AWS Networking Services

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## Amazon Virtual Private Cloud (VPC)

VPC is a foundational service that allows you to create a secure private network in the AWS cloud where you launch your resources.

###### Features:

1. Private virtual network.
2. Launch resources like EC2 instances inside the VPC.
3. Isolate and protect resources.
4. A VPC spans Availability Zones in a Region.
5. VPC peering allows you to connect 2 VPCs together that facilitates the transfer of data in a secure manner.

## Other networking services:

### Amazon Route 53

Route 53 is a DNS service that routes users to applications.

###### Features:

1. Domain Name Registration.
2. Performs health checks on AWS resources.
3. Supports hybrid cloud architectures.

### Amazon Direct Connect

Direct Connect is a dedicated physical network connection from your on-premises data center to AWS.

###### Features:

1. Dedicated physical network connection.
2. Connects your on-premises data center to AWS.
3. Data travels over a private network.
4. Supports a hybrid environment.

###### Use case:

1. Large datasets
2. Business-critical data
3. Hybrid model

### AWS VPN

Site-to-Site VPN creates a secure connection between your internal networks and your AWS VPCs.

###### Features:

1. Similar to Direct Connect, but data travels over the public internet.
2. Data is automatically encrypted.
3. Connects on-premises data center to AWS.
4. Supports a hybrid environment.

### API Gateway

API Gateway allows you to build and manage APIs.

###### Features:

1. Sharing data between systems.
2. Integrate with services like lambda.

##### Important for the exam:

1. Don’t forget an internet gateway allows traffic to the public internet and peering connects 2 VPC’s together.
2. Don’t forget Route 53 performs health checks on AWS resources and supports a hybrid model.
3. Remember that Direct Connect supports a hybrid model.
4. Remember that a Site-to-Site VPN supports a hybrid model. Don’t forget to review components such as the virtual private gateway and customer gateway.