

Course prerequisites - MTCNA certificate

Title	Objective
Module 1 PPP	• PPP Profile + LAB; • Local and Remote addresses; • Incoming/Outgoing Filters; • Address List; • Change TCP-MSS; • Use Encryption; • Session Timeout; • Rate-Limit configuration; • Only-one setting; • PPP Secret + LAB; • Service and Profile; • Local and Remote address; • Routes configuration; • Limit Bytes In/Limit Bytes Out configuration; • IP Pool; • Set addresses ranges; • Next Pool options;
Module 2 PPTP/L2TP	• PPTP and L2TP; • Theory; • Comparison; • PPTP Client configuration + LAB; • Client Setup; • Set profile; • Dial-on-Demand; • Add Default Route and static routes; • PPTP Server configuration + LAB; • Enable server; • Setup profiles; • Add clients to /ppp secret; • Set static interfaces for clients; • L2TP Client configuration + LAB; • Client setup; • Configure profile; • Dial-on-Demand; • Add Default Route and static routes; • PPTP Server configuration + LAB; • Enable server; • Set profiles; • Add clients to /ppp secret; • Set Static interfaces for clients;

Title	Objective
Module 3 PPPoE	• PPPoE server and client; • Theory; • Usage environment; • Comparison to other PPP protocols; • PPPoE client configuration + LAB; • Client setup; • Select interface; • Service name • Configure profile; • PPPoE Server configuration + LAB; • Enable PPPoE server; • Set profiles; • Add clients to /ppp secret; • Add Static interfaces for clients; • Secure server by removing any IP address from PPPoE server interface; • Encryption + LAB; • Set profile without encryption; • Set profile with encryption; • Configure PPPoE client without encryption; • Interface ECMP; • set ECMP routes for ppp interfaces;
Module 4 PPP Bridging	• L2TP and EoIP + LAB; • Set L2TP tunnel; • Set EoIP tunnel; • Create bridge and add necessary interfaces to ports; • Confirm you have Ethernet connectivity between remote nodes; • L2TP and VPLS + LAB; • Set L2TP tunnel; • Set VPLS tunnel; • Create bridge and add necessary interfaces to ports; • L2TP and BCP + LAB; • Set L2TP tunnel; • Use BCP to bridge PPP interface; • Add to bridge necessary interface; • Multilink Protocol; • Enable Multilink by specifying correct MRRU settings; • Disable Mangle rules for MSS adjustment; • MLPPP [optional]; • Setup client and specify multiple interfaces for one client; • Set PPPoE server with MLPPP support;

Title	Objective
Module 5 IPSec	• Introduction; • Theory and concepts; • Comparison to other VPN protocols; • IPSec Peer; • Use different authentication methods; • IPSec exchange modes; • Encryption and Hash algorithms; • NAT-Traversal; • Lifetime and Lifebytes; • DPD protocol; • Policy; • IPsec protocol and action; • Tunnels; • Generate dynamic Policy; • Proposal; • Encryption and Authentication algorithms; • Lifetime; • PFS; • Installed-SA; • Flush SA; • Create IPSec between two routers with NAT + LAB; • Set peer; • Set policy; • Set NAT rules; • Confirm the secure link is established;

Title	Objective
Module 6 HotSpot	• Introduction; • Concepts; • Usage environments; • Setup HotSpot with default settings + LAB; • HotSpot Login Methods + LAB; • HTTP CHAP/PAP; • MAC; • Cookie; • HTTPS; • Trial; • RADIUS • Users + LAB; • Add users; • Set MAC-address for user; • Set MAC-address for username; • Limit Uptime and Limit Bytes In/Out; • Reset limits for user; • Monitor Users; • Host Table; • Active Table; • SNMP for users; • Profile + LAB; • Keepalive timeout; • Shared users; • Rate-Limit; • Address-list; • Incoming/Outgoing filter; • Incoming/Outgoing Packet Mark; • Bypass HotSpot; • walled-garden; • walled-garden ip; • ip-binding; • Customize HotSpot + LAB; • Advertisement; • Customize pages;
Module 7 RADIUS	• RADIUS client + LAB; • add radius client; • set service; • use-radius for the specific service; • RADIUS server; • User Manager + LAB; • Install the latest user-manager; • Add routers; • Add users; • Set profile; • RADIUS incoming