Designing Cisco Network Service Architectures (642-874)

Exam Description: The ARCH Designing Cisco Network Service Architectures (ARCH) v1.0 642-874 exam is a 75-minute test with 45–65 questions that are associated with the Cisco CCDP® certification. This exam tests a candidate's knowledge of the latest developments in network design and technologies, including network infrastructure, intelligent network services, and converged network solutions. The exam is closed book and no outside reference materials are allowed.

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 Design Advanced Enterprise Campus Networks

- 1.1 Design for high availability in enterprise networks
- 1.2 Design Layer 2 and Layer 3 campus infrastructures using best practices
- 1.3 Describe enterprise network virtualization considerations
- 1.4 Design for infrastructure services
  - 1.4.a Voice
  - 1.4.b Video
  - 1.4.c QoS
- 1.5 Identify network management capabilities in Cisco IOS Software

24% 2.0 Design Advanced IP Addressing and Routing Solutions for Enterprise Networks

- 2.1 Create summary-able and structured addressing designs
- 2.2 Describe IPv6 for campus design considerations
- 2.3 Create stable and scalable routing designs for EIGRP for IPv4
- 2.4 Describe IPv4 multicast routing
- 2.5 Create IPv4 multicast services and security designs
- 2.6 Create stable and scalable routing designs for OSPF for IPv4
- 2.7 Create stable and scalable routing designs for BGP for IPv4

8% **3.0** **Design WAN Services for Enterprise Networks**

3.1 Describe Layer 1–3 WAN connectivity options

- 3.1.a Optical networking
- 3.1.b MetroEthernet
- 3.1.c VPLS
- 3.1.d MPLS VPNs

3.2 Describe IPsec VPN technology options

3.3 Evaluate WAN service provider design considerations

- 3.3.a Features
- 3.3.b SLAs
- 3.3.c WAN backup

3.4 Create site-to-site VPN designs with appropriate technologies, scaling, and topologies

32% **4.0** **Design an Enterprise Data Center**

4.1 Describe data center network infrastructure best practices

4.2 Describe the components and technologies of a SAN network

4.3 Describe integrated fabric designs using Cisco Nexus technology

4.4 Describe network and server virtualization technologies for the data center

4.5 Create an effective e-commerce design

4.6 Design a high-availability data center network that is modular and flexible

6% **5.0** **Design Security Services**

5.1 Create firewall designs

5.2 Create NAC appliance designs

5.3 Create IPS/IDS designs

5.4 Create remote access VPN designs for the teleworker