

CCNA Data Center

Agility is the hallmark of today's successful data center. Built for rapid application deployment and supported by a highly elastic infrastructure, the data center has become core to businesses competing in our digital era. CCNA Data Center certification provides the confidence and nimbleness you need to install, configure, and maintain data center technology. Gain grounding in data center infrastructure, data center networking concepts and technologies, storage networking, unified computing, network virtualization, data center automation and orchestration, and Cisco Application Centric Infrastructure (ACI).

Prerequisites:

No prerequisites

Required Exams:

Introducing Cisco Data Center Networking (200-150)

The Introducing Cisco Data Center Networking (DCICN) exam (200-150) is a 90-minute, 55–65 question assessment. This exam is one of the exams associated with the CCNA Data Center Certification. This exam tests a candidate's knowledge of data center physical infrastructure, data center networking concepts, and data center storage networking. The course, Introducing Cisco Data Center Networking v6 (DCICN), will help candidates prepare for this exam, as the content is aligned with the exam topics.

Exam Topics:

1.0 Data Center Physical Infrastructure	15%
1.1 Describe different types of cabling, uses, and limitations	
1.2 Describe different types of transceivers, uses, and limitations	
1.3 Identify physical components of a server and perform basic troubleshooting	
1.4 Identify physical port roles	
1.5 Describe power redundancy modes	
2.0 Basic Data Center Networking Concepts	23%
2.1 Compare and contrast the OSI and the TCP/IP models	
2.2 Describe classic Ethernet fundamentals	
• 2.2.a Forward	
• 2.2.b Filter	
• 2.2.c Flood	

- 2.2.d MAC address table

2.3 Describe switching concepts and perform basic configuration

- 2.3.a STP
- 2.3.b 802.1q
- 2.3.c Port channels
- 2.3.d Neighbor discovery
 - 2.3.d [i] CDP
 - 2.3.d [ii] LLDP
- 2.3.e Storm control

3.0 Advanced Data Center Networking Concepts

23%

3.1 Basic routing operations

- 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

3.2 Compare and contrast the First Hop Redundancy Protocols

- 3.2.a VRRP
- 3.2.b GLBP
- 3.2.c HSRP

3.3 Compare and contrast common data center network architectures

- 3.3.a 2 Tier
- 3.3.b 3 Tier
- 3.3.c Spine-leaf

3.4 Describe the use of access control lists to perform basic traffic filtering

3.5 Describe the basic concepts and components of authentication, authorization, and accounting

4.0 Basic Data Center Storage

19%

4.1 Differentiate between file and block based storage protocols

4.2 Describe the roles of FC/FCoE port types

4.3 Describe the purpose of a VSAN

4.4 Describe the addressing model of block based storage protocols

- 4.4.a FC
- 4.4.b iSCSI

5.0 Advanced Data Center Storage

20%

5.1 Describe FCoE concepts and operations

- 5.1.a Encapsulation
- 5.1.b DCB
- 5.1.c vFC
- 5.1.d Topologies
 - 5.1.d [i] Single hop
 - 5.1.d [ii] Multihop
 - 5.1.d [iii] Dynamic

5.2 Describe Node Port Virtualization

5.3 Describe zone types and their uses

5.4 Verify the communication between the initiator and target

- 5.4.a FLOGI
- 5.4.b FCNS
- 5.4.c active zone set

Introducing Cisco Data Center Technologies (200-155)

The Introducing Cisco Data Center Technologies (DCICT) exam (200-155) is a 90-minute, 55–65 question assessment. This exam is one of the exams associated with the CCNA Data Center Certification. This exam tests a candidate's knowledge of fundamental data center technologies including unified computing, data center network virtualization, Cisco data center networking technologies, data center automation and orchestration, and Application Centric Infrastructure. The course, Introducing Cisco Data Center Technologies v6 (DCICT), will help candidates prepare for this exam, as the content is aligned with the exam topics.

Exam Topics:

1.0 Unified Computing	25%
<ul style="list-style-type: none">1.1 Describe common server types and connectivity found in a data center1.2 Describe the physical components of the Cisco UCS1.3 Describe the concepts and benefits of Cisco UCS hardware abstraction1.4 Perform basic Cisco UCS configuration<ul style="list-style-type: none">• 1.4.a Cluster high availability• 1.4.b Port roles• 1.4.c Hardware discovery1.5 Describe server virtualization concepts and benefits<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	
2.0 Network Virtualization	17%
<ul style="list-style-type: none">2.1 Describe the components and operations of Cisco virtual switches2.2 Describe the concepts of overlays<ul style="list-style-type: none">• 2.2.a OTV• 2.2.b NVGRE• 2.2.c VXLAN2.3 Describe the benefits and perform simple troubleshooting of VDC STP2.4 Compare and contrast the default and management VRFs2.5 Differentiate between the data, control, and management planes	

3.0 Cisco Data Center Networking Technologies

26%

- 3.1 Describe, configure, and verify FEX connectivity
- 3.2 Describe, configure, and verify basic vPC features
- 3.3 Describe, configure, and verify FabricPath
- 3.4 Describe, configure, and verify unified switch ports
- 3.5 Describe the features and benefits of Unified Fabric
- 3.6 Describe and explain the use of role-based access control within the data center infrastructure

4.0 Automation and Orchestration

15%

- 4.1 Explain the purpose and value of using APIs
- 4.2 Describe the basic concepts of cloud computing
- 4.3 Describe the basic functions of a Cisco UCS Director
 - 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
- 4.4 Interpret and troubleshoot a Cisco UCS Director workflow

5.0 Application Centric Infrastructure

17%

- 5.1 Describe the architecture of an ACI environment
 - 5.1.a Basic policy resolution
 - 5.1.b APIC controller
 - 5.1.c Spine leaf
 - 5.1.d APIs
- 5.2 Describe the fabric discovery process
- 5.3 Describe the policy-driven, multitier application deployment model and its benefits
- 5.4 Describe the ACI logical model
 - 5.4.a Tenants
 - 5.4.b Context
 - 5.4.c Bridge domains
 - 5.4.d EPG

- 5.4.e Contracts