AWS Interview Questions:

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Interview Questions on VPC:

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1. What is AWS VPC (Virtual Private Cloud)?

Answer: AWS VPC is a virtual network dedicated to your AWS account, allowing you to provision and manage a logically isolated section of the AWS cloud where you can launch AWS resources.

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2. What are the key components of AWS VPC?

Answer: The key components of AWS VPC include subnets, route tables, internet gateways, NAT gateways, security groups, and network access control lists (ACLs).

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3. What is a subnet in AWS VPC?

Answer: A subnet is a range of IP addresses in your VPC where you can place AWS resources. Subnets can be public or private and are associated with specific Availability Zones.

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4. What is a route table in AWS VPC?

Answer: A route table is a set of rules, called routes, that determine where network traffic is directed within a VPC. It controls the routing of traffic between subnets and the internet.

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5. What is an internet gateway in AWS VPC?

Answer: An internet gateway is a horizontally scaled, redundant, and highly available AWS service that allows communication between instances in your VPC and the internet.

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6. What is a NAT gateway in AWS VPC?

Answer: A NAT gateway is a managed network address translation (NAT) service provided by AWS that allows instances in private subnets to initiate outbound internet traffic while preventing inbound traffic from reaching them.

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7. What is a security group in AWS VPC?

Answer: A security group acts as a virtual firewall for instances in a VPC, controlling inbound and outbound traffic based on user-defined rules.

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8. What is a network access control list (ACL) in AWS VPC?

Answer: A network access control list (ACL) is an optional layer of security for your VPC that acts as a firewall for controlling traffic in and out of one or more subnets.

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9. What is a VPC endpoint in AWS VPC?

Answer: A VPC endpoint enables private connectivity to AWS services from within your VPC without requiring an internet gateway, NAT device, VPN connection, or AWS Direct Connect connection.

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10. How do you connect your VPC to the internet?

Answer: You can connect your VPC to the internet by attaching an internet gateway to your VPC and updating the route table to route traffic destined for the internet through the internet gateway.

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11. What is VPC peering in AWS VPC?

Answer: VPC peering enables you to connect two VPCs to each other, allowing instances in the connected VPCs to communicate with each other as if they were within the same network.

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12. How do you restrict access to resources in a VPC?

Answer: Access to resources in a VPC can be restricted using security groups and network access control lists (ACLs) to control inbound and outbound traffic based on user-defined rules.

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13. What is the difference between a public subnet and a private subnet in AWS VPC?

Answer: A public subnet is a subnet with a route to the internet gateway, allowing instances within the subnet to communicate with the internet. A private subnet does not have a route to the internet gateway and relies on NAT gateways or instances for outbound internet access.

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14. How do you monitor the traffic and performance of your VPC?

Answer: You can monitor the traffic and performance of your VPC using Amazon CloudWatch, which provides metrics and logs for VPC-related activities such as network traffic, latency, and errors.

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15. Can you change the CIDR block of a VPC after it has been created?

Answer: No, you cannot change the CIDR block of a VPC after it has been created. However, you can create a new VPC with the desired CIDR block and migrate resources to the new VPC.

Interview Questions on ELB

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1. What is AWS Elastic Load Balancer (ELB)?

Answer: AWS Elastic Load Balancer (ELB) is a managed load balancing service provided by Amazon Web Services that automatically distributes incoming application or network traffic across multiple targets, such as EC2 instances, containers, and IP addresses, within one or more Availability Zones.

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2. What are the types of Elastic Load Balancers?

Answer: There are three types of Elastic Load Balancers: Classic Load Balancer (CLB), Application Load Balancer (ALB), and Network Load Balancer (NLB).

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3. How does a Classic Load Balancer (CLB) differ from an Application Load Balancer (ALB)?

Answer: Classic Load Balancer operates at the transport layer (Layer 4) and supports only basic routing based on TCP and UDP protocols. Application Load Balancer operates at the application layer (Layer 7) and provides advanced routing features, content-based routing, and support for containers.

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4. What is a Network Load Balancer (NLB)?

Answer: Network Load Balancer (NLB) is a high-performance load balancer that operates at the connection level (Layer 4) and is designed to handle millions of requests per second with ultra-low latency.

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5. How does ELB handle scaling?

Answer: ELB automatically scales its capacity to handle varying levels of incoming traffic by adding or removing load balancer nodes based on demand.

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6. What is a target group in ELB?

Answer: A target group is a logical grouping of targets, such as EC2 instances, that receive traffic from the load balancer based on the configured routing rules.

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7. How do you configure health checks for targets in ELB?

Answer: Health checks for targets in ELB are configured within the target group settings, where you specify the protocol, port, and endpoint to perform health checks.

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8. What is SSL termination in ELB?

Answer: SSL termination is the process of decrypting HTTPS requests at the load balancer and forwarding the requests to targets over HTTP.

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9. How do you enable cross-zone load balancing in ELB?

Answer: Cross-zone load balancing is enabled by default in ELB, allowing the load balancer to distribute traffic evenly across all registered targets in all enabled Availability Zones.

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10. How do you monitor the performance of ELB?

Answer: You can monitor the performance of ELB using Amazon CloudWatch, which provides metrics such as request count, latency, and error rates for the load balancer and target groups.

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