



CCNA Data Center

Course Content

Module 01: Introducing Cisco Data Center Networking (200-150)	Module 02: Introducing Cisco Data Center Technologies (200-155)
<p>1.0 Data Center Physical Infrastructure</p> <p>1.1 Describe different types of cabling, uses, and limitations</p> <p>1.2 Describe different types of transceivers, uses, and limitations</p> <p>1.3 Identify physical components of a server and perform basic troubleshooting</p> <p>1.4 Identify physical port roles</p> <p>1.5 Describe power redundancy modes</p> <p>2.0 Basic Data Center Networking Concepts</p> <p>2.1 Compare and contrast the OSI and the TCP/IP models</p> <p>2.2 Describe classic Ethernet fundamentals</p> <ul style="list-style-type: none"> • 2.2.a Forward • 2.2.b Filter • 2.2.c Flood • 2.2.d MAC address table <p>2.3 Describe switching concepts and perform basic configuration</p> <ul style="list-style-type: none"> • 2.3.a STP • 2.3.b 802.1q • 2.3.c Port channels • 2.3.d Neighbor discovery <ul style="list-style-type: none"> ○ 2.3.d [i] CDP ○ 2.3.d [ii] LLDP • 2.3.e Storm control <p>3.0 Advanced Data Center Networking Concepts</p> <p>3.1 Basic routing operations</p> <ul style="list-style-type: none"> • 3.1.a Explain and demonstrate IPv4/IPv6 addressing • 3.1.b Compare and contrast static and dynamic routing • 3.1.c Perform basic configuration of SVI/routed interfaces <p>3.2 Compare and contrast the First Hop Redundancy Protocols</p> <ul style="list-style-type: none"> • 3.2.a VRRP • 3.2.b GLBP 	<p>1.0 Unified Computing</p> <p>1.1 Describe common server types and connectivity found in a data center</p> <p>1.2 Describe the physical components of the Cisco UCS</p> <p>1.3 Describe the concepts and benefits of Cisco UCS hardware abstraction</p> <p>1.4 Perform basic Cisco UCS configuration</p> <ul style="list-style-type: none"> • 1.4.a Cluster high availability • 1.4.b Port roles • 1.4.c Hardware discovery <p>1.5 Describe server virtualization concepts and benefits</p> <ul style="list-style-type: none"> • 1.5.a Hypervisors • 1.5.b Virtual switches • 1.5.c Shared storage • 1.5.d Virtual Machine components • 1.5.e Virtual Machine Manager <p>2.0 Network Virtualization</p> <p>2.1 Describe the components and operations of Cisco virtual switches</p> <p>2.2 Describe the concepts of overlays</p> <ul style="list-style-type: none"> • 2.2.a OTV • 2.2.b NVGRE • 2.2.c VXLAN <p>2.3 Describe the benefits and perform simple troubleshooting of VDC STP</p> <p>2.4 Compare and contrast the default and management VRFs</p> <p>2.5 Differentiate between the data, control, and management planes</p> <p>3.0 Cisco Data Center Networking Technologies</p> <p>3.1 Describe, configure, and verify FEX connectivity</p> <p>3.2 Describe, configure, and verify basic vPC features</p> <p>3.3 Describe, configure, and verify FabricPath</p> <p>3.4 Describe, configure, and verify unified switch ports</p> <p>3.5 Describe the features and benefits of Unified</p>

<ul style="list-style-type: none"> • 3.2.c HSRP <p>3.3 Compare and contrast common data center network architectures</p> <ul style="list-style-type: none"> • 3.3.a 2 Tier • 3.3.b 3 Tier • 3.3.c Spine-leaf <p>3.4 Describe the use of access control lists to perform basic traffic filtering</p> <p>3.5 Describe the basic concepts and components of authentication, authorization, and accounting</p> <p>4.0 Basic Data Center Storage</p> <p>4.1 Differentiate between file and block based storage protocols</p> <p>4.2 Describe the roles of FC/FCoE port types</p> <p>4.3 Describe the purpose of a VSAN</p> <p>4.4 Describe the addressing model of block based storage protocols</p> <ul style="list-style-type: none"> • 4.4.a FC • 4.4.b iSCSI <p>5.0 Advanced Data Center Storage</p> <p>5.1 Describe FCoE concepts and operations</p> <ul style="list-style-type: none"> • 5.1.a Encapsulation • 5.1.b DCB • 5.1.c vFC • 5.1.d Topologies <ul style="list-style-type: none"> ○ 5.1.d [i] Single hop ○ 5.1.d [ii] Multihop ○ 5.1.d [iii] Dynamic <p>5.2 Describe Node Port Virtualization</p> <p>5.3 Describe zone types and their uses</p> <p>5.4 Verify the communication between the initiator and target</p> <ul style="list-style-type: none"> • 5.4.a FLOGI • 5.4.b FCNS • 5.4.c active zone set 	<p>Fabric</p> <p>3.6 Describe and explain the use of role-based access control within the data center infrastructure</p> <p>4.0 Automation and Orchestration</p> <p>4.1 Explain the purpose and value of using APIs</p> <p>4.2 Describe the basic concepts of cloud computing</p> <p>4.3 Describe the basic functions of a Cisco UCS Director</p> <ul style="list-style-type: none"> • 4.3.a Management • 4.3.b Orchestration • 4.3.c Multitenancy • 4.3.d Chargeback • 4.3.e Service offerings • 4.3.f Catalogs <p>4.4 Interpret and troubleshoot a Cisco UCS Director workflow</p> <p>5.0 Application Centric Infrastructure</p> <p>5.1 Describe the architecture of an ACI environment</p> <ul style="list-style-type: none"> • 5.1.a Basic policy resolution • 5.1.b APIC controller • 5.1.c Spine leaf • 5.1.d APIs <p>5.2 Describe the fabric discovery process</p> <p>5.3 Describe the policy-driven, multitier application deployment model and its benefits</p> <p>5.4 Describe the ACI logical model</p> <ul style="list-style-type: none"> • 5.4.a Tenants • 5.4.b Context • 5.4.c Bridge domains • 5.4.d EPG • 5.4.e Contracts
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