

Voice & Data Technologies
in cooperation with
Texas Training and Conference Centers
offers the course

Computer Networking

A 5 day hands-on course in computer networking basics

For details on course content, registration, costs, visit our website.

www.vdtsite.com

"Take the mystery out of the lingo. Really learn Ethernet, TCP/IP, IPv4, subnetting, VLANs, VPNs, firewalls, wireless LANs, etc.

You'll configure VLANs on Cisco switches; configure Cisco routers and understand how they operate. You will use a protocol analyser...
and a lot more!"

Who should take this course?

MANAGERS AND SUPERVISORS who seek more fundamental understanding of computer networking, devices, security, etc. to better manage their networks, security, budgets, personnel, and third party WAN providers

TELECOMMUNICATION MANAGERS AND SPECIALISTS seeking a fundamental understanding of data networking

LAN PROFESSIONALS who seek fundamental computer networking knowledge to prepare for certification training (CCNA, CCNP, MCSE, etc.)

IT TECHNICIANS who require the fundamental computer networking knowledge to enhance their on-the-job effectiveness.

DATES:

2004 Schedule Being Developed

TIME:

Monday - Friday 8:30am - 4:30pm

LOCATION:

11200 Richmond Ave., Suite 100, Houston, Tx 77082

previous student comments

"Instructor has excellent knowledge and was able to present it in an understandable way."

- V. Berryhill, AT&T -

"One of the most useful aspects of the training was the TCP/IP overview - I've had this explained a few times - this is the first time it really clicked!"

- C. Meyers, Target Corporation -

"This was one of the rare courses that was excellent all around. The instructor was awesome. His knowledge and teaching ability were top rate."

- B. Chabot, Ahold Information Services -

"The instructor was the best I've had."

- R. Wardley, Calfed Bank -



Instructor - Fred Wells, Ph.D., CCNA

This course, developed by Dr. Wells and associates, was last updated January 2003. Over the past 3 years he has taught computer networking fundamentals to over 2500 students, both in public and private on-site classes. On-site classes have included companies such as Dell, COMPAQ(HP), Nortel, Lucent, 3COM, Xylinx, and others.

Computer Networking

Course Content

The Enterprise Network

- LAN, WAN
- Cabled versus Wireless
- Convergence
- Client / Server

Analog and Digital Signaling

- Basics of information transmission
- Binary, Decimal, Hexadecimal Base Systems

LAN, WAN and Internet Standards

- IEEE - LAN
- ITU-T - WAN
- IAB - Internet
- TIA/EIA - Cabling
- ISO OSI 7 Layer Model

Ethernet - 10/100/1000/10000 Mbps

- IEEE Standards
- Collision / Broadcast Domains
- Ethernet Frame Formats
- Ethernet Switch Operations

TCP/IP Protocol Suite

- Detailed Overview with Examples
- Major Protocols: IP, TCP, UDP, ICMP, ARP, SMTP, DNS, HTTP, FTP, DHCP, NAT etc.
- IPv4 Addressing and Subnetting (Detailed)
- IP over Ethernet, Network to Network
- VLSM (Variable Length Subnet Masking)
- CIDR (Classless Inter Domain Routing)

Switching and Routing

- Spanning Tree Protocol
- VLANs: IEEE 802.1q
- Routing vs. Routed Protocols
- RIP v1 Routing Protocol
- RIP v2 Routing Protocol
- OSPF Routing Protocol
- BGP Routing Protocol
- Multi-layer switching; Layers 2,3,4

Virtual Private Networks, Network Security and Firewalls

- Enterprise Network Architecture
- Network Security; Firewalls, Proxy Servers
- Packet Filters, ACLs, Circuit Level Filters, NPAT, SOCKS, Application Level Gateways, SMLI,
- VPNs, IPsec, ESP
- Wireless LAN Security

Wide Area Networks (WAN)

- PSTN (Public Switched Telephone Network); POTS, T-Carrier, ISDN, xDSL, SONET
- PSDN (Packet Switched Data Network); PPP, HDLC, Frame Relay and ATM
- Internet; Dialup, ADSL, Cable Modem ISP

Hands-On Labs

1. Equipment Review by Instructor
2. Install a Single Ethernet Collision Domain LAN
3. Initial Computer Configuration and DHCP / DNS / DDNS; FTP Exercise
4. Design and Implementation of Subnets
5. Configuring Static vs. Dynamic TCP/IP Parameter Assignments
6. TCP/IP Troubleshooting: PING / TRACERT / PATHPING / NETSTAT / ARP
7. Exploring the Internet DEMO: www.arin.net / www.icann.org / PING / NETSTAT / TRACERT / PATHPING
8. Learning to Use a Protocol Analyzer / Analyze Network Traffic
9. Install Catalyst 1924 Switch / Analyze Physical Segmentation of LAN / Analyze MAC Switching Table
10. Install Multiple Catalyst 1912/1924 Switches / Configure IP Management Addresses / Configure Spanning Tree
11. Analyze Spanning Tree BPDUs on Switches
12. Configure VLANs on Switches
13. Configure VLAN Trunks Between Switches for IEEE 802.1q Communication
14. Install Cisco 2514 Routers, Manually Configure Initial Setup Parameters, Configure RIP version 1
15. Configure RIP version 2 on the Routers / Analyze RIP v1 versus RIP v2 with Variable Length Subnet Masking (VLSM)
16. Analyze the IP Network with the Protocol Analyzer: Predict Protocol Exchanges for PING, ARP; Analyze RIP Routing Updates
17. Configure the Routers to Use OSPF Routing Protocol / Analyze the Network Using PING and TRACERT
18. Install a Network of Linked Subnets: Router-Switch-Router-Switch-Router... etc.; Attach Laptop to Each Switch; Configure Switch to Copy Inter-Router Traffic to Laptop for Protocol Analyzer Capture; Generate and Trace an Ethernet Frame from One End Through all the Subnets to the Other End; Analyze How the Ethernet Frame Changes
19. Configure Access Control Lists (ACLs) on Routers to Selectively Permit/Deny Traffic From/To Subnets; Analyze for Traffic Management / Firewalls

COST:

\$1895 (\$1695 for each additional seat from same company)

REGISTRATION:

Call 281-589-1400 or email jgriffin@txacc.com

COURSE CONTENT INFORMATION:

Call 281-433-9958

Voice & Data Technologies

www.vdtsite.com

Contact us at:

training@vdtsite.com

or

Tel: 281-433-9958

