



CompTIA Cloud Essentials+ Certification Exam Objectives

EXAM NUMBER: CLO-002



About the Exam

Candidates are encouraged to use this document to help prepare for CompTIA Cloud Essentials+ CLO-002. CompTIA Cloud Essentials+ will certify the successful candidate has the knowledge and skills required to make clear and conscious decisions about cloud technologies and their business impact by evaluating business use cases, financial impacts, cloud technologies, and deployment models with knowledge of cloud computing.

These content examples are meant to clarify the test objectives and should not be construed as a comprehensive listing of all the content of this examination.

EXAM DEVELOPMENT

CompTIA exams result from subject matter expert workshops and industry-wide survey results regarding the skills and knowledge required of an IT professional.

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PLEASE NOTE

The lists of examples provided in bulleted format are not exhaustive lists. Other examples of technologies, processes, or tasks pertaining to each objective may also be included on the exam although not listed or covered in this objectives document. CompTIA is constantly reviewing the content of our exams and updating test questions to be sure our exams are current and the security of the questions is protected. When necessary, we will publish updated exams based on testing exam objectives. Please know that all related exam preparation materials will still be valid.

TEST DETAILS

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|------------------------|--|
| Required exam | CLO-002 |
| Number of questions | 70 |
| Type of questions | Multiple choice |
| Length of test | 75 minutes |
| Recommended experience | 6-12 months of work experience as a business analyst in an IT environment with some exposure to cloud technologies |
| Passing score | 720 (on a scale of 100 –900) |

EXAM OBJECTIVES (DOMAINS)

The table below lists the domains measured by this examination and the extent to which they are represented:

| DOMAIN | PERCENTAGE OF EXAMINATION |
|--|---------------------------|
| 1.0 Cloud Concepts | 24% |
| 2.0 Business Principles of Cloud Environments | 28% |
| 3.0 Management and Technical Operations | 26% |
| 4.0 Governance, Risk, Compliance, and Security for the Cloud | 22% |
| Total | 100% |



1.0 Cloud Concepts

1.1 Explain cloud principles.

- **Service models**
 - SaaS
 - IaaS
 - PaaS
 - **Deployment models**
 - Public
 - Private
 - Hybrid
 - **Characteristics**
 - Elastic
 - Self-service
 - Scalability
 - Broad network access
 - Pay-as-you-go
 - Availability
 - **Shared responsibility model**
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1.2 Identify cloud networking concepts.

- **Connectivity types**
 - Direct connect
 - VPN
 - **Common access types**
 - RDP
 - SSH
 - HTTPS
 - **Software-defined networking (SDN)**
 - Load balancing
 - DNS
 - Firewall
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1.3 Identify cloud storage technologies.

- **Storage features**
 - Compression
 - Deduplication
 - Capacity on demand
 - **Storage characteristics**
 - Performance
 - Hot vs. cold
 - **Storage types**
 - Object storage
 - File storage
 - Block storage
 - **Software-defined storage**
 - **Content delivery network**
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1.4 Summarize important aspects of cloud design.

- **Redundancy**
- **High availability**
- **Disaster recovery**
- **Recovery objectives**
 - RPO
 - RTO



2.0 Business Principles of Cloud Environments

2.1 Given a scenario, use appropriate cloud assessments.

- Current and future requirements
- Baseline
- Feasibility study
- Gap analysis
 - Business
 - Technical
- Reporting
 - Compute
 - Network
 - Storage
- Benchmarks
- Documentation and diagrams
- Key stakeholders
- Point of contact

2.2 Summarize the financial aspects of engaging a cloud provider.

- Capital expenditures
- Operating expenditures
- Variable vs. fixed cost
- Licensing models
 - BYOL
 - Subscription
- Contracts
- Billing
- Request for information
- Human capital
 - Training
 - Professional development

2.3 Identify the important business aspects of vendor relations in cloud adoptions.

- Professional services
 - Time to market
 - Skill availability
 - Support
 - Managed services
- Statement of work (SOW)
- Service level agreement (SLA)
- Training
- Evaluations
 - Pilot
 - Proof of value
 - Proof of concept
 - Success criteria
- Open-source vs. proprietary



2.4 Identify the benefits or solutions of utilizing cloud services.

- **Identity access management**
 - Single sign-on
 - Multifactor authentication
 - Federation
 - **Cloud-native applications**
 - Microservices
 - Containerization
 - **Data analytics**
 - Machine learning
 - Artificial intelligence
 - Big Data
 - **Digital marketing**
 - Email campaigns
 - Social media
 - **Autonomous environments**
 - **IoT**
 - **Blockchain**
 - **Subscription services**
 - **Collaboration**
 - **VDI**
 - **Self-service**
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2.5 Compare and contrast cloud migration approaches.

- **Rip and replace**
- **Lift and shift**
- **Hybrid**
- **Phased**



3.0 Management and Technical Operations

3.1 Explain aspects of operating within the cloud.

- **Data management**
 - Replication
 - Locality
 - Backup
- **Availability**
 - Zones
 - Geo-redundancy
- **Disposable resources**
- **Monitoring and visibility**
 - Alerts
 - Logging
- **Optimization**
 - Auto-scaling
 - Right-sizing

3.2 Explain DevOps in cloud environments.

- **Provisioning**
 - Infrastructure as code
 - Templates
- **Continuous integration/continuous delivery**
- **Testing in QA environments**
 - Sandboxing
 - Load testing
 - Regression testing
- **Configuration management**
 - Orchestration
 - Automation
 - Upgrades and patching
- **API integration**

3.3 Given a scenario, review and report on the financial expenditures related to cloud resources.

- **Storage**
- **Network**
- **Compute**
- **Chargebacks**
 - Resource tagging
- **Maintenance**
- **Instances**
 - Reserved
 - Spot
- **Licensing type**
- **Licensing quantity**



• 4.0 Governance, Risk, Compliance, and Security for the Cloud

4.1 Recognize risk management concepts related to cloud services.

- **Risk assessment**
 - Asset inventory
 - Classification
 - Ownership
 - **Risk response**
 - Mitigation
 - Acceptance
 - Avoidance
 - Transfer
 - **Documentation**
 - Findings
 - Risk register
 - **Vendor lock-in**
 - **Data portability**
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4.2 Explain policies or procedures.

- **Standard operating procedures**
 - **Change management**
 - **Resource management**
 - **Security policies**
 - Incident response
 - **Access and control policies**
 - **Department specific policies**
 - **Communication policies**
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4.3 Identify the importance and impacts of compliance in the cloud.

- **Data sovereignty**
 - **Regulatory concerns**
 - **Industry-based requirements**
 - **International standards**
 - **Certifications**
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4.4 Explain security concerns, measures, or concepts of cloud operations.

- **Threat**
- **Vulnerability**
- **Security assessments**
 - Penetration testing
 - Vulnerability scanning
 - Application scanning
- **Data security**
 - Categories
 - Public
 - Private
 - Sensitive
- Confidentiality
 - Encryption
 - Sanitization
- Integrity
 - Validation
- Availability
 - Backup
 - Recovery
- Breach
- **Application and Infrastructure security**
 - Audit
 - Access
 - Authorization
 - Hardening

CompTIA Cloud Essentials+ Acronyms

The following is a list of acronyms that appear on the CompTIA Cloud Essentials+ exam. Candidates are encouraged to review the complete list and attain a working knowledge of all listed acronyms as part of a comprehensive exam preparation program.

| ACRONYM | SPELLED OUT | ACRONYM | SPELLED OUT |
|---------|---|---------|---|
| AI | Artificial Intelligence | MSP | Managed Service Provider |
| API | Application Programming Interface | MTTR | Mean Time to Repair |
| ASP | Application Service Provider | OEM | Original Equipment Manufacturer |
| BPaaS | Business Process as a Service | OS | Operating System |
| BYOL | Bring Your Own License | PaaS | Platform as a Service |
| CaaS | Communications as a Service | PII | Personally Identifiable Information |
| CDN | Content Delivery Network | PoC | Proof of Concept |
| CFO | Chief Financial Officer | PoV | Proof of Value |
| CI/CD | Continuous Integration/Continuous Delivery | QA | Quality Assurance |
| CIO | Chief Information Officer | QoS | Quality of Service |
| CISO | Chief Information Security Officer | RDP | Remote Desktop Protocol |
| CLI | Command Line Interface | RFI | Request for Information |
| CMS | Content Management System | RFP | Request for Proposal |
| CPU | Central Processing Unit | ROI | Return on Investment |
| CRM | Customer Relationship Management | RPO | Recovery Point Objective |
| CSP | Cloud Service Provider | RTO | Recovery Time Objective |
| CTO | Chief Technology Officer | SaaS | Software as a Service |
| DBaaS | Database as a Service | SAN | Storage Area Network |
| DDoS | Distributed Denial of Service | SDN | Software-defined Network |
| DNS | Domain Name Service | SFTP | Secure File Transfer Protocol |
| DR | Disaster Recovery | SLA | Service Level Agreement |
| ERP | Enterprise Resource Planning | SNMP | Simple Network Management Protocol |
| EULA | End-user License Agreement | SOA | Service-oriented Architecture |
| FTP | File Transfer Protocol | SOP | Standard Operating Procedure |
| GUI | Graphical User Interface | SOW | Statement of Work |
| HTTPS | Hypertext Transport Protocol Secure | SQL | Structured Query Language |
| IaaS | Infrastructure as a Service | SSH | Secure Shell |
| IoT | Internet of Things | SSL | Secure Sockets Layer |
| IP | Internet Protocol | SSO | Single Sign-on |
| ISO | International Standards Organization | TCO | Total Cost of Ownership |
| ISP | Internet Service Provider | TCP/IP | Transmission Control Protocol/Internet Protocol |
| ITaaS | Information Technology as a Service | V2P | Virtual to Physical |
| ITIL | Information Technology Infrastructure Library | V2V | Virtual to Virtual |
| JSON | JavaScript Object Notation | VDI | Virtual Desktop Infrastructure |
| KVM | Kernel Virtual Machine | VLAN | Virtual Local Area Network |
| LDAP | Lightweight Directory Access Protocol | VM | Virtual Machine |
| MaaS | Monitoring as a Service | VPN | Virtual Private Network |
| MFA | Multifactor Authentication | WAN | Wide Area Network |
| ML | Machine Learning | XML | Extensible Markup Language |