

Networking: 101

Lesson Number

Lesson Title

Basic Concepts

Lesson 1	What is a Computer Networking?
Lesson 2	Types of Computing Device IOT, Network Printer, PC, Laptop Smart Device, Router, Switch, Firewall Server, Super Computer, Tablet, macPC
Lesson 3	Basic Networking Devices & Components PC, NIC, Cable & Connector, WAP, Switch
Lesson 4	Enterprise Networking Devices Router, G3 Switch, Firewall Server, Storage, Multiplexer Call Manager, Load Balancer, AAA Server Proxy, IP Phone, OLT, UTM
Lesson 5	Networking Product Manufacturer & Market Share
Lesson 6	Network Media (Copper, Wireless, Fiber)
Lesson 7	Network Tools - Crimper, Cable Tester
Lesson 8	Network Cabling (Straight + Cross)
Lesson 9	Optical Fiber Introduction
Lesson 10	Media converter and SFP
Lesson 11	FTTx Introduction
Lesson 12	Internet and Intranet
Lesson 13	Internetworking concepts
Lesson 14	Network Services
Lesson 15	Network Types (LAN/WAN/PAN/SAN/CAN)
Lesson 16	Network Topologies
Lesson 17	Building a small/SOHO Network
Lesson 18	Client Server Network Architecture
Lesson 19	How the Internet works
Lesson 20	Networking Protocol Application Protocol - HTTP, FTP, DHCP Transport Layer Protocol - TCP & UDP, TLS/SSL Routing Protocol Ping Protocol Layer 2 Protocol - Ethernet, VTP, DTP,
Lesson 21	Networking Standards IEEE

IETF
IGF
RIR
IANA
ICANN

Lesson 22	ICANN & RIR Responsibilities
Lesson 23	Internet connection Types 3G/4G Modem & BTCL DSL Modem CellPhone - Operator Broadband (ISP) Satellite (Bank)
Lesson 24	What is IIG, ITC, ISP, BSCCL
Lesson 25	Bandwidth and Throughput
Lesson 26	Number System Introduction
Lesson 27	Network Address Introduction

TCP/IP Concepts

Lesson 28	TCP/IP Communication system
Lesson 29	TCP and OSI model
Lesson 30	Application Layer Protocol concepts
Lesson 31	How FTP Works?
Lesson 32	Telnet Concepts
Lesson 33	SSH Concepts
Lesson 34	SMTP Concepts
Lesson 35	POP3 Concepts
Lesson 36	IMAP Concepts
Lesson 37	DNS
Lesson 38	SNMP Concepts
Lesson 39	NTP Concepts
Lesson 40	DHCP Concepts
Lesson 41	Proxy Concepts
Lesson 42	SSL/TLS Concepts
Lesson 43	HTTP & HTTPs Concepts
Lesson 44	How RADIUS
Lesson 45	How Presentation Layers works
Lesson 46	How Interact Session and Transport Layer
Lesson 47	How Transport Layer works
Lesson 48	TCP & UDP Protocols
Lesson 49	Commonly used TCP/UDP Ports
Lesson 50	How Port Number works?
Lesson 51	Wireshark Introduction
Lesson 52	Segmentation Introduction

Lesson 53	TCP/UDP Header Analysis using Wireshark
Lesson 54	IP Packet Analysis
Lesson 55	Fragmentation Introduction
Lesson 56	Layer 3 vs Layer 2 Concepts
Lesson 57	Ethernet Technologies
Lesson 58	Layer 2 Frame Analysis

Networking Concepts

Lesson 59	MAC Address Details
Lesson 60	IPv4 Address Details
Lesson 61	Unicast, Broadcast and Multicasts concepts
Lesson 62	How Subnet Mask Works?
Lesson 63	Gateway Concepts
Lesson 64	How DNS Works
Lesson 65	Public IP vs Private IP
Lesson 66	Function of Loopback Address
Lesson 67	Routing Concepts
Lesson 68	Types of Routing Protocol
Lesson 69	Routing Protocol vs Routed Protocol
Lesson 70	NAT Concepts
Lesson 71	What is port Forwarding
Lesson 72	Ping (ICMP) Details
Lesson 73	Working with TTL Values
Lesson 74	Tracert Details
Lesson 75	DNS Lookup Details

Networking Core Concepts:

Lesson 76	Collision Domain vs Broadcast Domain
Lesson 77	CSMA/CD
Lesson 78	How Does a Hub work
Lesson 79	How Does a Switch Work?
Lesson 80	ARP Concepts
Lesson 81	Bridging Concepts
Lesson 82	How Does a Router work?
Lesson 83	What is bandwidth controller
Lesson 84	How does a Firewall work?
Lesson 85	Hub vs Switch vs Bridge vs Router
Lesson 86	Manage Switch vs Un-manage Switch
Lesson 87	Switch Loop Prevention Concepts (STP)
Lesson 88	VLAN Concepts
Lesson 89	InterVLAN Routing
Lesson 90	IP Subnetting

Lesson 91	VLSM Design
Lesson 92	IPv6 Introduction
Lesson 93	Power over Ethernet
Lesson 94	Wireless LAN (WLAN) and Wi-Fi Technologies
Lesson 95	802.11 Wireless Standards
Lesson 96	Access Point vs Wireless Router
Lesson 97	Install and configure Wireless Router

Intermediate:

Lesson 98	Router and Firewall Design
Lesson 99	Network Loadbalancer Concepts
Lesson 100	Network Authentication and AAA Concepts
Lesson 101	How VPN works?
Lesson 102	Network ACL Concepts
Lesson 103	DMZ & Network Firewall Zone Concepts
Lesson 104	Network Failover Concepts
Lesson 105	Load Balancing Concepts
Lesson 106	Link Aggregation Technology
Lesson 107	Cluster concepts
Lesson 108	Datacenter Functions & Devices
Lesson 109	Different Types of Network Attack
Lesson 110	How to secure your Network
Lesson 111	Authentication & Authorization
Lesson 112	Software Define Networking (SDN)
Lesson 113	Network Automation Introduction