Implementing Cisco Data Center Infrastructure (300-165)

Exam Description: The Implementing Cisco Data Center Infrastructure (DCII) exam (300-165) is a 90-minute, 60–70 question assessment. This exam is one of the exams associated with the CCNP Data Center Certification. This exam tests a candidate's knowledge of implementing Cisco data center infrastructure including key protocols, routing and switching protocols, maintenance, management, operations, security, and storage. The course, Implementing Cisco Data Center Infrastructure v6 (DCII), helps candidates to prepare for this exam because the content is aligned with the exam topics.

The following topics are general guidelines for the content likely to be included on the exam. However, other related topics may also appear on any specific delivery of the exam. In order to better reflect the contents of the exam and for clarity purposes, the guidelines below may change at any time without notice.

29% 1.0 Implement Data Center Protocols

- 1.1 Implement vPC
- 1.2 Implement FabricPath
  - 1.2.a Segment ID
  - 1.2.b Distributed gateway, anycast HSRP
  - 1.2.c Multiprotocol BGP
  - 1.2.d vPC+
- 1.3 Implement VXLAN
  - 1.3.a Distributed gateway
  - 1.3.b Multiprotocol-BGP-EVPN
  - 1.3.c vPC
- 1.4 Implement OTV
- 1.5 Implement LISP

22% 2.0 Implement Routing and Switching Protocols

- 2.1 Implement routing protocols
  - 2.1.a OSPFv2, OSPFv3
  - 2.1.b IS-IS
  - 2.1.c PIM
  - 2.1.d FHRP
    - 2.1.d (i) HSRP
    - 2.1.d (ii) VRRP
- 2.2 Implement switching protocols
  - 2.2.a STP

2.2.b LACP/port channel
2.2.c FEX, VNTAG

14% 3.0 Data Center Infrastructure Maintenance, Management, and Operations

3.1 Plan and execute software updates
- 3.1.a Disruptive / nondisruptive
- 3.1.b EPLD

3.2 Implement configuration management
- 3.2.a Backups / restore
- 3.2.b Checkpoints /rollback

3.3 Implement infrastructure monitoring
- 3.3.a Logging
- 3.3.b SNMP
- 3.3.c Call Home
- 3.3.d NetFlow
- 3.3.e SPAN

3.4 Configure time synchronization
- 3.4.a PTP
- 3.4.b NTP

12% 4.0 Data Center Infrastructure Security

4.1 Implement ACLs

4.2 Implement AAA and RBAC

4.3 Implement keychain authentication

4.4 Implement first-hop security
- 4.4.a Dynamic ARP inspections
- 4.4.b DHCP snooping
- 4.4.c Unicast RPF
- 4.4.d MACsec
- 4.4.e Port security

4.5 Implement CoPP

4.6 Implement fabric binding and port security

23% 5.0 Infrastructure Storage

5.1 Implement Fibre Channel fabric
- 5.1.a Switched fabric initialization
- 5.1.b Port channels, ISL
- 5.1.c FCID
- 5.1.d FCIP

5.2 Implement Fibre Channel Protocol services
- 5.2.a Zoning
- 5.2.b Cisco Fabric Services
- 5.2.c FCNS
- 5.2.d Device alias
- 5.2.e VSAN
- 5.2.f FSPF

5.3 Implement FCoE Unified Fabric
- 5.3.a Storage VDC
- 5.3.b FIP
- 5.3.c FCoE topologies
- 5.3.d DCB