

Certified Cloud Tester - Advanced Level (CCTAL)

1. Functional Testing of Cloud Applications

- SaaS
- Pros and Cons
- Layers of Cloud Testing
- Views of Testing
- Identifying Functions to Test
- How Functions are Implemented
- Service Implementation
- Prioritizing Functions
- Testing Workflows
- Taking the Organizational View vs. Product View
- Methods
- The Relationship Between Process and Data
- Structured Testing
- Physical Items
- Physical Test Metrics
- Functions
- Metrics
- Time Budgeter
- METS iPhone App
- Agile Testing
- The Basis for Test Conditions
- Business Process Testing
- Classification Trees Using CTE-XL
- Evaluating Tests
- Characteristics of Good Incident Reports
- Incident Reporting and Tracking - Things You Need to Know
- Sample Incident Categories
- Sample Incident Priorities
- How Can This Data be Used?
- Regression Testing

2. The Role of Test Automation

- How Automation Can Help in Cloud Testing

- The Risks
- Which Functions and Tests Can be Automated?
- Tool Options

3. Testing Cloud Security

- How Important is Security?
- Cloud Security Advantages
- Security Relevant Cloud Components
- Cloud Security Risks
- Key Security Questions
- The Nature of Security Tests
- Compliance
- What are Your Compliance Requirements?
- Compliance Issues
- Data Security Risks
- Volume-based Encryption
- Application Level Encryption
- File-based Encryption
- Policy and Key Management
- The Role of SLAs
- On-premises Key Management
- Auditing
- The Threat
- The “Hardware Roof of Trust”
- Governance
- A Process for Cloud Security Testing
- Putting it Together
- Guidelines from NIST
- The Cloud Security Alliance
- Further Resources

4. Testing Cloud Performance

- Examples of Cloud Applications and Performance Concerns
- How We Got Here

- The Performance Impact of Cloud Computing
- Service Level Agreements
- Performance Through the Cloud
- Profiling Workload and Capacity Levels
- Designing Performance Tests
- Understanding Where the Traffic Goes
- Performance Test Tools
- How Cloud Performance Tools Work
- How Cloud-based Performance Tools Work
- Steps in Designing a Cloud Performance Test

5. Testing Cloud Reliability and Availability

- What Customers Expect
- The Role of Testing
- The Role of Service Level Agreements (SLAs)
- Key Point About SLAs
- What This Means
- How to Test and Monitor Reliability and Availability
- How to Measure Reliability and Availability
- You Must Decide What is Important
- Traditional Monitoring
- The Challenge: Geo Dispersed Cloud Applications
- Possible Solutions
- Unified Monitoring
- Example Dashboard
- SLA Report

6. Transitioning to the Cloud

- What to Consider When Transitioning Applications to the Cloud
- Understanding the Business Needs and Value
- Understand the Risks
- The Risk Watch List
- Example: Testing Risk and Return
- Example: Risk Mitigation