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## CCDE Practical Exam v2.0

**Exam Description:** Cisco CCDE® Practical Exam v2.0 is an 8-hour, scenario-based exam that will validate that professionals have the expertise to gather and clarify network functional requirements, develop network designs to meet functional specifications, develop an implementation plan, convey design decisions and their rationale, and possess expert-level network infrastructure knowledge. 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.

- 36%**    **1.0**    **Analyze Design Requirements**
  - 1.1    Analyze business requirements, conflicts, and constraints
    - 1.1.a    OPEX and CAPEX
    - 1.1.b    Project goals
    - 1.1.c    Lifecycle and return on investment (ROI)
    - 1.1.d    Business environment
    - 1.1.e    Compliance and policy
  - 1.2    Analyze technical requirements, conflicts, and constraints
    - 1.2.a    Application requirements
    - 1.2.b    Compliance and policy
  - 1.3    Analyze physical requirements
    - 1.3.a    Topology implications
    - 1.3.b    Operational requirements
    - 1.3.c    Analyze business and technical risks
  - 1.4    Analyze existing network
    - 1.4.a    Network documentation
    - 1.4.b    Network infrastructure and its effect on network design
- 39%**    **2.0**    **Develop Network Designs**
  - 2.1    Identify the technology to resolve a specific design problem
    - 2.1.a    Functional specifications
    - 2.1.b    Network designs
    - 2.1.c    Operational considerations
  - 2.2    Analyze the effect on the existing network and services
    - 2.2.a    Functional specifications
    - 2.2.b    Network designs

- 2.2.c Operational considerations
- 2.3 Incorporate best practices within the network design
  - 2.3.a Avoidance of over-engineering
  - 2.3.b Consistent and modularized solution sets throughout the network
  - 2.3.c Industry best practices
- 2.4 Incorporate business requirements within the network design
  - 2.4.a OPEX and CAPEX
  - 2.4.c Lifecycle and return on investment (ROI)
  - 2.4.e Compliance and policy
- 13%** **3.0 Implement Network Design**
  - 3.1 Analyze implementation options
    - 3.1.a Effect on design
    - 3.1.b Effect on performance, availability, and network management
    - 3.1.c Effect on the business
    - 3.1.d Risk and consequence for a given implementation plan
  - 3.2 Design an implementation plan
    - 3.2.a Interdependencies between services, failure domains, and other architectural elements
    - 3.2.b Implementation timeline and steps
    - 3.2.c Contingency plans for network restoration
- 12%** **4.0 Validate and Optimize Network Design**
  - 4.1 Analyze design choices based on specifications
    - 4.1.a Effect of implementing changes to the original design
    - 4.1.b Effect of different design solutions created by new drivers
  - 4.2 Validate design
    - 4.2.a Test strategy
    - 4.2.b Performance metrics and baselines
  - 4.3 Optimize design
    - 4.3.a KPI
    - 4.3.b Baselines