Tutorial 7 Major Commercial and Research Cloud Service Providers: Variations in Fabrics, Clustering, Storage; Service models, applications

Instructions

1. For questions containing multiple choice answers numbered as 1,2,3,4 select only one CORRECT answer

2. For questions containing multiple choice answers numbered as A,B,C,D select only one WRONG answer

Note: In case of doubt select the most suitable correct or wrong answer

1. When selecting IaaS Cloud Service Provider what factors are important?
   - A  Size of the provider provider physical infrastructure
   - B  Compatibility of the computer platform, so that to simplify applications
   - C  Compliance with the industry standardisation on Cloud Computing
   - D  Open Source Cloud management platform

2. Mark what brands are Open Source cloud software
   - 1  Amazon EC2
   - 2  Citrix/CloudStack
   - 3  Eucalyptus
   - 4  Google Android
   - 5  IBM/Softlayer
   - 6  Microsoft Azure
   - 7  OpenNebula
   - 8  OpenStack
   - 9  OpenCompute Project
   - 10 VMware

3. The customer requests a VM for large data volume processing. What kind of storage resources will be VM configured with?
   - 1  Large network attached storage
   - 2  Object storage
   - 3  Block storage
   - 4  Hadoop File System (HDFS) storage

4. What is Ephemeral Storage
   - 1  Rackspace proprietary storage format
   - 2  Internal storage of the hypervisor not visible to individual VMs
   - 3  Large size storage spread over few physical devices
   - 4  Storage attached to VM
5 What is object storage? How it is different from other storage types?
1 Object storage is used for storing logical data units
2 Object storage has a hierarchical structure defined by the object namespace structure
3 Object storage has a special design to simplify Object Oriented programming
4 Object storage has a flat logical structure where data are accessed via container

6 Amazon Internet and Cloud Storage S3 features
1 Amazon S3 provides a globally distribute file systems
2 Amazon S3 stores files in buckets identified by filenames
3 Objects in S3 are identified by keys pointing to files
4 S3 buckets support multi-tenancy, so that data from multiple users can be safely stored in one bucket

7 Block and object storage in OpenStack
1 OpenStack Swift block storage allows optimising workload when processing distributed data
2 OpenStack object storage can optimise data object storage over distributed storage cluster
3 Swift is an implementation of ephemeral storage for VM instances in OpenStack
4 VM images are stored with their configured block storage

8 Is CAP theorem applicable for cloud infrastructure?
1 CAP theorem in cloud computing is applicable only for distributed applications
2 In clouds the CAP theorem works at multiple level: infrastructure resiliency, data storage, distributed applications
3 CAP theorem provides a design principle for cluster construction
4 CAP theorem is applicable to distributed databases such as NoSQL databases but not applicable to SQL databases

9 What is the purpose of NoSQL databases
1 NoSQL provide alternative to SQL databases to store textual data
2 NoSQL databases allow storing non-structured data
3 NoSQL are not suitable for storing structured data
4 NoSQL is a new data format to store large datasets

10 What is the purpose of Load Balancers in clouds?
A Load balancers distribute traffic at the network level
B Load balancers can work at multiple levels from hypervisor to server and storage
C Load balancing can use different algorithms to optimise power consumption
D Load Balancer requires compatible server hardware and software