

Windows 2000 Administrative Tools

OBJECTIVES

1. View Component Services (COM+).
2. View Data Sources (ODBC).
3. View Event Viewer.
4. View Local Security Policy.
5. Use a Performance Counter.
6. View Services.
7. View Telnet Server Administration.



**Operating
System
Technology**

RESOURCES

1. Marcraft 8000 Trainer with Windows 2000 installed

DISCUSSION

COM+ is a set of services based on extensions of Microsoft Transaction Server (MTS) and the Component Object Model (COM). The idea of COM applications is not at all new. It's simply the term used to refer to groups of COM components developed to work together. A COM application example is Microsoft Excel, which consists of a primary executable and accompanying application extension DLLs for spell checking, Visual Basic functionality, and so on. Some of what differentiates a COM+ application is written into the component code, and some is defined through the Component Services administrative tool.

COM+ is a part of the Microsoft Management Console (MMC). MMC does not perform administrative functions, but works with tools that do. MMC can be used to create, save, and open administrative tools (called MMC consoles) that manage the hardware, software, and network components of your Windows system. MMC is a feature of Windows 2000, Windows NT, Windows 95, and Windows 98. The Component Services Console Tree can use the console tree of the Component Services administrative tool to view the applications, components, and security roles.



Operating System Technology

PROCEDURE

1. Component Services

- ___ a. Boot the computer to Windows 2000.
- ___ b. Follow the path Start/Settings/Control Panel.
- ___ c. Double-click Administrative Tools. The window should look similar to Figure 16-1.

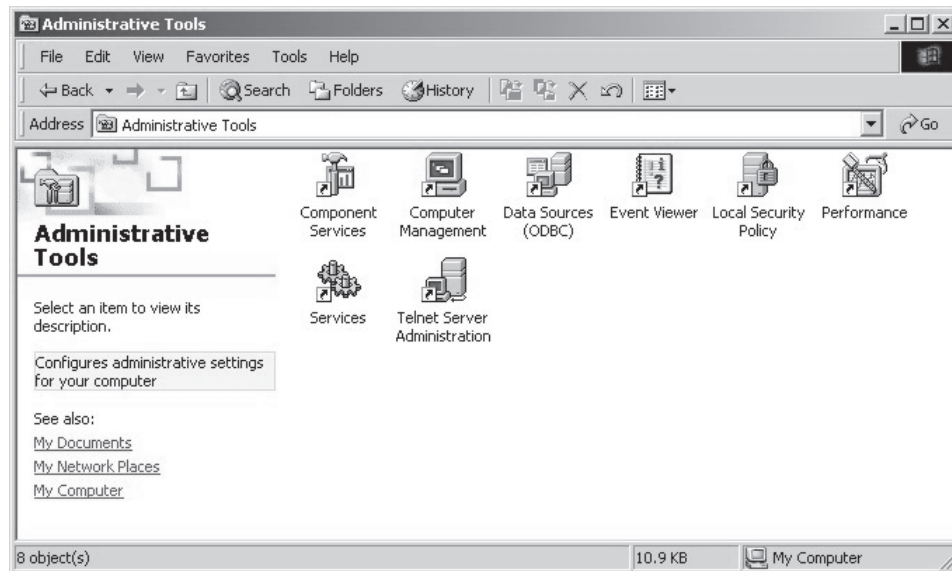


Figure 16-1:
Administrative Tools

- ___ d. You should now see the shortcuts to the eight administrative tools provided in Windows 2000. Double-click Component Services.

NOTE: You may need to maximize the window and resize the window pane.

- ___ e. Expand the Component Services icon that appears by clicking the plus (+) sign next to the "Component Services" icon.
- ___ f. Click the plus (+) sign next to the "Computers" icon.
- ___ g. Then click the plus (+) sign next to the "My Computer" icon.
- ___ h. Expand the COM+ APPLICATIONS Folder. This corresponds to the applications installed on this computer. You can change the properties of an application by right-clicking the application and then clicking Properties.
- ___ i. Record the three items that appear in Table 16-1.
- ___ j. Expand the Distributed Transaction Coordinator. This contains the Transaction List to display current transactions in which the computer is participating. It also contains Transaction Statistics.
- ___ k. Click the Transaction Statistics. In the right-hand window pane information such as performance, types, speed, and maximum and minimum response time for the transactions in which a computer participates is displayed. The window should look similar to Figure 16-2 on the next page.

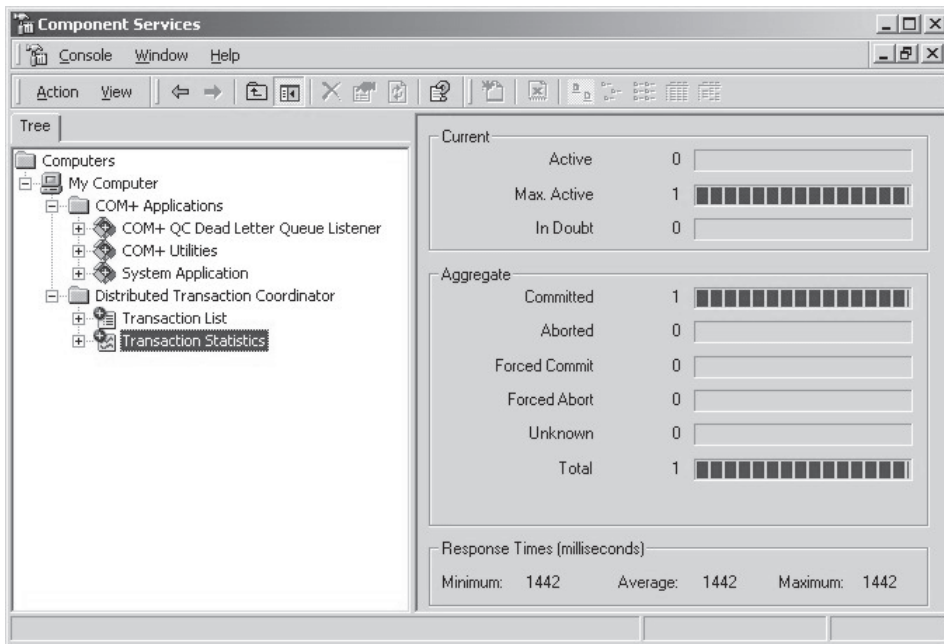


Figure 16-2:
Component Services

___ 1. Close the *Component Services* window.

2. Data Sources

Open Database Connectivity (ODBC) can be used to access data from a variety of database management systems. An ODBC driver allows ODBC-enabled programs to get information from ODBC data sources. DSN stands for Data Source Name.

- ___ a. From the ADMINISTRATIVE TOOLS folder double-click Data Sources (ODBC).
- ___ b. The window that opens will look similar to Figure 16-3.

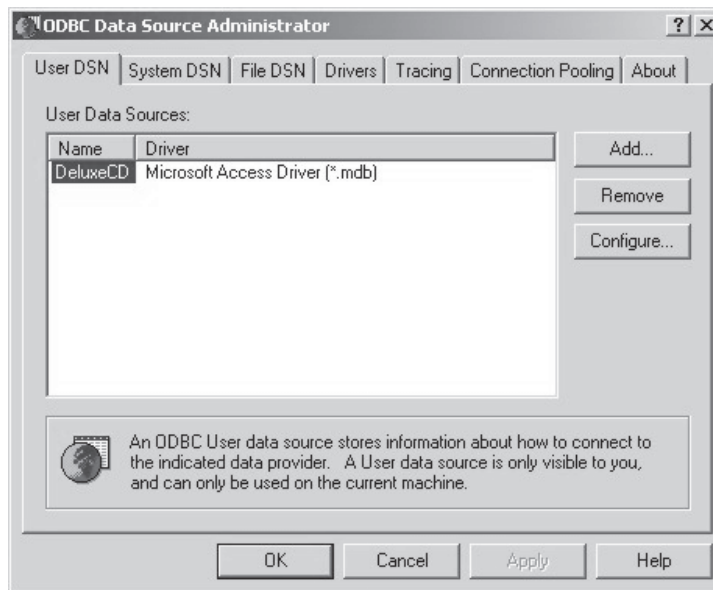


Figure 16-3: ODBC

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- ___ c. Read the explanation at the bottom of the window. Click the System DSN tab.
- ___ d. Record the explanation about a System DSN from the bottom of the window in Table 16-2.
- ___ e. Click the File DSN tab. This area of ODBC allows a connection to a specific database file.
- ___ f. Click the Drivers tab. Count how many drivers are installed; you may need to scroll down.
- ___ g. Record the number of drivers in Table 16-3.
- ___ h. Click the Tracing tab. Read its description in the bottom of the window.
- ___ i. Click the Connection Pooling tab. Read its description in the bottom of the window.
- ___ j. Click the About tab. Record its description in Table 16-4.
- ___ k. Close the ODBC Data Source Administrator.

3. Event Viewer

Event viewer is a useful tool for diagnosing hardware, software, and system problems with Windows. Usually when an error occurs it will be logged for later viewing in Event Viewer. If log warnings show that a disk driver can only read or write to a sector after several retries, the sector is likely to go bad eventually. Logs can also confirm problems with software. If a program crashes, a program event log can provide a record of activity leading up to the event.

- ___ a. From the ADMINISTRATIVE TOOLS folder double-click on Event Viewer.
- ___ b. The window should look similar to Figure 16-4. There are three areas of Event Viewer: Application Log, Security Log, and System Log.

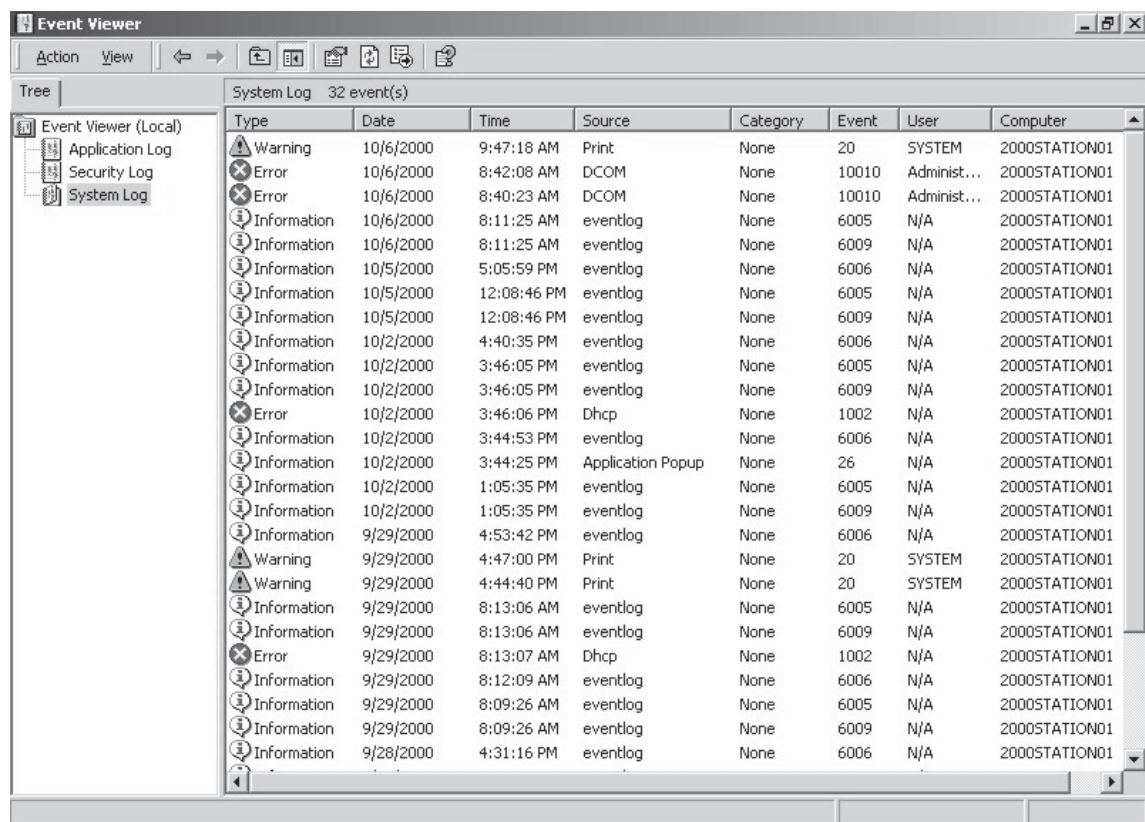


Figure 16-4:
Event Viewer

- ___ c. The System Log is highlighted by default. Items are sorted by latest date first in the right-hand window pane. There are three types of events: Warnings, Errors, and Information. Look at the first item in the list. Record the required information in Table 16-5.

- ___ d. Click the Application Log and view any information that it contains. This area records any errors or Information that applications encounter with Windows.
- ___ e. Click the Security Log.
- ___ f. Record how many events appear in Table 16-6. Here Windows will record actions that it monitors that are viewed as security violations.
- ___ g. Close *Event Viewer*.

4. Local Security Settings

Local Security Settings is used to configure security policies for the local computer. These settings include the Password policy, Account Lockout policy, Audit policy, IP Security policy, user rights assignments, recovery agents for encrypted data, and other security options. Local Security Policy is only available on Windows 2000 computers that are not domain controllers. If the computer is a member of a domain, these settings may be overridden by policies received from the domain.

- ___ a. From the ADMINISTRATIVE TOOLS folder double-click Local Security Policy.
- ___ b. The window should look similar to Figure 16-5.

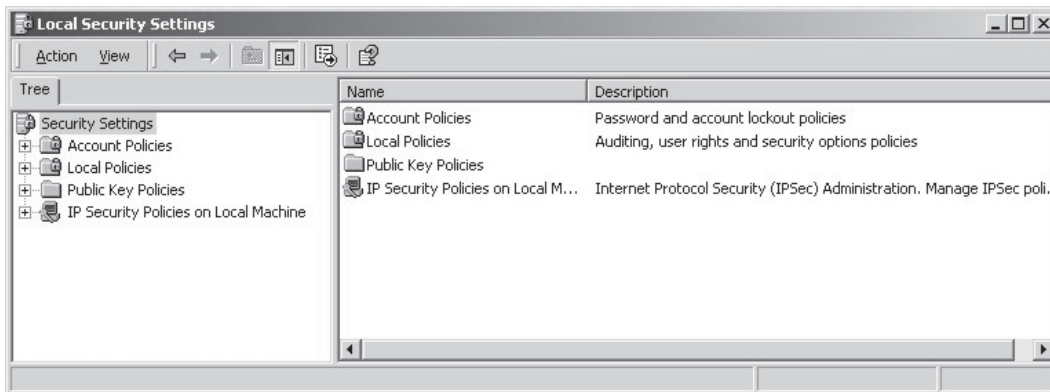


Figure 16-5:
Local Security Settings

- ___ c. Expand Account Policies.
- ___ d. Click Password Policy.
- ___ e. Record the Maximum password age in Table 16-7. The Maximum password age is the time a password will remain the same until the user is prompted to change it.
- ___ f. Expand Local Policies.
- ___ g. Click User Rights Assignment.
- ___ h. View the right-hand window pane and scroll down to "Shut down the system".
- ___ i. Double-click on Shut down the System, and a window similar to Figure 16-6 appears.
- ___ j. The users that have rights to this operation will be listed. From this window you can add and delete users assigned to shut down the system. Record the users assigned to this task in Table 16-8.
- ___ k. Click OK.
- ___ l. Click Security Options under Local Policies.

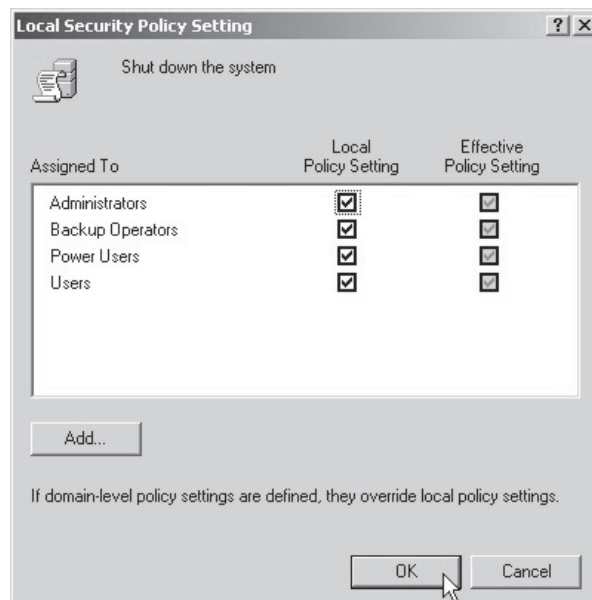


Figure 16-6:
Local Security Policy Setting

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- ___ m. Record the first policy that is listed in Table 16-9.
- ___ n. Click IP Security Policies on Local Machine.
- ___ o. Write the three policies in Table 16-10.
- ___ p. Close *Local Security Settings*.

5. Performance

The performance console collects and displays real-time data about memory, disk, processor, network, and other activity in a graph, histogram, or report form.

- ___ a. From the ADMINISTRATIVE TOOLS folder double-click Performance.

NOTE: Notice that the System Monitor is selected on the left-hand window pane by default. There are no graphs selected by default.

- ___ b. Click the large plus (+) button above the graph in the right-hand window pane to add a computer.
- ___ c. By default the performance object is set to Processor and the counter selected is % Processor Time.
- ___ d. Click Add.
- ___ e. Click Close.
- ___ f. You are now monitoring how much the processor is used in terms of time. Start a few programs like *Internet Explorer* and *Notepad* and then close them.
- ___ g. Observe the changes in the chart. The window will look similar to Figure 16-7.

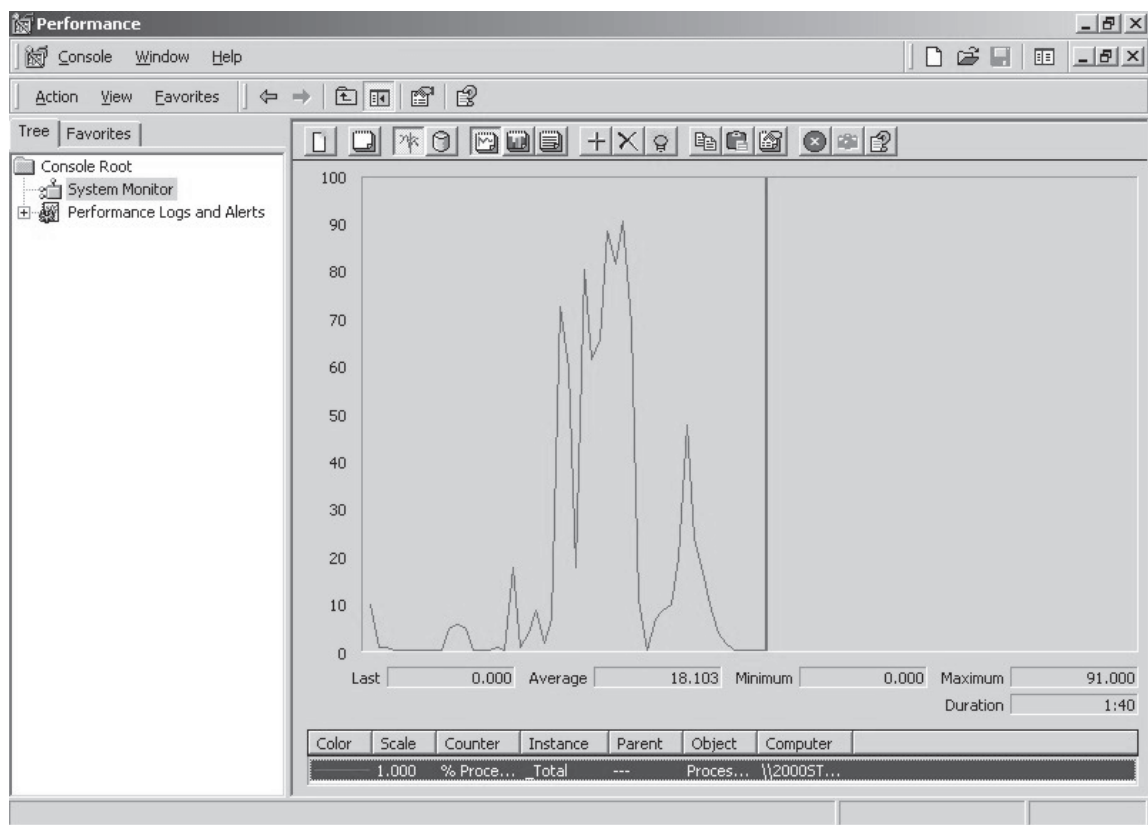


Figure 16-7:
Performance
Charting

- ___ h. Notice the key on the bottom of the window. It shows the color of the line, scale, and other information about the chart.

- ___ i. As before click the (+) button.

NOTE: You can add more than one graph on the same chart. When you add another line to the chart, Performance Console will automatically choose an available color for the graph.

- ___ j. This time select Memory for the Performance object. You may need to scroll the drop-down menu.
 ___ k. Select % Committed Bytes In Use as the counter. You may need to scroll up in the list.
 ___ l. The window should look similar to Figure 16-8.

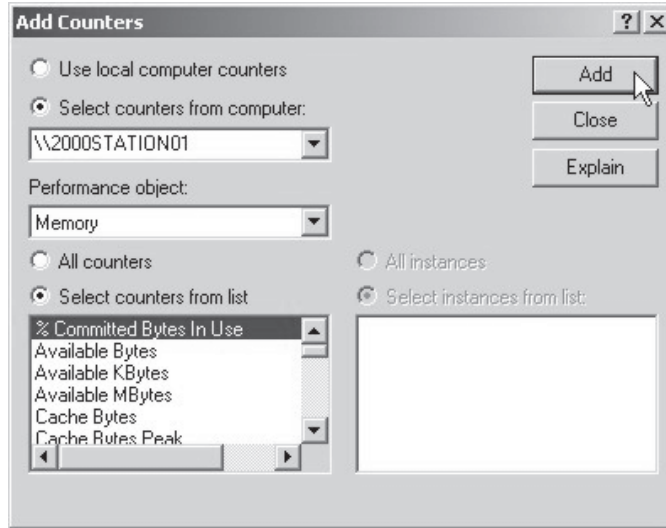


Figure 16-8:
Add a Counter

- ___ m. Click Add.
 ___ n. Click Close.
 ___ o. Record the Color of the % Processor Time and % Committed Bytes In Use lines in Table 16-11.
 ___ p. As before start a program but this time do not close it, just minimize it.
 ___ q. Record your observations of the % Committed Bytes In Use line in Table 16-12.
 ___ r. Close Performance and any other programs you have started in this step, but do not close the Administrative Tools window.

6. Services

The services console is used to manage the services on your computer, set recovery actions to take place if a service fails, and create custom names and descriptions for services so that you can easily identify them.

- ___ a. From the ADMINISTRATIVE TOOLS folder double-click Services.
 These are services listed on the right-hand window pane.

NOTE: From this window you can see all the services running, either by default from Windows 2000 or from installed programs that add a service.

- ___ b. Double-click the Alerter Service. From this window you change the properties for starting the service, add an action when the service fails, or change its Log On properties.
 ___ c. Read its Description and click Cancel. You can see the status of the service; it will be either Started or blank (implying stopped).
 ___ d. Count how many services have been started and record this in Table 16-13.
 ___ e. Close Services.

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7. Telnet Server Administration

Telnet is a service that allows you to "telephone-net" into another computer. Originally it was designed to view information on a remote computer (hundreds of miles away) as if you were sitting at that computer. Now we just use the Internet for this type of long distance communication, but telnet can still be a useful tool. The Telnet Server is built into Windows 2000 to allow remote computers access through a telnet client. The client can be invoked by typing "telnet" from the command line.

- a. From the ADMINISTRATIVE TOOLS folder double-click on Telnet Server Administration. You will see a window similar to Figure 16-9.

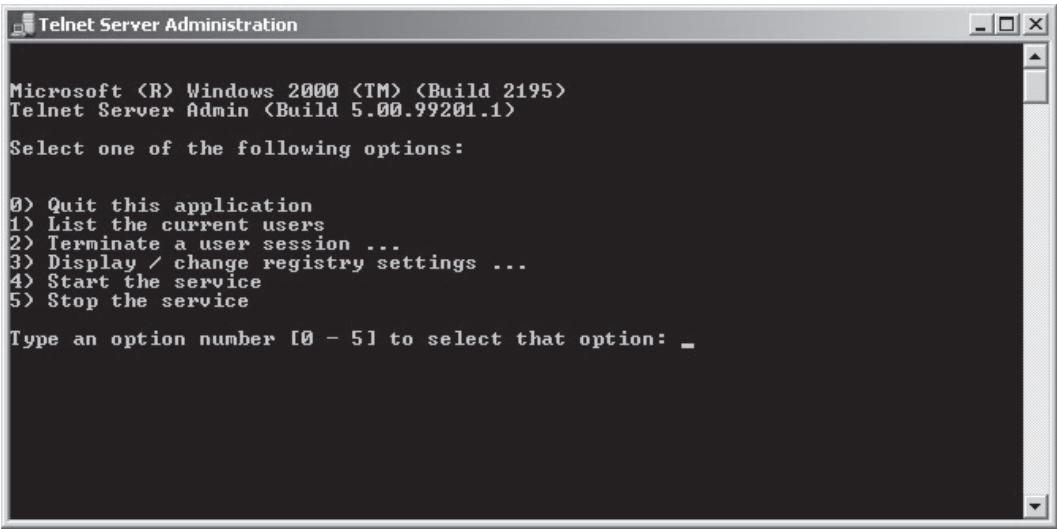


Figure 16-9: Telnet Server Administration Window

- b. Type 4 and press ENTER to start the service.

NOTE: After the service has started, other computers connected on the LAN can connect to the computer via the command prompt. A remote computer can connect by typing "telnet" and the IP address of a computer with the Telnet Server running.

- c. Stop the telnet service by typing 5 and pressing ENTER.
- d. Enter 0 to quit the *Telnet Server Administration*.
- e. Close all open windows, and shut down the computer.

TABLES

Table 16-1

Com+ Applications Folder:	

Table 16-2

System DSN Explanation:	

Table 16-3

Number of ODBC Drivers:	
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Table 16-4

ODBC About Description:	

Table 16-5

Event Viewer System Log - First Event	
Type:	
Date:	
Source:	

Table 16-6

Security Log Events:	
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Table 16-7

Maximum Password Age:	
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Table 16-8

Users Assigned to Shut Down the System:	

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Table 16-9

First Listed Policy:	
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Table 16-10

IP Security Policies:	

Table 16-11

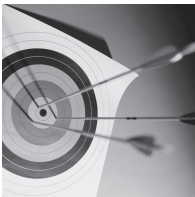
Colors	
% Processor Time:	
% Committed Bytes in Use:	

Table 16-12

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Table 16-13

Number of Services Started:	
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Feedback

LAB QUESTIONS

- 1. How many items did you have in the Application Log of Event Viewer?
- 2. How can Event Viewer be useful?
- 3. What is an automatic feature of the Performance console?
- 4. Which option in Telnet Server Administration starts the service?
- 5. How would you navigate to view all the services that are running?