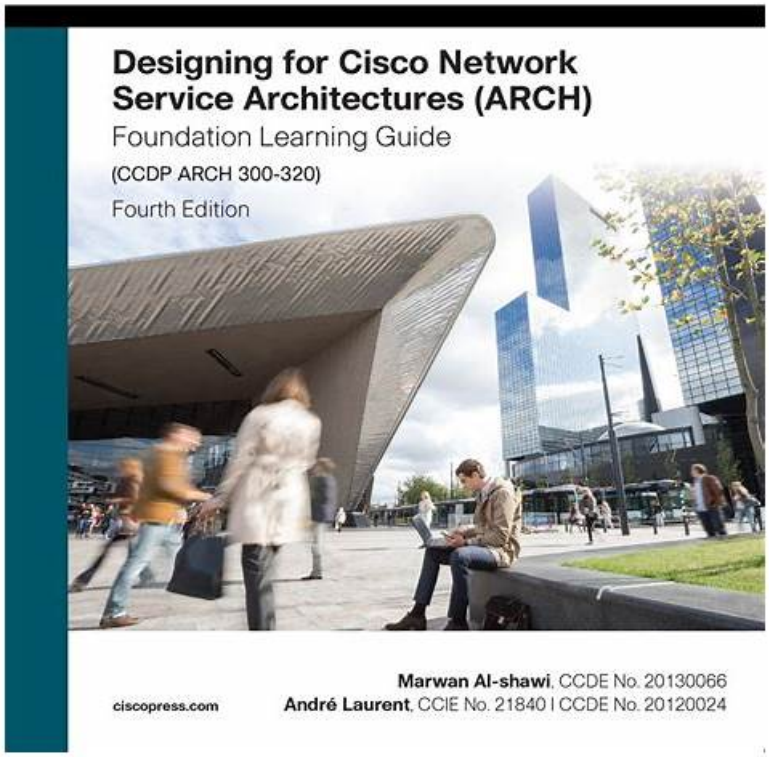
Cisco Books 300-540 PDF: Designing and Implementing Cisco Service Provider Cloud Network Infrastructure - PassTestking Quality and Value Guaranteed



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Cisco 300-540 Exam Syllabus Topics:

Topic	Details
Topic 1	• Service Assurance and Optimization: This section of the exam measures the skills of Cloud Operations Engineers and covers assurance mechanisms used to maintain performance, stability, and visibility across NFVI environments. It includes network assurance concepts such as MANO frameworks, VNF workload monitoring, VIM control plane KPIs, and streaming telemetry with gRPC and gNMI. Candidates must understand cloud infrastructure performance monitoring tools, including SR-PM, NetFlow, IPFIX, syslog, SNMP traps, RMON, cloud agents, and automated fault management systems. The domain also touches on diagnosing NFVI-related errors and optimizing VNFs using techniques such as SR-IOV and software-accelerated virtual switching technologies like DPDK and VPP.

Topic 2	• Security: This section of the exam measures the skills of Network Security Engineers and covers the implementation of infrastructure-level protection in cloud and NFVI ecosystems. It includes topics such as ACLs, uRPF, RTBH, router hardening, BGP flowspec, TACACS, and MACSEC. Candidates should understand DoS mitigation methods and apply security practices within NFVI, focusing on API protection, securing the control and management plane, and segmentation strategies in service provider cloud environments. The domain also evaluates basic knowledge of TLS, mTLS, and general cloud security solutions related to DNS protection, zero-day defenses, and malware detection.
Topic 3	• Cloud Interconnect: This section of the exam measures the skills of Service Provider Network Engineers and covers how large networks interconnect with cloud platforms and carrier-neutral facilities. Candidates are expected to understand various connectivity options to cloud providers, customer sites, and other neutral facilities, as well as evaluate WAN connectivity models such as direct connect, MPLS or segment routing, and IPsec VPN links. The domain also includes the ability to troubleshoot advanced data center interconnect solutions, including EVPN VXLAN, EVPN over SR • MPLS, ACI-based connectivity, and pseudowire architectures supporting cloud-to-cloud and cloud-to-edge communication.
Topic 4	• High Availability: This section of the exam measures the skills of Cloud Infrastructure Architects and covers the design and implementation of redundancy and resiliency mechanisms in virtualized network functions and distributed cloud platforms. It includes data plane redundancy for VNFs, high availability within a single VIM control plane, and resilient compute, vNIC, and top-of-rack switching. The exam requires an understanding of multi-homing, EVLAG configurations, virtual private cloud deployment, and ECMP strategies for NFVI integrations with physical routing protocols such as BGP, OSPF, and IS-IS. Candidates must also recommend suitable high-availability models involving DNS, routing, and load balancing.
Topic 5	• Virtualized Architecture: This section of the exam measures the skills of Cloud Network Engineers and covers the foundational concepts of virtualized infrastructures used in modern service provider and cloud environments. Candidates are expected to understand constraints in IaaS designs, determine appropriate cloud service models, and demonstrate awareness of container orchestration compared to traditional virtual machines. The exam also evaluates the ability to implement key virtualization functions such as NFV, VNF, NSO, and virtualized Cisco platforms. Learners must be able to deploy NFV with automation tools, manage VNF onboarding, work with NSO-driven orchestration, and use protocols like NETCONF, RESTCONF, REST APIs, and gNMI within automated cloud ecosystems. A general understanding of supporting platforms such as OpenStack also forms part of the required knowledge in this domain.

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Cisco Designing and Implementing Cisco Service Provider Cloud Network Infrastructure Sample Questions (Q24-Q29):

NEW QUESTION # 24
What is a valid connection method between carrier-neutral facilities within the same metro area?

- A. CAT6e connection
- B. DWDM ring
- C. OSPF backbone area adjacency
- D. private wireless connection

Answer: B

Explanation:
Comprehensive and Detailed Explanation Based on Designing and Implementing Cisco Service Provider Cloud Network Infrastructure Knowledge When connectingcarrier-neutral facilities (CNFs)ordata centerswithin the same metropolitan area, service providers typically usehigh-bandwidth, low-latency optical transport methods. The most appropriate and commonly deployed interconnection technology is:
DWDM (Dense Wavelength Division Multiplexing) ring, which provides:
* High capacity (10G, 40G, 100G, 400G)
* Low latency
* Redundancy through ring or mesh topologies
* Multi-wavelength multiplexing for cost efficiency
* Carrier-grade reliability for metro interconnect services
This aligns with cloud interconnect and metro transport design used in service provider environments.
Evaluation of the Options
A). OSPF backbone area adjacency
This is a routing protocol adjacency, not a physical connection method. It requires a transport link underneath but does not represent the physical interconnect itself.
B). Private wireless connection
Not suitable for CNF or metro DC interconnect because it lacks the bandwidth, reliability, and deterministic performance required for large-scale carrier-grade interconnects.
C). DWDM ring
This is the correct method. DWDM-based metro fiber rings are the standard for connecting carrier-neutral facilities in the same metro region.
D). CAT6e connection
This is limited to short-distance copper Ethernet (tens of meters). It is not used for metro-scale interconnects or between CNFs.

NEW QUESTION # 25
The use of Yang models in network configuration is to:

- A. Replace XML-based data models
- B. Increase the complexity of network scripts
- C. Simplify the parsing of binary data
- D. Provide a standardized data modeling language

Answer: D

NEW QUESTION # 26
Network segmentation in a service provider cloud environment is important for:

- A. Decreasing performance
- B. Increasing complexity
- C. Isolating resources and reducing attack surfaces
- D. Centralizing all resources

Answer: C

NEW QUESTION # 27
Software accelerated virtual switch technologies like DPDK and VPP aim to:

- A. Decrease network security
- B. Slow down packet processing
- C. Improve network function virtualization performance
- D. Increase physical network dependency

Answer: C

NEW QUESTION # 28
To secure API communication, it is essential to implement:

- A. Public API keys only
- B. Rate limiting and authentication
- C. Unencrypted data exchange
- D. Unrestricted access policies

Answer: B

NEW QUESTION # 29
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