**Q. You are a platform engineer in Fast tech solution pvt ltd and you have been asked to create following Infrastructure in AWS.**

**1) Create a VPC "fast-tech-solutions" in us-east-1 with CIDR - 10.1.0.0/16.**

**2) Create a public subnet within this vpc with the name "fast-tech-public". You can use CIDR within above VPC. The public subnet should have access to internet.**

**3) Create a private subnet within this vpc with the name "fast-tech-private". You can use CIDR within above VPC. The resources in private subnet can communicate only with resources in public subnet.**

**4) Create an EC2 instance in public subnet and make sure it has public IP. Name it "web-tier" and setup firewall in such a way that instance allow traffic from all sources in all ports. (Use Ubuntu Image)**

**5) Create an EC2 instance in private subnet. Name it "database-tier" and setup firewall in such a way that it only allows inbound traffic from web-tier instance on port 5432. (Use Ubuntu image)**

**6) SSH to web-tier EC2 instance and try to connect to database-tier using telnet. Syntax below**

**telnet <private ip address> <port>**

**You should receive message "Connection refused" because database server is not running in port 5432**

**Steps:**

**1 Create VPC:**

* Go to the AWS Management Console.
* Navigate to the VPC service.
* Click on "Create VPC."
* Enter the name as "fast-tech-solutions" and CIDR as "10.1.0.0/16."
* Click "Create VPC."

**2. Create Public Subnet:**

* Inside your VPC dashboard, go to "Subnets."
* Click "Create subnet."
* Enter the name as "fast-tech-public," choose the VPC you created, and specify the CIDR within the VPC range.
* Ensure "Auto-assign public IPv4 address" is set to "Yes."
* Click "Create subnet."

**3. Create Private Subnet:**

* Follow the same steps as above but name it "fast-tech-private."
* Set "Auto-assign public IPv4 address" to "No."

**4. Create EC2 Instance in Public Subnet:**

* Go to the EC2 dashboard.
* Click "Launch Instance."
* Choose an Amazon Machine Image (AMI) Ubuntu.
* Configure instance details, selecting the public subnet.
* Add storage, tags, and configure security groups to allow traffic from all sources in all ports.
* Review and launch the instance.

**5. Create EC2 Instance in Private Subnet:**

* Follow the same steps as above but select the private subnet.
* Configure security groups to allow inbound traffic only from the public instance on port 5432.

**6. SSH to Web-tier and Telnet to Database-tier:**

* Use an SSH client to connect to the public instance (web-tier).
* Attempt to telnet to the private instance (database-tier) on port 5432.

Code telnet 10.1.133.94 5432

You should receive message "Connection refused" because database server is not running in port 5432