Designing Cisco Wireless Networks v1.2 (300-110)

Exam Description: Designing Cisco Wireless Networks v1.2 (WLSD 300-110) is a 90-minute exam associated with the CCNP Wireless Certification. This exam certifies a candidate's knowledge of wireless network design including site surveys, wired and wireless infrastructure, mobility and WLAN high availability. The course, Designing Cisco Wireless Networks, helps candidates 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.

25% 1.0 Wireless Site Survey

- 1.1 Collect design requirements and evaluate constraints
  - 1.1.a Client density
  - 1.1.b Real-time applications
  - 1.1.c AP type (including antenna type)
  - 1.1.d Deployment type (data, location, voice, video)
  - 1.1.e Security
- 1.2 Describe material attenuation and its effect on wireless design
- 1.3 Perform and analyze a Layer 1 site survey
- 1.4 Perform a pre-deployment site survey
- 1.5 Perform a post deployment site survey
- 1.6 Perform a predictive site survey
- 1.7 Utilize planning tools and evaluate key network metrics (Ekahau, Hamina, Chanalyzer, Spectrum Analyzer)

30% 2.0 Wired and Wireless Infrastructure

- 2.1 Determine physical infrastructure requirements such as AP power, cabling, switch port capacity, mounting, and grounding
- 2.2 Determine logical infrastructure requirements such as WLC/AP licensing requirements based on the type of wireless architecture
- 2.3 Design radio management
  - 2.3.a RRM (Including Cisco Catalyst Center AI-Enhanced RRM)
  - 2.3.b RF/Radio profiles
  - 2.3.c RxSOP
- 2.4 Apply design requirements for these types of wireless networks
  - 2.4.a Data
  - 2.4.b Voice and video
  - 2.4.c Location (including Cisco Spaces)
- 2.5 Design high-density wireless networks and their associated components
- 2.6 Design wireless bridging (mesh)
  - 2.6.a Modes of operation
  - 2.6.b Ethernet bridging

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2.6.c WGB and roaming

25% 3.0 Mobility

3.1 Design mobility groups based on mobility roles
3.2 Optimize client roaming
3.3 Validate mobility tunneling for data and control path
3.4 Describe Site Tags

20% 4.0 WLAN High Availability

4.1 Design high availability for controllers
- 4.1.a Network availability through LAG
- 4.1.b Stateful Switchover (SSO)
- 4.1.c Controller priority and redundancy (including Anchor)

4.2 Design high availability for APs
- 4.2.a AP prioritization
- 4.2.b Fall-back (assigning primary, secondary, and tertiary)
- 4.2.c Embedded Wireless Controller (EWC)

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