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Assignment / Answers

Cloud

1. A virtual private network (VPN) is one way to manage the security of data during its transport in a cloud environment. A VPN essentially makes the public network your own private network instead of using dedicated connectivity.
2. Amazon S3 or Amazon Simple Storage Service is a service offered by Amazon Web Services that provides object storage through a web service interface. Amazon S3 uses the same scalable storage infrastructure that Amazon.com uses to run its global e-commerce network.

- Amazon S3 provides object (file) storage through a web interface. It's built to store, protect and retrieve data from “buckets” at any time from anywhere on any device

-Yes, it secures and protects your data.

1. Cloud Formation: Manage EC2 configuration. With AWS OpsWorks, developers can deploy Puppet or Chef to manage declarative configurations within EC2 instances. ... However, OpsWorks automates the initial deployment of applications, as well as the ongoing changes to the operating system and application infrastructure.
2. An Amazon Machine Image (AMI) is a template that contains a software configuration (for example, an operating system, an application server, and applications). From an AMI, you launch an instance, which is a copy of the AMI running as a virtual server in the cloud.
3. Amazon Elastic Compute Cloud (Amazon EC2) is a web service that provides secure, resizable compute capacity in the cloud. It is designed to make web-scale cloud computing easier for developers. Amazon EC2's simple web service interface allows you to obtain and configure capacity with minimal friction.
4. In order to make system more efficient against the burst of traffic or load, buffer is used. It synchronizes different component . The component always receives and processes the request in an unbalanced way.
5. C4 instances are designed for compute-bound workloads, such as high-traffic front-end fleets, MMO gaming, media processing, transcoding, and High Performance Computing (HPC) applications. ... Each C4 instance type is EBS-optimized by default and at no additional cost
6. The Classic Load Balancer is likely to be the best choice if your routing and load-balancing needs can all be handled based on IP addresses and TCP ports. In contrast, the Application Load Balancer can address more complex load-balancing needs by managing traffic at the application level.
7. SQL databases were designed to run on a single server to maintain the integrity of the data, so they're not easy to scale. NoSQL databases scale horizontally, meaning you can add more servers to power your growing database.
8. Amazon EC2's simple web service interface allows you to obtain and configure capacity with minimal friction.
9. A content delivery network (CDN) refers to a geographically distributed group of servers which work together to provide fast delivery of Internet content. A CDN allows for the quick transfer of assets needed for loading Internet content including HTML pages, JavaScript files, stylesheets, images, and videos.
10. There are four cloud deployment models: public, private, community, and hybrid. Each deployment model is defined according to where the infrastructure for the environment is located.
11. Step 1: Sign into the AWS Management Console. Create an account and sign into the console. ...

Step 2: Create a launch template. ...

Step 3: Create an Auto Scaling group. ...

Step 4: Add Elastic Load Balancers (Optional) ...

Step 5: Configure Scaling Policies (Optional)

1. Amazon ElastiCache allows you to seamlessly set up, run, and scale popular open-source compatible in-memory data stores in the cloud. Build data-intensive apps or boost the performance of your existing databases by retrieving data from high throughput and low latency in-memory data stores.
2. Amazon RDS.

-Amazon Document DB.

-Amazon Keyspaces.

-Amazon ElastiCache.

16. An Amazon Machine Image (AMI) is a template that contains a software configuration (for example, an operating system, an application server, and applications). From an AMI, you launch an instance, which is a copy of the AMI running as a virtual server in the cloud.

17. Buffer helps to synchronize different components, which gets requests and processes it in an unsynchronized way. It manages the balance between various components in order to maintain the speed and provide a faster service. In AWS buffer also ensures efficiency over traffic or load.

18. -Create a new VPC with a public subnet (or select an existing VPC). ...

-Create a private subnet. ...

-Create a new route table for each subnet. ...

-Create Security Groups to restrict inbound/outbound internet access to the EC2 instances in the VPC. ...

-Deploy the VM-Series firewall.

# An EC2 instance is a virtual server in Amazon's Elastic Compute Cloud (EC2) for running applications on the Amazon Web Services (AWS) infrastructure. ... Users can select an AMI provided by AWS, the user community, or through the AWS Marketplace.

19. Amazon EC2

20. API stands for application programming interface. APIs let your product or service communicate with other products and services without having to know how they're implemented. This can simplify app development, saving time and money.