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

1.3   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