



Certified Inter-Networking Engineer (MTCINE)

Training outline

Duration: 2 days

Outcomes: By the end of this training session, the student will be able to set up and manage organization wide networks

Target audience: Network engineers and technicians wanting to deploy and support networks using BGP (internal and external), MPLS, VPLS protocols

Course prerequisites: MTCNA and MTCRE certificates

Title	Objective
Module 1 BGP	<ul style="list-style-type: none"> • What is Autonomous System (AS) • What is Border Gateway Protocol (BGP)? • Path Vector algorithm • BGP Transport and packet types • iBGP and eBGP • Stub network scenarios and private AS removal • Non-stub scenarios • iBGP and eBGP multi-hop and loopback usage • Route distribution and routing filters • BGP best path selection algorithm • BGP prefix attributes and their usage • BGP route reflectors and confederations • Module 1 laboratory
Module 2 MPLS	<ul style="list-style-type: none"> • MPLS basics • Static label mapping • Label Distribution Protocol (LDP) • Penultimate-hop-popping • MPLS traceroute differences • LDP based VPLS tunnels • Bridge split horizon • VPLS control word (CW) usage • L2MTU importance and MPLS fragmentation • BGP based VPLS • VRF and route leaking • BGP based layer3 tunnels (L3VPN) • OSPF as CE-PE protocol • Module 2 laboratory
Module 3 Traffic Engineering	<ul style="list-style-type: none"> • What is traffic engineering and how it works • RSVP, static path, dynamic path (CSPF) • Bandwidth allocation and bandwidth limitation differences and settings • Module 3 laboratory