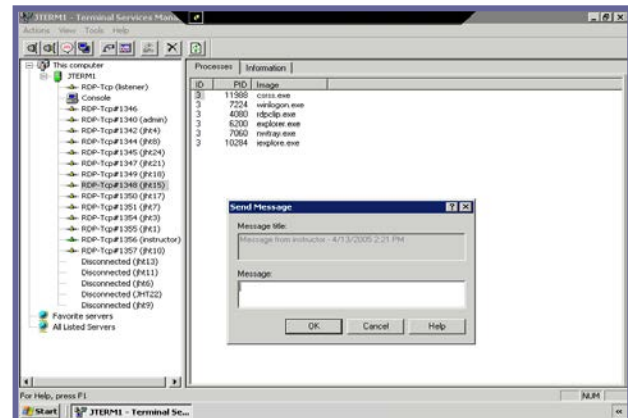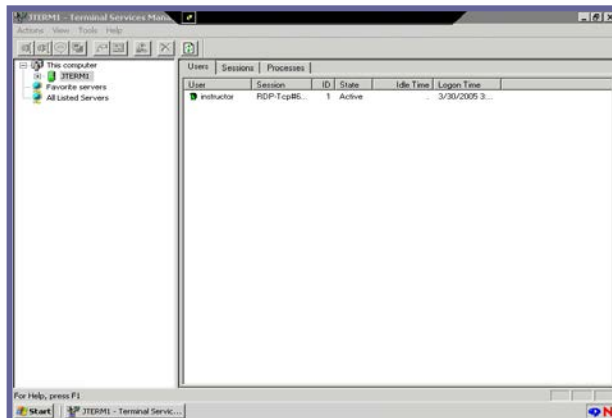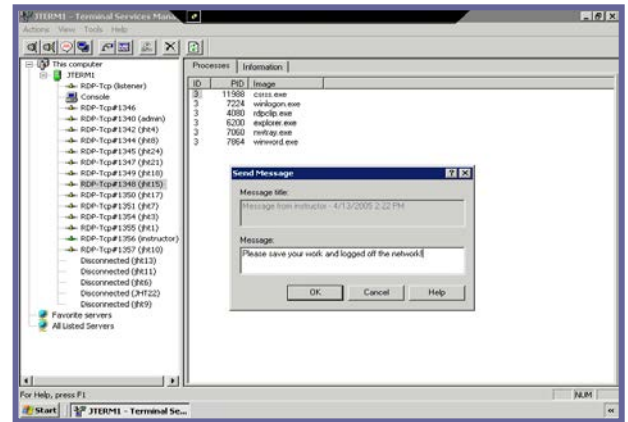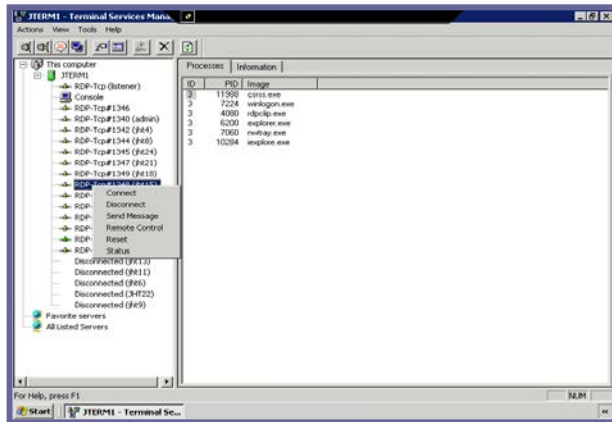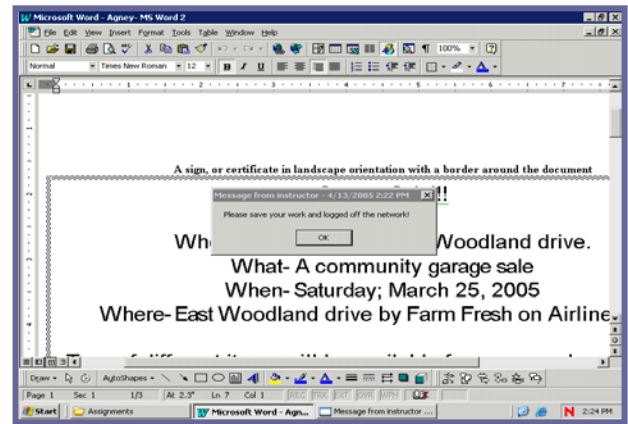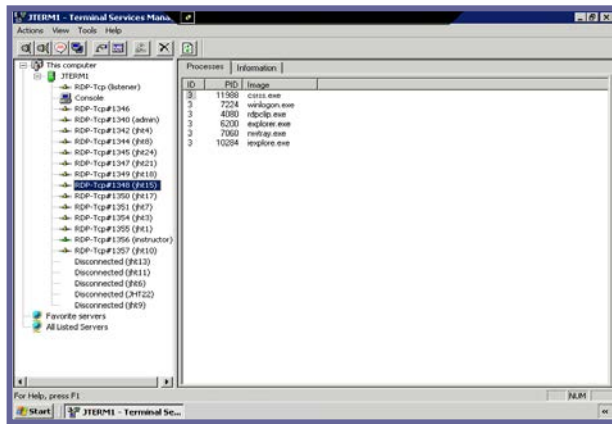
Check Your Practice

The boxes are arranged in proper order from 1-6 according to how you would see them while using the send message feature. Compare your answers to the ones below!
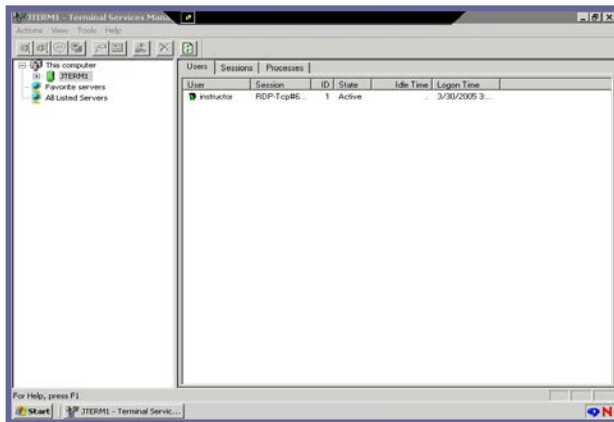

#1

#2

#3

#4

#5

#6

Practice What You Learned

In the boxes below each screenshot, practice arranging the pictures in proper order from 1-6 according to how you would see them while using the remote control feature.
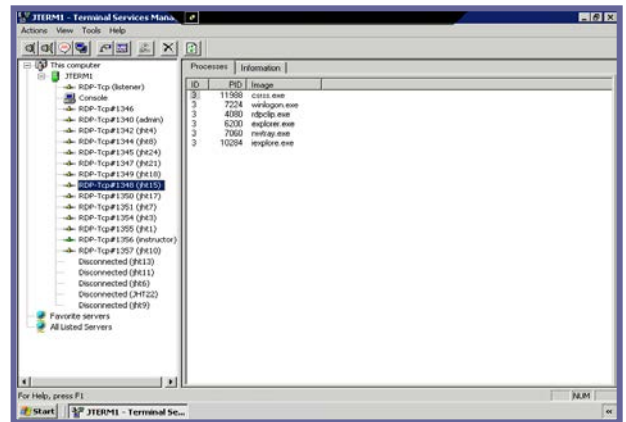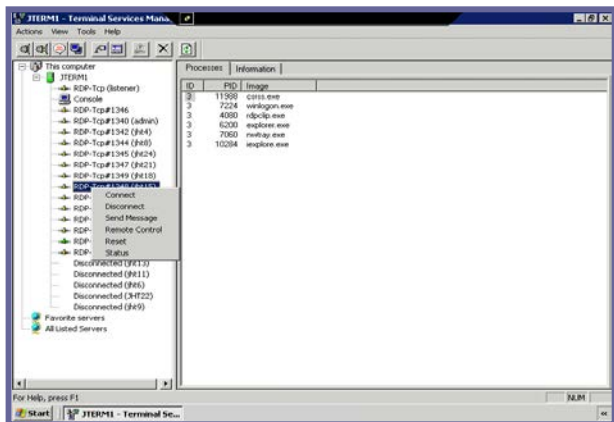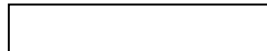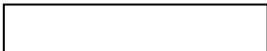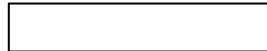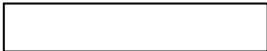
Check Your Practice

The boxes are arranged in proper order from 1-6 according to how you would see them while using the remote control feature. Compare your answers to the ones below!
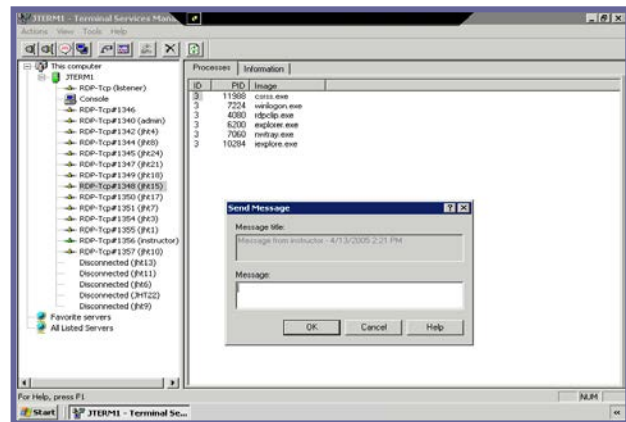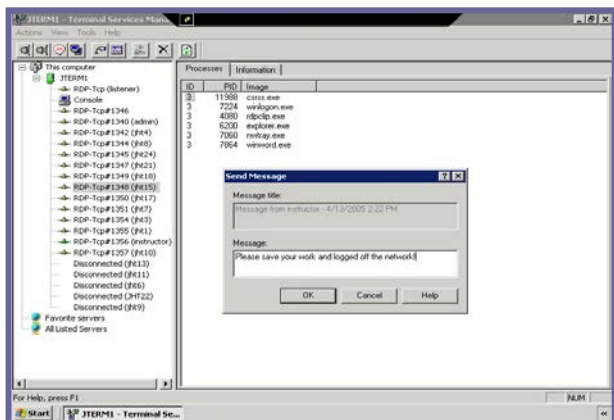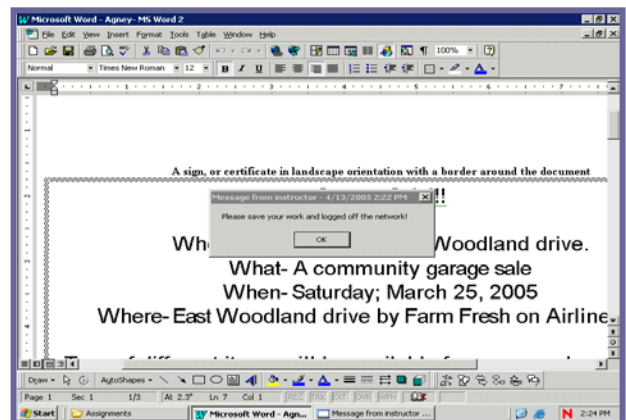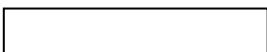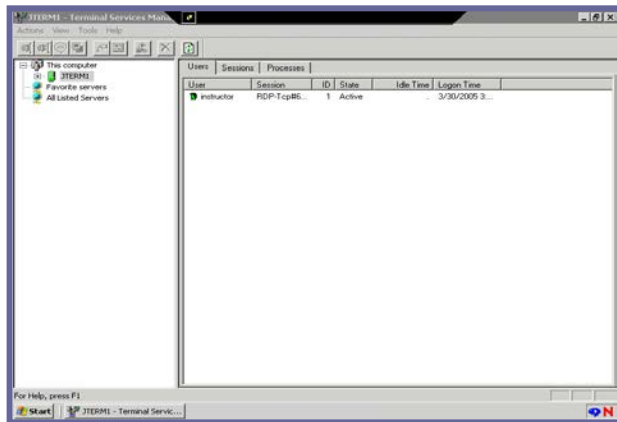

#1
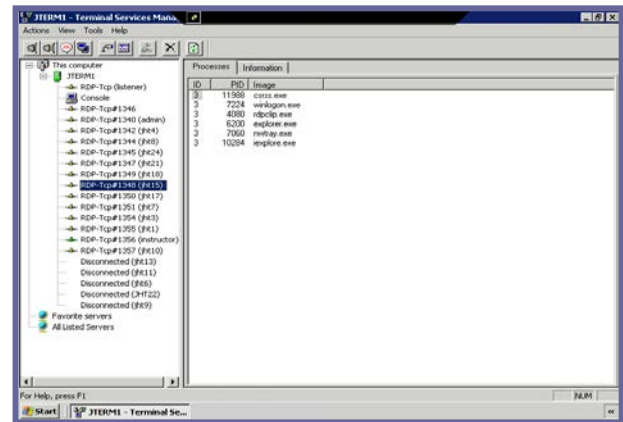
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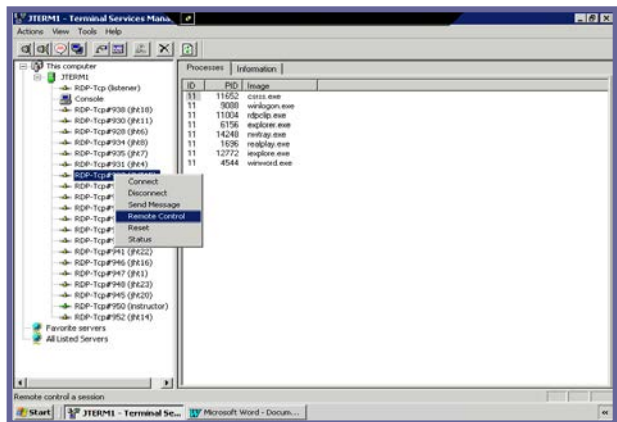
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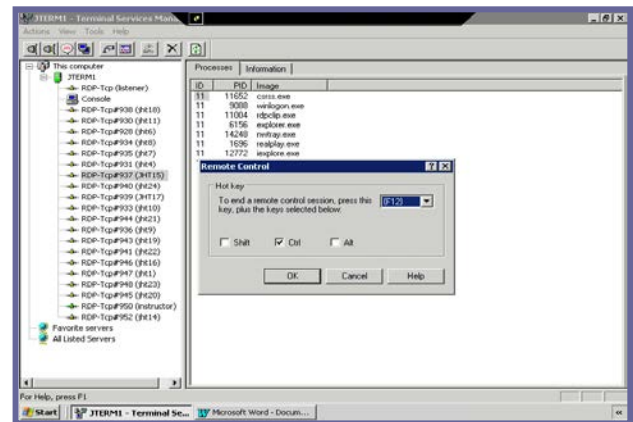
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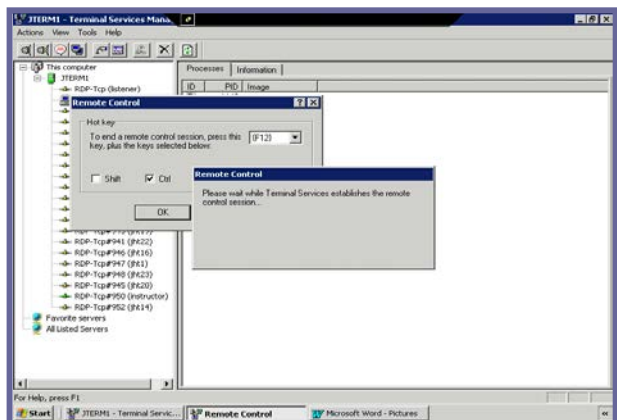
#5
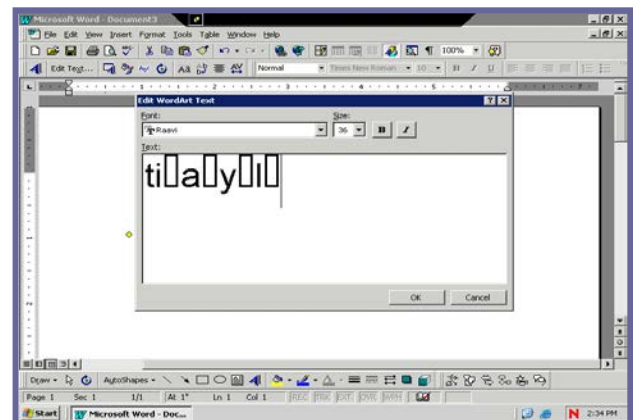
#6

Wrapping Up

Now that you have completed all the sections of this instructional packet, you should be more comfortable with operating the Terminal Services Software Manager within the Roxana Jr. High School computer lab. Your understanding of this material will help you better manage the lab environment and assist you in developing curriculum that combines your subject area and technology.

There is just one thing that you must complete in order to successfully complete this instructional packet and that is the final test.

The final test is a critical part of this instruction; because it will assist you in identify areas that you may need to review. It will also serve as a good indicator of how well you mastered the instruction.

Please do not use the instructional packet to assist you in answering the questions on the final test. I know that it is tempting, but keep in mind that it is your knowledge being tested and it is for your own benefit and the benefit of your students!

Test Taking Tips!

☑ Take the final test after reviewing the material and completing all practice exercises
☑ Take notes and summarize the material before taking the test
☑ Read the directions carefully before answering any questions
☑ Don't be afraid to use the test to help you answer figure out other questions
☑ Notice key words and located throughout questions
☑ Come back to more difficult questions if you get stuck
☑ Think about your response before answering questions
☑ Relax and remember that this test is only provided to enrich your knowledge

Graphics used throughout this instructional packet courtesy of www.google.com and Microsoft Office Clipart 2003. Screenshots of Software Manager provided by SME and edited by instructional designer.

Managing Terminal Service Features within a Classroom Environment

Glossary of Terms and Definitions

Administrative User: A person responsible for setting up and managing domain controllers or local computers and their user and group accounts, assigning passwords and permissions, and helping users with networking problems. Administrators are members of the Administrators group and have full control over the domain or computer.

Client: Any computer or program connecting to, or requesting the services of, another computer or program. For a local area network (LAN) or the Internet, a computer that uses shared network resources provided by another computer (called a server).

Connect: To assign a drive letter, port, or computer name to a shared resource so that you can use it.

Console Tree: The left pane in a Microsoft Management Console (MMC) that displays the items contained in the console. By default, it is the left pane of a console window, but it can be hidden. The items in the console tree and their hierarchical organization determine the capabilities of a console.

Desktop: The on-screen work area on which windows, icons, menus, and dialog boxes appear.

Details Pane: The pane in the Microsoft Management Console (MMC) that displays the details for the selected item in the console tree. The details can be a list of items or they can be administrative properties, services, and events that are acted on by a snap-in.

Interactive Dialog Box: A dialog box that requires a response from the user. Intermediary devices such as a security host require such a dialog box as an added layer of security between the client and the remote access server. In such dialog boxes, the user types an access code or a user name and password on the remote access terminal screen.

Interactive Logon: A network logon from a computer keyboard, when the user types information in the Logon Information dialog box displayed by the computer's operating system.

Icon: A small image displayed on the screen to represent an object that can be manipulated by the user. Icons serve as visual mnemonics and allow the user to control certain computer actions without having to remember commands or type them at the keyboard.

Log On: To begin using a network by providing a user name and password that identifies a user to the network.

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Logon Script: Files that can be assigned to user accounts. Typically, a batch file is script that runs automatically every time the user logs on. It can be used to configure a user's working environment at every logon, and it allows an administrator to influence a user's environment without managing all aspects of it. A logon script can be assigned to one or more users.

Network: A group of computers and other devices, such as printers and scanners, connected by a communications link, enabling all the devices to interact with each other. Networks can be small or large, permanently connected through wires or cables, or temporarily connected through phone lines or wireless transmissions. The largest network is the Internet, which is a worldwide group of networks.

Password: A security measure used to restrict logon names to user accounts and access to computer systems and resources. A password is a string of characters that must be provided before a logon name or an access is authorized. A password can be made up of letters, numbers, and symbols, and it is case sensitive.

Primary Mouse Button: The button you use most often for clicking and double-clicking. The primary mouse button is the left button on most mice and trackball devices, and the lower button on some trackball devices, but you can switch the function of the buttons by using the Mouse Properties dialog box in Control Panel.

Right-Click: To position the mouse over an object and then press and release the secondary (right) mouse button. Right-clicking opens a shortcut menu that contains useful commands, which change depending on where you click.

Script: A type of program consisting of a set of instructions to an application or tool program. A script usually expresses instructions by using the application's or tool's rules and syntax, combined with simple control structures such as loops and if/then expressions. "Batch program" is often used interchangeably with "script" in the Windows environment.

Select: To specify a block of data or text on screen by highlighting it or otherwise marking it, with the intent of performing some operation on it.

Server: In general, a computer that provides shared resources to network users.

Service: A Service is a program, routine, or process that performs a specific system function to support other programs. Examples of services include, but are not limited to the remote control and the send message service.

Session: A logical connection created between two hosts to exchange data. Typically, sessions use sequencing and acknowledgments to send data reliably.

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Static Dialog Box: A scripted dialog box between the client computer and an intermediary device. This kind of dialog box requires no response from the user.

Terminal: A device consisting of a display screen and a keyboard that is used to communicate with a computer.

Terminal Server: Provides multiple users access to one central computer. Once properly logged in the terminal server, you can run programs, save files, and use network resources from a remote computer location as if the resources were installed on the computers your class is using.

Terminal Server Services Manager: With this pre-installed software and your administrative server password, you have access, from the administrative client (your computer), to various software features. Features are used to manage sessions, users, and processes for each basic client (student computer) connected to the terminal server in the class.

Text Box: In a dialog box, a box in which you type information needed to carry out a command. The text box may be blank or may contain text when the dialog box opens.

Toolbar: In a program in a graphical user interface, a row, column, or block of on-screen buttons or icons. When clicked, these buttons or icons activate certain functions, or tasks, of the program. For example, the toolbar in Microsoft Word contains buttons for, among other actions, changing text to italic or boldface, and for saving or opening a document. Users can often customize toolbars and move them around on the screen.

User: A person who uses a computer. If the computer is connected to a network, a user can access the programs and files on the computer, as well as programs and files located on the network (depending on account restrictions determined by the network administrator).

User Password: The password stored in each user's account. Each user generally has a unique user password and must type that password when logging on or accessing a server.

User Name: A unique name identifying a user account to Windows. An account's user name must be unique among the other group names and user names within its own domain or workgroup.

Final Test

1. Select the feature in column II that would be used to carry out the task in column?

Column I	Column II

_____1. You want to verify the processes and applications that a student is running.

_____2. You decide to connect and walk a student step-by-step through the process.

_____3. Return to a session after a meeting and you do not want to end current session.

_____4. You switch logins at the end of the period without interrupting the session.

_____5. A connection is not work properly and ultimately freezes-up.

_____6. You want to advise a student to save their work.

a. Remote Control

b. Administrative Desktop

c. Status

d. Disconnect

e. Reset

f. Send Messages

g. Services Manager

h. Connect

2. Write the 3 steps required to open the Terminal Services Manager?

Step1:

_____

_____

Step 2:

_____

_____

Step 3:

_____

_____
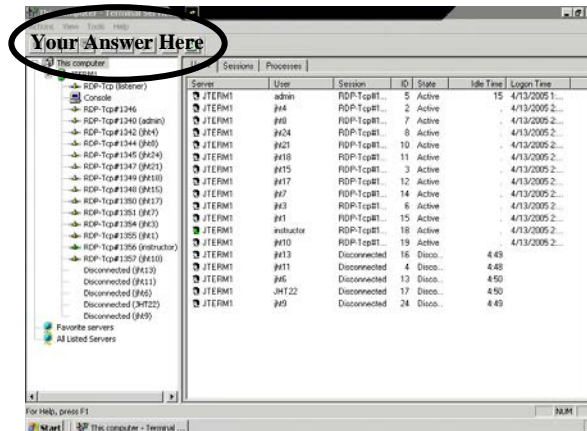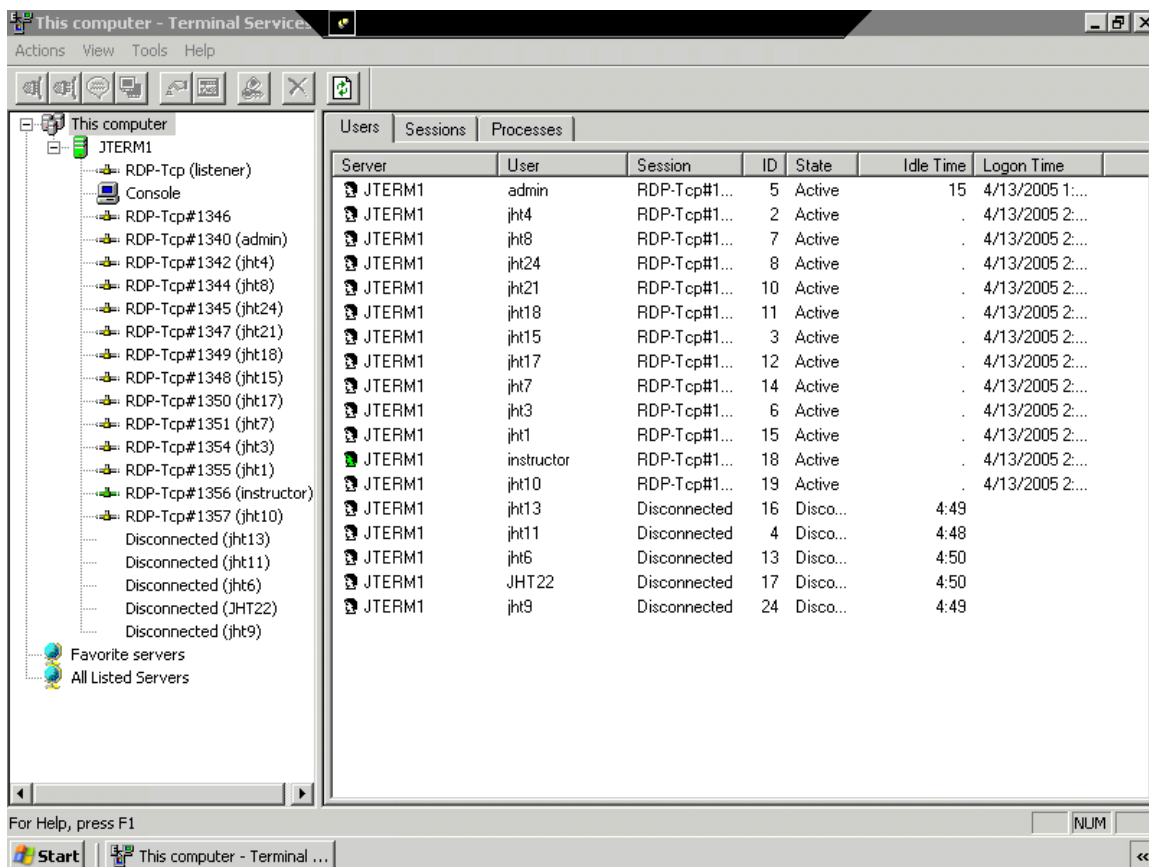
Final Test

3. Circle the area where the feature toolbar, client access panel, and client status panel are located on the screenshot to illustrate correct location. Write feature <u>toolbar</u>, <u>client access panel</u>, and <u>client status panel</u> inside circle to label the correct location?

Example Screenshot:

Test Screenshot:

4. Sequence the list of written steps below that are used to execute the send message feature of Terminal Services Manager in proper order beginning with the number 1 and ending with 6?

_____Select Client to Send Message

_____Select Send Message

_____Client Receives Message

_____Open Client Access Panel

_____Send Message

_____Type Message

5. Sequence the list of written steps below that are used to execute the remote control feature of Terminal Services Manager in proper order beginning with the number 1 and ending with 6?

_____Connecting to the Client Computer

_____Remote Control Established

_____Establish the Connection

_____Select Remote Control

_____Open Client Access Panel

_____Select Client to Remote Control

a. You have just been told that a particular application that students are running on the server will be unavailable for a certain period and you want to advise the student to save their work.
b. While monitoring a student's session, you notice that they are having difficulty with a particular application and you decide to connect and walk them step-by-step through the process.
c. A student is running an unrestricted application which causes their connection to not work properly and ultimately freeze-up.
d. You are collaborating with other instructors on a real time project and must switch logins at the end of the period.
e. You are working a particular project and have to attend a faculty meeting, but want to return to a session after the meeting and you do not want to end the current session.
f. You suspect a student in your class has been using unauthorized applications during class and want to verify all of the process and applications that the student is running.

Final Test Answer Key

1. Select the feature in column II that would be used to carry out the task in column?

Column I	

Column II	

_c____1. You want to verify the processes and applications that a student is running.

_a____2. You decide to connect and walk a student step-by-step through the process.

_d____3. Return to a session after a meeting and you do not want to end current session.

_h____4. You switch logins at the end of the period without interrupting the session.

_e____5. A connection is not work properly and ultimately freezes-up.

_f____6. You want to advise a student to save their work.

a. Remote Control

b. Administrative Desktop

c. Status

d. Disconnect

e. Reset

f. Send Messages

g. Services Manager

h. Connect

2. Write in proper order the 3 steps required to open the Terminal Services Manager?

Step 1: Log into the Terminal Server using your pre-assigned administrative terminal server username and password.

Step 2: Place mouse cursor on the Terminal Services Manager Icon and double click the left mouse button on top of the icon to execute.

**Step 3:** Wait for the Windows administrative desktop to load.

Final Test Answer Key

3. Circle the area where the feature toolbar, client access panel, and client status panel are located on the screenshot to illustrate correct location. Write <u>feature toolbar</u>, <u>client access panel</u>, and <u>client status panel</u> inside circle to label the correct location?

Example Screenshot:
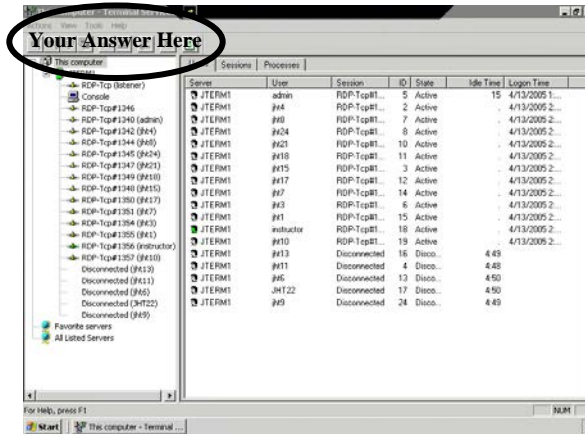
Test Screenshot:
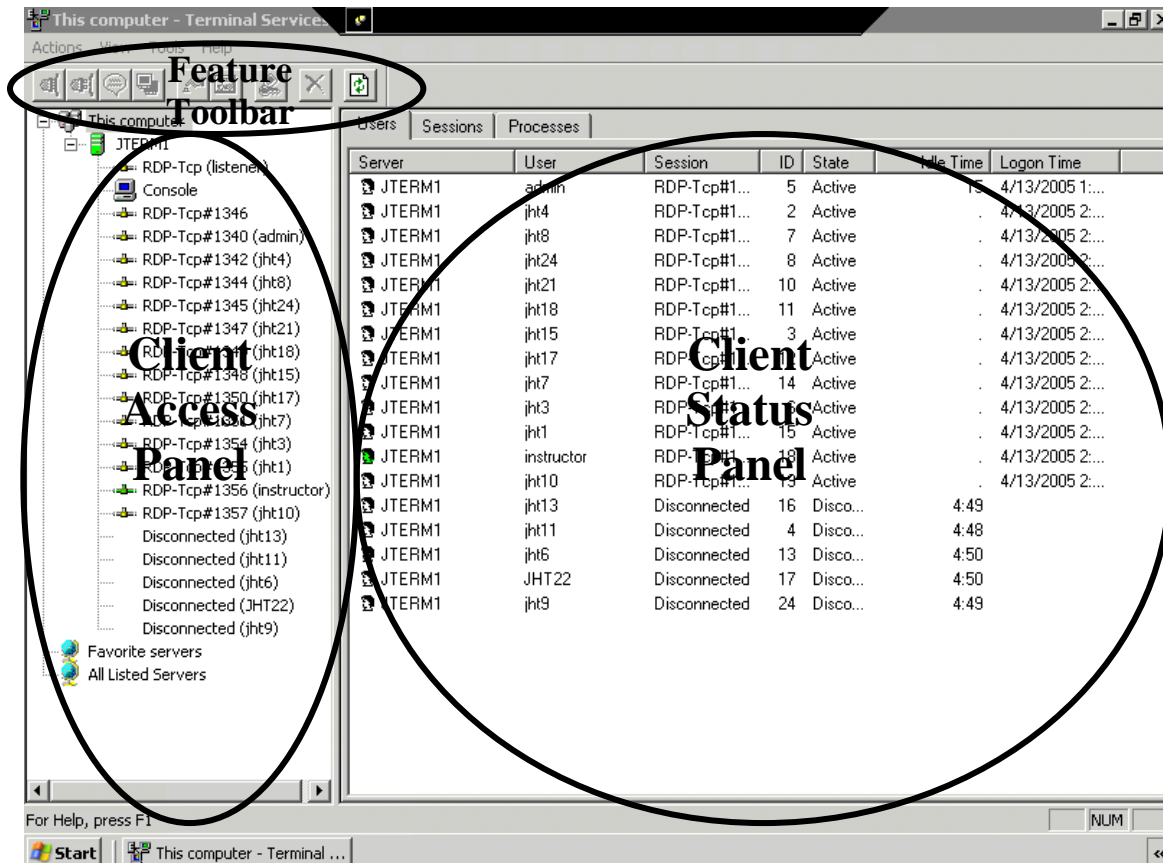
Final Test Answer Key

4. Sequence the list of written steps below that are used to execute the send message feature of Terminal Services Manager in proper order beginning with the number 1 and ending with 6?

___**2**___Select Client to Send Message

___**3**___Select Send Message

___**c**___Client Receives Message

___**6**___Open Client Access Panel

___**5**___Send Message

___**4**___Type Message

5. Sequence the list of written steps below that are used to execute the remote control feature of Terminal Services Manager in proper order beginning with the number 1 and ending with 6?

___**5**___Connecting to the Client Computer

___**6**___Remote Control Established

___**4**___Establish the Connection

___**3**___Select Remote Control

___**1**___Open Client Access Panel

___**2**___Select Client to Remote Control