



www.compvisions.com
16 Corporate Woods Blvd.
Albany, NY 12211

Computer Visions Course Outline

Get What You Want

We offer highly customizable group training courses: desktop applications, web development, networking & operating systems, technical certification, professional development & skills, help desk.

Get It When & Where You Want It

All Computer Visions courses are available for presentation on-site or off-site for your convenience. We can roll out any combination of courses at one or more locations anywhere in the United States, according to your requirements and time table. Just let us know and we'll work with you!

Corporate Training Solutions

Corporations look to us to train their employees. Why? Because our proven training methods have increased employee proficiency and productivity. We assign one person to each of our corporate clients to ensure quality service, and we also offer extranet Web registration, management, reporting and billing for all clients. Simplicity, quality and outstanding service are our hallmarks.

Consulting Solutions

Consulting is about trust,

#6420: Fundamentals of Windows Server 2008 Network and Applications Infrastructure

Description: This five-day instructor-led course introduces students to network and applications infrastructure concepts and configurations provided by Window Server 2008. Students will be able to acquire a fundamental understanding in order to pursue advanced topics available for certification in the network and applications infrastructure areas.

Course Outline:

Module 1: Fundamentals of Network Infrastructure

This module describes the fundamentals of an enterprise networking environment, which consists of Windows Infrastructure Services, Windows Application Platform Services, and Active Directory.

Lessons

- Network Communication Standards
- Physical Network Infrastructure
- Logical Network Organization
- Overview of Active Directory
- Server Roles

Lab : Identifying Network Components

- Creating a Network Diagram
- Expanding the Network Diagram

service and accountability. Our consulting division is one of the fastest-growing around. Why? Clients trust us to provide excellent service and expertise. Visit our [consulting section](#) for more information.

Classroom and Computer Rentals

Need space and equipment to conduct specialized presentations or classes? We can help. With our world class classrooms and state of the art projection and presentation equipment, we take care of the details so you can have a successful presentation.

After completing this module, students will be able to:

- Describe the purpose of network communication standards and the OSI model.
- Describe the components of physical network infrastructure.
- Describe the logical organization of networks.
- Describe the characteristics of Active Directory components.
- Describe server roles and how they are categorized.

Module 2: IT Professionals in the Enterprise

This module describes the IT Professional roles (and their respective responsibilities) that may exist in a typical enterprise environment.

Lessons

- IT Professional Roles
- IT Management and Processes
- Professional Development for IT Professionals

Lab : Developing a Training Plan

Viewing Information about Microsoft Learning Resources

Creating a Training Plan

After completing this module, students will be able to:

- Describe the IT professional roles.
- Describe IT management and processes.
- Describe options for the professional development of IT professionals.

Module 3: Configuring Basic TCP/IPv4

This module describes the TCP/IPv4 configuration, protocols and the tools used to validate configurations.

Lessons

- Overview of the TCP/IP Protocol Suite
- Overview of TCP/IP Addressing
- Name Resolution
- Dynamic IP Addressing

- TCP/IPv4 Tools

Lab : Configuring Basic TCP/IPv4 Settings and Validating TCP/IPv4 Connectivity

- Configuring a Dynamic IP Address
- Configuring a Static IP Address
- Testing DNS Configuration
- Connecting to a Web Application

After completing this module, students will be able to:

- Describe the TCP/IP protocol suite and the individual protocols that are part of it.
- Describe the components of IPv4 addressing.
- Describe NetBIOS and DNS name resolution.
- Describe how IPv4 addresses can be assigned dynamically.
- Describe tools that can be used to manage and monitor IPv4.

Module 4: Fundamentals of Communication Technologies

This module describes static and dynamic HTTP content, how to differentiate between the two, and the various mechanisms used by TCP/IPv4 to send and receive data traffic.

Lessons

- Network Content Types
- Packet Delivery Methods

Module 5: Creating IPv4 Address Spaces

This module explains how to define and create an IPv4 address range and subnetting for a network.

Lessons

- Overview of IP Communication
- Subnetting Overview
- Subnetting for Complex Networks

Lab : Creating IPv4 Address Spaces

- Defining the Subnet Mask for a WAN

- Defining the Hosts for a Network

After completing this module, students will be able to:

- Describe the IPv4 communication process between computers.
- Describe the concept of subnetting.
- Create IPv4 networks by performing subnetting.

Module 6: IPv6 Fundamentals

This module introduces IPv6, describes the differences between IPv4 and IPv6 and explains how to configure IPv6 addresses.

Lessons

- Introduction to IPv6
- Unicast IPv6 Addresses
- Configuring IPv6

Lab : Configuring IPv6

- Defining IPv6 Networks for Internal Use
- Configuring a Static IPv6 Address on a Server

After completing this module, students will be able to:

- Describe the characteristics of IPv6.
- Describe the characteristics of IPv6 unicast addresses.
- Describe how IPv6 can be configured automatically and statically.

Module 7: Fundamentals of Administering Windows Server 2008

This module explains how to use the administrative tools available in Windows Server 2008 server to monitor system performance, monitor system status, and manage a server from a remote computer rather than the server console.

Lessons

- Using Windows Server 2008 Administrative Tools
- Monitoring Performance
- Monitoring Events
- Using Remote Desktop for Administration
- Configuring Security for Server Administration

Lab : Administering Windows Server 2008

- Joining a Server to the Domain
- Configuring Remote Desktop for Administration
- Centralizing Event Logging
- Resolving a Performance Issue by Using Reliability and Performance Monitor

After completing this module, students will be able to:

- Describe common Windows Server 2008 Administrative Tools.
- Describe how to monitor performance.
- Describe how to monitor events.
- Describe how to use Remote Desktop for administration.
- Describe how to configure security for server administration.

Module 8: Security Fundamentals

This module introduces basic industry standard security concepts for server roles.

Lessons

- Defense-in-Depth
- Securing Access to Web Content
- Securing Access to Files
- Data Encryption

Lab : Configuring Data Security

- Creating a Simple Share
- Creating an Advanced Share
- Configuring Web Content for Anonymous Access
- Securing Web Content

After completing this module, students will be able to:

- Describe how Defense in Depth is used to secure computers.
- Describe how to secure access to Web content.
- Describe how to secure access to files.
- Describe data encryption and how it is used to protect data on disk.

Module 9: Fundamentals of Securing Network Communication

This module describes how to secure network traffic by using certificates.

Lessons

- Public Key Infrastructure
- Using Certificates

Lab : Securing a Web Site by using SSL

- Verifying the Trusted Root CA
- Securing a Web site by using SSL

After completing this module, students will be able to:

- Describe public key infrastructure components and certificates.
- Describe methods for securing network communication by using certificates.

Module 10: Windows Firewall and Caching Fundamentals

This module describes proxy and caching services; how to configure Windows Firewall by creating exceptions and modifying firewall rules; how to configure auditing and monitoring; and how to troubleshoot Windows Firewall.

Lessons

- Overview of Perimeter Security
- Windows Firewall Overview
- Creating Windows Firewall Rules
- Monitoring and Troubleshooting Windows Firewall

Lab : Using Windows Firewall

- Limiting Access to a Web Application
- Distributing Windows Firewall Rules by Using Group Policy

After completing this module, students will be able to:

- Describe firewall and proxy server characteristics.
- Describe Windows Firewall and how to perform basic administration.
- Describe how to create Windows Firewall rules.
- Describe how to monitor and troubleshoot Windows Firewall.

Module 11: Remote Access Fundamentals

This module explains how to configure network policies, configure a radius

proxy, and how to troubleshoot NPS as a radius proxy.

Lessons

- Remote Access Overview
- RADIUS Overview
- Network Policy Server
- Troubleshooting Remote Access

Lab : Implementing Remote Access

- Implementing a VPN server
- Implementing a RADIUS server
- Implementing a RADIUS proxy

After completing this module, students will be able to:

- Describe the characteristics of remote access methods.
- Describe how RADIUS is used.
- Describe how to implement network policies on a Network Policy Server
- Describe how to troubleshoot remote access.

Module 12: Routing Fundamentals

This module describes routing concepts and protocols, and explains how quality of service can be used within a network environment.

Lessons

- Routing Overview
- Configuring Routing and Remote Access as a Router
- Quality of Service

Lab : Configuring Routing

- Configuring a LAN Router
- Implementing RIPv2
- Configuring a Demand-dial Router
- Configuring QoS

After completing this module, students will be able to:

- Describe routing protocols and routing tables.
- Describe how to configure RRAS as a LAN router.

- Describe Quality of Service (QoS) and how to implement it.

Module 13: Network Load Balancing Fundamentals

This module explains how to configure and test network load balancing.

Lessons

- Server Availability and Scalability Overview
- Network Load Balancing
- Configuring Windows NLB

Lab : Implementing Network Load Balancing

- Preparing Web Servers for NLB
- Creating an NLB Cluster for Failover
- Configuring an NLB Cluster for Load Balancing

After completing this module, students will be able to:

- Describe server availability and scalability options.
- Describe Windows Network Load Balancing.
- Describe how to configure Windows Network Load Balancing.

Module 14: Configuring Print Resources and Printing Pools

This module explains how to configure network print resources and printing pools.

Lessons

- Printing Overview
- Configuring Network Printers
- Using Print Management
- Managing Printers
- Troubleshooting Network Printing

Lab : Implementing Printing

- Creating an XPS document
- Adding a Printer by Using Control Panel
- Using Print Management
- Deploying Printers by Using Group Policy
- Migrating a Printer to a New Server

After completing this module, students will be able to:

- Describe the printing process.
- Describe how to configure network printers.
- Describe how to manage servers by using Print Management.
- Describe how to manage printers by using Print Management.
- Describe how to troubleshoot network printing.

Module 15: Server Virtualization Overview

This module describes the fundamental functions included with Windows Server Virtualization (WSV).

Lessons

- Overview of Server Virtualization
- Overview of Windows Server Virtualization
- Creating a Virtual Environment