

Building the Cisco Cloud with Application Centric Infrastructure (300-475)

Exam Description: The Building the Cisco Cloud with Application Centric Infrastructure (CLDACI) exam (300-47) is a 90-minute, 55–65 question assessment that is associated with the CCNP Cloud Certification. This exam tests a candidate's knowledge and skills in ACI architecture, fabric and physical topology; ACI design and configuration; APIC automation using northbound API; ACI integration; and ACI day two operations. Candidates can prepare for this assessment by taking the Building the Cisco Cloud with Application Centric Infrastructure (CLDACI v1.0) course.

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.

- 10%** **1.0 ACI Architectural Overview**
 - 1.1 Describe concepts of decoupling of identity from location and why ACI is relevant
 - 1.1.a Application policy
 - 1.1.b Application mobility
 - 1.1.c Application use cases for ACI
 - 1.2 Describe basic fabric design concepts
 - 1.2.a Theory of design leaf spine
 - 1.2.b Fabric controller
 - 1.3 Describe connectivity for the following
 - 1.3.a Bare metal servers
 - 1.3.b Appliances
 - 1.3.c Networks
 - 1.3.d Interoperability
 - 1.4 Describe fabric use of VXLAN
 - 1.5 Describe the operational model change in data center / orchestration / northbound API
- 15%** **2.0 ACI Fabric Fundamentals**
 - 2.1 Describe ACI VXLAN overlay functionality
 - 2.2 Describe service graphing
 - 2.3 Describe endpoints and endpoint groups
 - 2.4 Describe application workload mobility
 - 2.5 Describe ACI multitenancy model
 - 2.6 Describe Layer 4 to Layer 7 services
 - 2.7 Describe telemetry
 - 2.8 Describe dynamic load balancing

	2.9	Describe unicast fast reroute
	2.10	Describe multicast fast reroute
	2.11	Describe health scores
	2.12	Describe anycast gateway
	2.13	Describe the object-oriented NX-OS
12%	3.0	ACI Physical Topology
	3.1	Explain 40 Gb and 100 Gb technologies
	3.2	Describe spine
	3.3	Describe leaf
	3.4	Describe fat tree
	3.5	Describe federation of policies
	3.6	Describe architecture spine, leaf
	3.7	Describe FEX placement
	3.8	Describe vPC and ACI
	3.9	Describe hypervisor networking
	3.10	Describe pods
	3.11	Describe controller network
20%	4.0	ACI Design and Configuration
	4.1	Describe migration
	4.2	Explain ACI scale
	4.2.a	Per fabric
	4.2.b	Per leaf
	4.3	Designing Topologies
	4.4	Describe ACI external and management tenants / EPGs
	4.4.a	Layer 2
	4.4.b	Layer 3
		4.4.b (i) Private – Layer 3
	4.5	Configure application profile
	4.6	Configure contracts
	4.7	Configure EPGs
	4.8	Configure tenant
14%	5.0	APIC Automation Using Northbound API
	5.1	Describe the role of automation and APIs
	5.2	Compare and contrast the DevOps approach and the ITIL approach

- 5.3 Differentiate the relationship between the following technologies and the ACI operational models
 - 5.3.a Puppet
 - 5.3.b Chef
 - 5.3.c Python (Cobra, SDK)
 - 5.3.d JSON
 - 5.3.e XML
 - 5.3.f RESTful API

- 14% 6.0 ACI Integration**
 - 6.1 Integrating L4-7 Services with ACI
 - 6.1.a Describe the Layer 4-7 ACI concepts
 - 6.1.a (i) Firewalls
 - 6.1.a (ii) Load balancers
 - 6.1.a (iii) IDS
 - 6.1.b Integrating existing Cisco and OEM devices
 - 6.1.c Describe the automation capabilities
 - 6.1.d Implement ACI with fully integrated devices

 - 6.2 Hypervisor integration
 - 6.2.a Describe how the hypervisor endpoint discovery is accomplished
 - 6.2.b Describe how the hypervisor endpoint policy is applied
 - 6.2.c Compare and contrast the ACI features of the Cisco AVS to other virtual switches

 - 6.3 Integration with Cisco OpenStack
 - 6.3.a Describe the role of the Cisco OpenStack controller
 - 6.3.b Describe the Interaction with the ACI fabric: the ACI neutron plugin
 - 6.3.c Describe the OpFlex concept and advantages into an easy integration to the ACI fabric

- 15% 7.0 ACI Day 2 Operations**
 - 7.1 APIC management
 - 7.1.a Explain controller overview
 - 7.1.b Explain controller clustering
 - 7.1.c Describe cluster communication
 - 7.1.d Explain scalability

 - 7.2 Monitoring and Troubleshooting
 - 7.2.a Troubleshooting the ACI fabric