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Table of Contents

1 Syllabus ................................................................................................................................. 1-4
  1.1 Audience .......................................................................................................................... 1-4
  1.2 Topics ............................................................................................................................... 1-4
1 Syllabus

This online course will provide the participant an opportunity to learn Casa Cable Modem Termination System (CMTS) C100 and C40G hardware and software. This course is designed with an emphasis on verifying configurations, diagnostics and troubleshooting.

1.1 Audience

Who should participate?

This course is most appropriate for technical professionals who are not typically implementing configurations but rather are in support of the Casa CMTS/CCAP such as NOC and support engineers who need to understand how to verify, diagnose and troubleshoot the Casa CMTS after production deployments.

1.2 Topics

Chapter 1 Hardware

Given the written guide at the end of this chapter the Course 1 participant should be able to:

- Describe broadband network architectures and the role of the Cable Modem Termination System (CMTS).
- List Chassis components of the C40 and C100G.
- Describe Power connections and options.
- Describe Hardware redundancy components and configurations.
- List the hardware RF and IP service modules and their functions.
- Discuss the downstream and upstream capacities of RF service modules.
- Describe RF and IP service module architecture’s.
- Describe proper replacement and maintenance of the chassis and service modules.
- Describe a visual inspection troubleshooting flow.
Chapter 2 Software

Given the written guide at the end of this chapter the Course 1 participant should be able to:

- Describe the data plane and management plane traffic flow in the CMTS Network side and RF side interfaces.
- Articulate the features and modalities of the Casa Command Line Interface (CLI).
- Describe software image and configuration file management.
- List software update procedures.
- Verify High Availability configurations and operations.
- Articulate how to troubleshooting cable modem initialization

Chapter 3 Verifying Configurations and Troubleshooting

Given the written guide at the end of this chapter the Course 1 participant should be able to:

- Describe Best practices and troubleshooting approaches.
- Articulate hardware troubleshooting methods.
- Describe RFI and NSI troubleshooting tools.
- Verify and troubleshoot RFI PHY layer configurations.
- Verify and troubleshoot RFI MAC layer configurations.
- Verify and troubleshoot NSI configurations.
- Verify OSSl configurations
- Verify and troubleshooting routing protocols configurations

Example Configuration Demonstrations.

This chapter includes demonstration on how to configure:

- RFI Configurations
- MAC domain Configurations
- CM IP Operations Configurations.
- OSSI Configurations.
- Layer 2 configurations.
- BPI configurations.
- Routing Configurations.