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 **What is VPC?**

* VPC (Virtual Private Cloud) is a virtual network in AWS that is logically isolated from other virtual networks in the AWS cloud. It allows you to have full control over your virtual networking environment, including selection of your own IP address range, creation of subnets, and configuration of route tables and network gateways.

 **How to create VPC?**

* You can create a VPC using the AWS Management Console, AWS CLI, or AWS SDKs. In the console, you navigate to the VPC dashboard, click on "Create VPC", choose a name, and specify the CIDR block for the VPC. You can also define other settings such as tenancy and enable DNS resolution.

 **How many VPC do you have in your project?**

* This would depend on the specific project. Typically, a project may have one or more VPCs, depending on the need for isolation between different environments (e.g., production, staging, and development).

 **What is VPC peering?**

* VPC peering is a networking connection between two VPCs that allows you to route traffic between them using private IP addresses. The VPCs can be in the same AWS account or different accounts, and they can also be in different regions.

 **How to connect virtual machines between private subnet?**

* You can connect virtual machines (EC2 instances) between private subnets using VPC peering, VPN connections, or AWS Transit Gateway. Additionally, you need to configure the route tables to allow traffic to flow between the subnets.

 **What kind of subnets do you have in the company?**

* Typically, a company may have private subnets (for internal resources that don't need direct access to the internet) and public subnets (for resources like web servers that need to communicate with the internet). There might also be dedicated subnets for databases, application servers, etc.

 **Explain Project Infrastructure.**

* Project infrastructure typically includes VPCs, subnets, route tables, internet gateways, NAT gateways, EC2 instances, load balancers, RDS databases, security groups, IAM roles, S3 buckets, and other resources. Each component serves a specific role in supporting the application and services hosted within the AWS environment.

 **How many servers do you have in various environment subnets?**

* This would depend on the specific architecture and needs of the project. For example, there might be a specific number of EC2 instances running in each subnet for different environments like production, staging, and development.

 **Explain different methods to access a server in your private subnet.**

* Servers in a private subnet can be accessed through:
  + **Bastion Host:** A server in a public subnet that you SSH into and then use to access instances in the private subnet.
  + **VPN Connection:** Securely connect your on-premises network to the VPC, allowing access to private subnets.
  + **Session Manager:** A service in AWS Systems Manager that allows you to access your EC2 instances without needing an SSH key or opening inbound ports.

 **What is an elastic load balancer?**

* An Elastic Load Balancer (ELB) is an AWS service that automatically distributes incoming application traffic across multiple targets, such as EC2 instances, containers, and IP addresses, in one or more Availability Zones.

 **Why do you use an Elastic Load Balancer? Which load balancer have you used in your project?**

* ELBs are used to ensure high availability and fault tolerance by distributing traffic across multiple instances. The types of ELBs include Application Load Balancer (ALB), Network Load Balancer (NLB), and Classic Load Balancer (CLB). The choice depends on the specific requirements of the application.

 **Have you created any user using IAM?**

* Yes, IAM users can be created using the AWS Management Console, AWS CLI, or AWS SDKs.

 **Which policies did you attach to a user?**

* The policies attached to a user depend on their role. Common policies include AmazonS3FullAccess, AmazonEC2FullAccess, AdministratorAccess, etc.

 **How many types of policies are there in IAM?**

* There are two main types of policies in IAM:
  + **Managed Policies:** Standalone policies that you can attach to multiple users, groups, and roles.
  + **Inline Policies:** Policies that are embedded directly into a specific user, group, or role.

 **Have you created any customized policy?**

* Yes, custom policies can be created using the JSON policy editor in the IAM console to meet specific access control requirements.

 **Explain the CLI command of S3 to copy an object from one bucket to another bucket.**

* The command is:

bash

Copy code

aws s3 cp s3://source-bucket/object-key s3://destination-bucket/object-key

 **Where do you store your backups?**

* Backups are typically stored in Amazon S3 or AWS Backup, which can be configured to automatically take and store backups in S3, Glacier, or other storage options.

 **How do you give access to any user or client to a particular object in your S3?**

* You can grant access by using S3 bucket policies, IAM policies, or pre-signed URLs that provide time-limited access to an S3 object.

 **What is Git?**

* Git is a distributed version control system that tracks changes in source code during software development. It enables multiple developers to work on the same project without overwriting each other’s work.

 **How do you use Git in your project?**

* Git is used for version control, branching, and collaboration in the project. Code changes are committed to local repositories and pushed to a central repository like GitHub, GitLab, or Bitbucket.

 **What work have you done on Git?**

* Tasks may include creating branches, merging code, resolving conflicts, and managing pull requests. Specific tasks depend on the project and the role.

 **Have you created any branch? If yes, then what kind of branch have you created?**

* Yes, branches like feature, bugfix, release, and hotfix are commonly created to organize development work.

 **What is a branching strategy in your company?**

* The branching strategy might follow Git Flow, GitHub Flow, or a custom strategy, where branches are created for features, releases, and hotfixes.

 **What is the release cycle of your company?**

* The release cycle varies but could be weekly, bi-weekly, or based on sprint cycles. It includes planning, development, testing, and deployment phases.

 **What is the difference between git pull and git pull request?**

* git pull fetches and merges changes from a remote repository into your local branch. A pull request is a request to merge changes from one branch into another, often in a collaborative environment like GitHub.

 **How to add a user in Git?**

* Users are added to Git repositories using access control mechanisms in platforms like GitHub, GitLab, or Bitbucket. The command to set a user's name and email locally is:

bash

Copy code

git config --global user.name "Username"

git config --global user.email "email@example.com"

 **How to create a blank file in Git?**

* You can create a blank file using the command:

touch filename

git add filename

git commit -m "Added blank file"

 **What is git fetch?**

* git fetch downloads commits, files, and references from a remote repository into your local repository, without merging them into your local branch.

 **What are your roles and responsibilities regarding Git?**

* Responsibilities may include managing branches, performing code reviews, resolving merge conflicts, and ensuring proper version control practices are followed.

 **What kind of tests do you perform in Jenkins?**

* Tests may include unit tests, integration tests, smoke tests, and regression tests. Jenkins pipelines can be configured to automate the running of these tests during CI/CD.

 **If I have one Jenkins master and I want to copy all the data from that Jenkins master to another server, how can I do it?**

* You can copy the Jenkins home directory ($JENKINS\_HOME) to the new server, which includes all jobs, configurations, plugins, and credentials. You can also use the Jenkins CLI or plugins like "ThinBackup" for backups.

 **Have you created a user in Jenkins? If yes, then how?**

* Yes, users can be created by navigating to Manage Jenkins > Manage Users > Create User.

 **Which permissions have you given to a user in Jenkins?**

* Permissions depend on the user's role, such as read-only, build permissions, or admin rights, configured through Role-Based Access Control (RBAC).

 **How to create a parameterized job in Jenkins?**

* A parameterized job can be created by selecting the "This project is parameterized" option when creating a new job and adding the desired parameters (e.g., string, boolean, choice).

 **How many types of pipelines are there?**

* Jenkins pipelines can be scripted pipelines (written in Groovy) or declarative pipelines (a simpler syntax built on top of scripted pipelines).

 **What kind of jobs have you created in Jenkins?**

* Jobs created in Jenkins might include build jobs, test jobs, deployment jobs, and pipeline jobs. The specific jobs depend on the project’s CI/CD needs.

 **What is the difference between Freestyle job and Pipeline job?**

* Freestyle jobs are simpler and more limited, suitable for basic tasks. Pipeline jobs are more advanced, supporting complex workflows, conditional logic, and can be defined as code (Jenkinsfile).

 **How do you create a master-slave connection?**

* A master-slave connection in Jenkins is created by configuring a slave node and connecting it to the master using JNLP or SSH.

 **What is the full form of JNLP?**

* Java Network Launch Protocol.

 **Explain the JNLP and SSH connection of master-slave.**

* **JNLP Connection:** The Jenkins master launches a slave using the JNLP agent, which connects back to the master, suitable for dynamic or cloud-based slaves.
* **SSH Connection:** The master connects to the slave via SSH, which is more common for static nodes.

 **Write down the recent Pipeline you have written.**

* The pipeline script would include stages for code checkout, build, test, and deploy, written in a Jenkinsfile.

 **Write down a pipeline script with a parallel job.**

groovy

Copy code

pipeline {

agent any

stages {

stage('Parallel Stage') {

parallel {

stage('Test 1') {

steps {

echo 'Running Test 1'

}

}

stage('Test 2') {

steps {

echo 'Running Test 2'

}

}

}

}

}

}

 **Write a script for stopping the httpd service.**

sudo systemctl stop httpd

 **Command to clone a particular branch in Jenkins pipeline**

git branch: 'branch-name', url: 'repository-url'

 **What is Docker?**

* Docker is a platform that uses OS-level virtualization to deliver software in packages called containers. Containers are isolated from each other and bundle their own software, libraries, and configuration files.

 **What is the difference between Docker and Docker Compose?**

* Docker is used to create, deploy, and manage individual containers. Docker Compose is a tool for defining and running multi-container Docker applications using a YAML file.

 **Why have you used Docker Compose in your project?**

* Docker Compose is used to manage and run multiple containers, define services, networks, and volumes in a single YAML file, and to simplify the orchestration of multi-container environments.

 **Command to delete all unused images and containers**

docker system prune -a

 **Command to delete images**

docker rmi image-name

 **What is the purpose of RDS in your project?**

* RDS (Relational Database Service) is used to manage relational databases in the cloud, providing automated backups, scaling, and patching while freeing the team from database maintenance tasks.

 **How many members do you have in your team?**

* This would depend on the specific project, typically a DevOps team might have anywhere from 5 to 15 members.

 **Where do you copy the .war file in Apache Tomcat?**

* The .war file is typically copied to the webapps directory of the Apache Tomcat installation.

 **Where do you execute ./startup command?**

* The ./startup command is executed in the bin directory of the Apache Tomcat installation to start the server.

 **If your Jenkins runs the 1st job correctly but fails to run the job in 2nd chance, what will you do?**

* I would check the job logs, investigate the error message, check for resource constraints, and verify that there are no issues with the Jenkins slave nodes or network connectivity.

 **What errors have you faced in Jenkins while performing a job?**

* Common errors include SCM checkout failures, build script errors, test failures, node connection issues, and plugin compatibility issues.