IT Essentials 5.0

5.3.3.7 Lab - Monitor and Manage System Resources in Windows XP

Introduction

Print and complete this lab.

In this lab, you will use administrative tools to monitor and manage system resources.

Recommended Equipment

The following equipment is required for this exercise:

- A computer running Windows XP Professional
- Internet access

Step 1

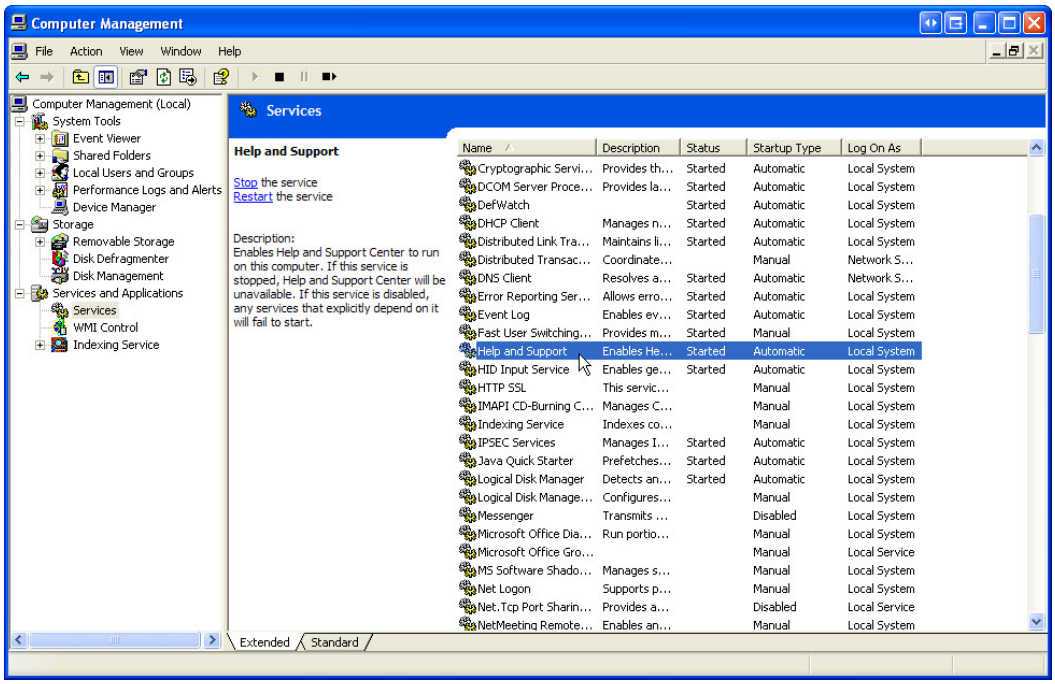
You will explore what happens when a service is stopped then started.

Log on to Windows as an administrator.

Click **Start > Control Panel > Administrative Tools > Computer Management >** expand **Services and Applications**.

Select **Services**.

Expand the **Computer Management** window so you see the “Help and Support” service.



What is the Status of the service?

Right-click the **Help and Support** service > **Properties**.

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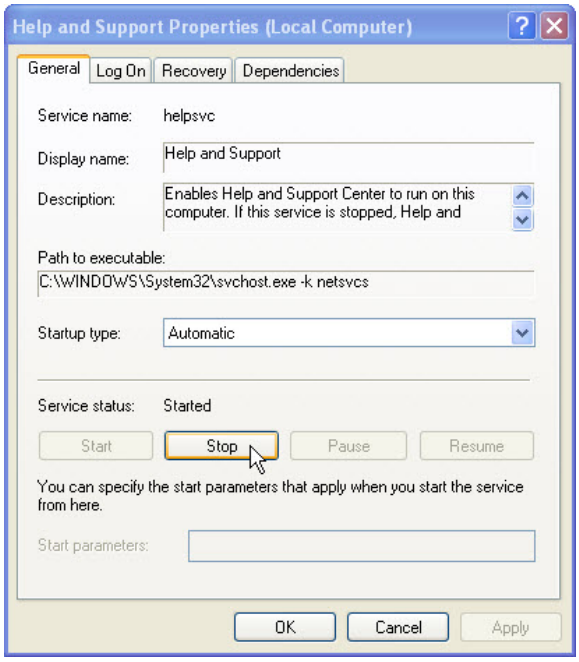
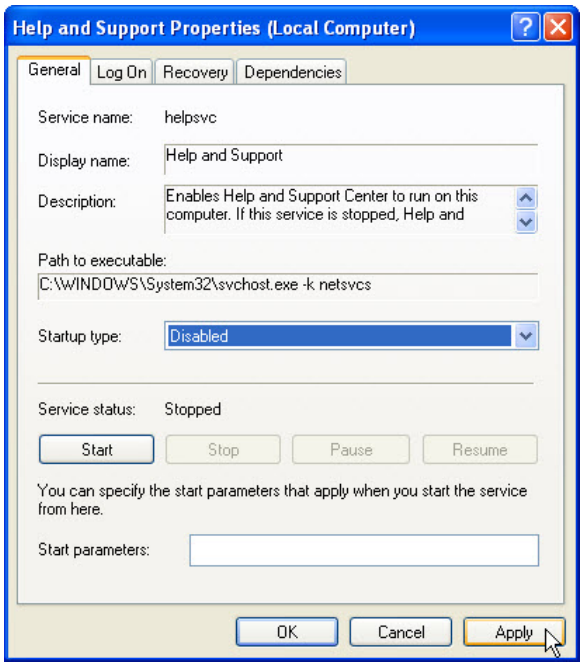
The “Help and Support Properties (Local Computer)” window opens.



Click **Stop**.

Note: The reason this service will be stopped is so you can easily see the results. When stopping a service, to free up system resources the service uses, it is important to understand how the overall system operation will be affected.



When the Service Control window closes, set the Startup type field to **Disabled**, and then click **Apply**.

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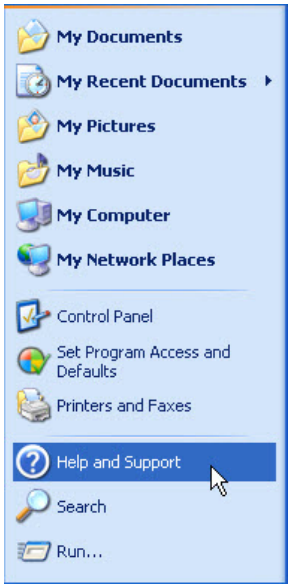
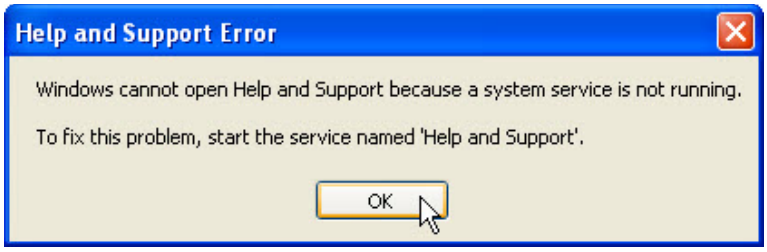
Click **Start > Help and Support**.



The “Help and Support Error” window opens.



Why will Help and Support not start?

What must be done to correct the error?

Click **OK**.

What steps must be followed to start the Help and Support service?

Next, you will start up the Help and Support service.

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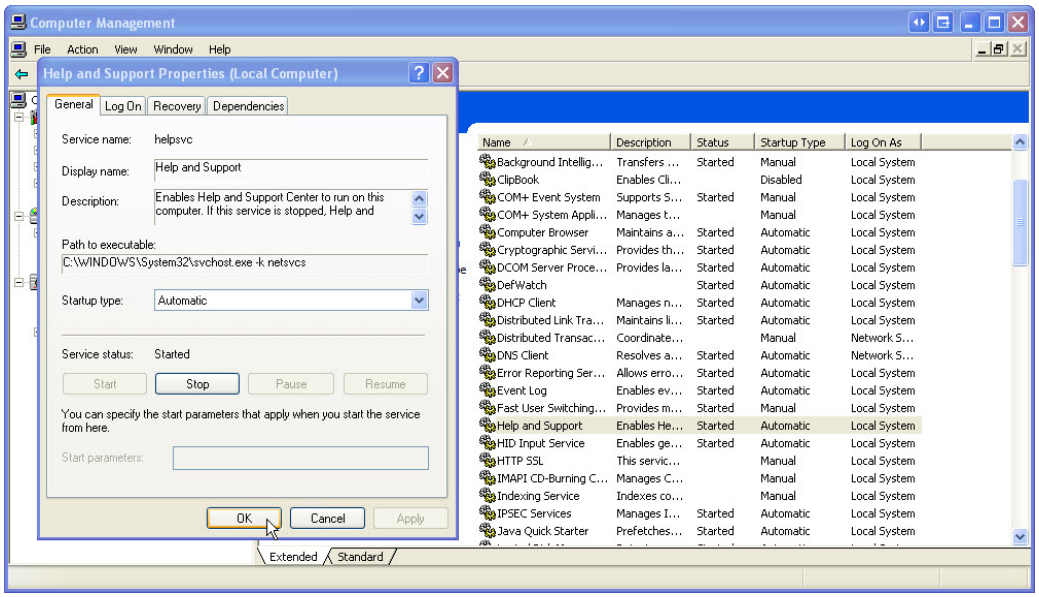


Set “Startup type” to **Automatic**, and then click **OK**.

Click **Start > Help and Support**.

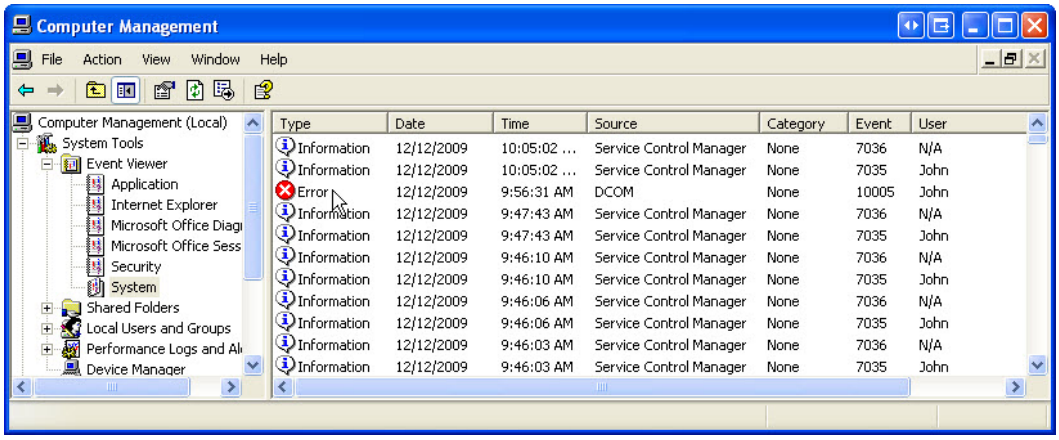
Did the Help and Support Center window appear?

Close the “Help and Support Center” window.

Make sure the Computer Management window is open.

Expand Event Viewer, and then select **System**.

Double-click the most recent Error event. Error events are displayed as a white X in a red circle icon.



The “Event Properties” window opens.

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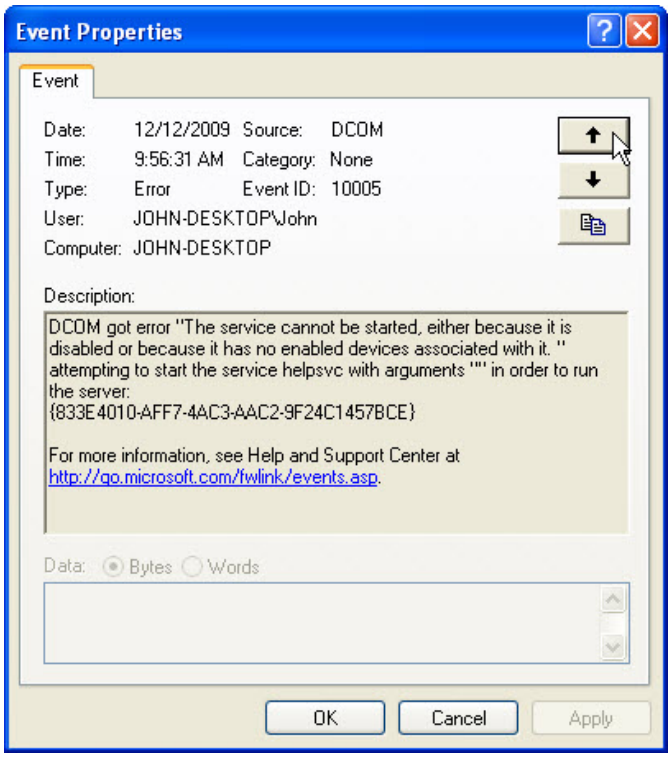
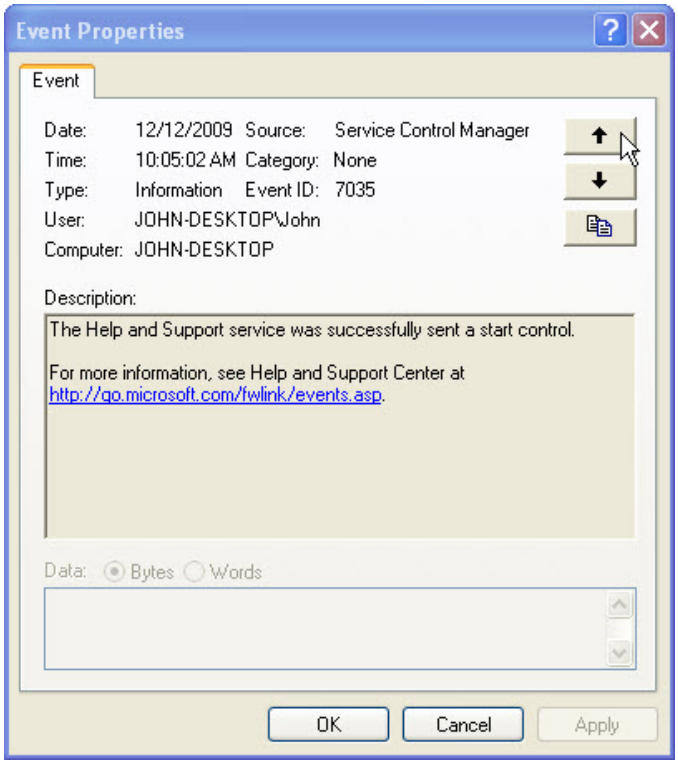


Why was helpsvc not started?

Click the up arrow button.



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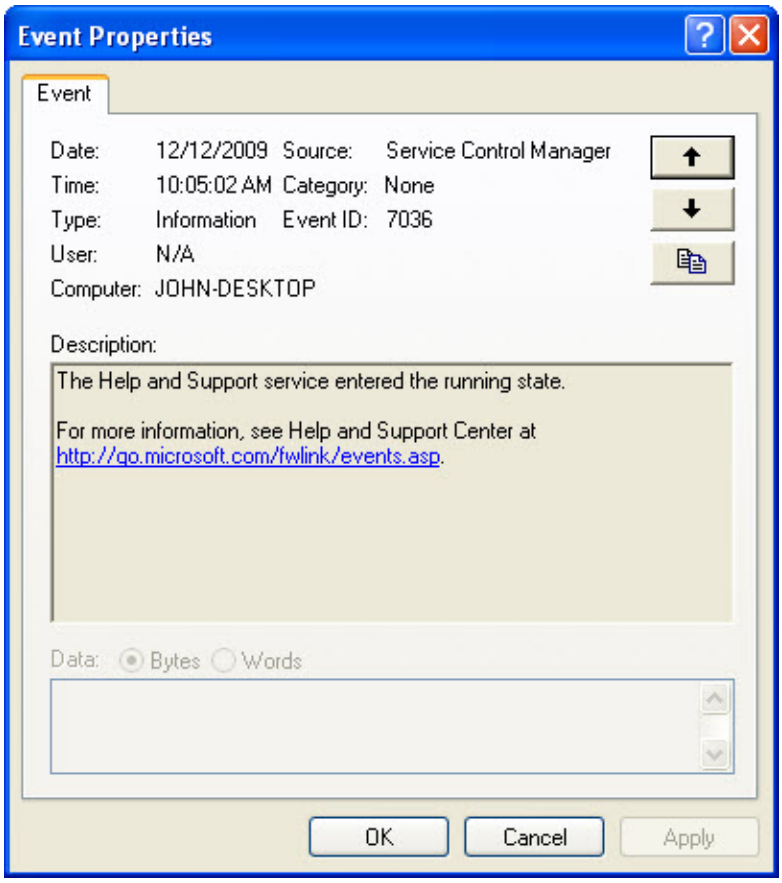
What has happened to the Help and Support service?

Click the up arrow button.



What has happened to the Help and Support service?

Close all open windows.

Step 2

You will now monitor what happens when a service is stopped and started.

Click **Start > Control Panel**. Double-click the **Network Connections** icon.

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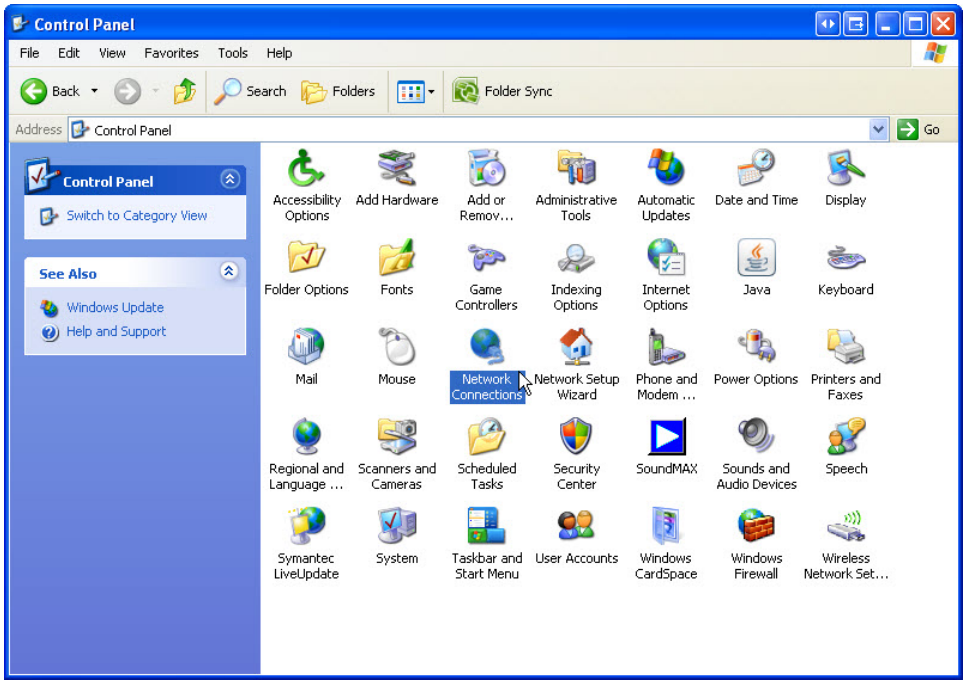

The “Network Connection” window opens.

Reduce the size of the “Network Connections” window. Leave this window open.

Once again navigate to the “Control Panel” window by clicking **Start > Control Panel**. Double-click the **Administrative Tools** icon.

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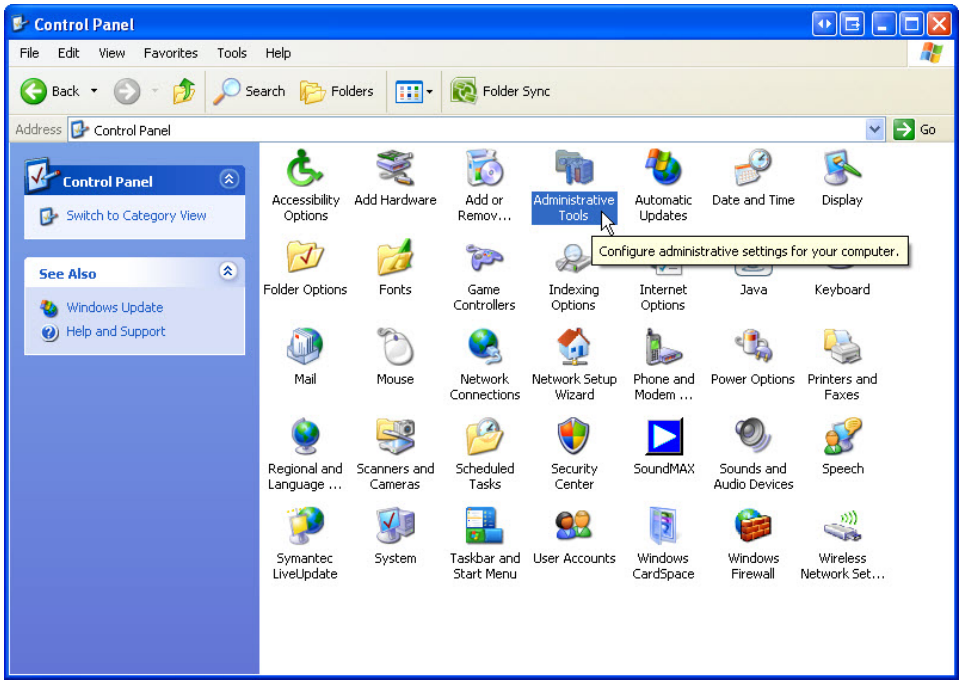
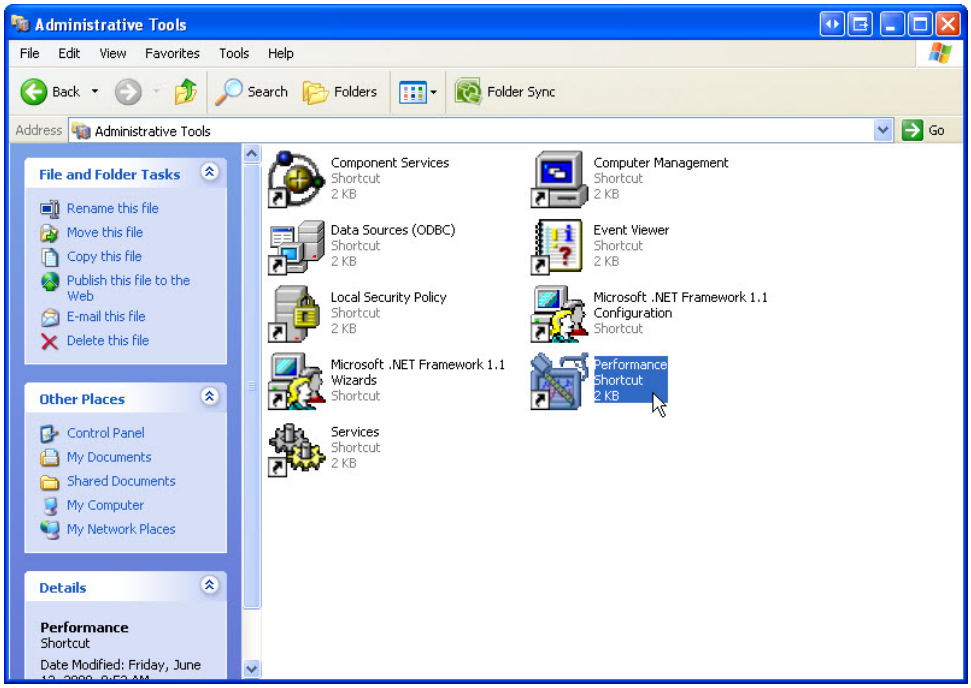


The “Administrative Tools” window opens.



Double-click the **Performance** icon.

The “Performance” window opens.

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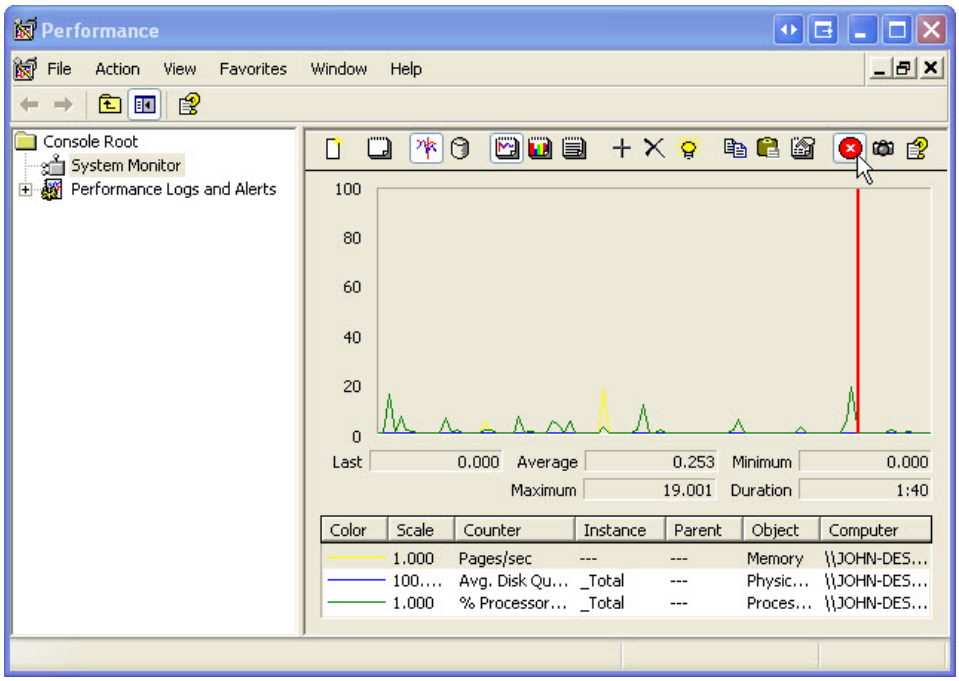
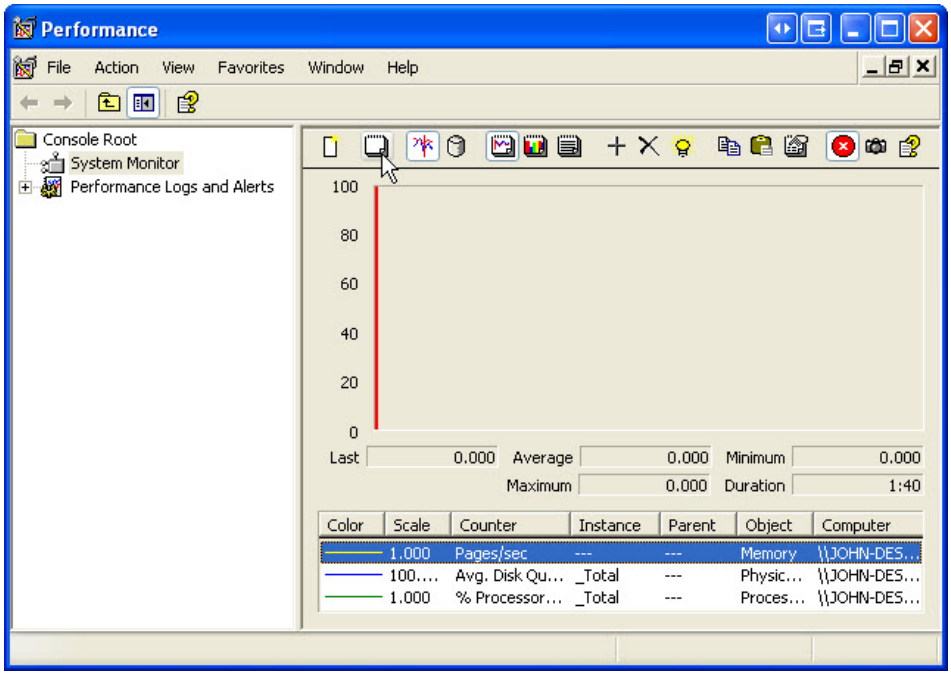


Make sure the System Monitor in the left pane is highlighted.

Click the **Freeze Display** icon to stop the recording.



Click the **Clear Display** icon to clear the graph. Leave this window open.

Navigate to the “Administrative Tools” window by clicking **Start > Control Panel > Administrative Tools**. Double-click the **Services** icon.

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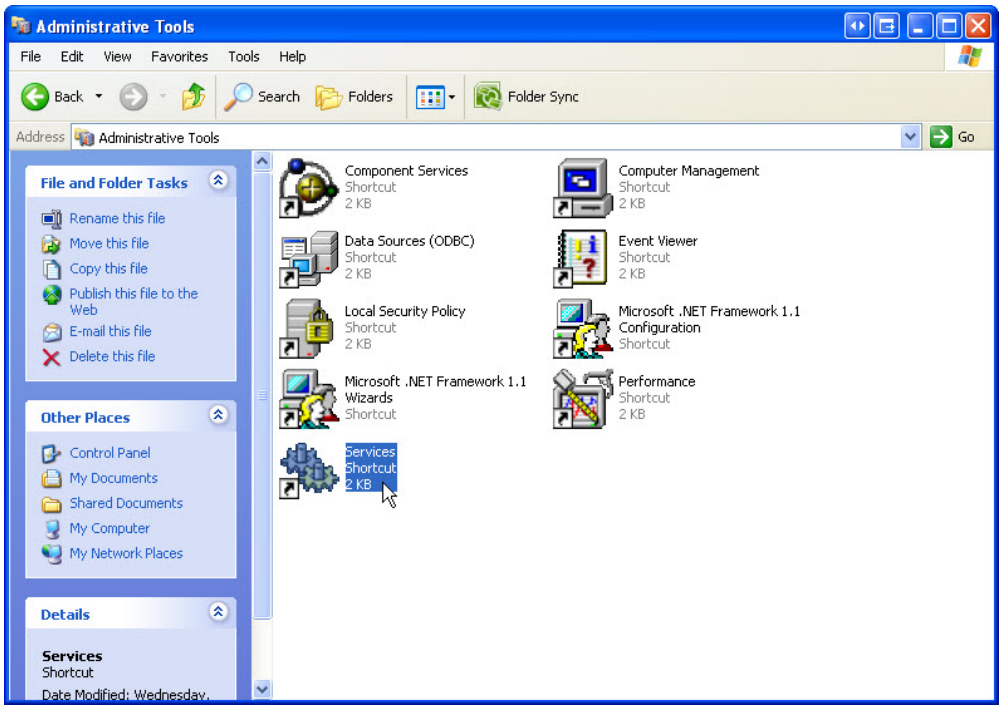
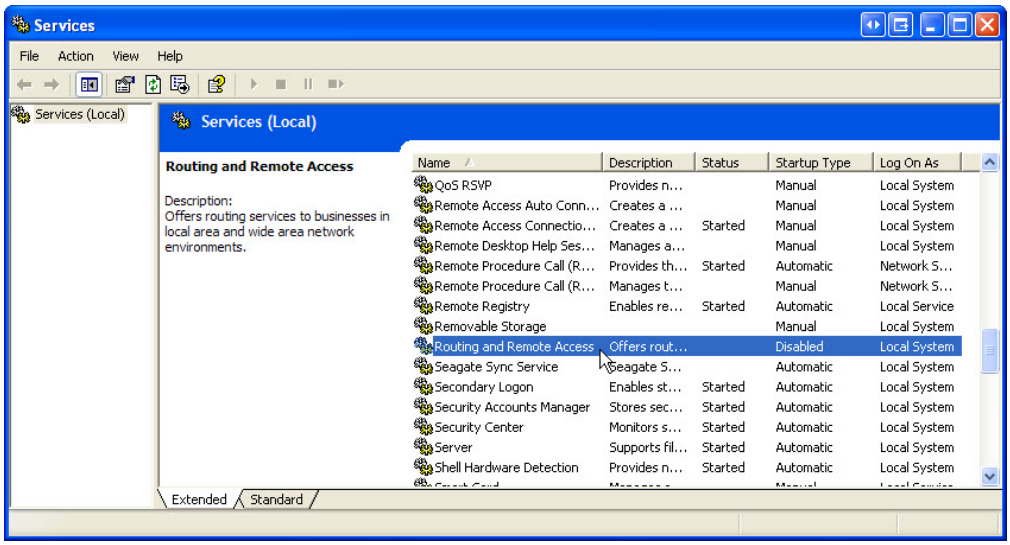


Expand the width of the “Services” window so you have a clear view of the content.



Scroll down in the right pane until you see the service Routing and Remote Access.

Double-click **Routing and Remote Access**.

The “Routing and Remote Access Properties (Local Computer)” windows opens.

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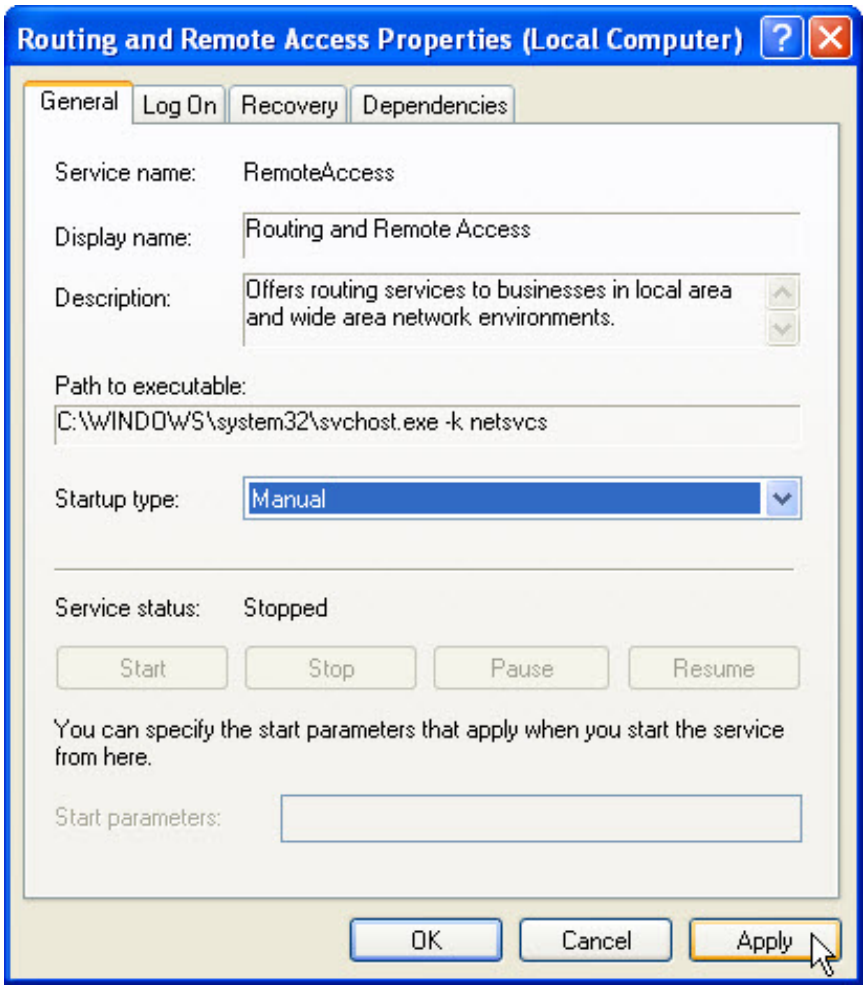

In the Startup type select **Manual**. Click **Apply**.

The Start button is now active; do not click the button yet. Leave this window open.

Position the following three windows so you can clearly see them at the same time: Network Connections, Routing and Remote Access Properties (Local Computer), and Performance.

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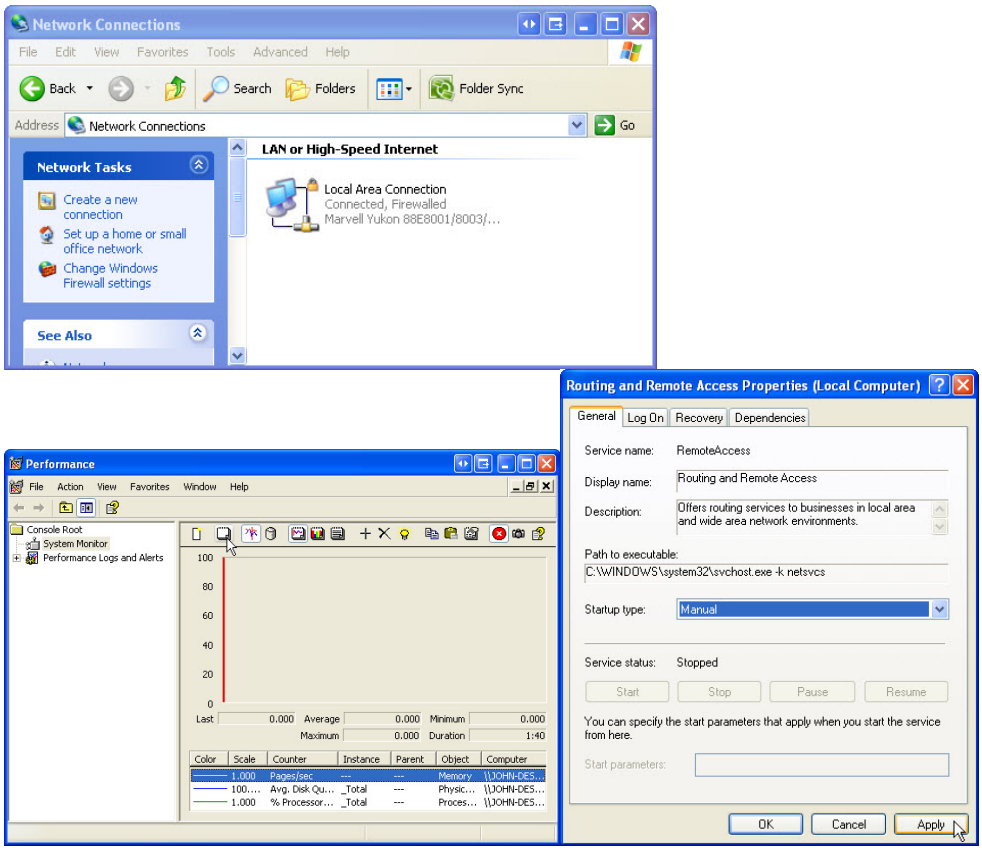

Click the “Performance” window so it is activated. Click the Freeze Display icon to start the recording.

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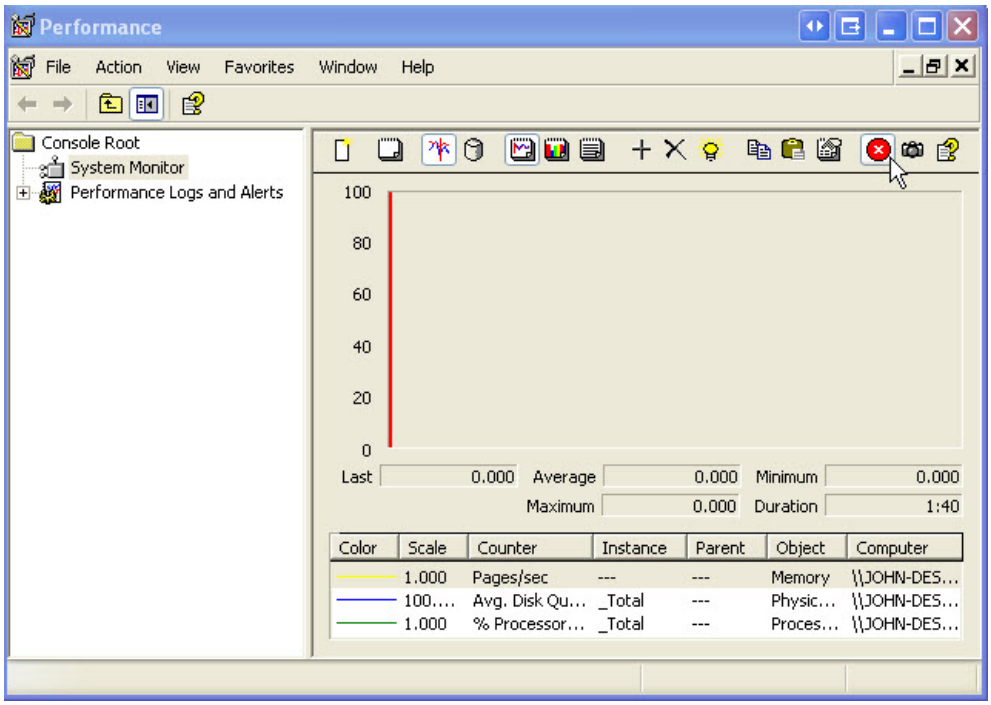
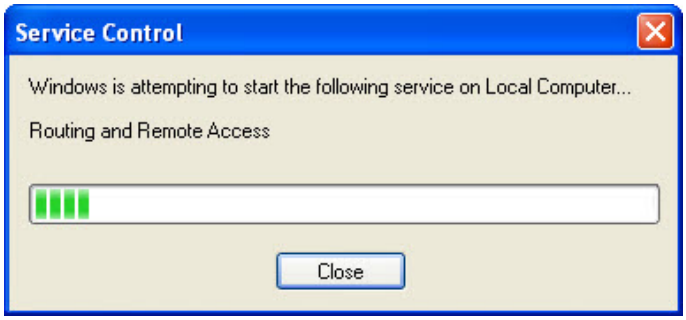


Click the “Routing and Remote Access Properties (Local Computer)” window so it is activated. To start the Service click **Start**.

A window with a progress bar opens.



The “Routing and Remote Access Properties (Local Computer)” window now shows the Stop and Pause button active. Leave this window open.

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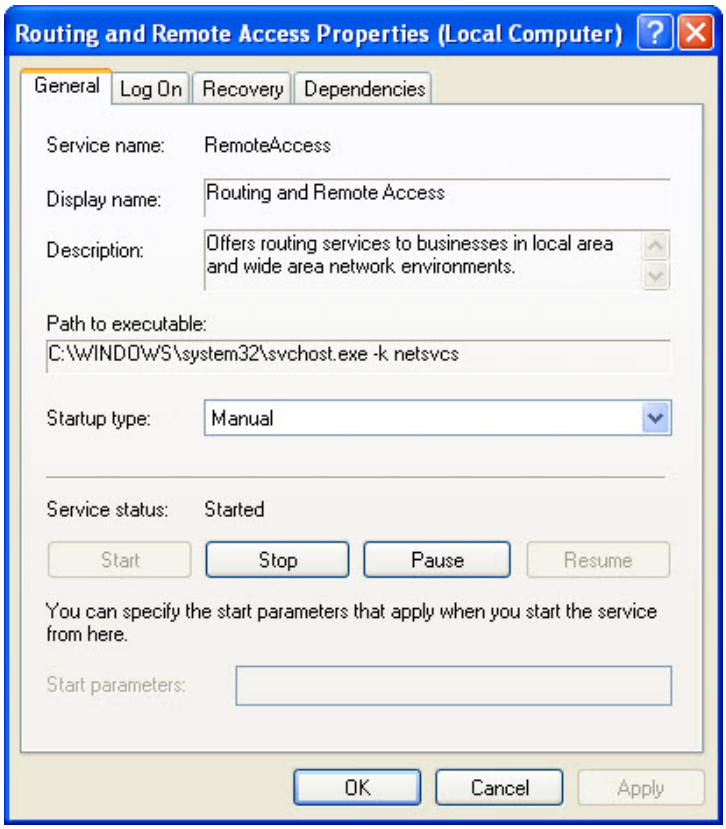
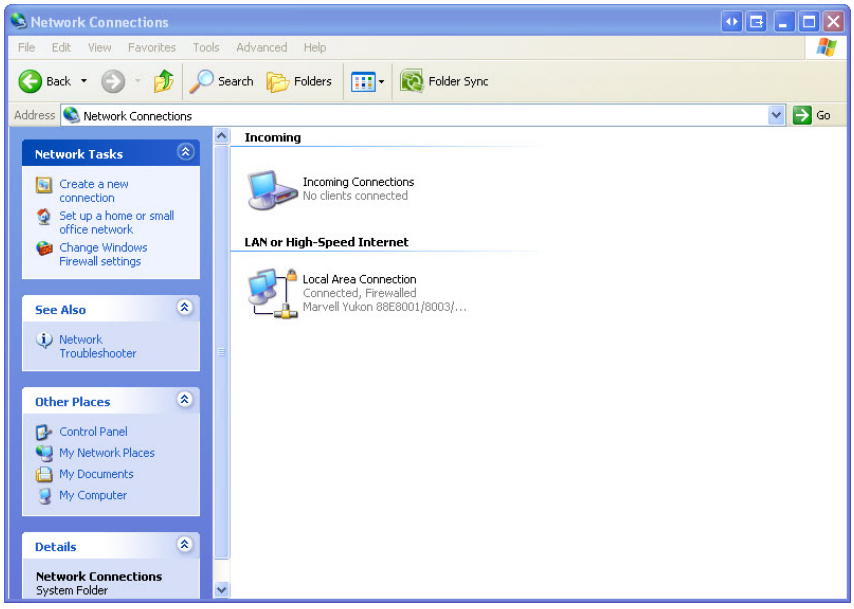


Click the “Network Connections” window so it is activated.



What changes appear in the right pane, after starting the Routing and Remote Access service?

Click the “Routing and Remote Access Properties (Local Computer)” window so it is activated. Click **Stop**.

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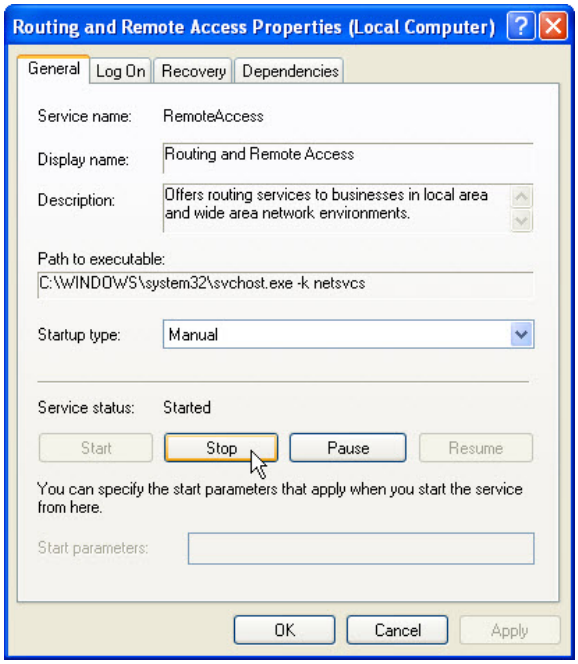

Click the “Network Connections” window so it is activated.

What changes appear in the right pane, after stopping the Routing and Remote Access service?

Click the “Performance” window so it is activated. Click the **Freeze Display** icon to stop the recording.

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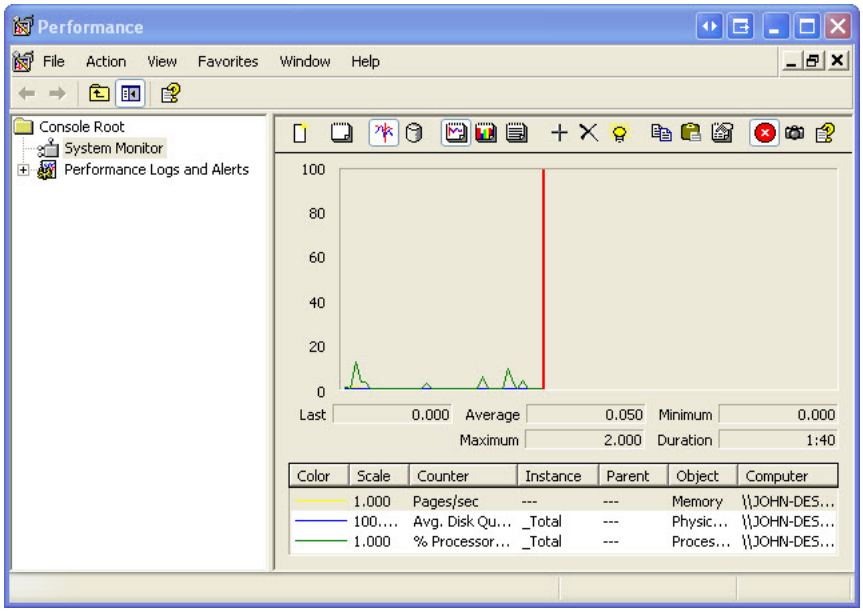
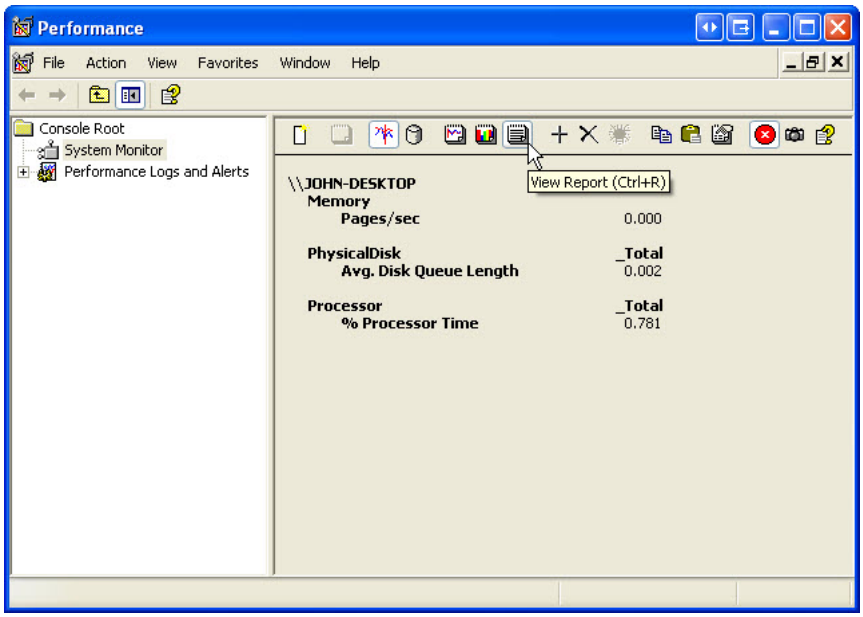


Which Counter is being recorded the most in the graph (hint: look at the graph color and Counter color)?

Click the **View Report** icon.



List the values of the three counters.

Click the “Routing and Remote Access Properties (Local Computer)” window so it is activated.

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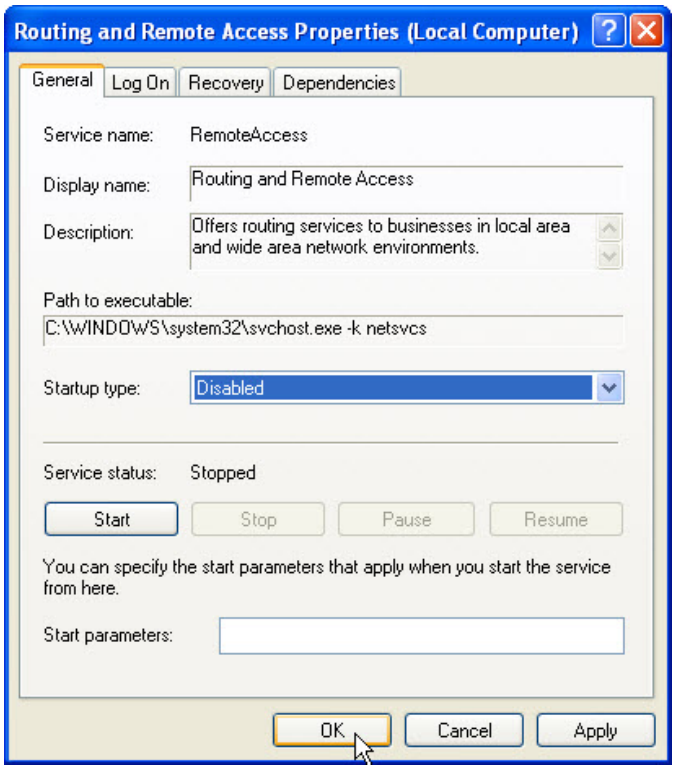
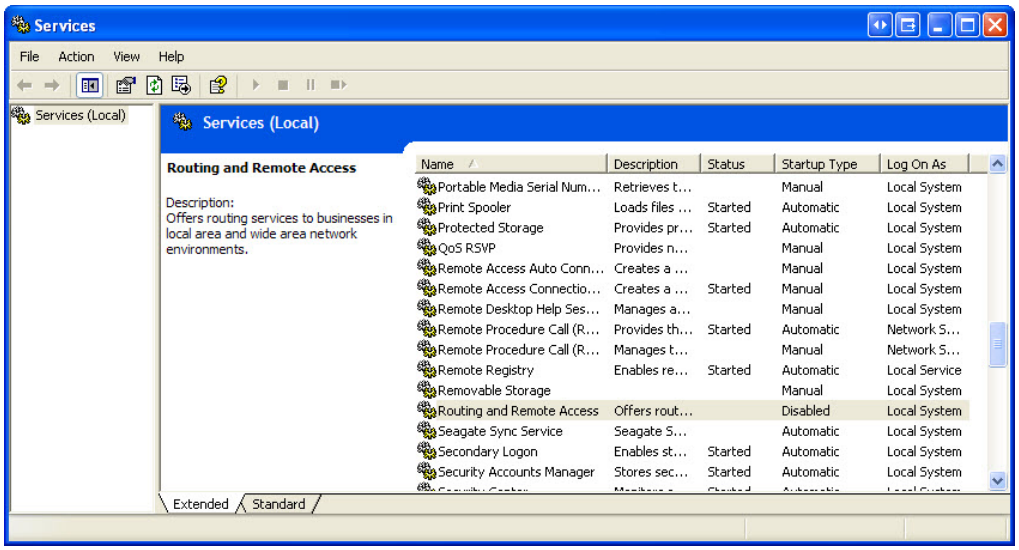


In the Startup type select **Disabled** and then click **OK**.

Click the “Services” window so it is activated.



What is the Status and Startup Type for Routing and Remote Access?

Click the “Performance” window so it is activated.

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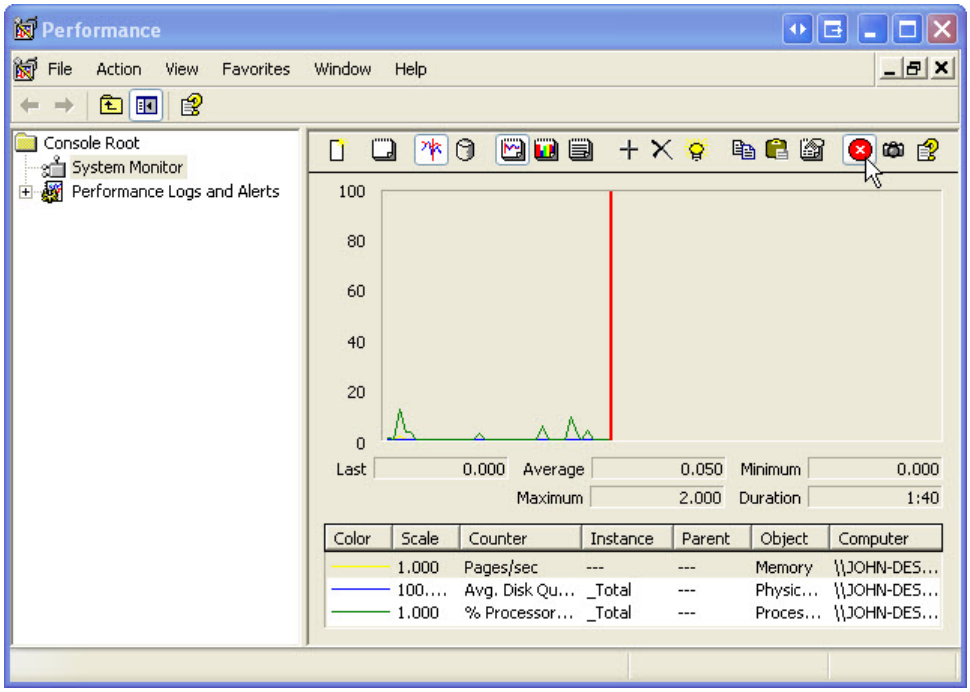
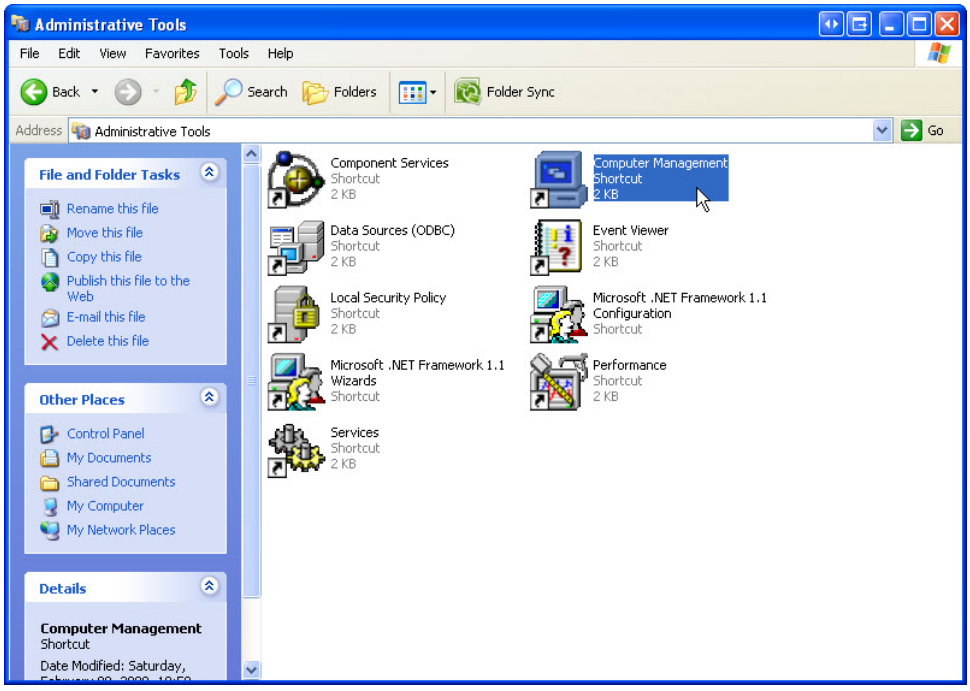


Click the **Freeze Display** icon to start the recording.

Close all open windows.

Navigate to the “Control Panel” window by clicking **Start > Control Panel**. Double-click the **Computer Management** icon.



The “Computer Management” window opens.

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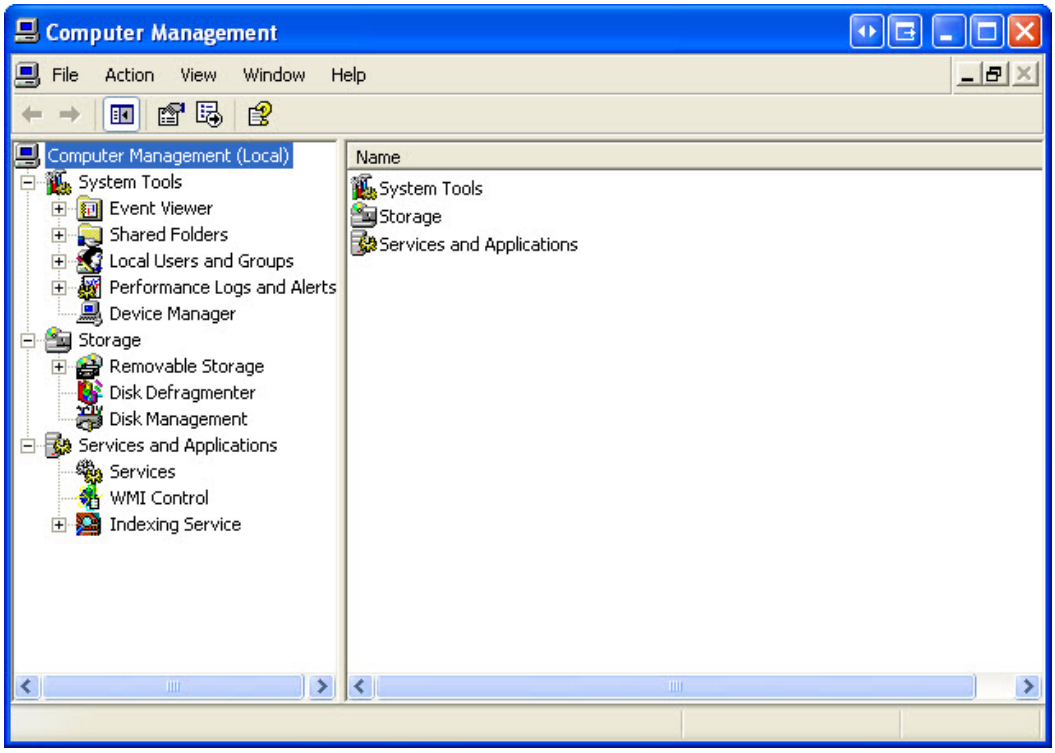
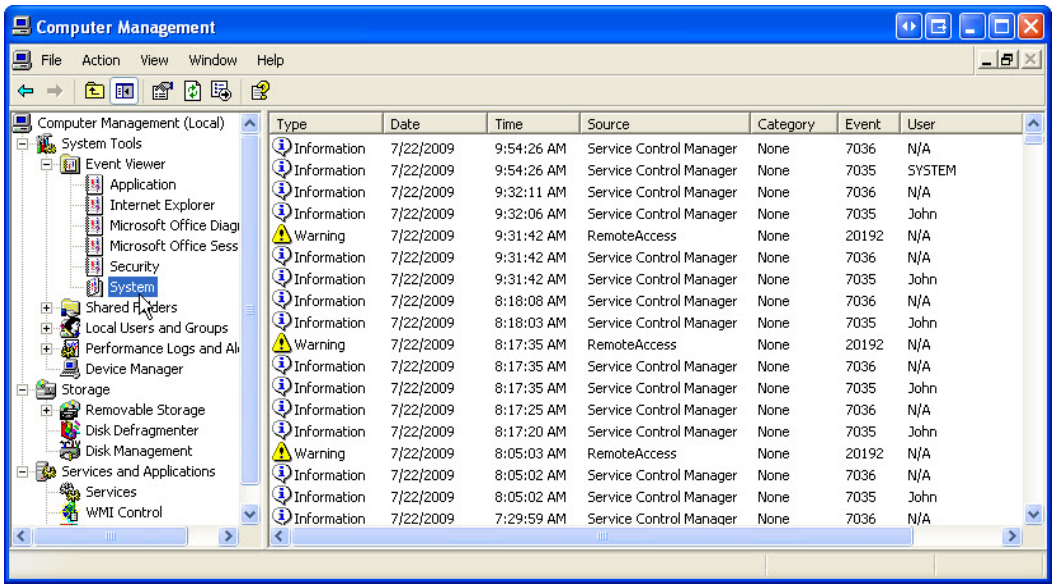


Expand the three categories by clicking on the **plus sign** next to: System Tools, Storage and Services, and Applications.

Click the **plus sign** next to Event Viewer.



Then select **System**.

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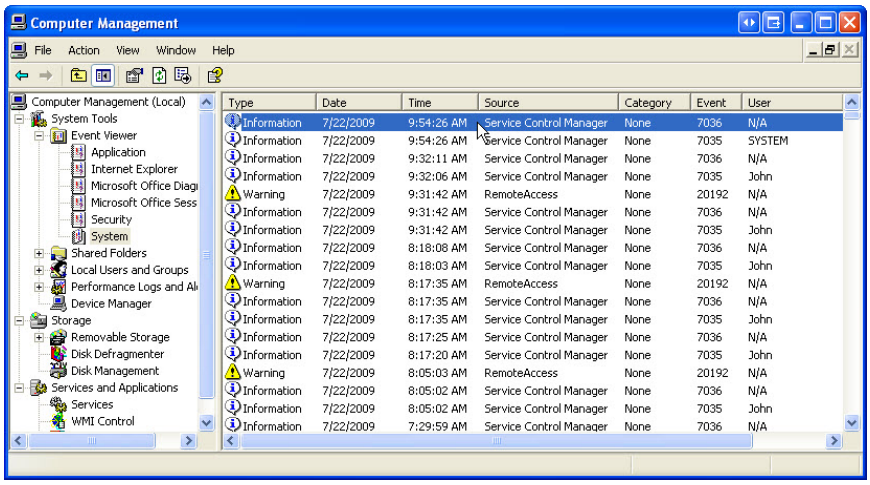
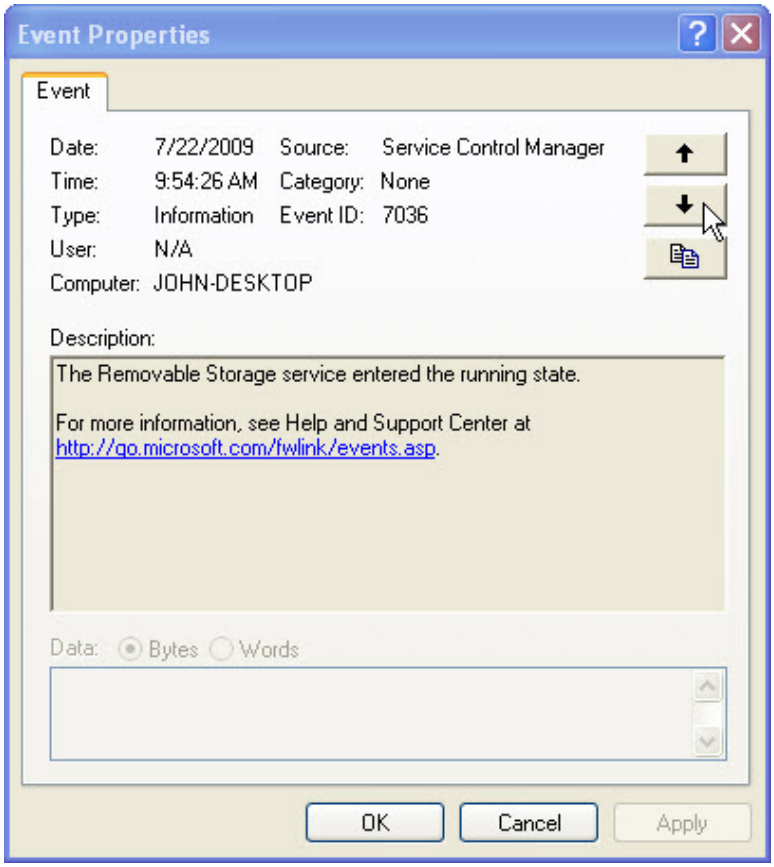


Double-click the first event in the window.

The “Event Properties” window appears for the event.



Click the down arrow key to locate an event for Routing and Remote Access.

You should find four events that describe the order for starting and stopping the Routing and Remote Access service.

Write down the description for each of the four events. Do not include any URL information.

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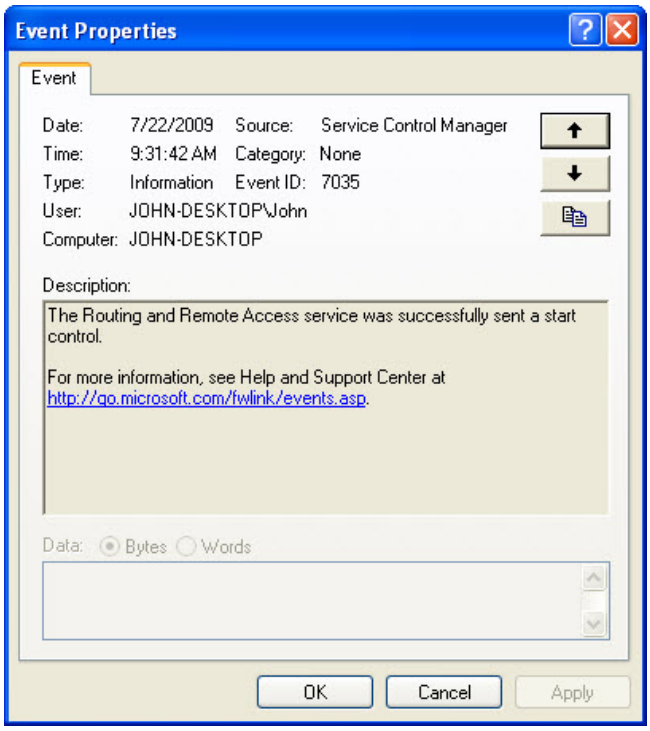

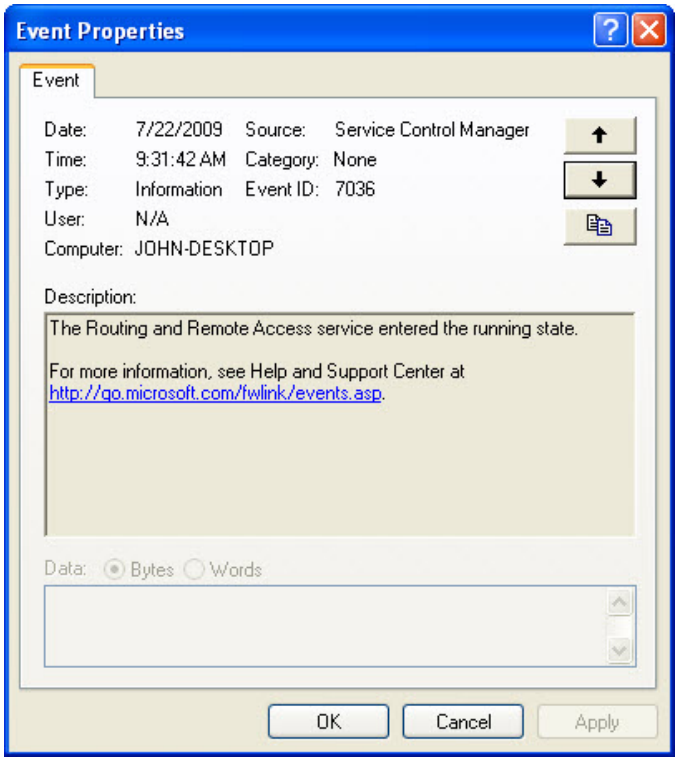

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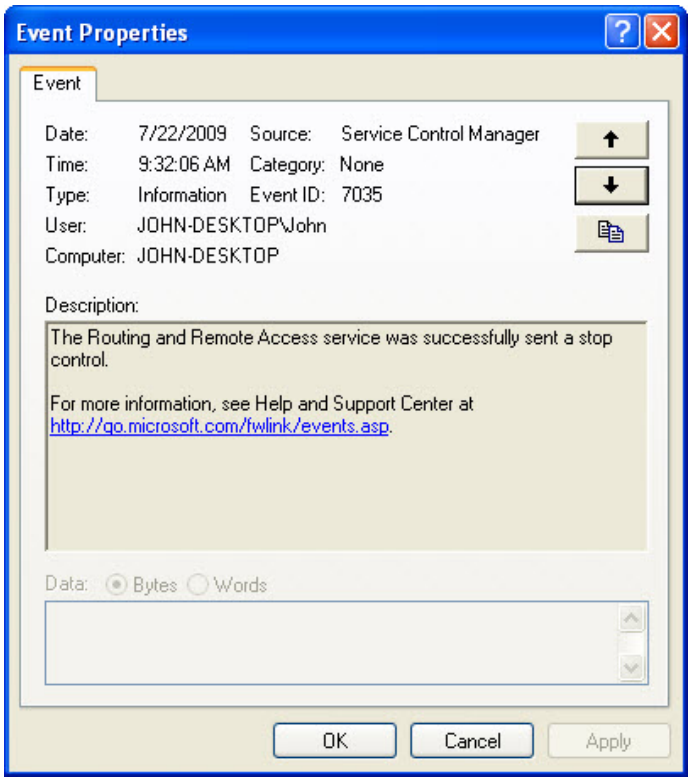

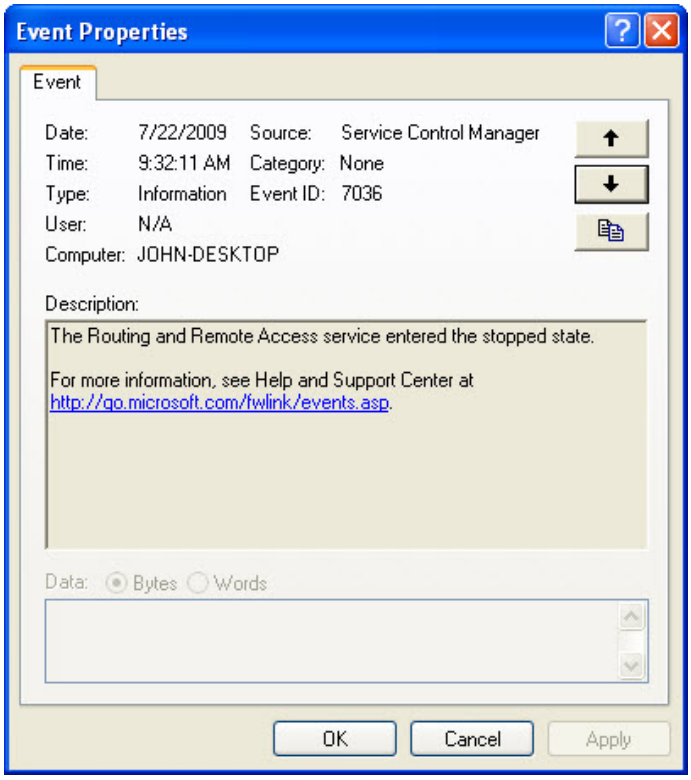

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Close all open windows.

Step 3

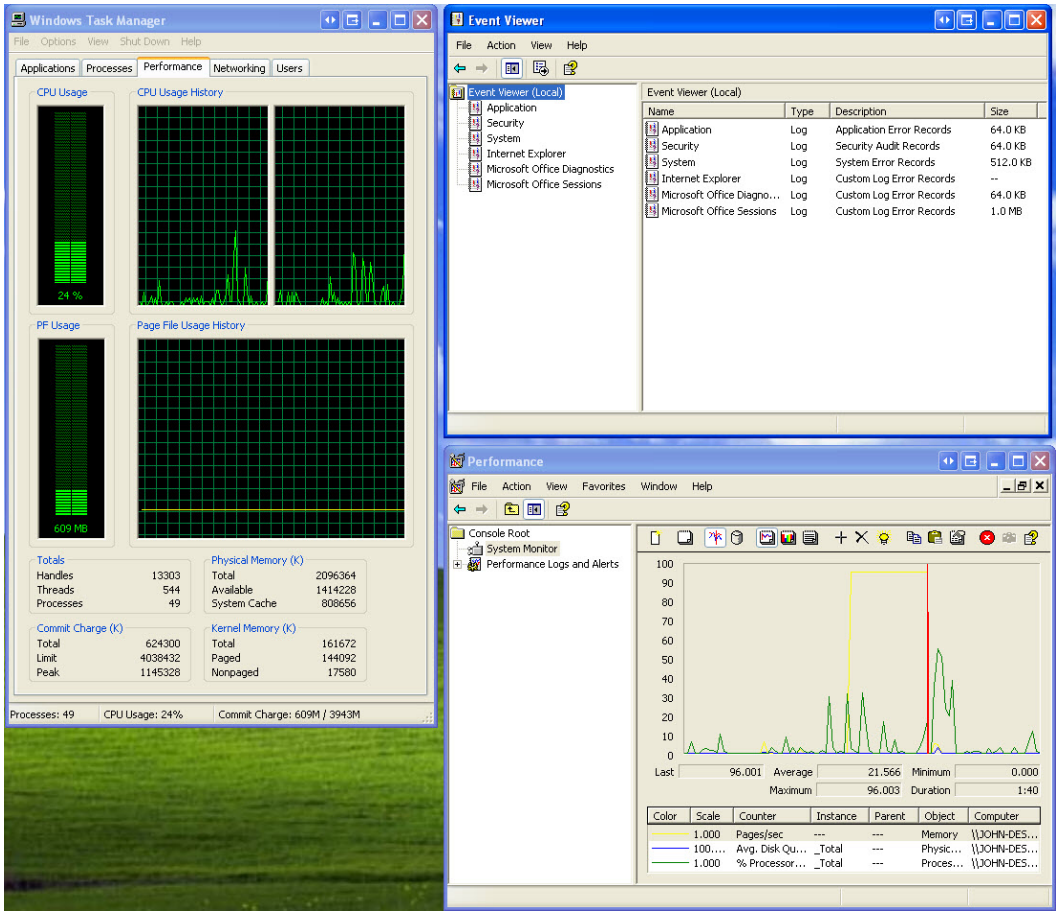
For the rest of this lab, you will configure advanced Administrative Tool features and monitor how this affects the computer system.

Press **Ctrl-Alt-Delete**. When the “Windows Task Manager” window opens, select the **Performance** tab.

Click **Start > Control Panel > Administrative Tools**. Open the following tools: Event Viewer and Performance.

Close the “Administrative Tools” window.

Resize and position all three windows so they can be seen at the same time.



Select the “Performance” window.

Expand “Performance Logs and Alerts”.

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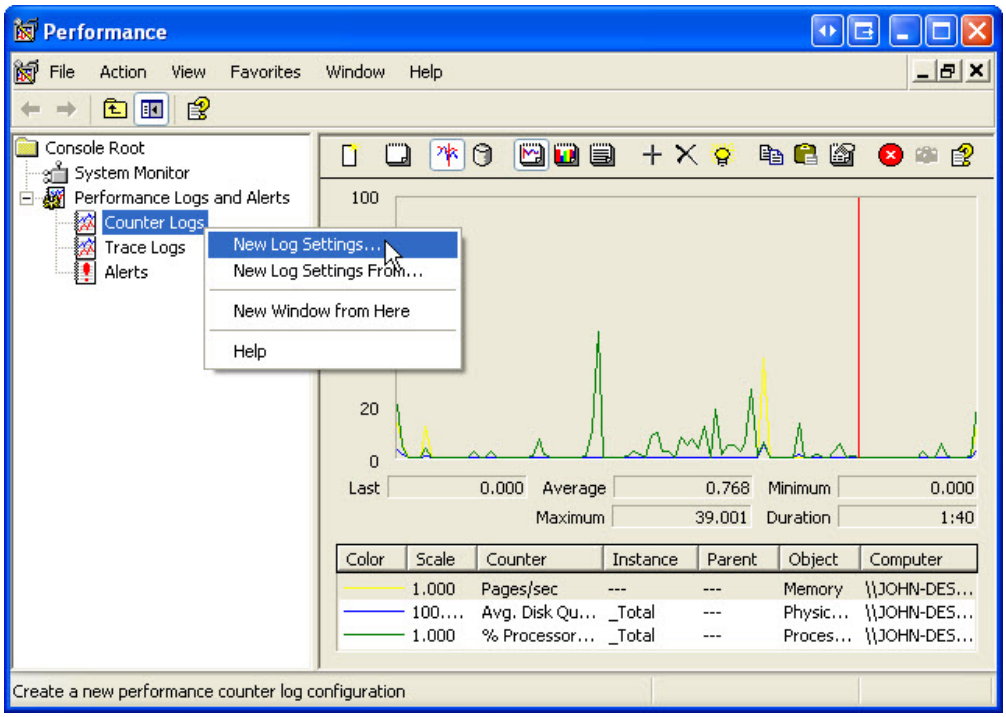
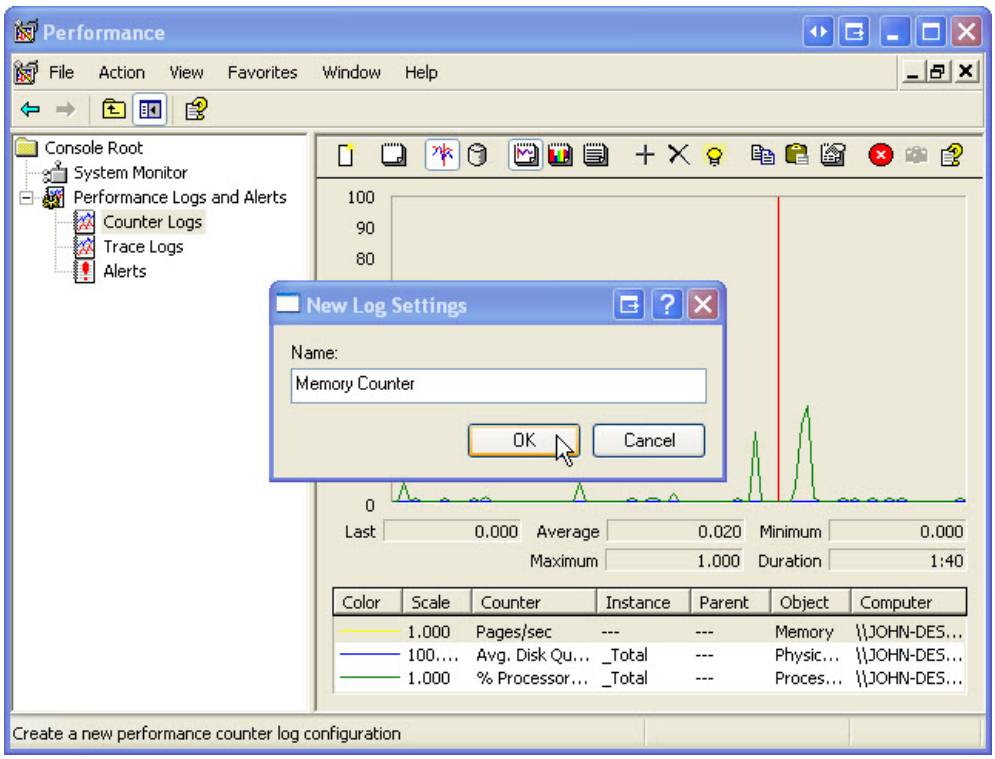


Right-click **Counter Logs > New Log Settings**.

In the Name field, type **Memory Counter**.



Click **OK**.

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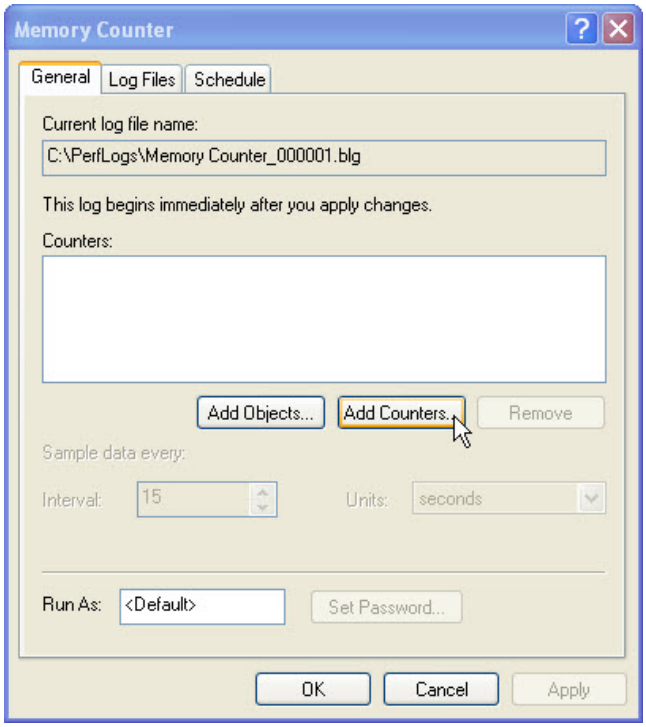
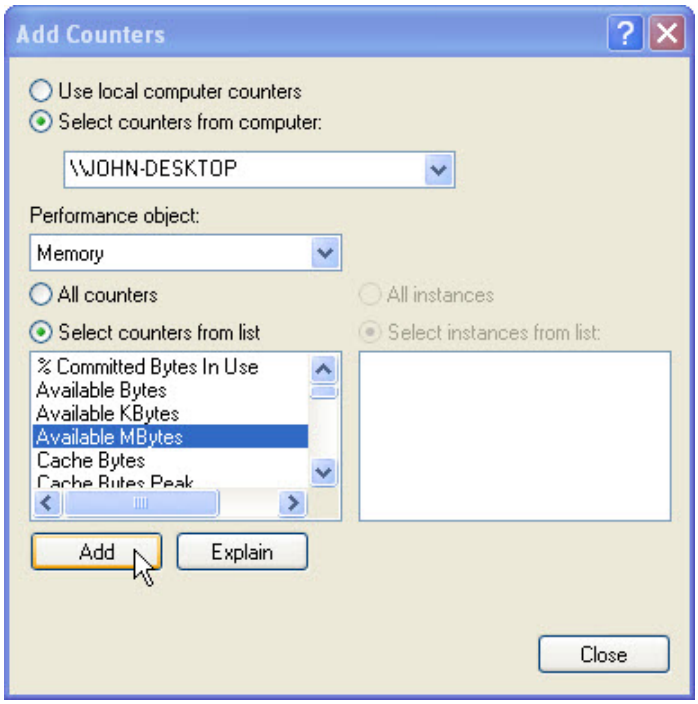
When the “Memory Counter” window appears, click **Add Counters**.



The “Add Counters” window opens.



Set the Performance object field to **Memory**.

Set the “Select counters from list” field to **Available Mbytes**, and then click **Add > Close**.

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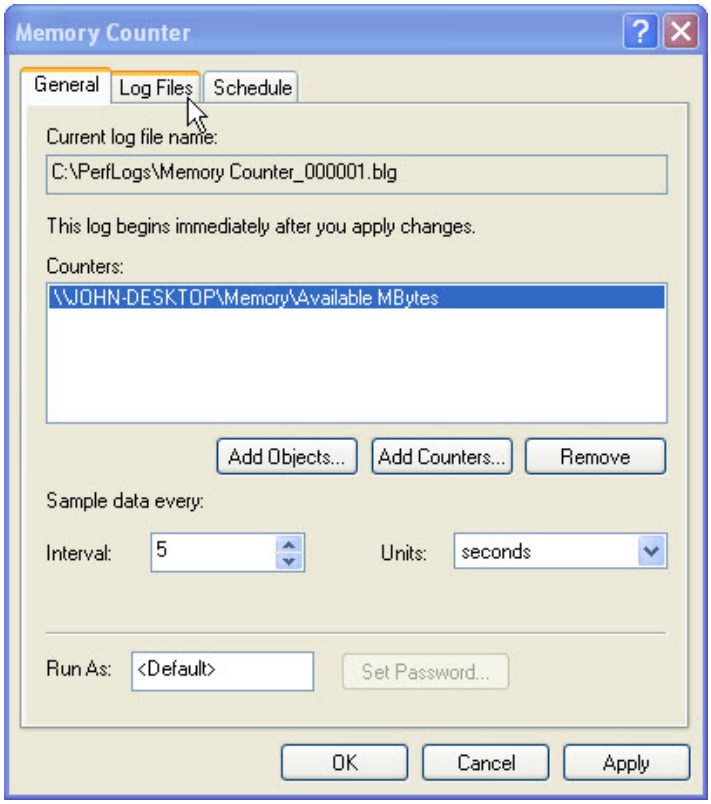

Change the Interval field to **5**.

Select the **Log Files** tab.

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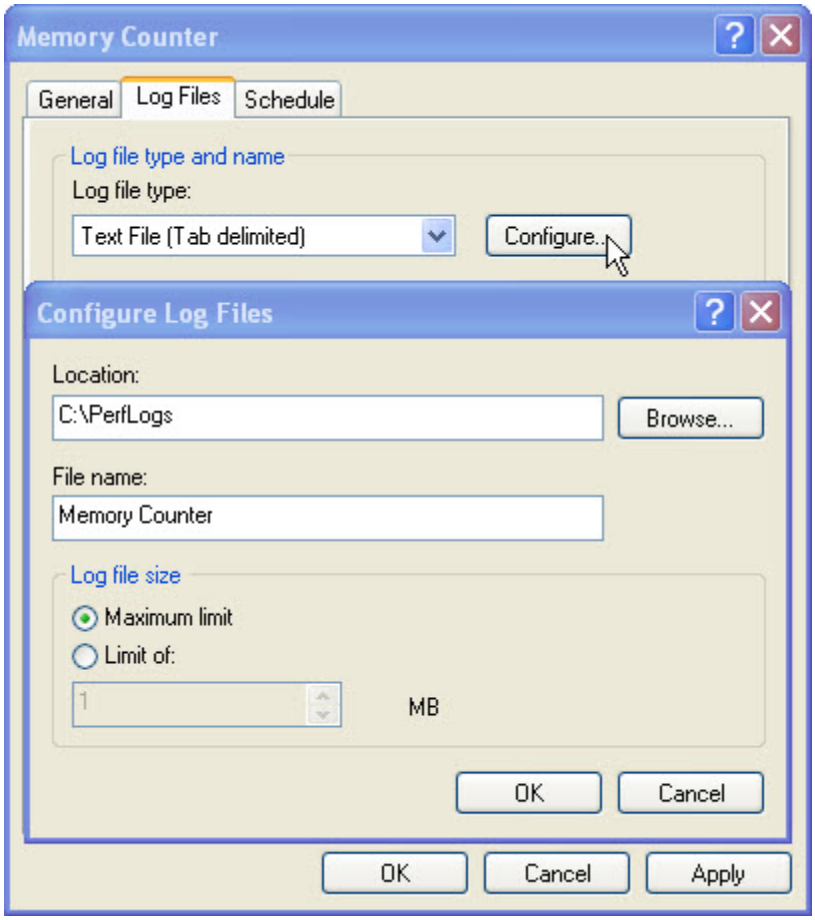


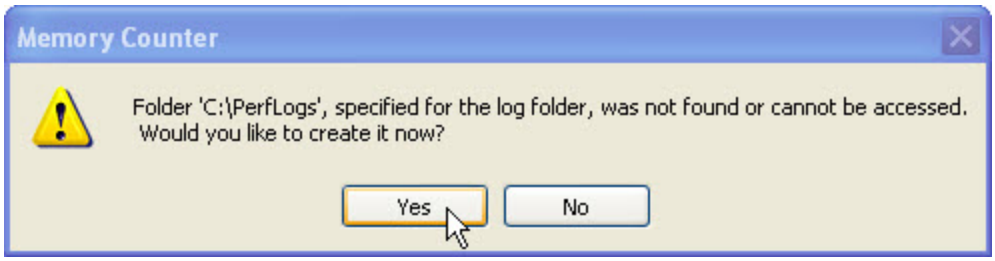
Set the Log file type field to **Text File (Tab delimited)**.

Click **Configure**.

What is the default location for the log files?

Click **OK** to close the “Configure Log Files” window.

A folder not found information window opens. Click **Yes** to create the folder.



Click the **Schedule** tab.

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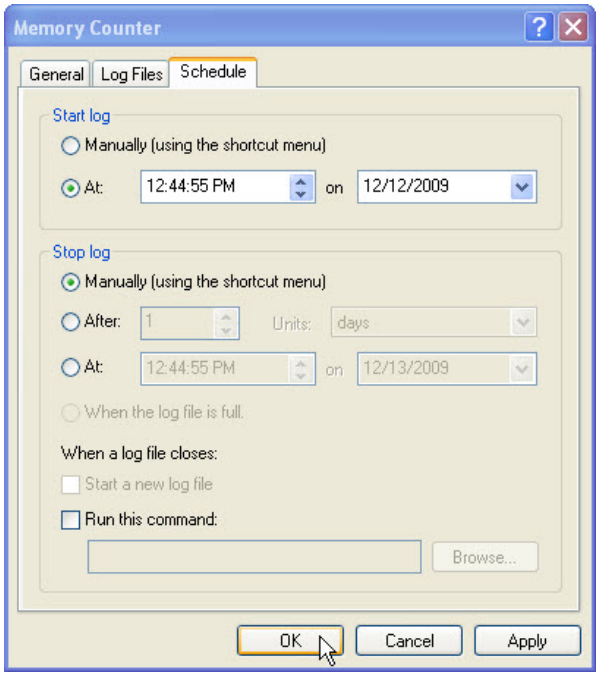
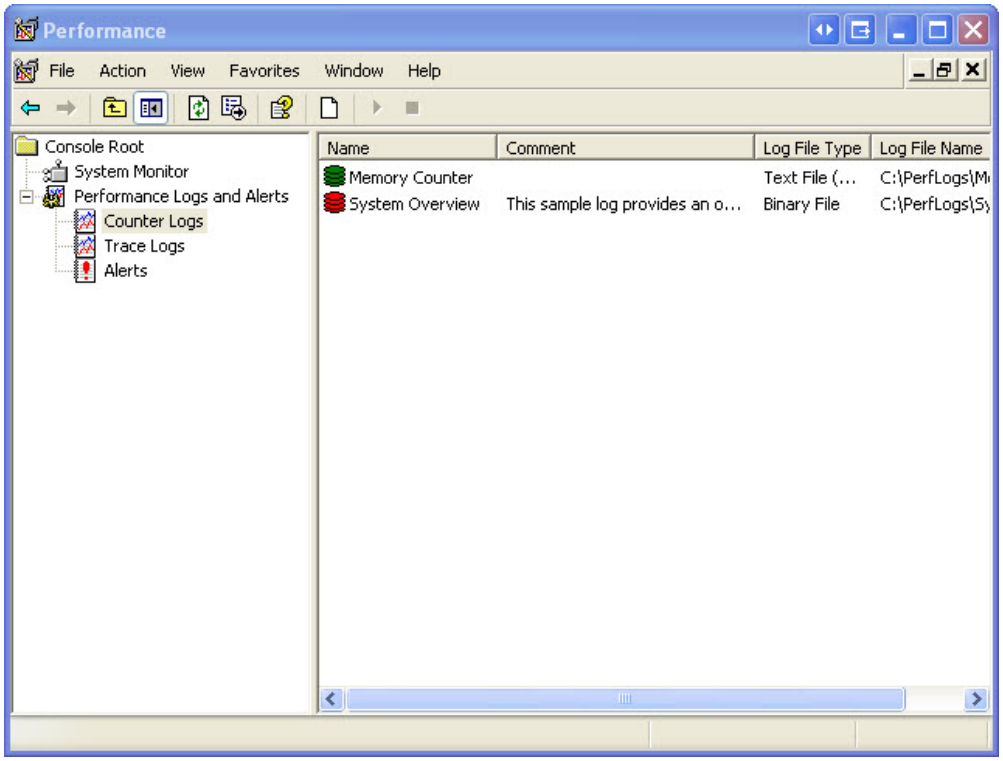


Keep the default settings and click **OK**.

The “Performance” window opens.



In the “Performance” window, select **Counter Logs**.

The Memory Counter log icon turns green once it has started.

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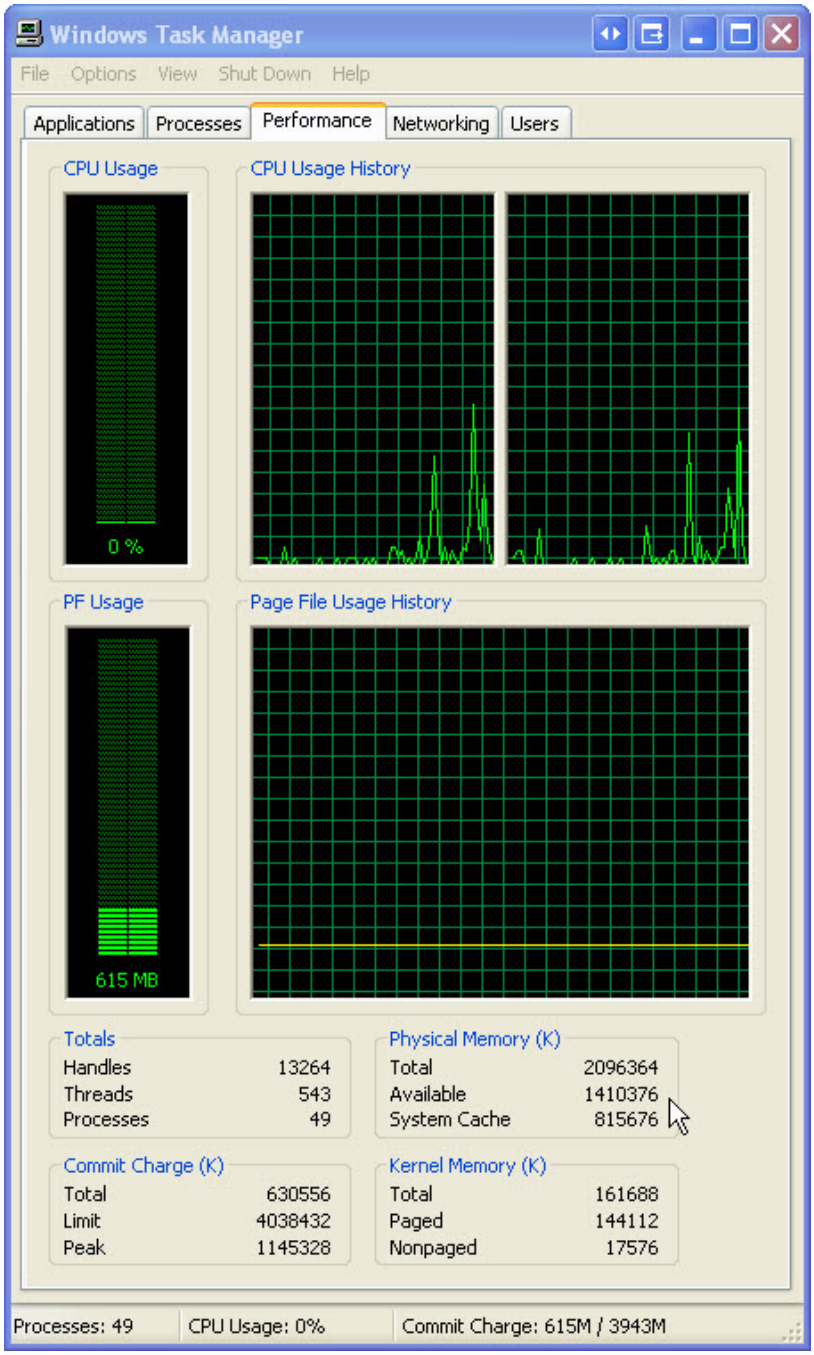
Select the “Windows Task Manager” window.



What amount of Physical Memory (K) is available?

Subtract about 10 MB of the available memory. Example: 1410376 – 10000 = 1400376.

How much available memory is left over?

Make sure the “Performance” window is active.

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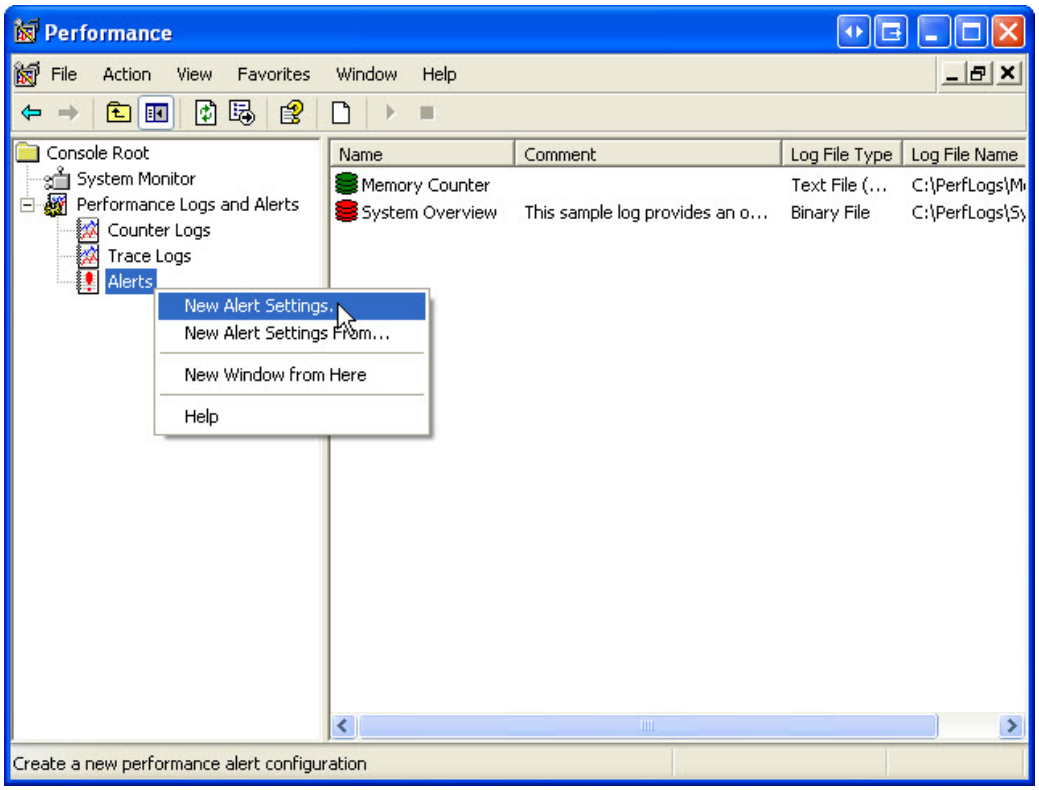
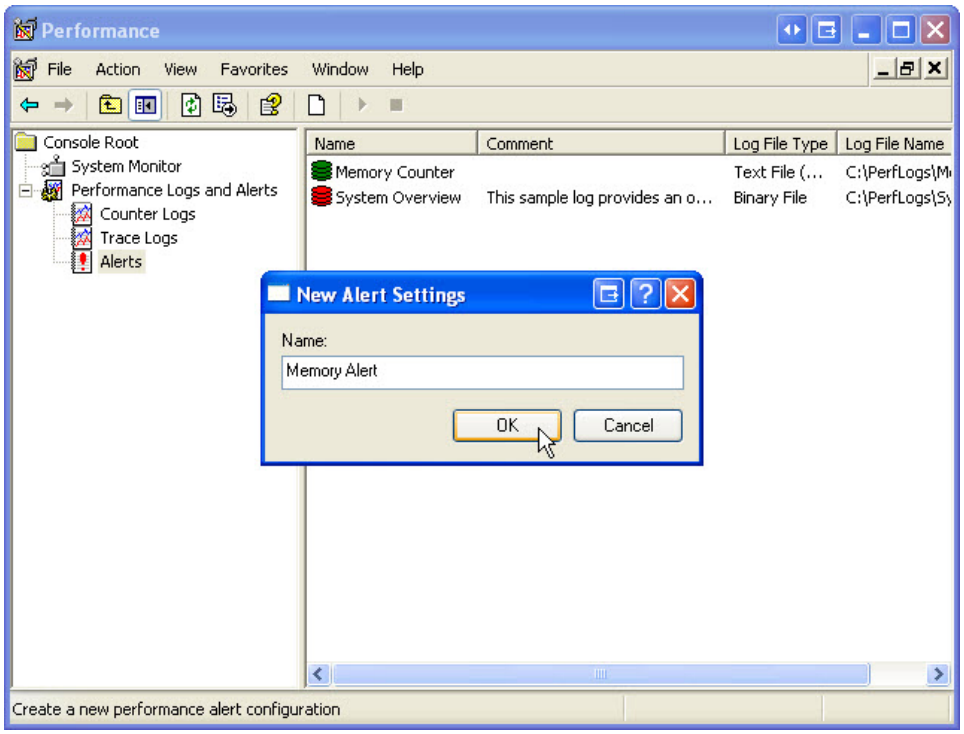


Right-click **Alerts > New Alert Settings**.



In the Name field, type **Memory Alert**, then click **OK**.

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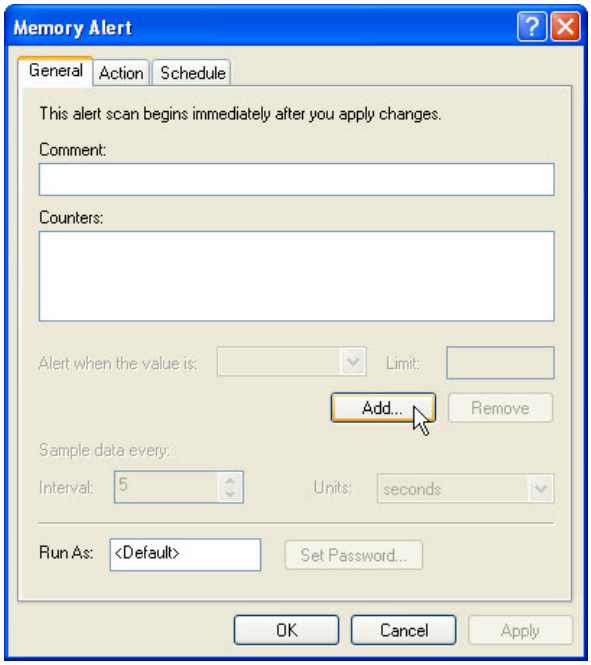
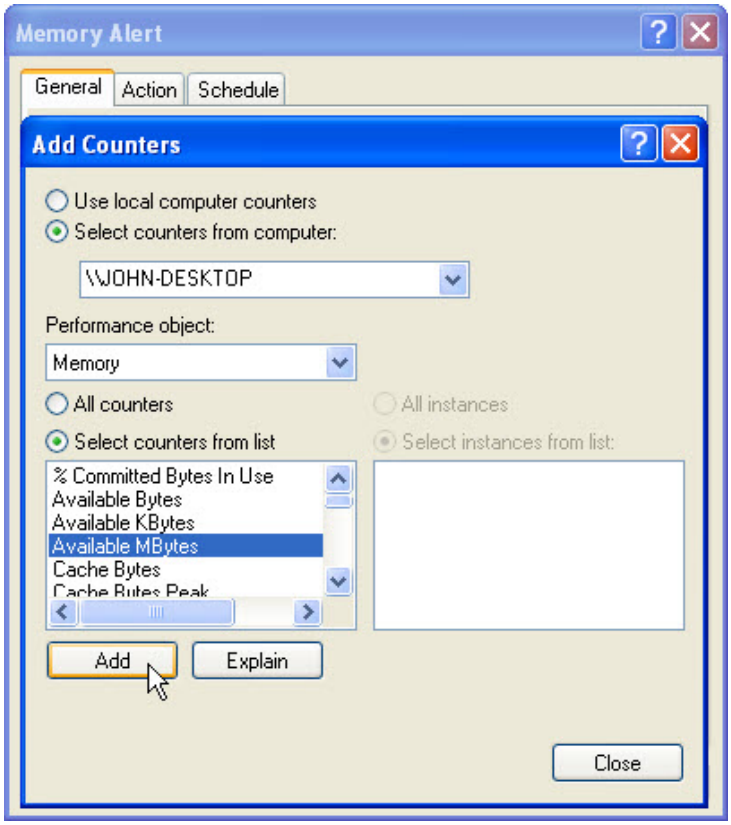
The “Memory Alert” window appears.



Click **Add**.

The “Add Counters” window opens.



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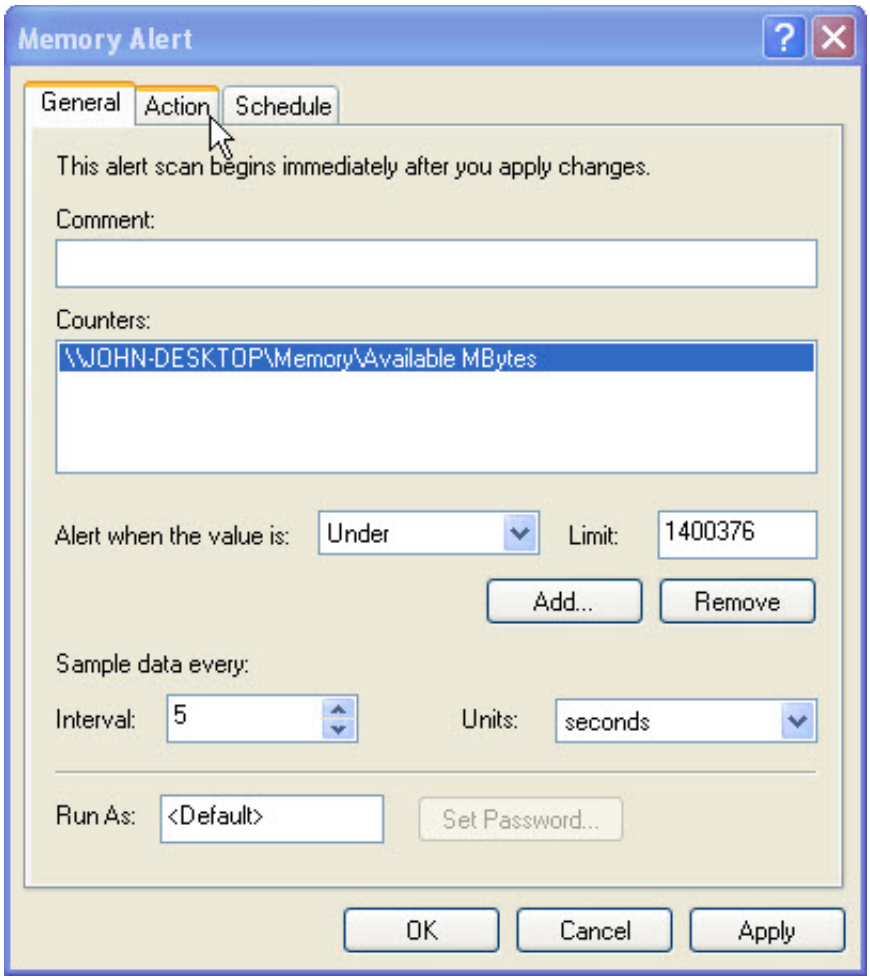
Set the “Performance object” field to **Memory**.

Set the “Select counters from list” field to **Available MBytes**. Click **Add > Close**.

Fill in the window fields.



Set the following field values for the General tab:

Alert when the value is: **Under**
Limit: **enter physical memory minus 10MB** (use the physical memory found in the Task Manager earlier in this lab). Example – 1400376
Interval: **5**
Units: **seconds**

Click the **Action** tab.

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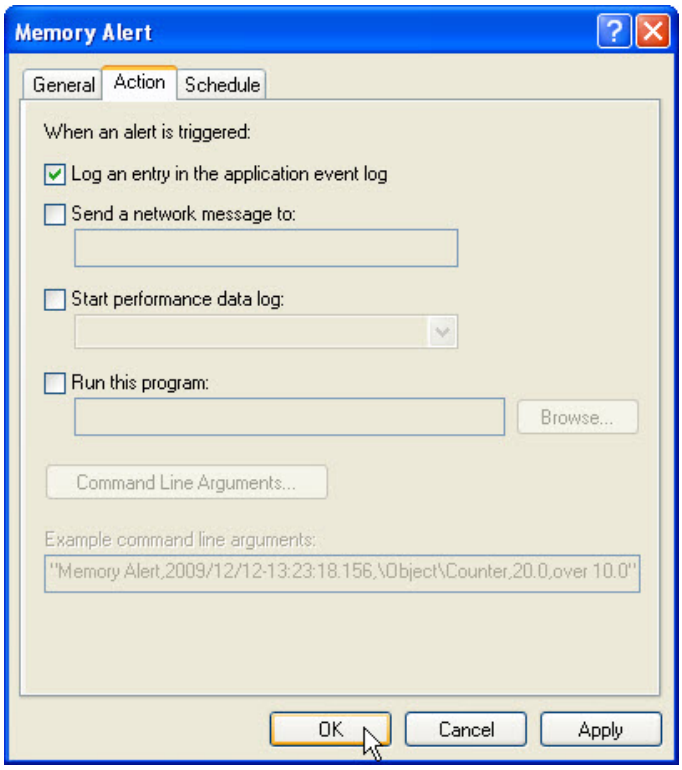
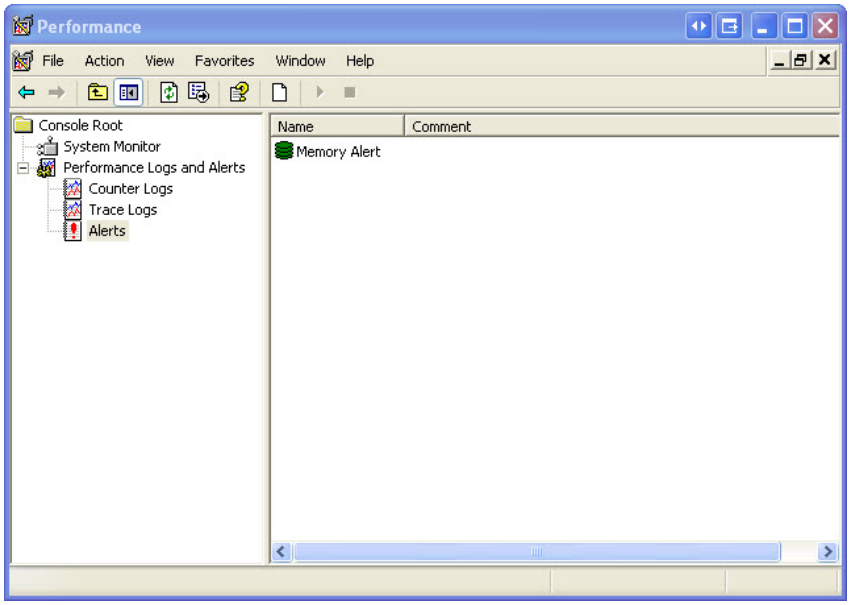


Click **OK** to keep default settings.

In the “Performance” window, select **Alerts**.



How can you tell that the Memory Alert has started?

To force the computer to use some of the available memory, open and close a browser. Example: Internet Explorer or FireFox.

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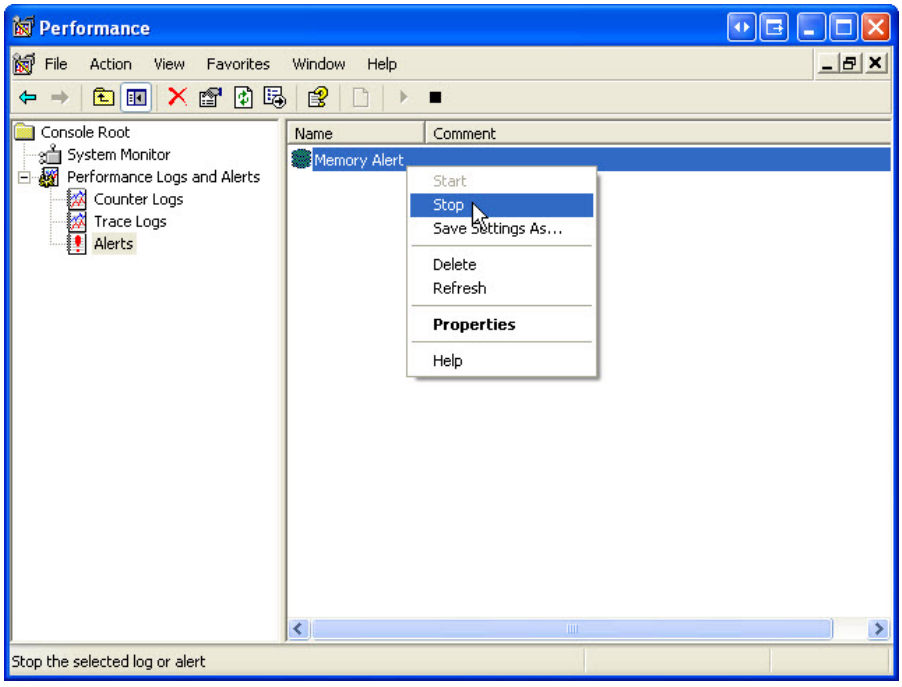
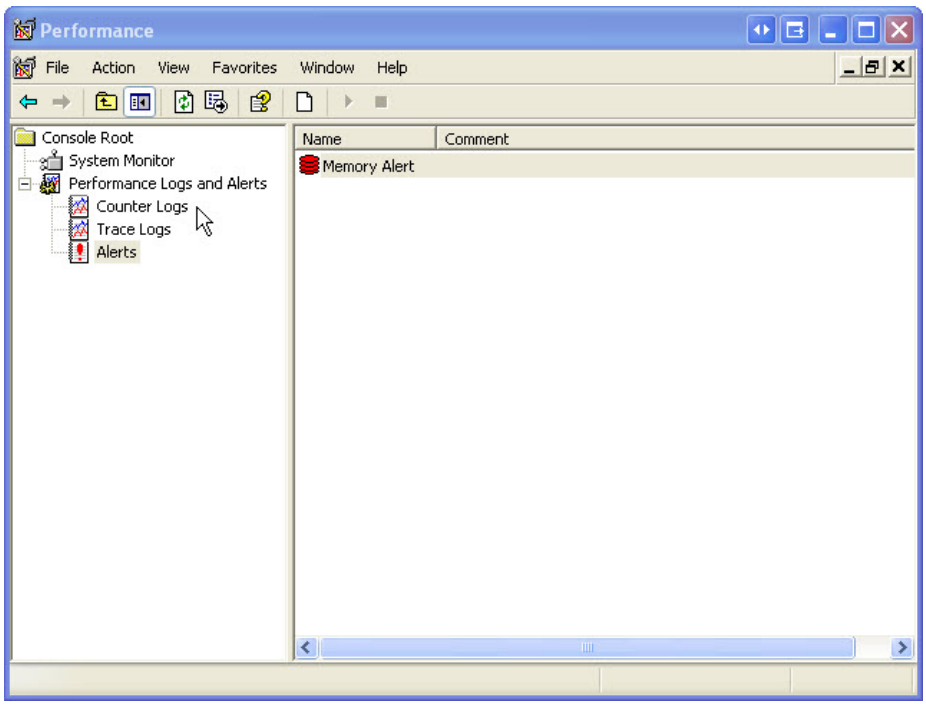
Right-click the **Memory Alert** icon **> Stop**.



Notice the “Memory Alert” icon has changed to a red color.



Select **Counter Logs**.

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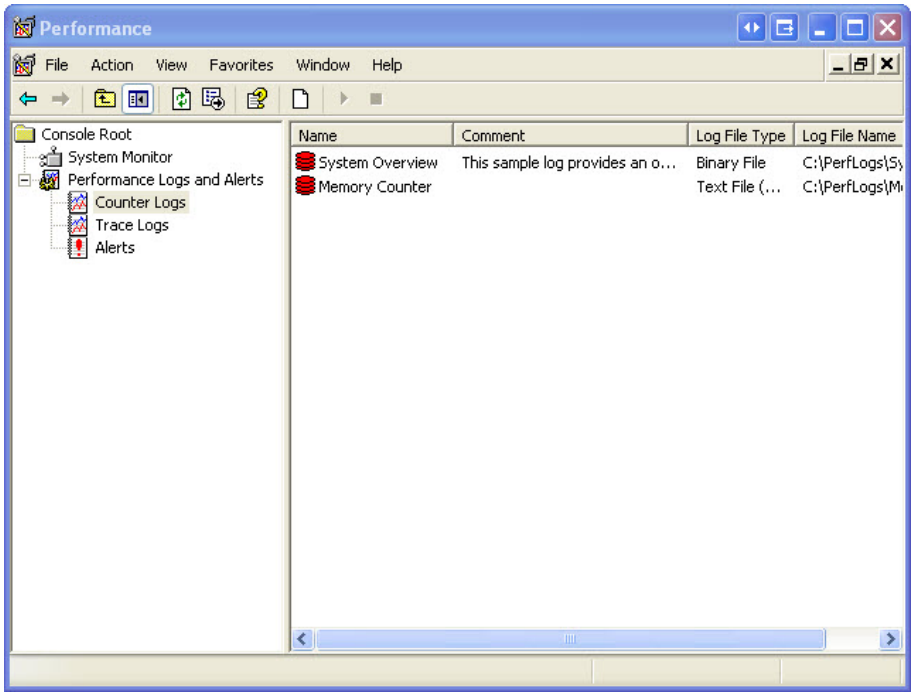
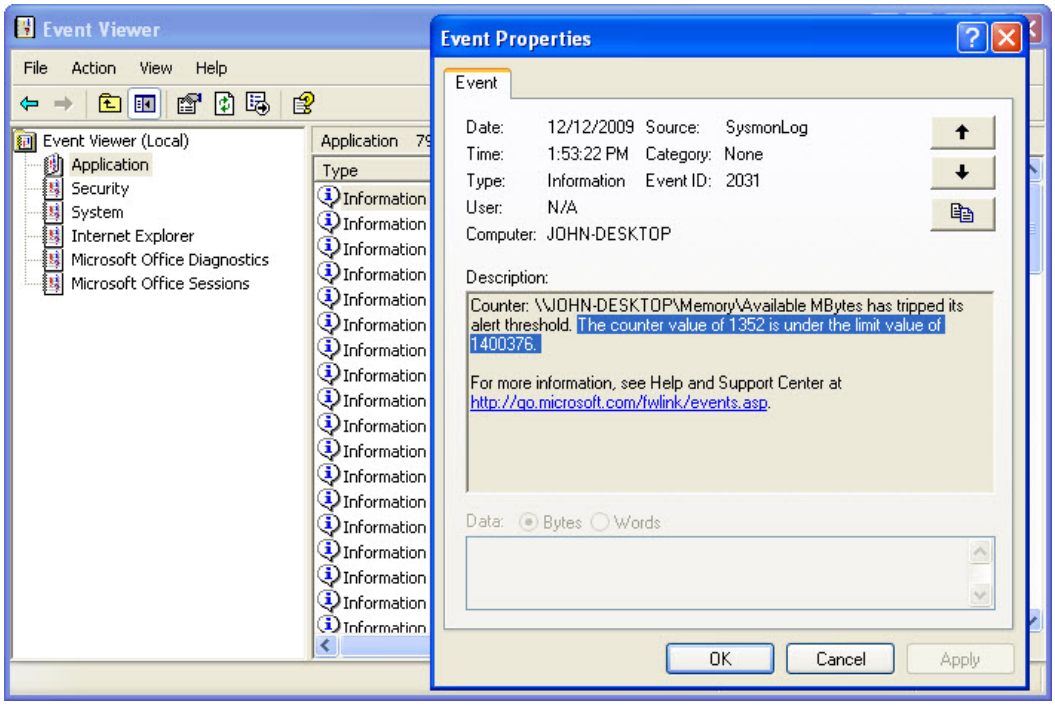


Right-click the **Memory Counter** icon and select **Stop**.

How can you tell the Memory Counter has stopped?

Make sure the “Event Viewer” window is active.

Select **Application**, and double-click the event at the top of the list.



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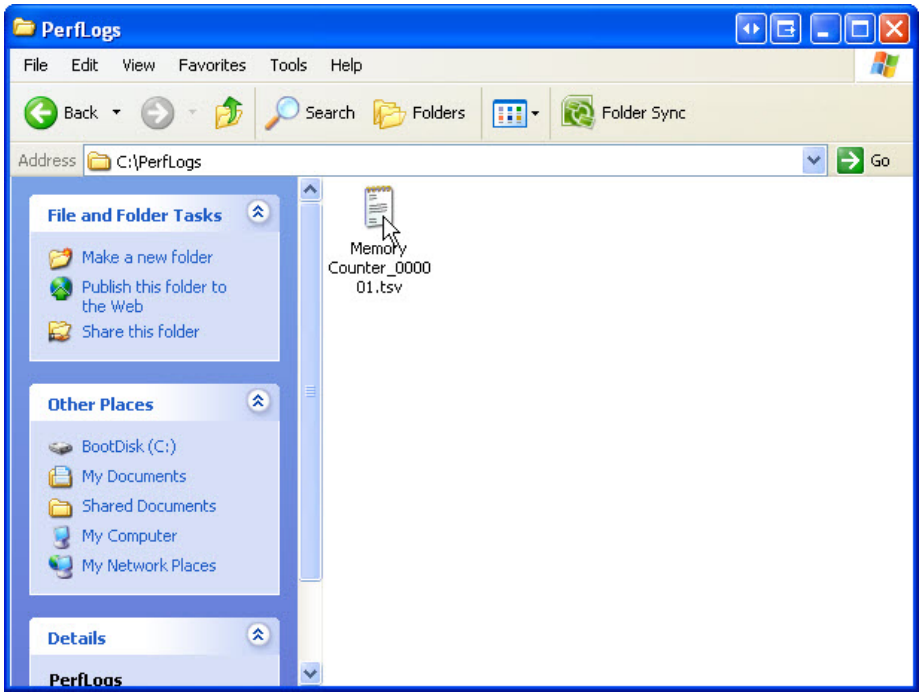
Does the event indicate that the available MBytes has tripped the alert threshold?

If you answered yes to the above question, what was the counter value that tripped the alert event?

If you answered no, click the down arrow a few times until you find the alert event. If you do not find an alert event ask the instructor for assistance.

Close the “Event Properties” window, click **OK**.

Click **Start > My Computer >** double-click drive **C: > PerfLogs**.



Double-click **Memory Counter** file.

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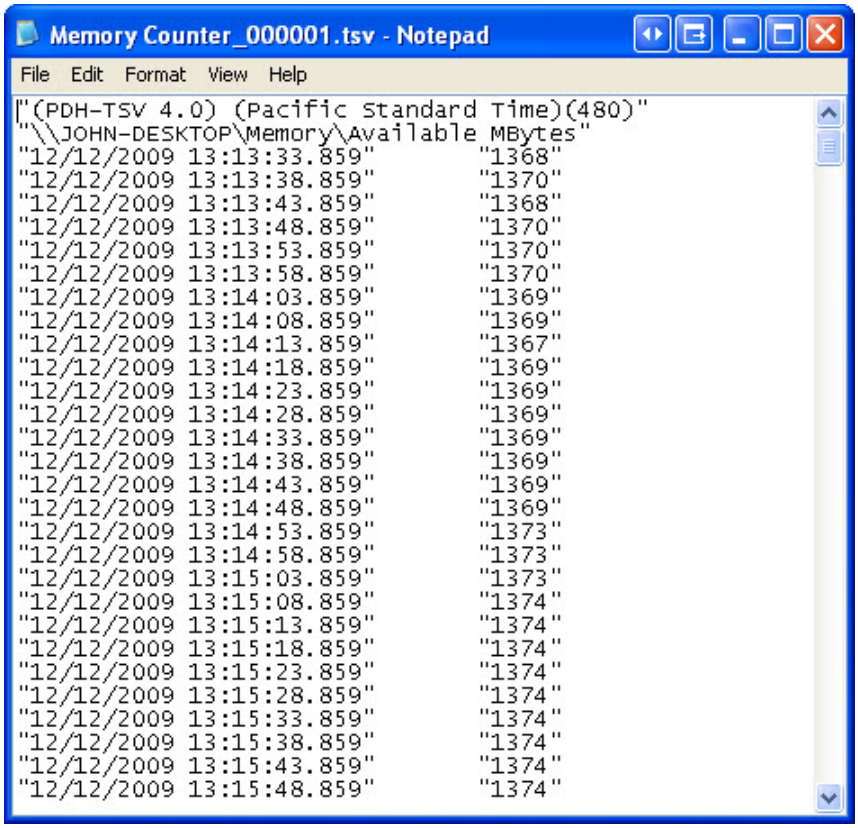
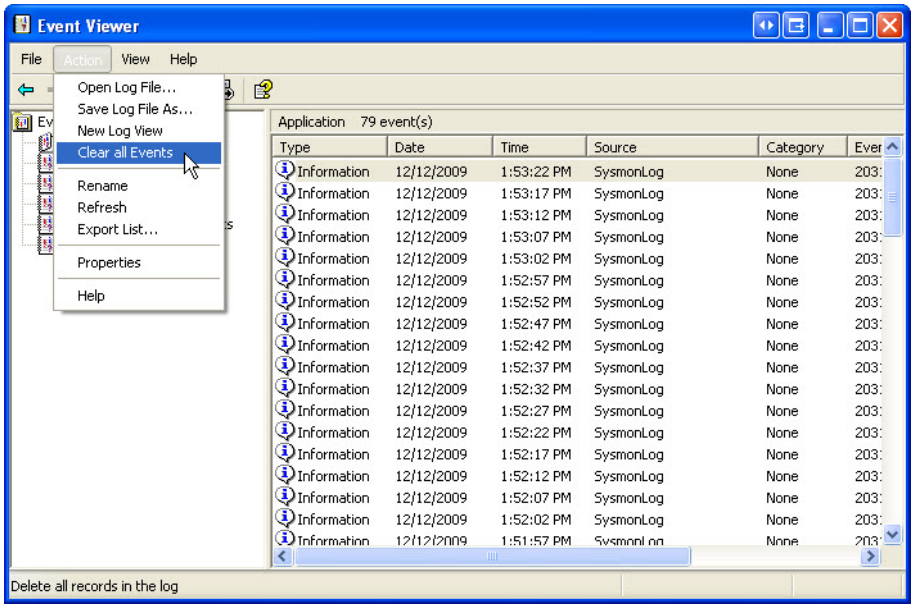


What does the column on the right show?

Close the Memory Counter file, PerfLogs folder, and Windows Task Manager.

In the “Event Viewer” window click **Application > Action > Clear All Events**. Click **No** when you are asked to save the events to a file.



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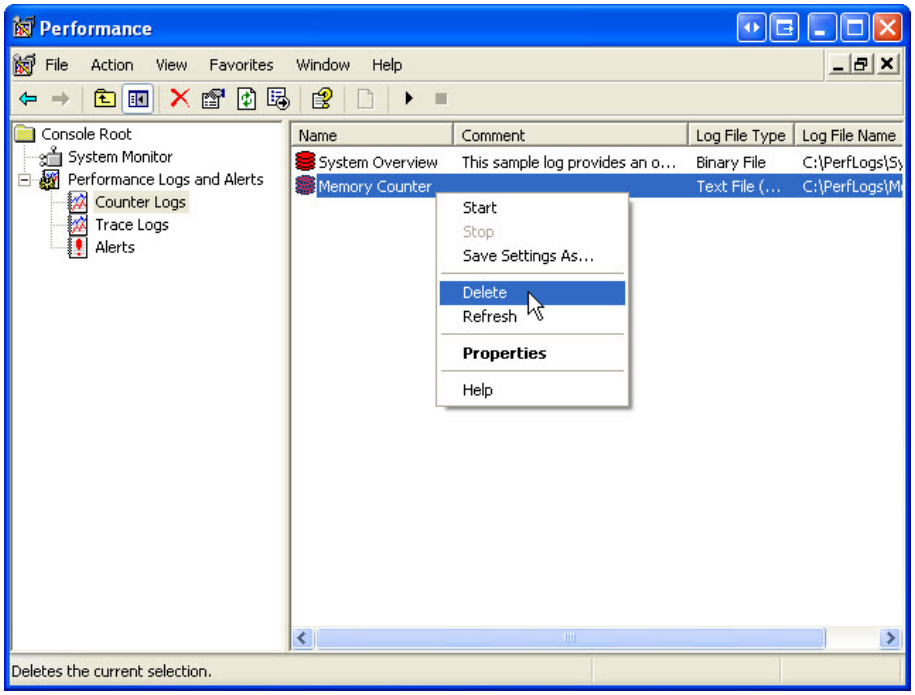
In the “Performance” window, click **Counter Logs >** right-click **Memory Counter > Delete**.



Select **Alerts > Memory Alert >** right-click **Memory Alert > Delete**.

Open drive **C:**.

Right-click the **PerfLogs** folder.

Click **Delete > Yes**.

Close all open windows.

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