Implementing Cisco SD-WAN Solutions v1.0 (300-415)

Exam Description: Implementing Cisco SD-WAN Solutions v1.0 (ENSDWI 300-415) is a 90-minute exam associated with the CCNP Enterprise Certification. This exam certifies a candidate's knowledge of Cisco's SD-WAN solution including SD-WAN architecture, controller deployment, edge router deployment, policies, security, quality or service, multicast and management and operations. The course, Implementing Cisco SD-WAN Solutions, helps candidates to prepare for this exam.

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. To better reflect the contents of the exam and for clarity purposes, the guidelines below may change at any time without notice.

20%   **1.0**   **Architecture**
       1.1   Describe Cisco SD-WAN Architecture and Components
           1.1.a   Orchestration plane (vBond, NAT)
           1.1.b   Management plane (vManage)
           1.1.c   Control plane (vSmart, OMP)
           1.1.d   Data plane (vEdge)
                   1.1.d (i)   TLOC
                   1.1.d (ii)   IPsec
                   1.1.d (iii) vRoute
                   1.1.d (iv) BFD

       1.2   Describe WAN Edge platform types, capabilities (vEdges, cEdges)

15%   **2.0**   **Controller Deployment**
       2.1   Describe controller cloud deployment

       2.2   Describe Controller on-Prem Deployment
           2.2.a   Hosting platform (KVM/Hypervisor)
           2.2.b   Installing controllers
           2.2.c   Scalability and redundancy

       2.3   Configure and verify certificates and whitelisting

       2.4   Troubleshoot control-plane connectivity between controllers

20%   **3.0**   **Router Deployment**
       3.1   Describe WAN Edge deployment
           3.1.a   On-boarding
           3.1.b   Orchestration with zero-touch provisioning/plug-and-play
           3.1.c   Single/multi data center/regional hub deployments

3.2   Configure and verify SD-WAN data plane
      3.2.a   Circuit termination/TLOC-extension
      3.2.b   Underlay-overlay connectivity

3.3   Configure and verify OMP

3.4   Configure and verify TLOCs

3.5   Configure and verify CLI and vManage feature configuration templates
      3.5.a   VRRP
      3.5.b   OSPF
      3.5.c   BGP

20%   4.0   Policies
4.1   Configure and verify control policies
4.2   Configure and verify data policies
4.3   Configure and verify end-to-end segmentation
      4.3.a   VPN segmentation
      4.3.b   Topologies

4.4   Configure and verify SD-WAN application-aware routing

4.5   Configure and verify direct Internet access

15%   5.0   Security and Quality of Service
5.1   Configure and verify service insertion
5.2   Describe application-aware firewall
5.3   Configure and verify QoS treatment on WAN edge routers
      5.3.a   Scheduling
      5.3.b   Queuing
      5.3.c   Shaping
      5.3.d   Policing

10%   6.0   Management and Operations
6.1   Describe monitoring and reporting from vManage
6.2   Configure and verify monitoring and reporting
6.3   Describe REST API monitoring
6.4   Describe software upgrade from vManage