

M.E. Degree Examination, December 2020

Third Semester

CP18011 - Cloud Computing Technologies (Regulation 2018)

Time: Three hours

Maximum : 80 Marks

Answer ALL questions

PART A - (8 X 2 = 16 marks)

1. In _____ the virtual machine simulates hardware, so it can be independent of the underlying system hardware.
 - (a) paravirtualization
 - (b) full virtualization
 - (c) emulation
 - (d) none of the mentioned
 2. What types of servers are used to send messages within Amazon SQS?
 - (a) Alternating server/planner server
 - (b) Performance server/slacker server
 - (c) Requesting server/worker server
 - (d) Available server/negative server
 3. Which of the following scenario may not be a good fit for HDFS?
 - (a) HDFS is not suitable for scenarios requiring multiple/simultaneous writes to the same file
 - (b) HDFS is suitable for storing data related to applications requiring low latency data access
 - (c) HDFS is suitable for storing data related to applications requiring low latency data access
 - (d) None of the mentioned.
 4. An IAM user:
 - (a) is an entity that you create in AWS
 - (b) is to give people the ability to sign in to the AWS Management Console for interactive tasks and to make programmatic requests to AWS services using the API or CLI
 - (c) A and B both
 - (d) None of these
 5. State the difference between native VM and Host VM.
 6. Why do we need hybrid Cloud?
 7. Justify how many daemon processes run on a hadoop system.
 8. Illustrate the data security is enforced in cloud.

PART B - (4 X16 = 64 marks)

09. (a) (i) Illustrate Network and Storage virtualization working concept with neat diagram. (8)

- (ii) Compare and contrast full and para virtualization with examples. (8)
- (OR)**
- (b) (i) “Virtualization is the wave of the future”. Justify. Explicate the process (8) of CPU, memory and I/O device virtualization in data center.
- (ii) Demonstrate the role of data center automation in virtualization. (8)
10. (a) (i) With architecture, illustrate the various deployment models, service (16) models and reference models of cloud computing.
- (OR)**
- (b) (i) Demonstrate the public cloud platforms GAE and AWS with neat (16) diagram. Illustrate how resource management supports the Inter-cloud computation.
11. (a) (i) Analyze how MapReduce frame work supports parallel and distributed (16) computing on large data sets with a suitable example. Develop a word count application with Hadoop MapReduce programming Model.
- (OR)**
- (b) (i) With an illustration, emphasize the significance of MapReduce (16) paradigm in Hadoop framework. List out the assumption and goals set in HDFS architecture for processing the data based on divide-and-conquer strategy.
12. (a) (i) Demonstrate how Open Stack and Nimbus components support in (16) cloud software environments with neat diagram
- (OR)**
- (b) (i) “In today’s world, infrastructure security and data security is highly (16) challenging at network, host and application levels”. Justify and explain the several ways of protecting the data at transit and at rest.

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