200-310

Designing for Cisco Internetwork Solutions

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SUCCESS GUIDE TO CISCO CERTIFICATION

Exam Summary – Syllabus – Questions

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Introduction to 200-310 Exam on Designing for Cisco Internetwork Solutions

A great way to start the Cisco Certified Design Associate (DESGN) preparation is to begin by properly appreciating the role that syllabus and study guide play in the Cisco 200-310 certification exam. This study guide is an instrument to get you on the same page with Cisco and understand the nature of the Cisco CCDA exam.

Our team of experts has composed this Cisco 200-310 exam preparation guide to provide the overview about Cisco Designing for Cisco Internetwork Solutions exam, study material, sample questions, practice exam and ways to interpret the exam objectives to help you assess your readiness for the Cisco DESGN exam by identifying prerequisite areas of knowledge. We recommend you to refer the simulation questions and practice test listed in this guide to determine what type of questions will be asked and the level of difficulty that could be tested in the Cisco CCDA certification exam.

Cisco 200-310 Certification Details:

Exam Name	Designing for Cisco Internetwork Solutions
Exam Number	200-310 DESGN
Exam Price	$300 USD
Duration	75 minutes
Number of Questions	55-65
Passing Score	Variable (750-850 / 1000 Approx.)
Recommended Training	Designing for Cisco Internetwork Solutions (DESGN) Designing for Cisco Internetwork Solutions (DESGN) E-Learning
Exam Registration	PEARSON VUE
Sample Questions	Cisco 200-310 Sample Questions
Practice Exam	**Cisco Certified Design Associate Practice Test**

Cisco 200-310 Exam Syllabus:

Section	Weight	Objectives
Design Methodologies	15%	1 Describe the Cisco Design lifecycle – PBM (plan, build, manage) 2 Describe the information required to characterize an existing network as part of the planning for a design change 3 Describe the use cases and benefits of network characterization tools (SNMP, NBAR, NetFlow) 4 Compare and contrast the top-down and bottom-up design approaches
Design Objectives	20%	1 Describe the importance and application of modularity in a network 2 Describe the importance and application of hierarchy in a network 3 Describe the importance and application of scalability in a network 4 Describe the importance and application of resiliency in a network 5 Describe the importance and application of concept of fault domains in a network
Addressing and Routing Protocols in an Existing Network	20%	1 Describe the concept of scalable addressing a) Hierarchy b) Summarization c) Efficiency 2 Design an effective IP addressing scheme a) Subnetting b) Summarization c) Scalability d) NAT 3 Identify routing protocol scalability considerations a) Number of peers b) Convergence requirements c) Summarization boundaries and techniques d) Number of routing entries e) Impact of routing table of performance f) Size of the flooding domain g) Topology

Section	Weight	Objectives
		4 Design a routing protocol expansion a) IGP protocols (EIGRP, OSPF, ISIS) b) BGP (eBGP peering, iBGP peering
Enterprise Network Design	20%	1 Design a basic campus a) Layer 2/Layer 3 demarcation b) Spanning tree c) Ether channels d) First Hop Redundancy Protocols (FHRP) e) Chassis virtualization 2 Design a basic enterprise network a) Layer 3 protocols and redistribution b) WAN connectivity b(i) Topologies (hub and spoke, spoke to spoke, point to point, full/partial mesh) b(ii) Connectivity methods (DMVPN, get VPN, MPLS Layer 3 VPN, Layer 2 VPN, static IPsec, GRE,VTI) b(iii) Resiliency (SLAs, backup links, QoS) c) Connections to the data center d) Edge connectivity d(i) Internet connectivity d(ii) ACLs and firewall placements d(iii) NAT placement 3 Design a basic branch network a) Redundancy a(i) Connectivity a(ii) Hardware a(iii) Service provider b) Link capacity b(i) Bandwidth b(ii) Delay
Considerations for Expanding an Existing Network	25%	1 Describe design considerations for wireless network architectures a) Physical and virtual controllers b) Centralized and decentralized designs 2 Identify integration considerations and requirements for controller-based wireless networks a) Traffic flows b) Bandwidth consumption c) AP and controller connectivity d) QoS 3 Describe security controls integration considerations a) Traffic filtering and inspection

Section	Weight	Objectives
		b) Firewall and IPS placement and functionality 4 Identify traffic flow implications as a result of security controls a) Client access methods b) Network access control 5 Identify high-level considerations for collaboration (voice, streaming video, interactive video) applications a) QoS (shaping vs. policing, trust boundaries, jitter, delay, loss) b) Capacity c) Convergence time d) Service placement 6 Describe the concepts of virtualization within a network design 7 Identify network elements that can be virtualized a) Physical elements (chassis, VSS, VDC, contexts) b) Logical elements (routing elements, tunneling, VRFs, VLANs) 8 Describe the concepts of network programmability within a network design a) APIs b) Controllers c) Application Centric Infrastructure (ACI) 9 Describe data center components a) Server load balancing basics b) Blocking vs. non-blocking Layer 2 c) Layer 2 extension

200-310 Sample Questions:

01. Which part of design methodology is important for identifying organizational goals?
a) Existing network and sites characterization
b) Conceptual architecture examination
c) Design of the network topology and solutions
d) Customer requirements identification
e) Design validation

02. Which two tasks are parts of characterizing an existing network?
(Choose two)
a) Using design tools to create a framework for the design
b) Collecting information using the existing documentation and direct organizational input
c) Using tools for automated auditing of the network
d) Identifying the business objectives of the organization

03. Which two of these reasons explain why you would modularize?
(Choose two)
a) To reduce the amount of data that the network device needs to process
b) To increase the amount of data that the network device needs to process
c) To reduce the amount of data that the engineer must manage
d) To increase the amount of data that the engineer must manage
e) To make it easier to have multiple routing protocols running in the network

04. Which two of these reasons explain why the hub-and-spoke topology is the basis for hierarchical design?
(Choose two)
a) It has better convergence than ring topology
b) It is the only topology compatible with Cisco devices
c) It scales better than full-mesh topology
d) It is the only standardized topology
e) It was invented before full-mesh and ring topologies

05. Which statement is true about a good IPv4 addressing plan?
a) Each individual point-to-point link should have its own separate /24 subnet
b) The user subnets size should always be designed for best fit because you can always allocate more addresses later
c) The management subnet should only be allocated after all other addressing is designed and implemented
d) You should dedicate a separate subnet for remote access

06. Which two statements about IPv6 addressing are true?
(Choose two)
a) The best way to subnet a /48 IPv6 prefix is to use IPv4 addresses and translate them from decimal to hexadecimal
b) Stateless auto configuration works with prefixes between /40 and /64
c) If you need a provider-independent address, you will need to go directly to IANA
d) /48 is a typical prefix that RIR or ISP assigns to you
e) If you use both IPv4 and IPv6 in your network, you want to strive to have a dual-stack network

07. Which two statements are true about campus design?
(Choose two)
a) For optimal distribution-to-core layer convergence, you should build triangles, not squares
b) Peering across the access layer should be limited as much as possible
c) Summarization within the campus network should be avoided
d) Within the campus, CEF should be disabled to get the best convergence
e) Summarization should not be performed at the boundary where the distribution layer of each building connects to the core

08. Which statement is true about VPNs?
a) With Layer 2 VPNs, the customer exchanges routes with SP routers
b) Examples of Layer 3 VPNs are VPLS and VPWS
c) With a Layer 2 VPN, the enterprise will maintain control over Layer 3 policies
d) From a provider perspective, Layer 2 VPNs are the most scalable solution

09. What are three properties and one-way requirements for voice traffic?
(Choose three)
a) Bursty
b) Smooth
c) Latency should be below 400 ms
d) Latency should be below 150 ms
e) Bandwidth required is roughly between 30 and 128 kbps
f) Bandwidth required is roughly between 0.5 and 20 Mbps

10. What are the main benefits of Cisco ACI?
a) Made by Cisco
b) Centralized application policy management
c) Requires that engineers configure each network device separately
d) Provides a platform-as-a-service infrastructure for running your applications

Answers to 200-310 Exam Questions:

Question: 01 Answer: d	Question: 02 Answer: b, c	Question: 03 Answer: a, c	Question: 04 Answer: a, c	Question: 05 Answer: d
Question: 06 Answer: d, e	Question: 07 Answer: a, b	Question: 08 Answer: c	Question: 09 Answer: b, d, e	Question: 10 Answer: b

Note: If you find any typo or data entry error in these sample questions, we request you to update us by commenting on this page or write an email on feedback@nwexam.com