

# CCP MODULE 05

## Advanced Cloud Architecture

Arcitura®  
CERTIFIED  
Cloud Architect

### OVERVIEW

This course builds upon CCP Module 4 to provide a deep dive into elastic, resilient, multitenant and containerized technology architectures, as well as specialized solution architectures, such as cloud bursting and cloud balancing.

Through the study of architectural mechanisms, industry technologies and design patterns, both core and extended components are described that combine to realize elasticity, resiliency, multitenancy and associated containerization extensions as primary characteristics of cloud platforms. By leveraging these native and enhanced scalability and failover-related feature-sets, specialized solution architectures are described to enable bursting between clouds and on-premise and cloud environments, as well as the balancing of runtime loads across clouds for performance and failover purposes.

The course organizes content so that architectural layers are explored sequentially and, where appropriate, in relation to each other. Newly introduced primary components are described and shared components across architectural layers are highlighted.

The following primary topics are covered:

- Understanding the Technology Architecture of Elastic, Resilient, Multitenant and Containerized Environments
- Elastic Resource Capacity and Elastic Network Capacity
- Multi-Container Isolation Control and Volatile Container Configuration
- Serverless Deployment and Elastic Disk Provisioning
- Leader Node Election and Micro Scatter-Gather
- Hypervisor Clustering and Redundant Storage
- Storage Service Gateway and Live Storage Migration
- LUN Storage and LUN Migration
- Dynamic Failure Detection and Recovery and Zero Downtime
- Service Load Balancing and Load Balanced Virtual Server Instances
- Load Balanced Virtual Switches and Persistent Virtual Network Configurations
- Dynamic Data Normalization and Synchronized Operating State
- Intra-Storage Device Vertical Tiering and Cross-Storage Device Vertical Tiering
- Storage Workload Management and Storage Maintenance Window
- Direct I/O Access and Direct LUN Access
- Redundant Physical Connection for Virtual Servers
- Cloud Bursting, including Burst In and Burst Out to Private/Public Clouds
- Cloud Balancing

Duration: 1 Day

### TRAINING + CERTIFICATION

This course is part of a training and accreditation program through which official certification can be achieved and for which official training and certification badges can be issued.



[www.arcitura.com/ccp/architect](http://www.arcitura.com/ccp/architect)

### eLEARNING + PRINTED STUDY KITS

This course is available as part of a study kit that includes course materials and supplemental self-study materials. The study kit is available in full-color printed format and eLearning format. Both types of study kits include the contents listed below.

- Workbook
- Self-Study Guide
- Containerization Patterns II Supplement
- Mind Map Poster
- Pattern and Mechanism Mapping Posters
- Flashcards
- Audio Tutor Recordings



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## Advanced Cloud Architecture

	Certified Cloud Professional*	Certified Cloud Technology Professional	Certified Cloud Architect	Certified Cloud Security Specialist	Certified Cloud Governance Specialist	Certified Cloud Storage Specialist	Certified Cloud Virtualization Specialist
MODULE 01 Fundamental Cloud Computing	●	●	●	●	●	●	●
MODULE 02 Cloud Technology Concepts	●	●	●	●	●	●	●
MODULE 03 Cloud Technology Lab		●					
MODULE 04 Fundamental Cloud Architecture			●				
<b>MODULE 05 Advanced Cloud Architecture</b>			●				
MODULE 06 Cloud Architecture Lab			●				
MODULE 07 Fundamental Cloud Security				●			
MODULE 08 Advanced Cloud Security				●			
MODULE 09 Cloud Security Lab				●			
MODULE 10 Fundamental Cloud Governance					●		
MODULE 11 Advanced Cloud Governance					●		
MODULE 12 Cloud Governance Lab					●		
MODULE 13 Fundamental Cloud Storage						●	
MODULE 14 Advanced Cloud Storage						●	
MODULE 15 Cloud Storage Lab						●	
MODULE 16 Fundamental Cloud Virtualization							●
MODULE 17 Advanced Cloud Virtualization							●
MODULE 18 Cloud Virtualization Lab							●

\* The Certified Cloud Professional designation is automatically issued when achieving any other CCP certification. It can also be achieved by receiving passing grades on Exams C90.01 + C90.02.

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