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| <p>Chapter 1: Introduction</p> <p>You will learn:</p> <ul style="list-style-type: none"> C Servers and workstations. C Network interface cards and drivers: ODI and NDIS. C Access protocols. C Industry standards: OSI, TCP/IP, SNA, et al. C The pros and cons of the most popular LAN technologies. C IEEE architectural layers. C Merging various LAN technologies into an efficiently supported infrastructure. |
| <p>Chapter 2: Transmission Techniques and Cabling</p> <p>You will learn:</p> <ul style="list-style-type: none"> C Network transport protocols. C Implementing concurrent multiple protocols. C NWLINK. C NWLINK configuration options. C TCP/IP. C TCP/IP configuration options. C TCP/IP diagnostic commands and utilities. |
| <p>Chapter 3: Windows NT and TCP/IP</p> <p>You will learn:</p> <ul style="list-style-type: none"> C Network transport protocols. C Implementing concurrent multiple protocols. C NWLINK. C NWLINK configuration options. C TCP/IP. C TCP/IP configuration options. C TCP/IP diagnostic commands and utilities. |

Chapter 4: Windows NT Directory Services

You will learn:

- C Planning and defining directory services.
- C Roles of domains in directory services.
- C Recognize the differences between the features of a Window NT based computer and a non-windows computer in the same domain.
- C Implementing each of the domain models.
- C Determining the optimal number of backup domains controllers and their optimal locations.
- C Calculating disk requirements for directory services.
- C Examining the effects of various directory services on the network.
- C Workgroup and domain models.
- C Windows NT 4.0 Directory Services.
- C Domain components: PDC, BDC, server, and clients.
- C Creating a domain.
- C Cross domain management in Windows NT networks.
- C Domain models.
- C Trust relationships.
- C Domain models and implementing trusts.
- C Pass-through authentication.
- C Net Logon Service and Pass-through authentication.
- C Interactive and remote logon.

Chapter 5: Windows NT: Administration

You will learn:

- C Creating user accounts.
- C Assigning user accounts to groups.
- C Managing rights.
- C Managing account policies.
- C RAS: Remote Access Service.
- C User profiles.
- C Auditing.

Chapter 6: Implementing TCP/IP: DHCP, WINS and DNS

You will learn:

- C DHCP clients and servers.
- C DHCP Manager.
- C Starting and stopping the DHCP server service.
- C DHCP scopes - creating/removing, and changing properties.
- C Administering DHCP clients.
- C Managing client leases.
- C Managing client reservations.
- C DHCP option types.
- C Configuring the WINS service.
- C Starting and stopping the WINS service.
- C Administering WINS servers.
- C Connecting to a WINS server.
- C Statistics in WINS Manager.
- C Adding static mappings.
- C Viewing the WINS database.
- C Backing up and restoring the database.
- C Installing a DNS server.
- C Adding a server to the DNS Manager list.
- C Working with zones.
- C Implementing WINS Lookup.
- C Adding a new host.
- C Managing subzones.
- C Forcing data file update on the DNS.

Chapter 7: Debugging and Commands

You will learn:

- C TCP/IP diagnostic utilities.
- C Troubleshooting IP configuration.
- C TCP debugging.
- C TCP commands.

Chapter 8: Performance Monitor

You will learn:

- C Setting events and interval.
- C Reports issued by the Performance Monitor.
- C Determining the baseline for a system.
- C Calculating overhead associated with I/O, network traffic, cache memory and internal memory.
- C Evaluating server performance.
- C Creating a file of measurement information for analysis, record keeping, and forecasting.
- C Analyzing performance and establishing a paradigm.
- C Counter organization with Performance Monitor.
- C Using %processor time and working set counters in order to ascertain how applications use memory.
- C Workload balance.
- C Tracking disk performance.
- C Server throughput statistics.
- C Threshold counters.

Chapter 9: Protocol Formats and Architecture

You will learn:

- C TCP\IP Internet Protocol Suite.
- C Ethernet addressing.
- C Ethernet frame format.
- C Internet addressing.
- C Special address conventions.
- C Mapping Internet Addresses to Physical Addresses (ARP).
- C ARP protocol format.
- C Internet Protocol: Connectionless Datagram Delivery.
- C Connectionless Delivery System.
- C Internet protocol.
- C Datagram format.
- C TTL: Time to Live.
- C Routing in an Internet.
- C ICMP - Internet Protocol: Error and Control Messages.
- C User Datagram Protocol.
- C Format of UDP messages.
- C UDP multiplexing, demultiplexing, and ports.
- C Reserved and available UDP numbers.
- C Stream delivery.
- C Reliable delivery service.
- C Ports, connections, and endpoints.

Chapter 10: Network Monitor

You will learn:

- C Implementing Network Monitor.
- C Network Monitor and the interface.
- C Capturing data with Network Monitor.
- C Network frames / categories of frames.
- C Viewing captured data.
- C Analyzing specific types of network traffic including the domain logon process, connecting to resources, and obtaining IP addresses.
- C Interpreting frames in a capture file.
- C Techniques for identifying and planning for network traffic problems and usage.
- C Optimizing logon validation.
- C Exploring browser traffic.
- C Analyzing traffic between domain controllers.
- C Analyzing traffic - account database synchronization.
- C Analyzing trust traffic.
- C Analyzing traffic generated through directory replication.