

Computer Networking

Computer networking is the engineering discipline concerned with communication between computer systems or devices. Networking, routers, routing protocols, and networking over the public Internet have their specifications defined in documents called RFCs. Computer networking is sometimes considered a sub-discipline of telecommunications, computer science, information technology and/or computer engineering. Computer networks rely heavily upon the theoretical and practical application of these scientific and engineering disciplines. There are three types of networks: 1. Internet. 2. Intranet. 3. Extranet. A computer network is any set of computers or devices connected to each other with the ability to exchange data.

Why Networking Certification?

Global Demand is growing for IT professionals at all levels especially networking has virtually exploded in recent years. India especially has proved its might in IT domain. Networking has created a vacuum of qualified people leading to shortage of skilled individuals to meet demand. The networking certification proves that one has the skills and knowledge demanded by employers in the competitive IT job market. Individuals can get certified, get a job and get ahead in life. Business will have happy customers, happy employees and will result in higher profits. Students will build strong foundation IT courses. The certifications can help satisfy government job requirements and increase your chances of promotion!

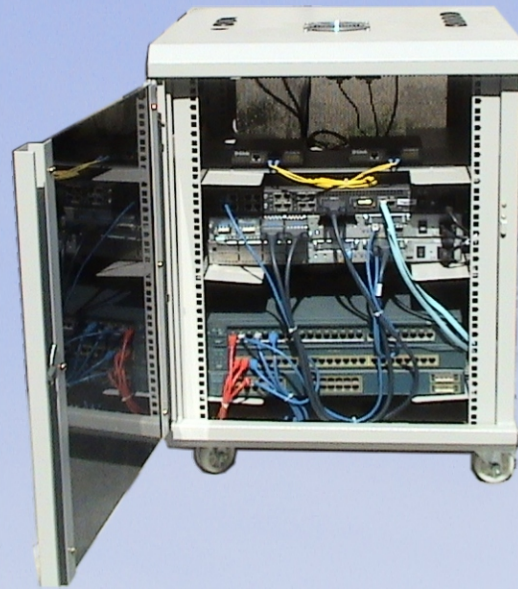
Global IT Spending is predicted to be \$1.6 trillion in 2009. Global IT research firm IDC says IT in 52 countries will create 5.8 million new jobs and more than 75,000 new businesses over next 4 years. The IT employment growth rate is 3 times the total employment growth rate and investing in IT will contribute to economic recovery and growth. Networking Cloud services will add \$800 billion in business revenues in next 4 years. To give in idea, a major player in networking domain clocks \$32 million in sales daily.

Why Amitec ?

- Course content /instructional model Internationally approved
- Cost Effective solution
- High Speed Links upto 1Gbps
- Vendor Neutral Emphasis
- Covers full range of technologies
- Support for IPV6
- 60 different Lab Combinations
- Learning by doing Philosophy, Real Hands-on, 2 students per system
- Reputed public ltd company exporting to 30 countries, bringing real situations to class room
- Industry experts reviewed training material

Description:

The laboratory supports all the features to pass network associate exams and give you a start on your networking professional certification. The routers support IOS12.4, IPV6 and SDM. Included is a router with dual 100Mb Ethernet, for use as a Cable/DSL Router. The routers can be used in different ways and will support IPV6. A Layer 3 switch provided can do routing just like a router too.



The Self Study Lab Workbook describes 60 different lab combinations. Exam Test Engine is provided with over 500 different questions. Also test tips, the IOS on CD, TFTP Server and other prep material is offered. An exam cram sheet six page, full color, laminated foldout is a great addition to study arsenal. Computer Based Training tutorials are provided comprising 44 videos with over 22 hours covering all exam topics. TCP/IP Study Poster is bundled. Thus laboratory is comprehensive in all respects.

Area of experiment and scope of study

- Categorize standard cable types and their properties
- Identify common connector types
- Identify common physical network topologies
- Given a scenario, differentiate and implement appropriate wiring standards
- Categorize LAN technology types and properties
- Categorize WAN technology types and properties
- Explain common logical network topologies and their characteristics
- Install components of wiring distribution
- Explain the function of common networking protocols
- Describe how a network works.
- Install, configure and differentiate between common network devices
- Identify the functions of specialized network devices
- Explain the advanced features of a switch
- Given a scenario, evaluate the proper use of the following addressing technologies and addressing schemes
- Configure, verify and troubleshoot a switch with VLANs and interswitch communications
- Implement an IP addressing scheme and IP Services to meet network requirements in a medium-size Enterprise branch office network
- Configure, verify, and troubleshoot basic router operation and routing on devices
- Explain and select the appropriate administrative tasks required for a WLAN

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ISO 9001:2000
Quality Management System
Cert. No. 2919

- Identify security threats to a network and describe general methods to mitigate those threats
- Implement, verify, and troubleshoot NAT and ACLs in a medium-size Enterprise branch office network
- Implement and verify WAN links

Networking Prelab

Cable Identification-CAT5(UTP), Plenum, RG58U, RG6U, RG8U, Telephone
 Connector Identification-RJ45 (Std &EZ), RJ11, F, N, BNC
 Cable Fabrication & testing-RG6U to F, RG58U to BNC, RG8U to N, CAT5 to RJ45, Telephone to RJ-11
 Fiber Optic Fabrication & testing-ST, SC, Polishing, Scribing
 Number of labs requiring only one router 7
 Number of labs requiring two routers 11
 Number of labs requiring three routers 19
 Number of labs requiring four routers 4
 Number of labs requiring one or more switches - 8

Technical Specifications

Routers - 1 nos of 128 MB DRAM/32MB Flash Dual100MB Ethernet Router for IOS 12.4, IPv6 & SDM
 1 nos of 128MB DRAM/32 MB Flash,Router support IOS 12.4, IPv6 & SDM, 2-WAN, 1-NM
 1 nos of 16MB DRAM/16MB Flash with transceiver supporting IOS 12.3 and IPv6,
 2-Serial ports, Ethernet port, Aux port, Console port

Switches -1 nos of Catalyst 100MB Switch supporting Enterprise 12.0.05 with 24 RJ45 100MB Ethernet ports
 1 nos of Layer 3 Switch with 24 RJ45 Ethernet ports with EMI 12.1.22 IOS
 1 nos of Catalyst Switch with 24 rk45 100MB Ethernet ports with EMI 12.1.22 IOS

Modules - 1 nos of Serial modules 5-in-1 connector supports several serial protocols (V.35, X.21, RS-232,RS-449, RS-530
 1 nos of Serial Modules 4 port with async/sync with speeds of 115.2/128 Kbps with 5-in-1 connector

Cables - 2 nos of Back to back cables
 3 nos of console cable kit
 8 nos of Ethernet patch cables
 8 nos- Ethernet Crossover Cables
 6 nos of Power supply cables

Racks - 1 nos of Study Racks

Telephone Line Emulator

Loop Length 4.2km max-24AWG twisted pair,
 Data Speed 28.8kbps, Dual RJ-11 jacks, DIP switch Programming

Fast Ethernet Converter

2 Nos of IEEE802.3u100BASE-TX, 100BASE-FX(Fast Ethernet, 100Mbps), Full Duplex Ethernet,15km Fiber optic range, 1310nm, RJ45/SC ports

Transmission Line Analyser

Frequency Domain Analyzer with Frequency range : 30-300 MHz typical LCD Display, Level : 100mV p-p, Attenuator 50 Ohms : 0.5, 1, 2,4, 8,15 dB, Output Impedance : 50 Ohms, Scope out : X-Y output to scope.

Time Domain Reflectometer with PRR Short range : 10MHz typical, Pulse width : <10ns typical, PRR Long range :100KHz typical, Amplitude : 1V nominal, Output Impedance : 50 Ohms. Cables of 50 ohms and 75 ohms coaxial cable, 300ohms, parallel line with balun, lossy line, Tee connectors,Standard load of 50 and 75 ohms, Various capacitive and inductive loads, shorts.

Resistive Impedance Analyzer with Characteristic Impedance measurement upto 900 ohms with Display : LCD

Tools/Accessories - CBT DVD, Lab Workbook, CRAM Sheet, TCP/IP Poster,12.4 IOS on CD for the XM Routers, 12.3 IOS for the 2500,12.0.05 Enterprise IOS for the switches, CCENT Test Engine, ICND1 & 2 Test Engine, CCNA Test Engine, BSCI Test Engine, BCMSN Test Engine, CCNP ISCW Test Engine, CCNP ONT Test Engine, 50+ articles covering concepts, TFTP Server, Subnet Calculator Trial Tools,Port Scanner Trial Tool, Password Recovery Trial Tool, PIX Firewall & IDS Tools, IOS Configuration Editor Trial Tools,Router & Switch Simulator Trials, Network Design Trial Tools, Network Protocol Analyzer Trial Tools, VOIP Packet Sniffer Trial Tool, Patch Cables, Wire Stripper,Nipper, Digital Multimeter, RG8, RG6 stripper and crimper,RJ45 crimper, Fiber Optic Splice Kit, RG6, RG58, RG8,Fiber Optic cables

E-Manual: Installation Video for ease of Learning

Dimensions: Rack Mount

Weight: 100 kg.

Warranty: 1 yrs.

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