Interconnecting Cisco Networking Devices Part 2
Version 2 (200-101)

Exam Description: The Interconnecting Cisco Networking Devices Part 2 (ICND2) version 2 (200-101) is a 1-½ hour test with 50–60 questions and is associated with the CCNA® Routing and Switching certification. Candidates can prepare for this exam by taking the Interconnecting Cisco Networking Devices Part 2 (ICND2) version 2 course. The exam tests a candidate's knowledge and skills required to successfully install, operate, and troubleshoot a small to medium-size enterprise branch network. The exam includes topics on LAN switching technologies, IP routing technologies, IP services (FHRP, syslog, SNMP v2 and v3), troubleshooting, and WAN technologies.

The following topics are general guidelines for the content likely to be included on the lab 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.

21%   1.0   LAN Switching Technologies
  1.1   Identify enhanced switching technologies
    1.1.a   RSTP
    1.1.b   PVSTP
    1.1.c   Etherchannels

  1.2   Configure and verify PVSTP operation
    1.2.a   Describe root bridge election
    1.2.b   Spanning tree mode

26%   2.0   IP Routing Technologies
  2.1   Describe the boot process of Cisco IOS routers

  2.2   Configure and verify the operation status of a serial interface

  2.3   Manage Cisco IOS files
    2.3.a   Boot Preferences
    2.3.b   Cisco IOS Images (15)
    2.3.c   Licensing
        2.3.c (i)   Show license
        2.3.c (ii)   Change license

  2.4   Differentiate methods of routing and routing protocols
    2.4 a   Admin distance
    2.4.b   split horizon
    2.4.c   metric

2.4.d   next hop

2.5   Configure and verify OSPF (multi-area)
    2.5.a   neighbor adjacencies
    2.5.b   OSPF states
    2.5.c   Configure OSPv2
    2.5.d   Configure OSPv3
    2.5.e   Router ID
    2.5.f   Understand LSA types and purpose

2.6   Configure and verify EIGRP (single AS)
    2.6.a   Feasible distance/feasible successors/administrative distance
    2.6.b   Feasibility condition
    2.6.c   Metric composition
    2.6.d   Router ID
    2.6.e   auto summary
    2.6.f   Path Selection
    2.6.g   Load Balancing
        2.6.g (i)   Unequal
        2.6.g (ii)   Equal

2.7   Passive Interface

6%   3.0   IP Services
3.1   Recognize high availability (FHRP)
    3.1.a   VRRP
    3.1.b   HSRP
    3.1.c   GLBP

3.2   Configure and verify syslog
    3.2.a   Utilize syslog output

3.3   Describe SNMP v2 and v3

32%   4.0   Troubleshooting
4.1   Identify and correct common network problems

4.2   Utilize netflow data

4.3   Troubleshoot and resolve spanning tree operation issues
    4.3.a   Verify root switch
    4.3.b   Verify priority
    4.3.c   Verify mode is correct
    4.3.d   Verify port states

4.4   Troubleshoot and resolve routing issues
    4.4.a   Verify routing is enabled (sh ip protocols)
    4.4.b   Verify routing table is correct

4.4.c   Verify correct path selection

4.5   Troubleshoot and resolve OSPF problems
         4.5.a   Verify neighbor adjacencies
         4.5.b   Verify hello and dDead timers
         4.5.c   Verify OSPF area
         4.5.d   Verify interface MTU
         4.5.e   Verify network types
         4.5.f   Verify neighbor states
         4.5.g   Review OSPF topology table

4.6   Troubleshoot and resolve EIGRP problems
         4.6.a   Verify neighbor adjacencies
         4.6.b   Verify AS number
         4.6.c   Verify load balancing
         4.6.d   split horizon

4.7   Troubleshoot and resolve inter VLAN routing problems
         4.7 a   Verify connectivity
         4.7.b   Verify encapsulation
         4.7.c   Verify subnet
         4.7.d   Verify native VLAN
         4.7.e   port mode trunk status

4.8   Troubleshoot and resolve WAN implementation issues
         4.8.a   serial interfaces
         4.8.b   frame relay
         4.8.c   PPP

4.9   Monitor NetFlow statistics

4.10   TS etherchannel problems

15% **5.0**   **WAN Technologies**
5.1   Identify different WAN Technologies
         5.1.a   metro ethernet
         5.1.b   vsat
         5.1.c   cellular 3g/4g
         5.1.d   MPLS
         5.1.e   T1/E1
         5.1.f   ISDN
         5.1.g   DSL
         5.1.h   frame relay
         5.1.i   cable
         5.1j   VPN

5.2   Configure and verify a basic WAN serial connection

5.3   Configure and verify a PPP connection between Cisco routers

5.4   Configure and verify Frame Relay on Cisco routers

5.5   Implement and troubleshoot PPPoE