

CCIE ENTERPRISE INFRASTRUCTURE V1.1

CCIE ENTERPRISE INFRASTRUCTURE EXAM SYLLABUS

MODULE 1: NETWORK INFRASTRUCTURE

01

Section 1: Layer 2 Technologies

Ethernet Switching
VLANs and VLAN Trunking
Spanning Tree Protocol
Layer 2 Multicast
EtherChannel

Section 2: Layer 3 Technologies

IPv4 and IPv6 Addressing
OSPF (Open Shortest Path First)
EIGRP (Enhanced Interior Gateway Routing Protocol)
BGP (Border Gateway Protocol)
Route Manipulation
Layer 3 Multicast

Section 3: VPN Technologies

MPLS Layer 3 VPNs
DMVPN (Dynamic Multipoint VPN)
IPsec VPN

MODULE 2: SOFTWARE DEFINED INFRASTRUCTURE

02

Section 1: SD-Access

Underlay and Overlay
Fabric design
Fabric Deployment
Fabric border handoff
Segmentation

Section 2: SD-WAN

Controller Architecture and onboarding
SD-WAN Underlay and cEdge onboarding
Advanced OMP Routing
Centralized Policies
Localized Policies
Managing devices using templates and configuration groups

MODULE 3: TRANSPORT TECHNOLOGIES AND SOLUTIONS

03

Section 1: Static point-to-point GRE tunnels

Section 2: MPLS

Section 3: DMVPN

MODULE 4: INFRASTRUCTURE SECURITY AND SERVICES

04

Section 1: Quality of Service

Classification and Marking

Congestion Management

Congestion Avoidance

Section 2: Network Services

NTP (Network Time Protocol)

NAT (Network Address Translation)

First Hop Redundancy Protocols

Section 3: Infrastructure Security and monitoring

Device Security

Network Security

Network Monitoring

Network Management

MODULE 5: INFRASTRUCTURE AUTOMATION AND PROGRAMMABILITY

05

Section 1: Data Encoding

JSON

XML

YAML

Jinja

Section 2: Automation and scripting

EEM applets

Guest shell

Linux environment

CLI Python module

EEM Python module

Section 3: Programmability

vManage API

Python requests library and Postman

Monitoring endpoints

Configuration endpoints

Interaction with Cisco DNA Center API using HTTP requests (GET, PUT, POST)
Python requests library and Postman
Deploy and verify model-driven telemetry
Configure on-change subscription using gRPC

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Thank you for reviewing the syllabus. If you have any questions or need further clarification, please feel free to contact us