



MEF Carrier Ethernet Professional Certification (CECP) Exam Preparation

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GENERAL INFORMATION

The MEF Carrier Ethernet Certified Professional (CECP) certification exam is for skilled Carrier Ethernet employees seeking to demonstrate their CE expertise.

This document provides information about the exam content sections to anyone who is interested in preparing for the CECP exam. Preparation can include the following:

- MEF Exam Objectives
- Carrier Ethernet training courses from MEF-Authorized Training Providers
- MEF web site for reference documents on certification, implementation agreements and acronyms

MEF EXAM OBJECTIVES

The CECP exam content sections that will be covered are listed below to help you prepare for the exam.

The CECP exam is targeted towards individuals that performs in job roles such as product manager, product planner, sales manager, sales engineer, or technical marketing representative. The candidate possesses the knowledge required to promote, define, market, and sell Carrier Ethernet products and services. The person has a working knowledge of:

- MEF Ethernet services definitions and other common service definitions that are similar to MEF Ethernet service definitions
- Key MEF UNI, ENNI, OVC, and EVC service attributes
- Target applications for Ethernet services
- Can compare and position Ethernet services with respect to legacy, L2, and TDM private line services



MEF EXAM CONTENT

The exam covers the following 10 content sections:

Section 1: Services Definitions

- Objective 1.01 Describe and distinguish between the service attributes of EPL, EVPL, EP-LAN, EVP-LAN, EP-Tree, and EVP-Tree.
- Objective 1.02 Describe how EPL, EVPL, EP-LAN, EVP-LAN, EP-Tree, and EVP-Tree are used to meet various subscriber needs.

Section 2: Transporting Carrier Ethernet Services

- Objective 2.01 Describe the connectivity properties of bridging, provider bridging, provider backbone bridging, provider backbone bridging with traffic engineering extensions, Ethernet over SONET/SDH, Carrier Ethernet over MPLS VPWS, Carrier Ethernet over MPLS VPLS, Carrier Ethernet over MPLS TP, Carrier Ethernet over OTN, and Carrier Ethernet over WDM.
- Objective 2.02 Describe the scalability and limitations of bridging, provider bridging, provider backbone bridging, provider backbone bridging with traffic engineering extensions, Ethernet over SONET/SDH, Carrier Ethernet over MPLS VPWS, Carrier Ethernet over MPLS VPLS, Carrier Ethernet over MPLS TP, Carrier Ethernet over OTN, and Carrier Ethernet over WDM.
- Objective 2.03 Describe which services are efficiently delivered by bridging, provider bridging, provider backbone bridging, provider backbone bridging with traffic engineering extensions, Ethernet over SONET/SDH, Carrier Ethernet over MPLS VPWS, Carrier Ethernet over MPLS VPLS, Carrier Ethernet over MPLS TP, Carrier Ethernet over OTN, and Carrier Ethernet over WDM.
- Objective 2.04 Describe the advantages of specific Carrier Ethernet transport technologies.
- Objective 2.05 Describe service protection mechanisms.



Section 3: Carrier Ethernet Access Technologies

- Objective 3.01 Describe the scalability and limitations of Ethernet over PDH, Ethernet over bonded copper, Ethernet over HFC, Ethernet over packet radio, Ethernet over fiber, and Ethernet over PON.
- Objective 3.02 Describe the advantages of specific Carrier Ethernet Access technologies.
- Objective 3.03 Given a scenario, identify which Carrier Ethernet Access Technology will meet the stated requirements.

Section 4: Basic Definitions

- Objective 4.01 Define Ethernet User-to-Network Interface (UNI), Ethernet External Network-to-Network Interface (ENNI), Ethernet Virtual Connection (EVC), Service Provider, Operator, and Operator Virtual Connection (OVC).
- Objective 4.02 Describe the role of Ethernet User-to-Network Interface (UNI), Ethernet External Network-to-Network Interface (ENNI), Ethernet Virtual Connection (EVC), Service Provider, Operator, and Operator Virtual Connection (OVC).

Section 5: Key UNI, ENNI, OVC, and EVC Service Attributes

- Objective 5.01 Define per UNI service attributes (e.g., physical interfaces, Frame format, Ingress/egress Bandwidth Profiles, CE-VLAN ID/EVC Map, UNI protection).
- Objective 5.02 Define EVC per UNI service attributes (e.g. ingress/egress Bandwidth Profiles).
- Objective 5.03 Define per EVC service attributes (e.g., CE-VLAN ID Preservation, CoS ID Preservation, Relationship between Service Level Agreement and Service Level Specification, Class of Service).
- Objective 5.04 Define OVC End Point per ENNI service attributes (e.g., ingress/egress bandwidth profiles).
- Objective 5.05 Describe bandwidth profiles.
- Objective 5.06 Given a service scenario, describe relevant service attribute settings/parameters.
- Objective 5.07 Define and describe the components of a Service Level Specification and the relationship to Service Level Agreement.



- Objective 5.08 Define and describe ENNI attributes (e.g., physical interfaces, Frame format, Ingress/egress Bandwidth Profiles, End Point Map, ENNI protection).
- Objective 5.09 Define and describe OVC attributes (e.g., CE-VLAN ID Preservation, CoS ID Preservation, Relationship between Service Level Agreement and Service Level Specification, Class of Service, hairpin switching).
- Objective 5.10 Define and describe the Carrier Ethernet protection mechanisms.

Section 6: Certification

- Objective 6.01 Describe the Certification process and requirements for networking equipment.
- Objective 6.02 Describe the Certification process and requirements for services delivered by a service provider.
- Objective 6.03 Describe what is covered by MEF 9, MEF 14, and MEF 18 Certifications.
- Objective 6.04 Describe the benefits of MEF Certification for equipment vendors, Service Provider, and end users.

Section 7: Target Application for Ethernet Services

- Objective 7.01 Describe wholesale access services, retail commercial/business services, mobile backhaul services, Ethernet access to IP services, and supporting legacy services over Ethernet.
- Objective 7.02 Describe which UNI or ENNI attribute values are selected for a given target application.
- Objective 7.03 Describe which EVC or OVC attribute values are selected for a given target application.
- Objective 7.04 Describe how specific service requirements of a target application (e.g., frame relay, Dedicated Internet Access, DSL or Cable Internet access, TDM Private Lines, WDM private network) are met using Ethernet services.
- Objective 7.05 Given a scenario determine appropriate Ethernet services.

Section 8: Comparing and Positioning Ethernet Services

- Objective 8.01 Compare and contrast Ethernet services with L2, IP, and TDM private line services.
- Objective 8.02 Given a scenario, recommend an Ethernet service to meet end user specifications.



Section 9: Circuit Emulation over Ethernet

- Objective 9.01 Define the purpose and need for Circuit Emulation over Ethernet applications.
- Objective 9.02 Define the critical components of circuit emulation over Ethernet service.
- Objective 9.03 Define the MEF Service Definitions used to deliver emulated circuits.
- Objective 9.04 Define the EVC service attributes required for emulated circuits.
- Objective 9.05 Define the three techniques and their uses for delivering synchronized clock over emulated circuits (e.g., Adaptive, 1588v2, Synchronous Ethernet, NTP, PTP).
- Objective 9.06 Describe how circuit emulation is used in Mobile Backhaul applications.

Section 10: Service Operations Administration and Maintenance (SOAM)

- Objective 10.01 Describe the various partitioning of responsibilities for Service Operations Administration and Maintenance (SOAM).
- Objective 10.02 Describe the basic mechanisms for fault management.
- Objective 10.03 Describe the basic mechanisms for performance management.
- Objective 10.04 Describe the basic metrics for performance management.