



640-875

Building Cisco Service Provider Next-
Generation Networks Part 1

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SUCCESS GUIDE TO CISCO CERTIFICATION

Exam Summary – Syllabus – Questions

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Introduction to 640-875 Exam on Building Cisco Service Provider Next-Generation Networks Part 1

A great way to start the Cisco Certified Network Associate Service Provider (SPNGN1) preparation is to begin by properly appreciating the role that syllabus and study guide play in the Cisco 640-875 certification exam. This study guide is an instrument to get you on the same page with Cisco and understand the nature of the Cisco CCNA Service Provider exam.

Our team of experts has composed this Cisco 640-875 exam preparation guide to provide the overview about Cisco Building Cisco Service Provider Next-Generation Networks Part 1 exam, study material, sample questions, practice exam and ways to interpret the exam objectives to help you assess your readiness for the Cisco SPNGN1 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 CCNA Service Provider certification exam.

Cisco 640-875 Certification Details:

Exam Name	Building Cisco Service Provider Next-Generation Networks Part 1
Exam Number	640-875 SPNGN1
Exam Price	\$300 USD
Duration	90 minutes
Number of Questions	65-75
Passing Score	Variable (750-850 / 1000 Approx.)
Recommended Training	Building Cisco Service Provider Next-Generation Networks, Part 1 (SPNGN1)
Exam Registration	PEARSON VUE
Sample Questions	Cisco 640-875 Sample Questions
Practice Exam	Cisco Certified Network Associate Service Provider Practice Test

Cisco 640-875 Exam Syllabus:

Section	Weight	Objectives
IP Networks	12%	<ol style="list-style-type: none"> 1. Describe the purpose and functions of various network devices (at the core, distribution, and access layers) 2. Identify the functional components required to meet a given network specification 3. Describe the OSI and TCP/IP models and their associated protocols to explain how data flows in a network 4. Describe common network applications and their impact on the network 5. Interpret network diagrams 6. Troubleshoot common network problems at layers 1, 2, 3, 4, and 7 using a layered model approach 7. Describe differences between LAN and WAN operation and features
IPv4 and IPv6 Addressing	13%	<ol style="list-style-type: none"> 1. Describe the structure of IPv4 and IPv6 addresses 2. Describe VLSM, CIDR and route summarization concepts 3. Describe the different types of IPv4 and IPv6 addresses 4. Design an IP subnetting plan based on given requirements
Switched Network Technologies I	12%	<ol style="list-style-type: none"> 1. Describe bridging concepts and Layer 2 Ethernet frames 2. Configure basic Spanning Tree operations on Cisco IOS Switches 3. Interpret the output of various basic show and debug commands to verify the operational status of a Cisco switched network 4. Configure basic switch security (i.e, port security, securing unused ports)

Section	Weight	Objectives
		5. Describe Ethernet link bundling, LACP, and PAgP and Flex Links
Routed Network Technologies I	10%	<ol style="list-style-type: none"> 1. Describe classful versus classless routing 2. Describe routing protocols basics (metrics, IGP versus EGP) 3. Describe RIPv1, RIPv2, RIPNG 4. Implement EIGRPv4 and EIGRPv6 on Cisco IOS, IOS-XE and IOS-XR routers 5. Describe route redistribution 6. Describe VRF 7. Describe GRE
IP Services	10%	<ol style="list-style-type: none"> 1. Configure NAT (IPv4) on Cisco routers 2. Configure DHCP (IPv4 and IPv6) operations on Cisco routers 3. Describe ICMPv4 and ICMPv6 4. Describe DNS
Cisco Operating Systems and Platforms I	15%	<ol style="list-style-type: none"> 1. Perform basic Cisco IOS, IOS-XE and IOS-XR CLI operations 2. Implement basic Cisco IOS, IOS-XE and IOS-XR routers configurations

Section	Weight	Objectives
Transport Technologies	9%	<ol style="list-style-type: none"> 1. Describe SONET and SDH 2. Describe DWDM, IPoDWDM, and ROADM 3. Configure 10 Gigabit Ethernet, 40 Gigabit Ethernet, and 100 Gigabit Ethernet interfaces on Cisco routers 4. Describe Frame Relay 5. Describe ATM 6. Describe Metro Ethernet 7. Describe DSL 8. Describe T1, T3, E1, E3, and ISDN 9. Implement PPP encapsulation on Cisco routers serial and POS interfaces 10. Describe cable (DOCSIS) 11. Describe the main BRAS and BNG routers functions in IP NGN 12. Describe various Passive Optical Network (PON) access technologies and FTTx
Security in the Network	10%	<ol style="list-style-type: none"> 1. Describe Layer 2 security features on Cisco IOS switches 2. Configure management plane security on Cisco routers and IOS switches 3. Describe IPsec 4. Describe control plane security 5. Configure basic AAA (TACACS+ and RADIUS) services on Cisco routers 6. Configure routing protocols authentication between Cisco routers 7. Describe the relationships between users, user groups, tasks groups and task IDs in IOS-XR 8. Describe common types of network attacks

Section	Weight	Objectives
Network Management	9%	<ol style="list-style-type: none"> 1. Configure NTP server or client on Cisco routers 2. Configure IP SLA on Cisco routers 3. Configure CDP on Cisco routers and IOS switches 4. Configure SNMP on Cisco routers 5. Configure NetFlow on Cisco routers 6. Configure logging to syslog server on Cisco routers 7. Describe the Cisco IOS Call-Home feature 8. Describe Cisco TAC procedure and navigate Cisco support tools (CCO) 9. Implement management access (SSH, telnet, and out-of-band management design) 10. Implement SPAN, RSPAN, and ERSPAN 11. Implement file transfers to manage network devices configurations and images using FTP, SCP, TFTP, SFTP, and RCP

640-875 Sample Questions:

01. Which command is used to display information about the SPAN sessions?

- a) show session monitor
- b) show session
- c) show span session
- d) show monitor session

02. An alert group is a predefined subset of alerts or events that Call Home detects and reports to one or more destinations. Which are supported alert groups?

(Choose three.)

- a) Mechanical
- b) Environmental
- c) Syslog
- d) Inventory
- e) Security
- f) Control plane

03. What are two main L2TP components?

(Choose two.)

- a) LAC
- b) BNG
- c) AAA
- d) LNS

04. SONET/SDH technology is what kind of technology?

- a) Packet-based
- b) Cell-based
- c) Circuit-based
- d) Segment-based

05. What are three characteristics of Ethernet 802.3?

(Choose three.)

- a) based on the CSMA/CD process
- b) is a standard that has been replaced by Ethernet II
- c) specifies the physical layer (Layer 1)
- d) developed in the mid-1970s
- e) specifies the MAC portion of the data link layer (Layer 2)
- f) also referred to as thick Ethernet

06. If a route for a network is in holddown and an update arrives from a neighboring router with the same metric as was originally recorded for the network, what does the router do?

- a) ignores the update
- b) increments the hold-down timer
- c) marks the network as "accessible" and removes the hold-down timer
- d) marks the network as "accessible" but keeps the hold-down timer on

07. Where are sequence numbers and acknowledgment numbers found?

- a) UDP header
- b) TCP header
- c) initial sequence number
- d) application layer

08. At which layer does de-encapsulation first occur?

- a) application
- b) data link
- c) network
- d) transport

09. Which of the following is a Cisco IOS command that is the most useful when troubleshooting port access issues?

- a) show controller
- b) show run
- c) show interface
- d) show counters

10. What does the ip nat inside source static command do?

- a) selects the inside static interface
- b) marks the interface as connected to the outside
- c) creates a pool of global addresses that can be allocated as needed
- d) establishes permanent translation between an inside local address and an inside global address.

Answers to 640-875 Exam Questions:

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

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