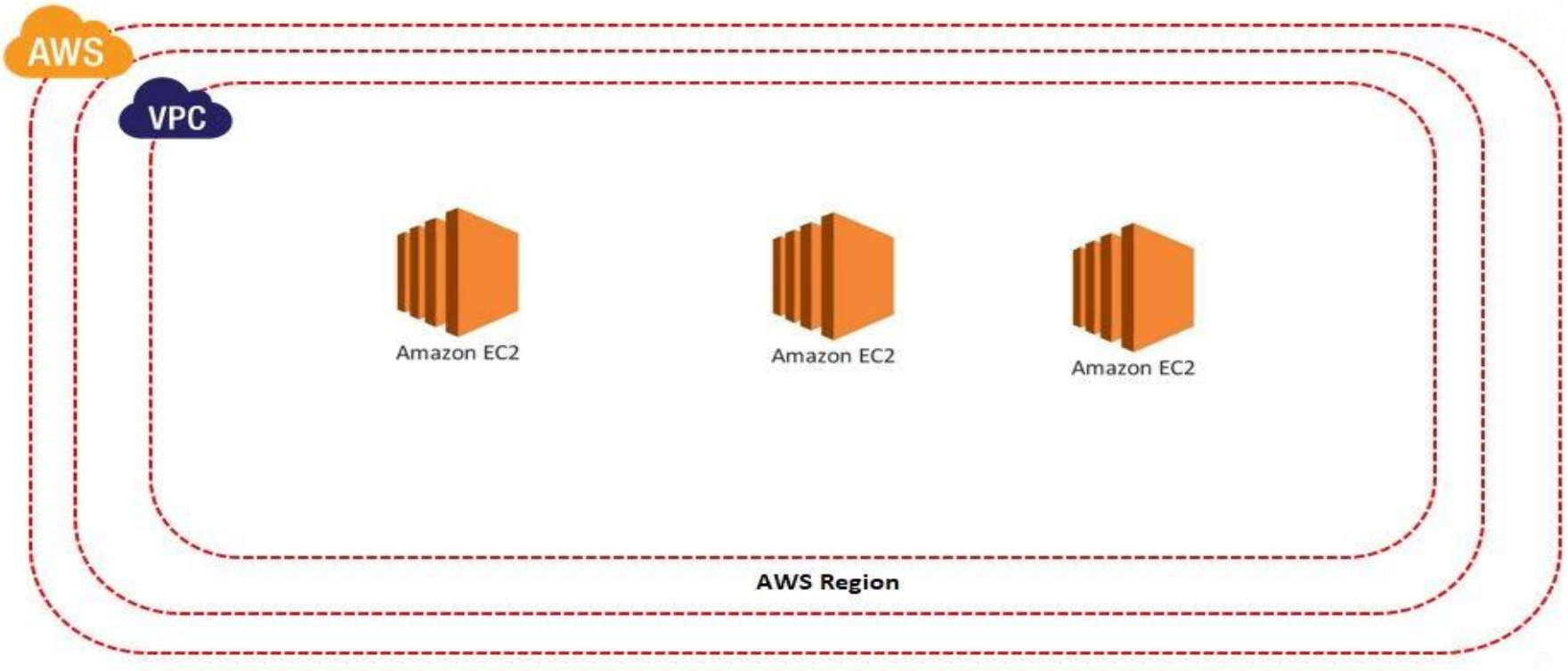
Amazon Web Services

Virtual Private Cloud

ankitnarula1991@gmail.com

Virtual Private Cloud - VPC

- A virtual private cloud (VPC) is a virtual network dedicated to your AWS account. It is logically isolated from other virtual networks in the AWS Cloud. You can launch your AWS resources, such as Amazon EC2 instances, into your VPC. There are no additional charges for creating and using an Amazon Virtual Private Cloud (VPC) itself.



VPC - Benefits

- **Easy to use and setup:** With the help of the AWS Management Console, one can easily and quickly set up AWS VPC. It also helps you to focus only on creating the application as the process such as Subnets, IP ranges, route tables, and security groups are automatically created.

- **Security:** To enable inbound and outbound filtering at the instance level and subnet level VPC provides advanced security features. You can provide security to Amazon S3 by restricting access so that it can access from instances in your AWS VPC.

- **Scalability and Reliability:** AWS VPC provides a facility of instant scalability so that you can instantly scale your resources up or down, select Amazon EC2 instances types and sizes that are right for your applications. It also helps to save the extra cost as there are no upfront costs.

VPC - Features

- VPC allows the user to select IP address range, create subnets, and configure route tables, network gateways, and security settings.
- VPC allows VPC Peering connections with other VPC within the same or different AWS accounts.
- It provides a feature of security such that the data stored in Amazon S3 can only be accessed from within your Amazon VPC.
- We can resize the VPC.
- Max VPC is 5 Per Region. We can increase this limit so that you can have 100s of VPCs per Region.
- We can create 200 Subnets in one VPC & 1000 Subnets in one region

VPC - Sizing

- VPC needs a set of IP addresses in the form of a Classless Inter-Domain Routing (CIDR) block. **For example**: the CIDR 172.16.0.0/16 includes all addresses from 172.16.0.0 to 172.16.255.255 — a total of 65,536 addresses. 16 is the net mask.
- As IPV4 is 32 bit so /16 means , 32-16=16 and so 2^16= 65,536 IP addresses
- Similarly for /28 means, 32-28= 4 and so 2^4=16 IP addresses.
- Block sizes must be between a /16 netmask and /28 netmask.
- Minimum Size is /28 (16 IP Address)
- Maximum Size is /16 (65536 IP Address)

- To More about IP Address CIDR: Click Here
- VPC Quotas: Click Here

VPC

- Search VPC
- Click on Create VPC
- Enter the Name of the VPC
- Enter IPV4 CIDR
- Select tenancy as default.
- Click on Create VPC

ankitnarula1991@gmail.com