

Volume #1:

Table of content

Subject	Page
Topology	4
Switching	
Lab 1 Configuring Trunks	9
Lab 2 Configuring EtherChannels	47
Lab 3 Storm Control –I	67
Lab 4 Storm Control –II	72
Lab 5 Private VLANs	82
Lab 6 Basic STP configuration (802.1D)	109
Lab 7 Advanced STP configuration	125
Lab 8 Rapid Spanning-tree Protocol (802.1w)	148
Lab 9 Multiple Instance of STP (802.1s)	165
Lab 10 Spanning-tree Port Fast	176
Lab 11 Configuring Uplink Fast	187
Lab 12 Configuring BPDU Guard	201
Lab 13 Configuring BPDU Filter	208
Lab 14 Spanning-tree BackBone Fast	221
Lab 15 Spanning-tree Root Gaurd	229
Lab 16 Spanning-tree Loop Gaurd	237
DMVPN	
Lab 1 Configuring DMVPN Phase –I Using Static mappings	243
Lab 2 Configuring DMVPN Phase –I Using Dynamic mapping	253
Lab 3 Configuring DMVPN Phase –II Using Static mappings	261
Lab 4 Configuring DMVPN Phase –II Using Dynamic mapping	269
Lab 5 Running Routing Protocols on Phase #I	276
Lab 6 Running Routing Protocols on Phase #II and III	300
RIPv2	
Lab 1 Configuring RIPv2	326
EIGRP	
Lab 1 EIGRP Named Configuration	388
Lab 2 EIGRP Stub	409

Lab 3 Advanced EIGRP Stub Configuration	421
Lab 4 EIGRP Filtering	430
Lab 5 EIGRP Mock Lab	437
Lab 6 Configuring EIGRP Authentication	511
OSPF	
Lab 1 Running OSPF on the interfaces	517
Lab 2 Establishing OSPF Adjacency	533
Lab 3 OSPF Broadcast Networks	558
Lab 4 OSPF Non-Broadcast Networks	572
Lab 5 OSPF Point-To-Point Networks	583
Lab 6 OSPF Point-To-Multipoint & Point-To-Multipoint Non-Broadcast Networks	587
Lab 7 OSPF Area Types	594
Lab 8 OSPF Filtering - I	647
Lab 9 OSPF Filtering - II	656
Lab 10 Redirecting Traffic in OSPF	697
Lab 11 Database Overload Protection	704
Lab 12 OSPF Summarization	711
Lab 13 Virtual-Links and GRE Tunnels	721
Lab 14 OSPF Cost	729
Lab 15 OSPF Authentication	735
Redistribution	
Lab 1 Basics of Redistribution - I	768
Lab 2 Basics of Redistribution - II	789
Lab 3 Redistribution of RIPv2 & EIGRP	807
Lab 4 Redistribution of RIPv2 & OSPF	833

Volume #2:

Table of content

Subject	Page
BGP	
Lab 1 Establishing Neighbor Adjacency	5
Lab 2 Route Reflectors	22
Lab 3 Conditional Advertisement and BGP Backdoors	40
Lab 4 Route Dampening	60
Lab 5 BGP Aggregation	69
Lab 6 The community Attribute	81
Lab 7 BGP Cost Community	98
Lab 8 BGP Load Balancing	107
Lab 9 Local Preference -I	124
Lab 10 Local Preference -II	134
Lab 11 The AS-Path Attribute	141
Lab 12 The Weight Attribute	149
Lab 13 Multi Exist Discriminator Attribute	158
Lab 14 BGP Filtering	175
Lab 15 Administrative Distance	219
Lab 16 Advanced BGP Configuration	227
Lab 17 BGP Confederation	239
Lab 18 BGP Hiding Local AS Number	251
Lab 19 BGP Allow-AS	259
Lab 20 BGP Automatic-Tag, and AS-Path tag & Table-map	264
Lab 21 4 Byte AS Numbers	271
MPLS & L3VPNs	
Lab 1 Configuring LDP	279
Lab 2 Static & RIPv2 Routing in a VPN	333
Lab 3 EIGRP Routing in a VPN	364
Lab 4 EIGRP Site-Of-Origin	386
Lab 5 OSPF Routing in a VPN	407
Lab 6 Back door links and OSPF	430

Lab 7 BGP Routing in a VPN	451
Lab 8 MPLS and NAT	463
Lab 9 Route-Targets, Import maps and Export maps	475
Lab 10 Internet Access Method, Partial Internet Routes	503
IP Multicasting	
Lab 1 Configuring IGMP	524
Lab 2 Dense Mode	543
Lab 3 Static RP	560
Lab 4 Auto-RP	578
Lab 5 Auto-RP Filtering & Listener	599
Lab 6 Configuring BSR	618
Lab 7 Configuring MSDP	630
Lab 8 Anycast-RP	648
Lab 9 Configuring SSM	657
Lab 10 Helper-map	667

Volume #3:

Lab 1 MLS QoS
Lab 2 DSCP Mutation
Lab 3 DSCP-CoS
Lab 4 CoS-DSCP Mapping
Lab 5 IP-Precedence-DSCP Mapping
Lab 6 Match Access-group
Lab 7 Match Destination & Source Address MAC
Lab 8 Match Input-interface
Lab 9 Match Packet-Length
Lab 10 Match IP Precedence/DSCP vs. Precedence/DSCP
Lab 11 Match Protocol HTTP URL, MIME & Host
Lab 12 Match QoS-Group
Lab 13 WFQ
Lab 14 CBWFQ - I
Lab 15 CBWFQ - II
Lab 16 Class Based Traffic Shaping - I
Lab 17 Class Based Traffic Shaping - II
Lab 18 LLQ
Lab 19 Class Based Policing – I
Lab 20 Class Based Policing – II
Lab 21 WRED & CB-WRED
IPv6
Lab 1 Acquiring an IPv6 Address
DMVPN & IPv6 in IPv4 Tunnel
Lab 1 Configuring IPv6 in IPv4 Tunnel
Lab 2 DMVPN & IPv6
OSPFv3
Lab 1 Configuring OSPFv3
Lab 2 Summarization of Internal and External Networks
Lab 3 OSPFv3 Broadcast Network Type
Lab 4 OSPFv3 Non-Broadcast Network Type
Lab 5 OSPFv3 Point-to-point Network Type
Lab 6 OSPFv3 Point-toMultipoint Network Type
Lab 7 OSPFv3 Cost & Auto-cost

Lab 8 LSAs in OSPFv3

Lab 9 OSPFv3 Area Types

Lab 10 OSPFv3 Authentication

EIGRPv6

Lab 1 EIGRPv6

Transitional Solutions

Lab 1 Static NAT-PT

Lab 2 AToM

Lab 3 6VPE

Volume #4

Table of content

Security	
Lab 1 DHCP Snooping	6
Lab 2 IP Source Guard	12
Lab 3 Dynamic ARP Inspection (DAI)	27
Lab 4 MAC Access-lists	37
Lab 5 VLAN Access-maps - I	42
Lab 6 VLAN Access-maps - II	46
Lab 7 Basic Router Security	53
Lab 8 Standard Named Access-lists	62
Lab 9 Controlling Telnet Access and SSH	65
Lab 10 Extended Access-lists IP & ICMP	72
Lab 11 Using MQC as a filtering tool	79
Lab 12 Extended Access-list with Established	84
Lab 13 Dynamic Access-list	88
Lab 14 Reflexive Access-list	96
Lab 15 Access-list and Time range	105
Lab 16 Configuring PAM	110
Lab 17 Control Plane Policing	112
Lab 18 uRPF	117
Lab 19 Basic Site-2-Site IPSec VPN (Main Mode)	132
Lab 20 Basic Site-2-Site IPSec VPN (Aggressive Mode)	145
Lab 21 Basic Site-2-Site IPSec VPN and NAT	155
Lab 22 Basic Site-2-Site IPSec VPN With Dynamic IP	161
Lab 23 GRE/IPSEC Tunnel mode, Transport Mode & S-VTI	167
Lab 24 Protecting DMVPN Tunnels	184
IP Services & Advanced Features	
IP Prefix-lists	
Lab 1 Configuring IP Prefix-lists	199

NAT	
Lab 1 Static NAT Configuration	218
Lab 2 Static NAT Configuration & the “Alias” Keyword	225
Lab 3 NAT Reversible	232
Lab 4 Advanced Static NAT Configuration	237
Lab 5 Configuration of Dynamic NAT - I	240
Lab 6 Configuration of Dynamic NAT - II	243
Lab 7 Configuration of Dynamic NAT - III	246
Lab 8 NAT and TCP Load Balancing	250
Lab 9 Configuring PAT	254
Lab 10 Configuring PAR	259
Lab 11 Configuring Static NAT Redundancy With HSRP	263
Lab 12 Stateful Translation Failover With HSRP	268
Lab 13 Translation of the Outside Source - I	275
Lab 14 Translation of the Outside Source - II	278
Lab 15 NAT on a Stick	283
Lab 16 NAT Virtual Interface	290
FHRP	
Lab 1 HSRP Configuration	298
Lab 2 VRRP Configuration	332
Lab 3 GLBP Configuration	366
EEM	
Lab 1 Configuring EEM	390
Syslog	
Lab 1 Configuring Syslog	409
IP Accounting	
Lab 1 Configuring IP Accounting	414
HTTP, TFTP and Core Dump Using FTP	
Lab 1 Configuring HTTP	432
Lab 2 Configuring TFTP	437
Lab 3 Configuring Core Dump Using FTP	444
NetFlow	

Lab 1 Configuring NetFlow	447
SNMP & RMON	
Lab 1 Configuring SNMP & RMON	457
DHCP	
Lab 1 Configuring DHCP	461
NTP & More IP Stuff	
Lab 31 Configuring NTP	478
Lab 32 More IP Stuff	487