



Introducing Cisco Data Center Networking (640-911)

Exam Description: The 640-911 DCICN “Introducing Cisco Data Center Networking” is one of the exams associated with the CCNA® Data Center certification. This 90-minute 65–75 questions exam tests a candidate's knowledge of networking concepts for the Data Center environment, based on Nexus-OS. You will learn fundamental information on how a Data Center network works; and how to configure virtualization in the network, addressing schemes, troubleshooting and configuration skills. Candidates can prepare for this exam by taking the course 640-911 DCICN, “Introducing Cisco Data Center Networking”.

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.

- 15%** **1.0** **Describe How a Network Works**
 - 1.1 Describe the purpose and functions of various network devices
 - 1.1.a Interpret a network diagram
 - 1.1.b Define physical network topologies
 - 1.2 Select the components required to meet a network specification
 - 1.2.a Switches
 - 1.2.b Describe and identify Nexus hardware specifications
 - 1.2.c Describe and identify Nexus licensing requirements
 - 1.3 Use the OSI and TCP/IP models and their associated protocols to explain how data flows in a network
 - 1.3.a IP
 - 1.3.b TCP
 - 1.3.c UDP
 - 1.4 Describe the purpose and basic operation of the protocols in the OSI and TCP
 - 1.4.a TCP/IP
 - 1.4.b OSI layers

- 21%** **2.0** **Configure, Verify and Troubleshoot a Switch with VLANs and Interswitch Communications Using Nexus**
 - 2.1 Explain the technology and media access control method for Ethernet
 - 2.1.a IEEE 802 protocols
 - 2.1.b CSMA/CD
 - 2.2 Explain basic switching concepts and the operation of Cisco switches
 - 2.2.a Layer 2 addressing
 - 2.2.b MAC table
 - 2.2.c Flooding

- 2.3 Describe and configure enhanced switching technologies
 - 2.3.a VTP
 - 2.3.b VLAN
 - 2.4.c 802.1q
 - 2.5.d STP

- 12%** **3.0 Implement an IP Addressing Scheme and IP Services to Meet Network Requirements in a Medium-Size Enterprise Branch Office Network Using Nexus**
 - 3.1 Describe the operation and benefits of using private and public IP addressing
 - 3.1.a Classful IP addressing
 - 3.1.b RFC 1918
 - 3.1.c RFC 4193

 - 3.2 Describe the difference between IPv4 and IPv6 addressing schemes
 - 3.2.a Comparative address space
 - 3.3.b Host addressing

- 52%** **4.0 Configure, Verify, and Troubleshoot Basic Router Operation and Routing on Cisco Devices Using Nexus**
 - 4.1 Describe and configure basic routing concepts
 - 4.1.a Packet forwarding
 - 4.1.b Router look-up process (exec mode, exec commands, configuration mode)

 - 4.2 Describe the operation of Cisco routers
 - 4.2.a Router boot-up process
 - 4.2.b POST
 - 4.3.c Router components



Introducing Cisco Data Center Technologies (640-916)

Exam Description – The 640-916 DCICT “Introducing Cisco Data Center Technologies” is one of the exams associated with the CCNA® Data Center certification. This 90-minute, 65–75 questions exam tests a candidate’s knowledge of fundamental Data Center technologies like network and server virtualization, storage, convergent I/O and network services like load balancing.

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.

- 30%** **1.0** **Cisco Data Center Fundamentals Concepts**
 - 1.1 Describe network architectures for the Data Center describe the purpose and functions of various network devices.
 - 1.1.a LAN
 - 1.1.b SAN
 - 1.2 Describe the Modular Approach in Network Design
 - 1.3 Describe the data center core layer
 - 1.4 Describe the data center aggregation layer
 - 1.5 Describe the data center access layer
 - 1.6 Describe the collapse core model
 - 1.7 Describe FabricPath
 - 1.8 Identify key differentiator between DCI and network interconnectivity
 - 1.9 Describe, configure, and verify vPC
 - 1.10 Describe the functionality of and configuration of port channels
 - 1.11 Describe and configure virtual device context (VDC)
 - 1.12 Describe the edge/core layers of the SAN
 - 1.13 Describe the Cisco Nexus product family
 - 1.14 Configure and verify network connectivity
 - 1.15 Identify control and data plane traffic
 - 1.16 Perform initial set up
- 20%** **2.0** **Data Center Unified Fabric**
 - 2.1 Describe FCoE
 - 2.2 Describe FCoE multihop
 - 2.3 Describe VIFs
 - 2.4 Describe FEX products
 - 2.5 Perform initial set up
- 18%** **3.0** **Storage Networking**
 - 3.1 Describe initiator target

- 3.2 Verify SAN switch operations
- 3.3 Describe basic SAN connectivity
- 3.4 Describe the different storage array connectivity
- 3.5 Verify name server login
- 3.6 Describe, configure, and verify zoning
- 3.7 Perform initial set up
- 3.8 Describe, configure, and verify VSAN

- 14%** **4.0 DC Virtualization**
 - 4.1 Describe device Virtualization
 - 4.2 Describe Server Virtualization
 - 4.3 Describe Nexus 1000v
 - 4.4 Verify initial set up and operation for Nexus 1k

- 17%** **5.0 Unified Computing**
 - 5.1 Describe and verify discovery operation
 - 5.2 Describe, configure, and verify connectivity
 - 5.3 Perform initial set up
 - 5.4 Describe the key features of UCSM

- 1%** **6.0 Data Center Network Services**
 - 6.1 Describe standard ACE features for load balancing
 - 6.2 Describe server load balancing virtual context and HA
 - 6.3 Describe server load balancing management options
 - 6.4 Describe the benefits of Cisco Global Load Balancing Solution
 - 6.5 Describe how the Cisco global load balancing solution integrates with local Cisco load balancers
 - 6.6 Describe Cisco WAAS needs and advantages in the Data Center