

Analytical & Technical Reasoning (10 Questions)

1. A system doubles its storage every 12 months. If the initial capacity is 4 TB, what is the capacity after 3 years?

- A. 16 TB
- B. 32 TB
- C. 64 TB
- D. 128 TB

Answer: B. 32 TB

Explanation:

Each year, storage doubles $\rightarrow 4 \times 2^3 = 32$ TB after 3 years.

This tests exponential reasoning, a key concept for understanding scaling in distributed storage systems like Nasuni.

2. If data replication takes 5 minutes for 10 GB, how long for 50 GB under the same bandwidth?

- A. 20 min
- B. 25 min
- C. 30 min
- D. 50 min

Answer: B. 25 min

Explanation:

Replication time scales linearly with data size. $50 \div 10 = 5\times$, so $5 \times 5 = 25$ minutes.

Tests ability to estimate real-world replication time in storage networks.

3. Which is the odd one out conceptually?

- A. NAS
- B. SAN
- C. NFS
- D. FTP

Answer: D. FTP

Explanation:

NAS (Network Attached Storage), SAN (Storage Area Network), and NFS (Network File System) are storage solutions.

FTP (File Transfer Protocol) is a *file transfer mechanism*, not a storage architecture.

4. Find the next term: 2, 4, 8, 16, 32, ?

- A. 48
- B. 60
- C. 64
- D. 80

Answer: C. 64

Explanation:

Pattern doubles each time ($\times 2$). Recognizing patterns reflects analytical clarity important for debugging performance scaling issues.

5. Nasuni's architecture most resembles which design principle?

- A. Monolithic system
- B. Distributed file system
- C. Single-threaded core service
- D. Centralized database model

Answer: B. Distributed file system

Explanation:

Nasuni uses **global file system** architecture built over **object storage**, enabling distributed access and caching across geographies.

6. If 4 engineers replicate a dataset in 8 hours, how many engineers needed to finish in 4 hours (same efficiency)?

- A. 6
- B. 8
- C. 10
- D. 12

Answer: B. 8

Explanation:

Work is inversely proportional to people: $4 \times 8 = 8 \times 4$. Doubling workers halves time.

Tests teamwork efficiency under scaling conditions.

7. Which option best represents scalability?

- A. Adding more CPU cores to increase performance
- B. Deleting data to save space
- C. Limiting users per region
- D. Caching data locally

Answer: A. Adding more CPU cores to increase performance

Explanation:

Scalability = ability to handle increased load by adding resources.

Tests conceptual understanding of cloud scalability.

8. If latency between nodes is halved, throughput will likely:

- A. Double
- B. Decrease
- C. Stay constant
- D. Drop to half

Answer: A. Double

Explanation:

Latency ↓ → response rate ↑ → throughput increases.

Evaluates understanding of network performance fundamentals.

9. Which of the following best explains 'eventual consistency'?

- A. Data always synchronized instantly
- B. Data syncs asynchronously but reaches same state eventually
- C. Only master copy is updated
- D. No replication occurs

Answer: B. Data syncs asynchronously but reaches same state eventually

Explanation:

Key property of distributed systems like Nasuni—writes propagate slowly but converge to the same state.

10. What is common between Nasuni and Git?

- A. Centralized control
- B. Object versioning and replication
- C. Encryption algorithms
- D. Blockchain verification

Answer: B. Object versioning and replication

Explanation:

Both use versioned object storage — Git for code objects, Nasuni for file objects — ensuring reliable version history and sync.

Behavioral Scenarios (5 Questions)

1. You're working on a live deployment, and a teammate blames your code for a system crash. What do you do?

- A. Defend yourself immediately
- B. Investigate first and share logs openly
- C. Escalate to your manager
- D. Ignore and continue your work

Answer: B. Investigate first and share logs openly

Explanation:

Shows accountability, calmness, and transparency — all crucial in DevOps culture.

2. You find a small bug that rarely affects users. What's your approach?

- A. Log and ignore it
- B. Patch and push fix immediately
- C. Report and schedule for next sprint
- D. Delete the module

Answer: C. Report and schedule for next sprint

Explanation:

Reflects process discipline and awareness of agile priorities.

3. Your team decides to use a new CI/CD tool unfamiliar to you.

- A. Resist and argue
- B. Research and prototype it
- C. Wait for others to decide
- D. Reject it due to risk

Answer: B. Research and prototype it

Explanation:

Shows initiative and curiosity — values prized by Nasuni.

4. A deadline is approaching, and your build keeps failing tests.

- A. Push code anyway
- B. Communicate the issue early and seek help
- C. Debug overnight silently
- D. Roll back to older version

Answer: B. Communicate early and seek help

Explanation:

Promotes transparency and team accountability under pressure.

5. You detect data loss during replication tests.

- A. Hide the issue to fix later
- B. Raise immediate alert and start rollback
- C. Delete logs to avoid blame
- D. Restart system silently

Answer: B. Raise immediate alert and start rollback

Explanation:

Prioritizes data integrity and proactive incident response — critical for cloud storage reliability.

SECTION D – Cloud & DevOps Awareness (5 Questions)

1. What does CI/CD stand for?

- A. Continuous Intelligence / Continuous Debugging
- B. Continuous Integration / Continuous Deployment
- C. Cloud Integration / Code Delivery
- D. Continuous Iteration / Code Definition

Answer: B. Continuous Integration / Continuous Deployment

Explanation:

Represents automated pipelines to integrate, test, and deploy changes — a DevOps essential.

2. Which Docker command lists all active containers?

- A. docker list
- B. docker ps
- C. docker show
- D. docker active

Answer: B. docker ps

Explanation:

Displays all running containers — a foundational Docker operation.

3. Which Git command merges feature branches?

- A. git join
- B. git merge
- C. git link
- D. git connect

Answer: B. git merge

Explanation:

Integrates changes from one branch into another — fundamental to collaborative version control.

4. What does Jenkins primarily automate?

- A. Build, test, and deployment pipelines
- B. File encryption
- C. Database backups
- D. UI rendering

Answer: A. Build, test, and deployment pipelines

Explanation:

Core role of Jenkins is to orchestrate CI/CD workflows automatically.

5. Which cloud concept matches Nasuni's file architecture?

- A. Object storage with metadata intelligence
- B. Pure block storage
- C. Local RAID replication
- D. In-memory caching only

Answer: A. Object storage with metadata intelligence

Explanation:

Nasuni leverages object storage (e.g., AWS S3, Azure Blob) with smart caching and metadata-based file management.