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1 Syllabus

Casa Learning Solutions practical labs allow the participant an opportunity to configure common production deployment configurations on a live product(s).

Participants can take practical hands-on labs remotely or on-site either at a customer training facility or our corporate office in Andover Massachusetts USA.

1.1.1 Audience

Who should participate?

The courseware is designed for technical professionals who are implementing configurations or are in support of the product and need to become familiar and comfortable with the Casa configurations and implementations prior to have to work with the product in a production environment.

1.2 Topics & Configurations Tasks

1.2.1 Network Side Interface Configurations

Given the written guide and access to a C100/C40G the participant should be able to:

- Verify and test Redundancy for SMM and Line card modules
- Install and apply a software patch
- Upgrade Casa software
- Remove a software patch
- Verify patch and software versions
- Perform configuration file management
- Configure a LACP trunk across SMMs
- Create a VLAN on the NSI and add the trunk to the VLAN
- Add an IP address to the VLAN
- Configure a loopback interface
- Configure OSPFv2
- Configure OSPFv3
- Configure Bi-directional forwarding
- Configure the Casa CMTS/CCAP as an OSPF ASBR
- Configure ISIS
- Configure a Route MAP
- Use various routing show command to verify routing configurations
- Layer 2 and layer 3 VPNs
- Configure Interior BGP
• Configure EoMPLS
• Configure VPLS
• Configure DNS
• Configure NTP
• Configure Syslog
• Configure SNMPv2
• Use SNMP gets/walks to verify configuration
• User Management
  • Create local users and assign a privilege levels
  • Configure TACACS+
  • Configure RADIUS
  • Configure a verify Access lists
  • Use various NSI show commands to verify NSI configurations

1.2.2 Radio Frequency Interface Configurations

Given the written guide and access to a C100/C40G the participant should be able to:

• Display DOCSIS downstream QAM channel parameters
• Configure and enable 8 downstream Annex A DOCSIS QAM channels
• Configure and enable 4 upstream DOCSIS channels
• Display DOCSIS upstream channel parameters
• Configure and enable 8 downstream Annex B DOCSIS QAM channels
• Configure two service groups
• Configure and verify DOCSIS 3.1 PHY
• Configure DOCSIS 3.1 OFDM channel
• Configure and Verify DOCSIS 3.1 OFDMA channel
• Configure and Verify DOCSIS 3.0 MAC domain
• Enable Security BPI and TFTP enforce and EAE
• Configure Static MAP Advance
• Configure Interleave level
• Enable Dynamic Interleaving
• Configure Pre-Equalization
- Configure Modulation Profiles
- Enable small signal compensation
- Enable and configure load balancing
- Configure and verify 8 by 4 channel bonding
- Use various show cable modem commands to verify CM status
- Configure an IP bundle interface

1.2.3 RFI Diagnosotics

- Enable CM status reporting
- Use CM show commands to view partial service
- Configure Casa Spectrum management
- Use various show commands to verify module and SMM status
- Perform debugging on a CMs
- Perform DOCSIS ping
- Perform packet trace (tcpdump) on CMs and network traffic
- Perform a cable mirror on CM traffic