EDUSUM
#1 Online Certification Guide

COMPTIA DS0-001

CompTIA DataSys Plus Certification Questions & Answers

Exam Summary – Syllabus –Questions

DS0-001
CompTIA DataSys+
90 Questions Exam – 700 / 900% Cut Score – Duration of 90 minutes

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Know Your DS0-001 Certification Well:

The DS0-001 is best suitable for candidates who want to gain knowledge in the CompTIA Data and Analytics. Before you start your DS0-001 preparation you may struggle to get all the crucial DataSys Plus materials like DS0-001 syllabus, sample questions, study guide.

But don't worry the DS0-001 PDF is here to help you prepare in a stress free manner.

The PDF is a combination of all your queries like-

- What is in the DS0-001 syllabus?
- How many questions are there in the DS0-001 exam?
- Which Practice test would help me to pass the DS0-001 exam at the first attempt?

Passing the DS0-001 exam makes you CompTIA DataSys+. Having the DataSys Plus certification opens multiple opportunities for you. You can grab a new job, get a higher salary or simply get recognition within your current organization.

CompTIA DS0-001 DataSys Plus Certification Details:

Exam Name	CompTIA DataSys+
Exam Code	DS0-001
Exam Price	$369 (USD)
Duration	90 mins
Number of Questions	90
Passing Score	700 / 900
Books / Training	**CompTIA DataSys+ Certification Training** **CertMaster Learn for DataSys+ Training**
Schedule Exam	**Pearson VUE**
Sample Questions	**CompTIA DataSys+ Sample Questions**
Practice Exam	**CompTIA DS0-001 Certification Practice Exam**

DS0-001 Syllabus:

Topic	Details
Database Fundamentals - 24%	
Compare and contrast database structure types.	- Relational vs. non-relational databases - Linear vs. non-linear format - NoSQL types • Document databases • Key-value stores • Column-oriented databases • Graph databases - Tools • Cassandra • MongoDB • Neo4j • Amazon DynamoDB • Cosmos
Given a scenario, develop, modify, and run SQL code.	- Data definition language (DDL) - Data manipulation language (DML) - Set-based logic - Transaction control languages (TCLs) - Atomicity, consistency, isolation, durability (ACID) principles - American National Standards Institute (ANSI) Structured Query Language (SQL) - Programming with SQL • Triggers • Stored procedures • Functions • Views
Compare and	- Script purpose and runtime location

Topic	Details
contrast scripting methods and scripting environments.	• Server side • Client side - Languages • PowerShell • Python - Command-line scripting • Linux • Windows
Explain the impact of programming on database operations.	- Object-relational mapping (ORM) • Hibernate • Entity Framework • Ebean - Process to gauge impact • Review SQL code generated by ORM • Confirm validity of code • Determine impact to database server • Provide solutions/alternate approach, as needed
Database Deployment - 16%	

Compare and contrast aspects of database planning and design.	- Requirements gathering
	
	• Number of users
	• Storage capacity
	  - Size
	  - Speed
	  - Type
	• Database objectives
	  - Use cases/purposes
	- Database architecture factors

Topic	Details

	- Inventory of needed assets
	  - Gap analysis - Cloud-based vs. on-premises - Types of cloud-hosted environments:
	  - Platform as a service (PaaS)
	  - Software as a service (SaaS)
	  - Infrastructure as a service (IaaS) - Database schema
	  - Logical
	  - Physical
	  - View - Data sources - System specifications - Design documentation
	
	   - Data dictionary - Entity relationships - Data cardinality - System requirements documentation

Explain database implementation, testing, and deployment phases.	- Acquisition of assets
	- Phases of deployment
	
	   - Installation and configuration
	  - Database prerequisites
	  - Provisioning
	  - Upgrading
	  - Modifying
	  - Importing - Database connectivity
	
	   - Database server location - Networking concepts
	  - Domain name service (DNS)
	  - Client/server architecture

Topic	Details

	1. Firewall and perimeter network considerations
	2. Static and dynamic internet protocol (IP) addressing
	- Ports/protocols
	- Testing
	
	• Database quality check (columns, tables, fields)
	• Code execution
	• Schema meets original requirements
	• Syntax errors
	• Stress testing
	  - Stored procedures stress test
	  - Application stress test
	• Notification triggers and alerts
	• Version control testing
	• Regression testing
	• Negative testing
	- Validate
	
	• Index analysis
	• Data mapping
	• Data values
	• Queries
	• Referential integrity/integrity validation
	• Scalability validation

Database Management and Maintenance - 25%	
Explain the purpose of monitoring and reporting for database management and performance.	- System alerts/notifications • Growth in size/storage limits • Daily usage • Throughput • Resource utilization - Central processing unit (CPU) usage

Topic	Details

	- Memory
	       - Disk space
	       - Operating system (OS) performance
	
	• Baseline configuration/trending
	
	• Monitoring job completion/ failure
	
	• Replication
	
	• Database backup alerts
	
	- Transaction log files
	- System log files
	- Deadlock monitoring
	- Connections and sessions
	
	    • Concurrent connections
	
	    • Failed/attempted connections

Explain common database maintenance processes.	- Query optimization
	- Index optimization
	- Patch management
	
	    • Updates
	
	    • Security and maintenance patches
	
	- Database integrity checks
	
	    • Table locking techniques
	
	- Data corruption checks
	- Periodic review of audit logs
	- Performance tuning
	
	    • Transaction volumes
	
	- Load balancing
	- Change management
	
	    • Release schedules
	
	    • Capacity planning
	
	    • Upgrades

Topic	Details
	• Vulnerability remediation • Change approval • Communication • Database refresh
Given a scenario, produce documentation and use relevant tools.	- Data dictionaries - Entity relationship diagram (ERD) - Maintenance documentation - Standard operating procedure (SOP) documentation • Organizational compliance documentation • Third-party compliance documentation - Tools • Unified modeling language (UML) editors • Word processors • Spreadsheet tools
Given a scenario, implement data management tasks.	- Data management • Modify data • Define data • Append columns • Create new data sets • Views/materialized views • Index creation • Create data tables • Create data relationships - Data redundancy - Data sharing
Data and Database Security - 23%	
Explain data security concepts.	- Encryption • Data in transit - Client-side encryption

Topic	Details

	- In-transit encryption
	      - Server-side encryption
	  • Data at rest
	- Data masking
	
	  • Data discovery
	- Data destruction techniques
	- Data security audit
	
	  • Expired accounts
	  • Connection requests
	- Code auditing
	
	  • SQL code
	  • Credential storage checks

Explain the purpose of governance and regulatory compliance.	- Data loss prevention
	- Data retention policies
	- Data classification
	
	  • Personally identifiable information (PII)/personal health information (PHI)
	  • Payment Card Industry Data Security Standard (PCI DSS)
	- Global regulations
	
	  • General Data Protection Regulation (GDPR)
	- Regional regulations

Given a scenario, implement policies and best practices related to authentication and authorization.	- Access controls
	
	  • Rights and privileges
	  • Least privilege
	- Password policies
	- Service accounts
	- Identity and access management

Explain the purpose	- Physical

Topic	Details
of database infrastructure security.	• Access control - Biometrics • Surveillance • Fire suppression • Cooling system - Logical • Firewall • Perimeter network • Port security
Describe types of attacks and their effects on data systems.	- SQL injection - Denial of service (DoS) attacks - On-path attacks - Brute-force attacks - Phishing - Malware • Ransomware
	Business Continuity - 12%

Explain the importance of disaster recovery and relevant techniques.	- Disaster recovery (DR) planning
	
	• DR documentation
	   - Manuals
	   - System security plan
	   - Continuity of operations plan
	   - Build documentation
	• DR techniques
	   - Replication
	   - Log shipping
	   - High availability
	   - Mirroring
	- DR plan testing

Topic	Details
	• Recovery point objective (RPO) • Recovery time objective (RTO) - Transition/failback to normal operations
Explain backup and restore best practices and processes.	- Full backup vs. incremental • Differential - Database dumping - Schedule and automate backups - Test backups - Validate backup hash - Storage location • On-site vs. off-site - Retention policy • Purge vs. archive cycles

CompTIA DS0-001 Sample Questions:

Question: 1

Which of the following best describes the policy/and or procedure that ensures records are kept in a database for a period of time and not deleted?

a) Data classification policy
b) Standard operating procedure
c) Data retention policy
d) Global regulation

Answer: c

Question: 2

Several users received a message from the Chief Executive Officer asking them for their bank account details. Which of the following types of attacks is taking place?

a) Malware
b) Phishing

c) Brute-force

d) Denial of service

Answer: b

Question: 3

What technology may be used to perform disk-to-disk backups with systems designed to work only with tapes?

a) Journaling

b) D2D

c) VLAN

d) VTL

Answer: d

Question: 4

What combination of backup strategies provides the fastest backup restoration time?

a) Incremental backups and differential backups

b) Full backups and incremental backups

c) Partial backups and incremental backups

d) Full backups and differential backups

Answer: d

Question: 5

Gary is logging into a system and is providing his fingerprint to gain access. What step of the IAM process is he performing?

a) Identification

b) Authorization

c) Accounting

d) Authentication

Answer: d

Question: 6

Which of the following qualifiers removes duplicate records from a SQL SELECT statement when included in a query?

a) DISTINCT

b) SINGLE

c) UNIQUE
d) TOP 1

Answer: a

Question: 7

Which of the following ORM tools enables developers to work with a database using .NET objects?

a) Ebean
b) Entity Framework
c) Eclipse
d) Hibernate

Answer: b

Question: 8

Howard is a database designer for an e-commerce website working on creating a table to store customer information. He wants to ensure that each customer can be uniquely identified within the table. Which database concept should Jack use to accomplish this goal?

a) Primary Key
b) Tuple
c) Foreign Key
d) Relation

Answer: a

Question: 9

A company's backup plan includes only running full backups for its small database. Which of the following frequencies would be most appropriate in this situation?

a) Daily
b) Monthly
c) Weekly
d) Quarterly

Answer: a

Question: 10

Brad is helping to design a disaster recovery strategy for his organization and is analyzing possible storage locations for backup data. He is not certain where the organization will recover operations in the event of a disaster and would like to choose an option that allows them the flexibility to easily retrieve data from any DR site.

Which one of the following storage locations provides the best option for Brad?

a) Primary data center
b) Field office
c) Cloud computing
d) IT manager's home

Answer: c

Study Guide to Crack CompTIA DataSys Plus DS0-001 Exam:

- Getting details of the DS0-001 syllabus, is the first step of a study plan. This pdf is going to be of ultimate help. Completion of the syllabus is must to pass the DS0-001 exam.
- Making a schedule is vital. A structured method of preparation leads to success. A candidate must plan his schedule and follow it rigorously to attain success.
- Joining the CompTIA provided training for DS0-001 exam could be of much help. If there is specific training for the exam, you can discover it from the link above.
- Read from the DS0-001 sample questions to gain your idea about the actual exam questions. In this PDF useful sample questions are provided to make your exam preparation easy.
- Practicing on DS0-001 practice tests is must. Continuous practice will make you an expert in all syllabus areas.

Reliable Online Practice Test for DS0-001 Certification

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100% marks in initial practice exam attempts. Just utilize the result section to know your strengths and weaknesses and prepare according to that until you get 100% with our practice tests. Our evaluation makes you confident, and you can score high in the DS0-001 exam.

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