MTCTCE training outline

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Course prerequisites – MTCNA certificate

Title	Objective
Packet flow diagram	• Why this diagram is necessary? • Full overview of all things covered by diagram • Simple examples how packet travels through the diagram (routing, bridging, connection to router etc.) + LAB • More complex examples of diagram usage + LAB

Firewall filter/nat/mangle	• Connection tracking
	• Filter + LAB
	  ○ chains (default/custom)
	  ○ all rule "actions" covered
	  ○ most common rule "conditions" covered
	• NAT + LAB
	  ○ chains (default/custom)
	  ○ all rule "actions" covered
	  ○ most common rule "conditions" covered
	  ○ NAT helpers
	• Mangle + LAB
	  ○ chains (default/custom)
	  ○ all rule "actions" covered
	  ○ most common rule "conditions" covered
	• Some complicated rule "conditions" covered ("advanced", "extra" tab) + LAB
	• uPNP

Quality of Service	• HTB
	  ○ HTB general information
	  ○ HTB implementation (queue tree)
	  ○ HTB structure + LAB
	  ○ HTB Dual Limitation + LAB
	  ○ HTB priority + LAB
	• Burst + LAB
	• Queue types
	  ○ FIFO + LAB
	  ○ SFQ + LAB
	  ○ RED + LAB
	  ○ PCQ + several LABs
	  ○ queue size + LAB
	• Simple queues + LAB
	• Simple queue and queue tree interaction

DNS client/cache	• Basic configuration + LAB • Static DNS Entry + LAB

DHCP client/relay/server	• DHCP communication analysis
	• DHCP-client identification/ configuration + LAB
	• DHCP server configuration: + LAB
	  ○ DHCP networks
	  ○ DHCP options (build-in and custom)
	  ○ IP Pool

Title	Objective
	○ advanced DHCP • DHCP relay configuration + LAB
Web Proxy	• Basic configuration • Proxy rule lists ○ Access list + LAB ○ Direct Access list + LAB ○ Cache list + LAB • Regular expression + LAB