Microsoft® Official Course

Module12

Monitoring Server Performance

Microsoft®

Module Overview

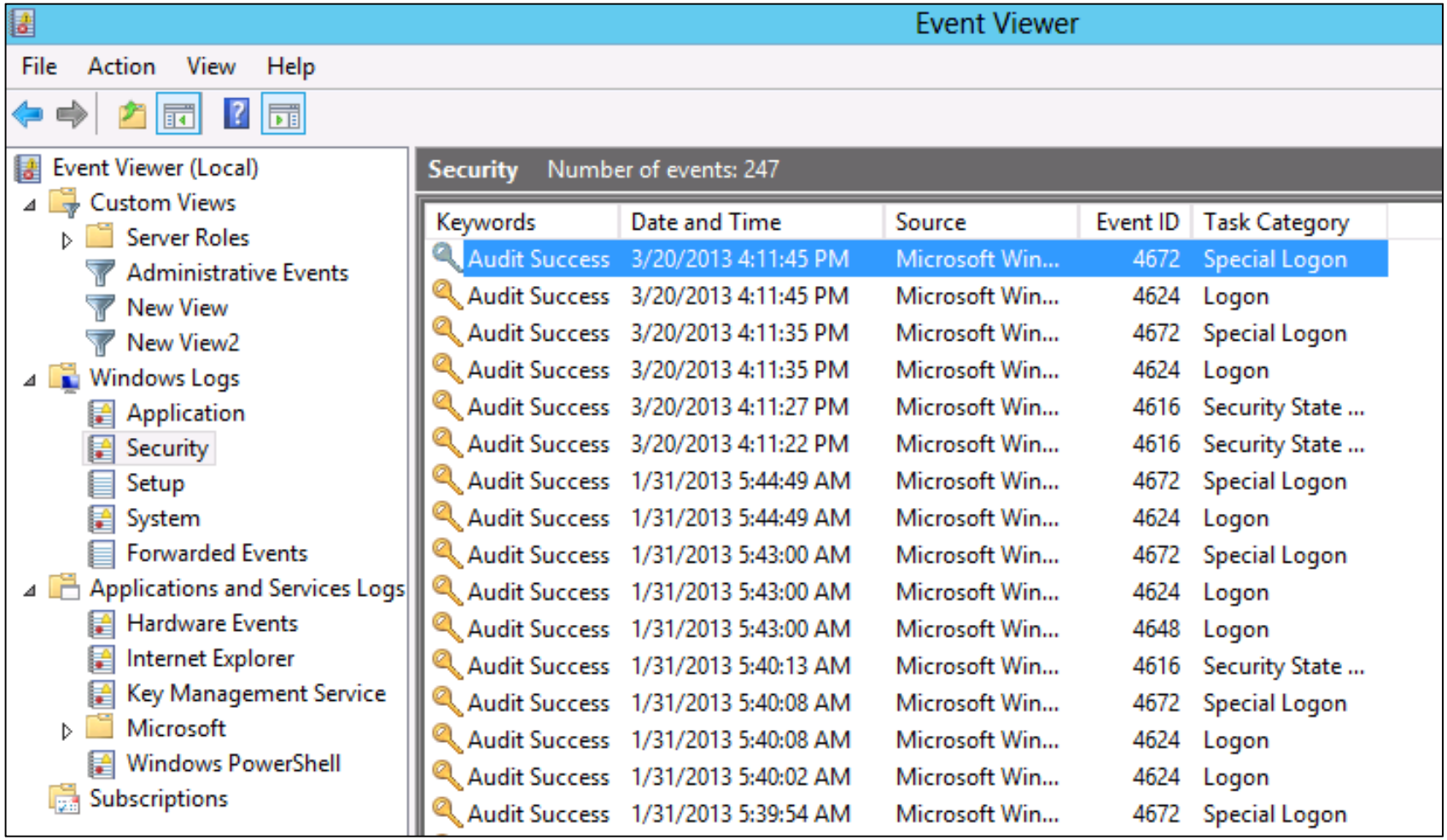
- Event Logging
- Performance Monitoring

Lesson 1: Event Logging

- Windows Logs
- Application and Services Logs
- What Are the Event Types and Data Formats?
- Filters, Custom Views, Tasks, and Subscriptions
- Demonstration: How to Use the Event Viewer

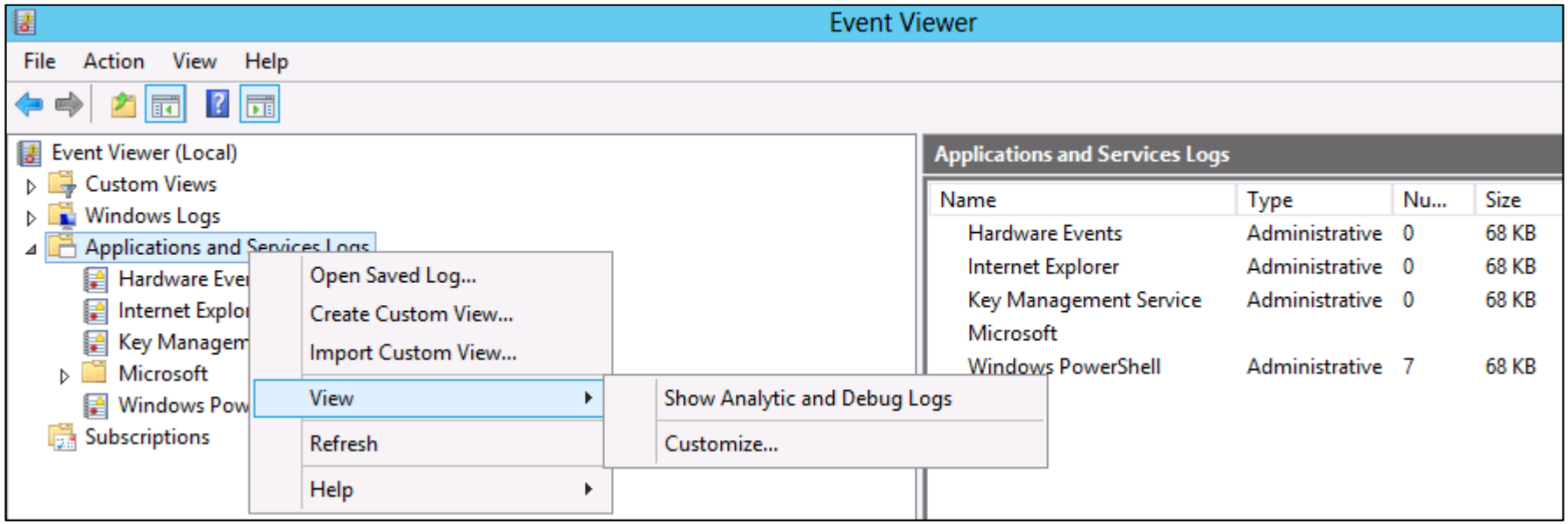
Windows Logs

- Event Viewer can display Windows Logs



Application and Services Logs

- Application and Server Logs are primarily used for local Administration and Operational events and logs are typically created for each role added.
- By default, Analytic and Debug logs are disabled and hidden

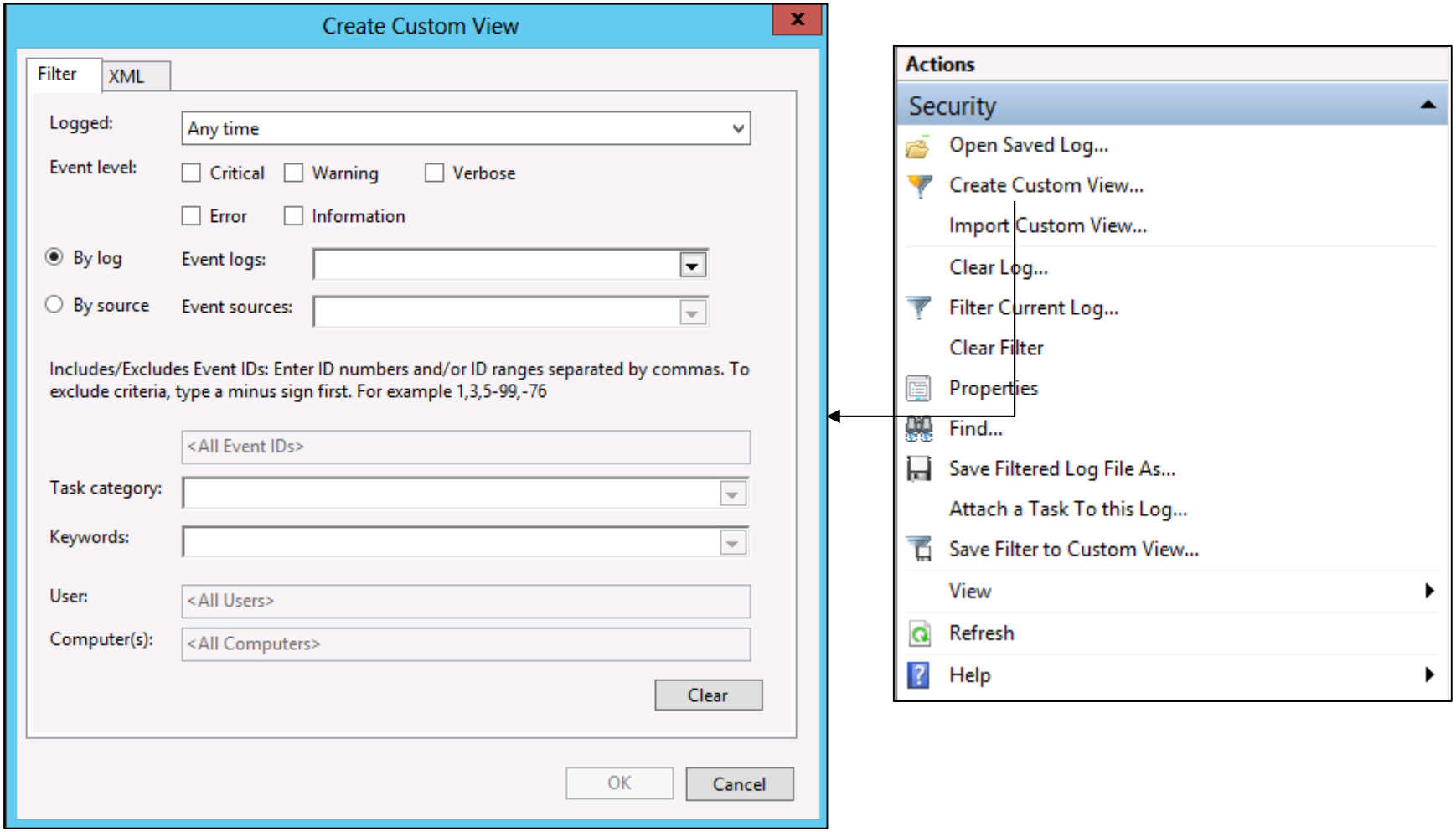


What Are the Event Types and Data Formats?

- Level Types occuring in Logs
  - Information
  - Error
  - Warning
- Additional classification occuring in Security Log
  - Audit Failure
  - Audit Success
- Events are presented in the same format for both Windows Logs and Application and Services Logs

Filters, Custom Views, Tasks, and Subscriptions

- Filters, Custom Views, Tasks, and Subscriptions help you focus on specific types of events



Demonstration: How to Use the Event Viewer

- In this demonstration, you will see how to use the Event Viewer to review Windows Logs, and Application and Services Logs. You will also see how to create a custom view.

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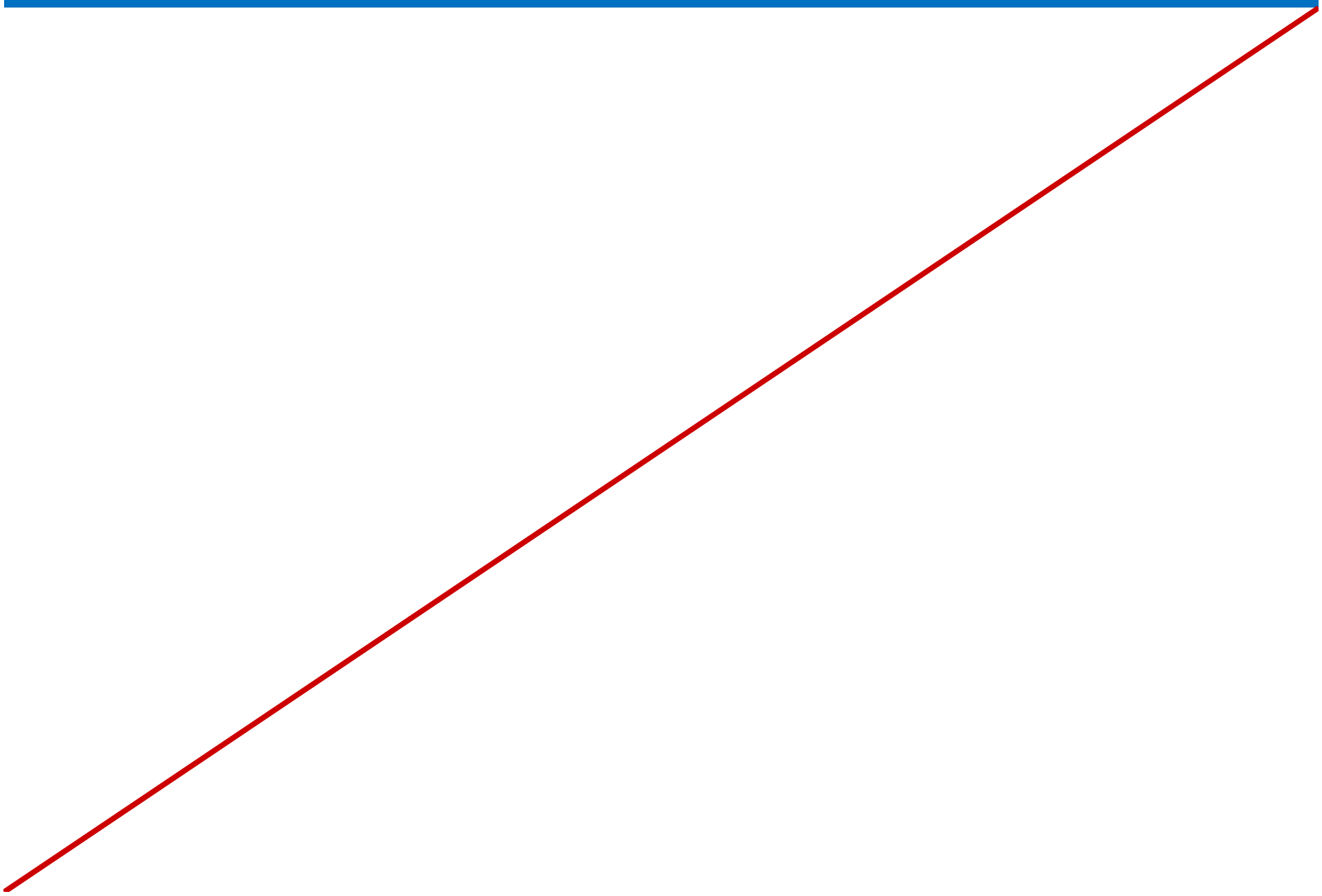

Lesson 2: Performance Monitoring

- Performance Bottlenecks
- The Process of Performance Monitoring
- Performance Counters
- Demonstration: How to Capture Current Performance Activity
- What Are Data Collector Sets?
- Demonstration: How to Use Data Collector Sets to Capture Performance Data
- Demonstration: How to Use Alerts to Identify Performance Bottlenecks

Performance Bottlenecks

- A performance bottleneck occurs when a server is unable to service a request for a resource
- There are many situations where bottlenecks can occur
- There are many bottleneck mitigation strategies
  - Adding and upgrading resources
  - Balancing users and processes across multiple servers
  - Running resource intensive applications during non-peak periods
  - Configuring resources for best performance

The Process of Performance Monitoring

Real Time	• Performance monitoring • Service level agreements
Historical	• Event logs • Retained performance logs
Tools	• Event Viewer • Windows System Resource Manager • Network Monitor • Performance Monitor • Resource Monitor • System Center Operations Manager • Task Manager

Performance Counters

- Primary Processor Counters
  - % Processor Time
  - Interrupts per Second
  - Processor Queue Length
- Primary Memory Counters
  - Pages per Second
- Primary Disk Counters
  - % Disk Time
  - Average Disk Queue Length
- Primary Network Counters

Demonstration: How to Capture Current Performance Activity

- In this demonstration, you will see how to use Performance Monitor to view real-time performance data

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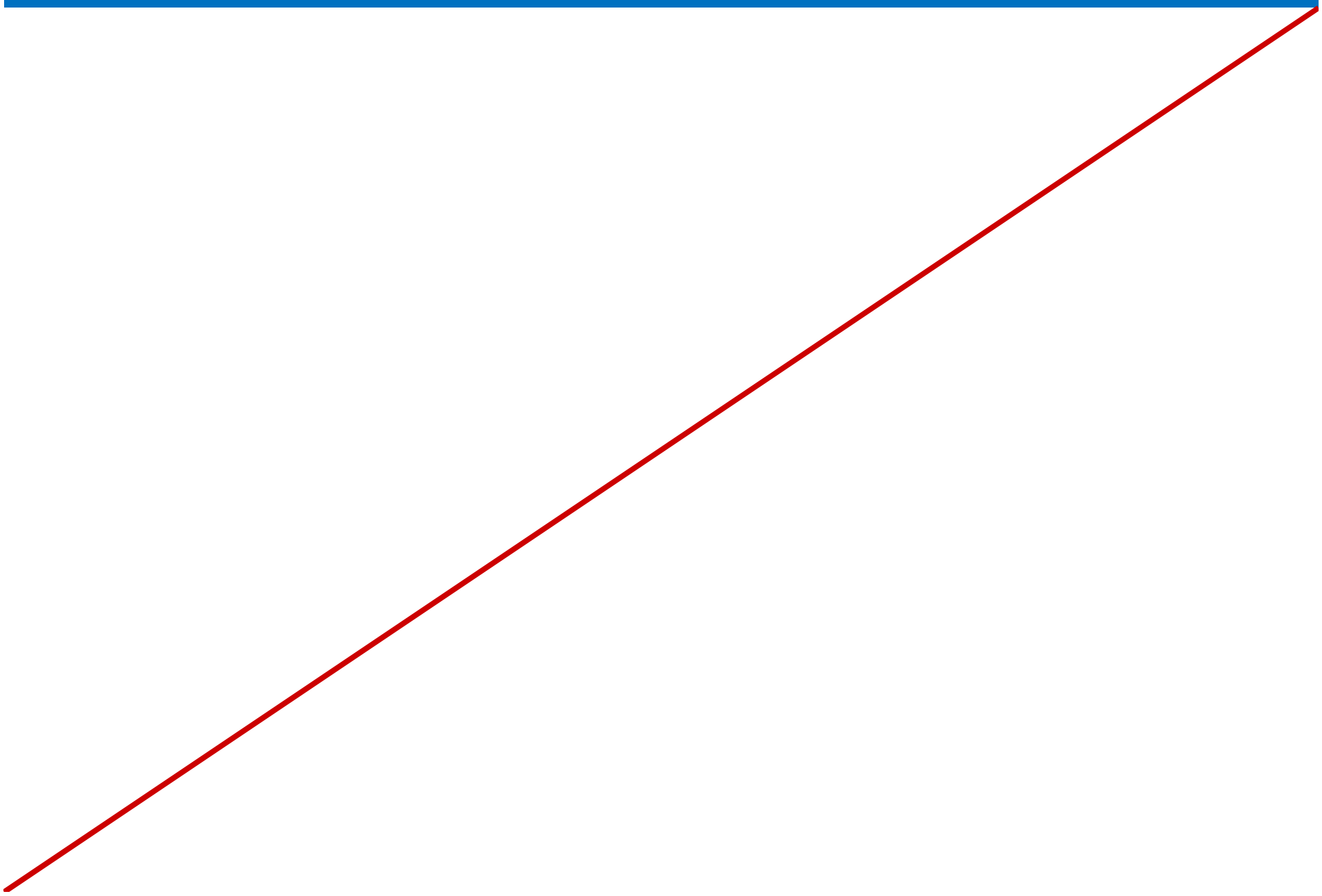

What Are Data Collector Sets?

- Data Collector Sets enable you to gather performance-related and other system statistics for analysis
- Data Collector Sets can contain the following types of data collectors:
  - Performance counters
  - Event trace data
  - System configuration information

Demonstration: How to Use Data Collector Sets to Capture Performance Data

- In this demonstration, you will see how to collect performance data in a Data Collector Set

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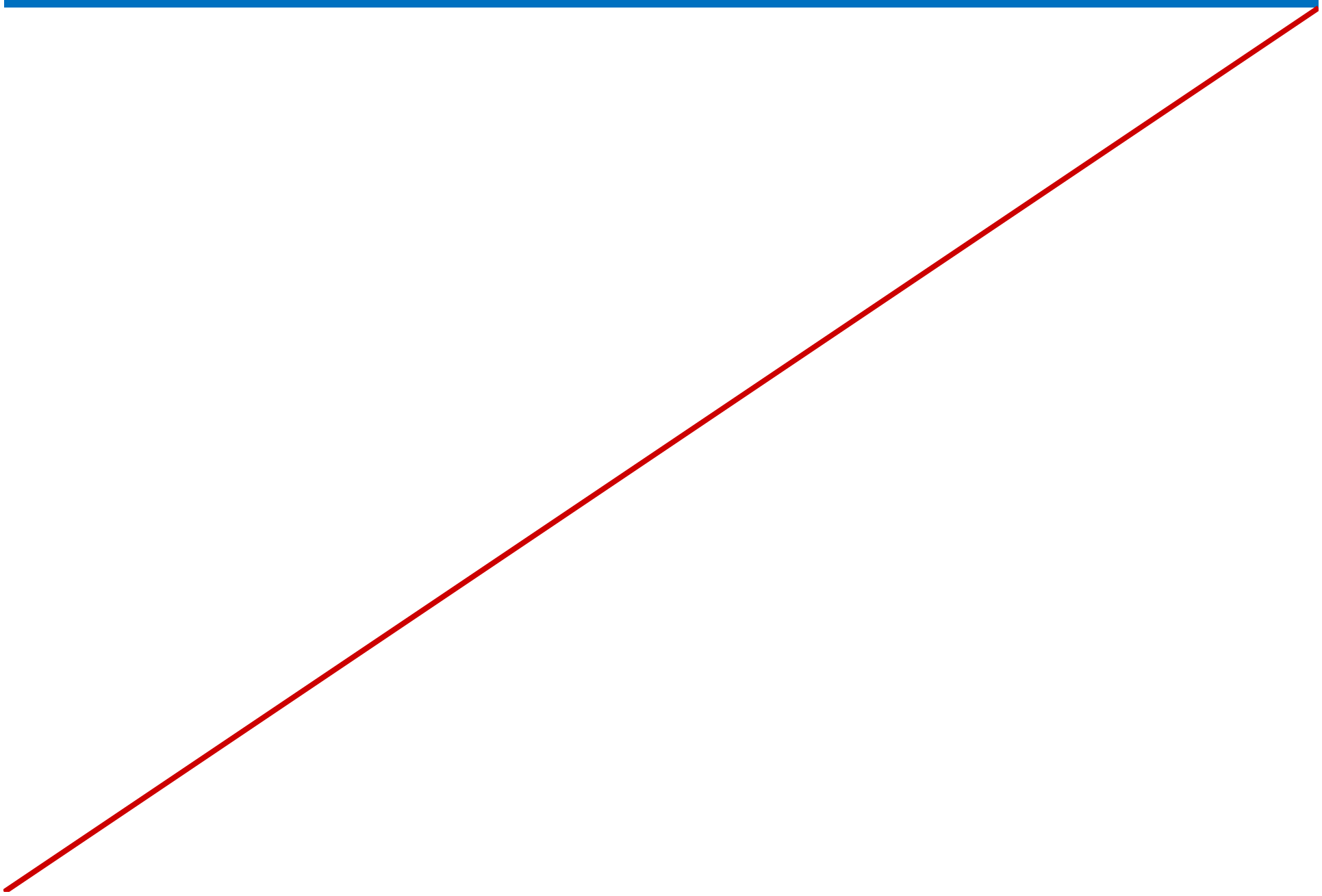

Demonstration: How to Use Alerts to Identify Performance Bottlenecks

- In this demonstration, you will see how to create an alert and verify it generates an Event when the alert is triggered.

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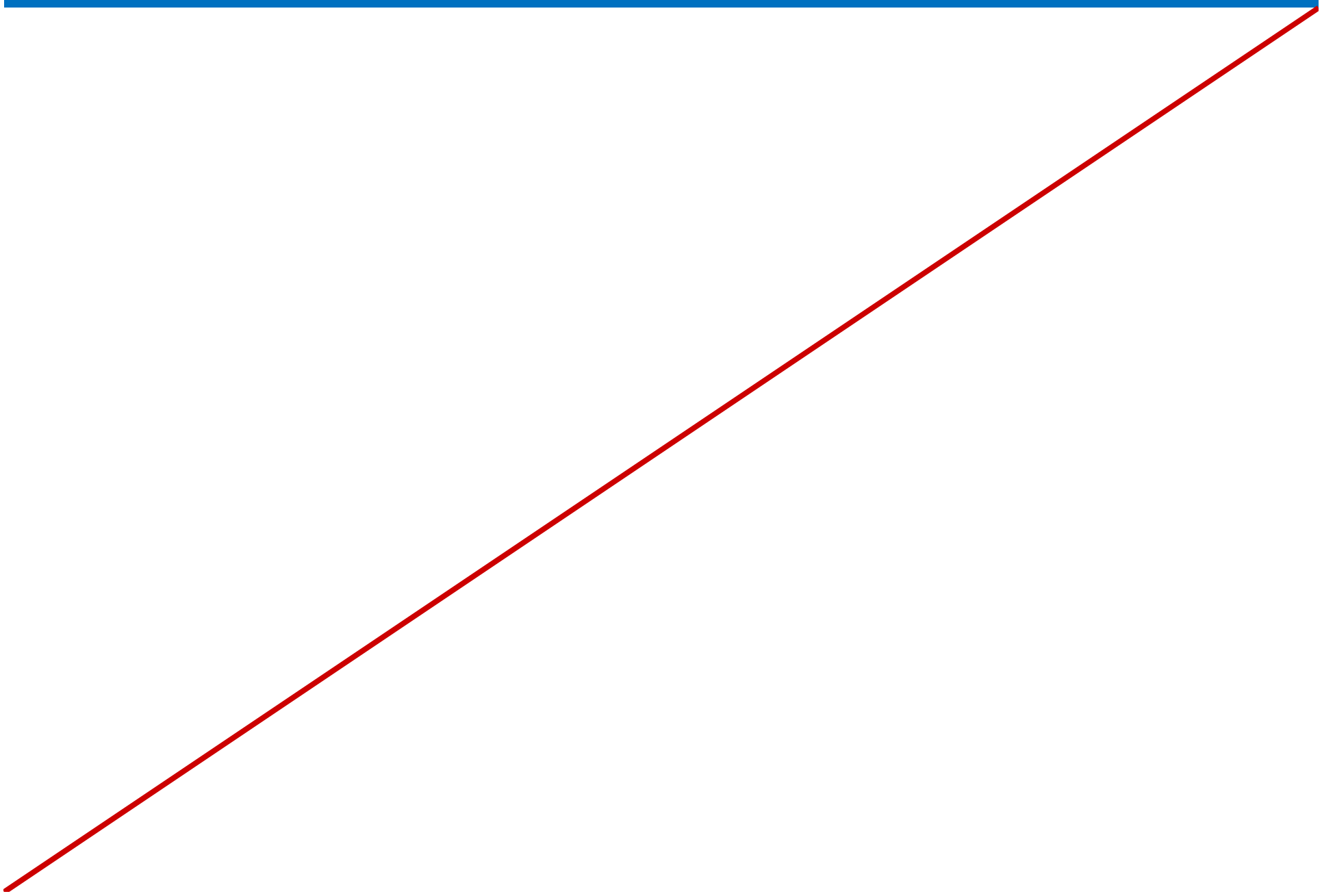

Lab: Monitoring Server Performance

- Exercise 1: Creating a Performance Baseline
- Exercise 2: Simulating a Server Load
- Exercise 3: Determining Probable Performance Bottlenecks
- Exercise 4: Create, test, and verify an alert

Logon Information

Virtual Machines: 10967A-LON-DC1, 10967A-LON-SVR1
User Name: ADATUM\Administrator
Password: Pa$$w0rd

Estimated Time: 60 minutes

Lab Scenario

You have successfully deployed some new servers at the A. Datum branch offices. Before the system goes live, you decide to establish a performance baseline so that you can compare future workloads to the expected workload and you also want to create and test an Alert that you can use to monitor the volume of data on the Network Interface on the server.

Lab Review

- During the lab, you collected data in a Data Collector Set. What is the advantage of collecting data in this manner?
- What significant counters should you monitor in Windows Server Performance Monitor?

Module Review and Takeaways

- Tools