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## CCDE Practical Exam v3.0

### On-Prem and Cloud Services Technology List

**Description:** The technologies shown in this document are associated with the On-prem and Cloud Services *area of expertise* of the CCDE Practical Exam v3.0. Candidates are expected to have a deep understanding of these technologies. Each of these technologies may appear in any delivery of the exam. If applicable for the technology candidates must expect content that is dual-stack by nature.

*Note: The technologies listed here are in addition to the technologies listed in the CCDE Core Technology list.*

#### 1.0 Transport Technologies

- 1.1 Data Center Interconnect options

#### 2.0 Layer 3 Control Plane

- 2.1 Inter-fabric connectivity, such as Multipod, Multisite
- 2.2 External connectivity for on-prem and cloud
- 2.3 Multi-cloud Network Architecture

#### 3.0 Network Virtualization

- 3.1 Overlay
  - 3.1.a Management plane
  - 3.1.b Control plane
  - 3.1.c Data plane (such as VXLAN, MPLS)
  - 3.1.d Segmentation
  - 3.1.e Policy
    - 3.1.e.i Security
    - 3.1.e.ii Topologies
    - 3.1.e.iii Data Center interconnect
    - 3.1.e.iv Multiple site strategy
    - 3.1.e.v Service insertion
- 3.2 Virtual Networking

#### 4.0 Automation

- 4.1 Deployment Models
  - 4.1.a Bare Metal

- 4.1.b VM
- 4.1.c Microservices

## **5.0 Data Center**

- 5.1 Storage
  - 5.1.a Physical topology
  - 5.1.b QoS requirements
  - 5.1.c FC and FCoE
    - 5.1.c.i Zoning
    - 5.1.c.ii Trunking
    - 5.1.c.iii Link aggregation
    - 5.1.c.iv Load balancing
  - 5.1.d iSCSI
    - 5.1.d.i Authentication
    - 5.1.d.ii Multipathing
- 5.2 Application delivery
  - 5.2.a Load balancer deployment modes
- 5.3 Compute
  - 5.3.a UCS blade integration
  - 5.3.b UCS rack server integration
  - 5.3.c HyperFlex integration
- 5.4 Compute connectivity
  - 5.4.a SAN/LAN uplinks
  - 5.4.b Port modes