



Certificate in Networking (107) – Windows Server 2003 Administration & Implementation




Prerequisites: Knowledge of Windows operating system.	Corequisites: A pass or higher in Diploma in Information Technology or equivalence
<p>Aim: Understanding the configuration of security in Windows Networks through planning and configuration of authentication and authorization strategy; setting up CA's, configuration and distribution of Certificates; using Smart Cards; planning and configuration of Encrypting File System; setting up server roles; planning and configuring workstation's security level; ISA Server 2004; securing Remote Access. Instructions focus on the installation, configuration and management of local area networked servers. Topics covered include support for local area networked devices, system services, and deployment of networked operating systems. The course covers tutorial in various network protocols, name resolution services, remote access, security, print installation, configuration, administration, monitoring, and troubleshooting of Server Administration software in an Active Directory domain environment. The course provides extensive tutorial for the technical knowledge required for installation, configuration, administration, monitoring, and troubleshooting of Network Infrastructure services such as NDS, DHCP, WINS, RRAS, NAT, and Certificate Authority to support the network infrastructure. The course teaches all skill sets related to Microsoft Windows Server 2003 including deployment, management, maintaining and monitoring of the server, and maintaining high availability of the servers in a network; how to design and plan network and application services including physical topologies and domains and forests. Learners will learn to design and manage an enterprise network.</p>	
Required Materials: Recommended Learning Resources.	Supplementary Materials: Lecture notes and tutor extra reading recommendations.
Special Requirements: The course requires a combination of lectures, demonstrations, discussions, and hands-on labs.	
<p>Intended Learning Outcomes:</p> <p>1. Understand the basics of Windows Server 2003</p> <p>2. Understand the installation and configuration of Windows Server 2003 and hardware devices</p>	<p>Assessment Criteria:</p> <p>1.1 Analyse the main products within the Windows Server 2003 family</p> <p>1.2 Explore the features of Windows Server 2003</p> <p>1.3 Assess the Windows Server 2003 operating system architecture</p> <p>1.4 Contrast workgroups vs domains</p> <p>1.5 Outline Windows Server 2003 network services</p> <p>1.6 Recognise the Windows Server 2003 network protocols</p> <p>1.7 Explain the Windows Server 2003 network security services</p> <p>1.8 Explain Windows Server 2003 network models and server roles</p> <p>1.9 Explain Windows Server 2003 Active Directory concepts</p> <p>1.10 Summarise the various tasks of a Windows Server 2003 Network Administrator</p> <p>2.1 Identify the phases of the installation process</p> <p>2.2 Differentiate CD-ROM over the network and upgrade installations</p> <p>2.3 Be able to troubleshoot failed installations</p> <p>2.4 Be able to use the Device Manager tool</p> <p>2.5 Analyse hardware profiles and event logs</p> <p>2.6 Be able to configure hardware resource settings and resolve resource settings</p>

	<p>conflicts</p> <p>2.7 Be able to install and manage Windows Server 2003 updates</p> <p>2.8 Analyse the various methods, tools and processes used to manage Windows Server 2003</p>
<p>3. Understand the features of Active Directory architecture</p>	<p>3.1 Outline the underlying Active Directory concepts</p> <p>3.2 Describe the basic elements of Active Directory</p> <p>3.3 Be able to install Active Directory</p> <p>3.4 Be able to work with Microsoft Management Console and Snap-ins</p> <p>3.5 Be able to create organisational units and manage Active Directory objects</p> <p>3.6 Summarise the role of Active Directory database and shared system volume</p> <p>3.7 Be able to troubleshoot Active Directory group types and scopes</p> <p>3.8 Be able to administer Active Directory object permissions</p> <p>3.9 Be able to management and troubleshoot Active Directory replication</p>
<p>4. Understand the organisational structure of data storage disks</p>	<p>4.1 Identify the different storage types</p> <p>4.2 Be able to create primary and extended partitions</p> <p>4.3 Contrast basic disks vs dynamic disks</p> <p>4.4 Be able to implement simple, spanned, striped, mirrored and RAID-5 volumes</p> <p>4.5 Be able to defragment volumes and partitions</p> <p>4.6 Analyse disk failure recovery process</p> <p>4.7 Outline disk management concepts, purpose and implementation of mounted drives.</p>
<p>5. Understand file systems, file permissions and distributed file system</p>	<p>5.1 Analyse the different file systems</p> <p>5.2 Be able to compress and encrypt data</p> <p>5.3 Be able to assign, create and manage shared folder permissions</p> <p>5.4 Contrast NTFS vs Special Access permissions</p> <p>5.5 Analyse Distributed file system components and be able to manage Dfs Root</p> <p>5.6 Be able to troubleshoot permissions</p> <p>5.7 Be able to configure file and folder attributes</p> <p>5.8 Be able to implement and manage disk quotas</p>
<p>6. Understand the administration of user Accounts</p>	<p>6.1 Illustrate the purpose of local user accounts</p> <p>6.2 Be able to create, set and modify local user accounts</p> <p>6.3 Analyse the automation of user creation and modification</p> <p>6.4 Summarise user profiles and be able to configure local, roaming and mandatory user profiles</p> <p>6.5 Demonstrate the user authentication</p>

7. Understand Group Accounts	<p>process</p> <p>6.6 Be able to troubleshoot user account and authentication problems</p> <p>7.1 Outline the different types of Group Accounts</p> <p>7.2 Be able to create and modify groups using Active Directory Users and Computers MMC snap-in</p> <p>7.3 Analyse built-in groups and their purpose</p> <p>7.4 Be able to create Group Policy Objects (GPOs)</p> <p>7.5 Differentiate Group Policy types</p> <p>7.6 Be able to modify software settings using GPOs</p> <p>7.7 Be able to redirect folders using GPOs</p> <p>7.8 Be able to troubleshoot computer accounts</p>
8. Understand Windows Server 2003 network printing terminology and environment	<p>8.1 Describe Microsoft's printing terminology</p> <p>8.2 Be able to install and share printer resources</p> <p>8.3 Demonstrate creating printer pool and controlling access to printers</p> <p>8.4 Be able to set printer priorities</p> <p>8.5 Be able to publish printers in Active Directory</p> <p>8.6 Be able to analyse and monitor printer performance</p> <p>8.7 Be able to troubleshoot printer problems</p>
9. Understand TCP/IP, DHCP and DNS network concepts	<p>9.1 Illustrate communication in Windows Server 2003 network</p> <p>9.2 Describe network protocol framework</p> <p>9.3 Identify TCP/IP concepts</p> <p>9.4 Be able to configure and examine IP addressing in TCP/IP</p> <p>9.5 Describe the functions of DNS and DHCP servers</p> <p>9.6 Configure and administer DNS and DHCP servers</p> <p>9.7 Troubleshoot TCP/IP, DHCP and DNS problems</p> <p>9.8 Contrast Windows, Unix and Linux operating systems</p> <p>9.9 Be able to administer web resources</p> <p>9.10 Be able to configure and troubleshoot VPN, NAT, Internet Connection Sharing and Terminal Services</p>
10. Understand software deployment using Group Policy	<p>10.1 Outline IntelliMirror components</p> <p>10.2 Analyse the phases of software management</p> <p>10.3 Be able to create and configure Windows Installer packages</p> <p>10.4 Be able to deploy software through Software Installation MMC snap-in</p>
11. Understand the importance of monitoring server performance	<p>11.1 Be able to use Task Manager to monitor server performance</p> <p>11.2 Be able to use Event Viewer to identify</p>

	and troubleshoot problems
11.3	Be able to use Performance console to monitor server performance
11.4	Be able to troubleshoot Windows Server 2003 startup problems
11.5	Be able to use Windows Server 2003 Backup utility
11.6	Analyse Windows Server 2003 security features

**Recommended Learning Resources:
Windows Server 2003 Administration & Implementation**

Text Books	<ul style="list-style-type: none"> Windows Server 2003: A Beginner's Guide (Beginner's Guide) by Martin Matthews. ISBN-10: 0072193093 MCSE Guide to Managing a Microsoft Windows Server 2003 Environment, Enhanced by Dan DiNicolò and Brian T. McCann. ISBN-10: 1423902890 Guide to Managing a Microsoft Windows Server 2003 Environment by Dan DiNicolò, Jennifer Guttormson, Kelly Reid. ISBN-10: 0619120347
Study Manuals 	BCE produced study packs
CD ROM 	Power-point slides
Software 	Windows Server 2003