Diploma in Windows Networking (200) – Windows Server 2003 Administration

Prerequisites: Knowledge of Windows operating system.	**Corequisites:** A Pass or better in Certificate in Networking or equivalence.

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.

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.

Intended Learning Outcomes:	Assessment Criteria:
1. Understand the basics of Windows Server 2003	1.1 Analyse the main products within the Windows Server 2003 family 1.2 Explore the features of Windows Server 2003 1.3 Assess the Windows Server 2003 operating system architecture 1.4 Contrast workgroups *vs* domains 1.5 Outline Windows Server 2003 network services 1.6 Recognise the Windows Server 2003 network protocols 1.7 Explain the Windows Server 2003 network security services 1.8 Explain Windows Server 2003 network models and server roles 1.9 Explain Windows Server 2003 Active Directory concepts 1.10 Summarise the various tasks of a Windows Server 2003 Network Administrator
2. Understand the installation and configuration of Windows Server 2003 and hardware devices	2.1 Identify the phases of the installation process 2.2 Differentiate CD-ROM over the network and upgrade installations 2.3 Be able to troubleshoot failed installations 2.4 Be able to use the Device Manager tool 2.5 Analyse hardware profiles and event logs 2.6 Be able to configure hardware resource settings and resolve resource settings

		conflicts
	2.7	Be able to install and manage Windows Server 203 updates
	2.8	Analyse the various methods, tools and processes used to manage Windows Server 2003
3. Understand the features of Active Directory architecture	3.1	Outline the underlying Active Directory concepts
	3.2	Describe the basic elements of Active Directory
	3.3	Be able to install Active Directory
	3.4	Be able to work with Microsoft Management Console and Snap-ins
	3.5	Be able to create organisational units and manage Active Directory objects
	3.6	Summarise the role of Active Directory database and shared system volume
	3.7	Be able to troubleshoot Active Directory group types and scopes
	3.8	Be able to administer Active Directory object permissions
	3.9	Be able to management and troubleshoot Active Directory replication
4. Understand the organisational structure of data storage disks	4.1	Identify the different storage types
	4.2	Be able to create primary and extended partitions
	4.3	Contrast basic disks *vs* dynamic disks
	4.4	Be able to implement simple, spanned, striped, mirrored and RAID-5 volumes
	4.5	Be able to defragment volumes and partitions
	4.6	Analyse disk failure recovery process
	4.7	Outline disk management concepts, purpose and implementation of mounted drives.
5. Understand file systems, file permissions and distributed file system	5.1	Analyse the different file systems
	5.2	Be able to compress and encrypt data
	5.3	Be able to assign, create and manage shared folder permissions
	5.4	Contrast NTFS *vs* Special Access permissions
	5.5	Analyse Distributed file system components and be able to manage Dfs Root
	5.6	Be able to troubleshoot permissions
	5.7	Be able to configure file and folder attributes
	5.8	Be able to implement and manage disk quotas
6. Understand the administration of user Accounts	6.1	Illustrate the purpose of local user accounts
	6.2	Be able to create, set and modify local user accounts
	6.3	Analyse the automation of user creation and modification
	6.4	Summarise user profiles and be able to configure local, roaming and mandatory user profiles
	6.5	Demonstrate the user authentication

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

11. Understand the importance of monitoring server performance	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

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Recommended Learning Resources:
Windows Server 2003 Administration

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Text Books	• 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 DiNicolo and Brian T. McCann. ISBN-10: 1423902890 • Guide to Managing a Microsoft Windows Server 2003 Environment by Dan DiNicolo, Jennifer Guttormson, Kelly Reid. ISBN-10: 0619120347
Study Manuals	BCE produced study packs
CD ROM	Power-point slides
Software	Windows Server 2003