CLOUD COMPUTING

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Infrastructure as a Service

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AWS – VPC Concepts

- **Virtual private cloud (VPC)** — A virtual network dedicated to your AWS account.
- **Subnet** — A range of IP addresses in your VPC.
- **Route table** — A set of rules, called routes, that are used to determine where network traffic is directed.
- **Internet gateway** — A gateway that you attach to your VPC to enable communication between resources in your VPC and the internet.
- **VPC endpoint** — Enables you to privately connect your VPC

AWS – VPC Concepts

- Create the VPC
- Launch an instance into your VPC
- Assign a elastic IP address to your instance
- Clean up

Exercise Overview

- Creates a VPC with a /16 IPv4 CIDR block (a network with 65,536 private IP addresses).
- Attaches an internet gateway to the VPC.
- Creates a size /24 IPv4 subnet (a range of 256 private IP addresses) in the VPC.
- Creates a custom route table, and associates it with your subnet, so that traffic can flow between the subnet and the internet gateway.

Create the VPC

1. Open the Amazon VPC console at https://console.aws.amazon.com/vpc/
2. In the navigation bar, on the top-right, take note of the AWS Region in which you'll be creating the VPC.
3. In the navigation pane, choose **VPC dashboard**. From the dashboard, choose **Launch VPC Wizard**.
4. Choose **VPC with a Single Public Subnet**, and then choose **Select**.

Create the VPC

5. On the configuration page, enter a name for your VPC in the **VPC name** field
6. A status window shows the work in progress. When the work completes, choose **OK** to close the status window
7. The **Your VPCs** page displays your default VPC and the VPC that you just created.

Launch an instance into VPC

1. Open the Amazon EC2 console at https://console.aws.amazon.com/ec2/
2. In the navigation bar, on the top-right, ensure that you select the same Region in which you created your VPC
3. From the dashboard, choose **Launch Instance**
4. On the first page of the wizard, choose the AMI that you want to use

Launch an instance into VPC

5. On the **Choose an Instance Type** page, you can select the hardware configuration and size of the instance to launch. You can use default. and then choose **Next: Configure Instance Details**.
6. On the **Configure Instance Details** page, select the VPC that you created from the **Network** list, and the subnet from the **Subnet** list. Leave the rest of the default settings
7. On the **Add Tags** Page, provide a name for the instance. Choose **Next: Configure Security Group**

Launch an instance into VPC

8. On the **Configure Security Group** page, the wizard automatically defines the launch-wizard-*x* security group to allow you to connect to your instance. Choose **Review and Launch**.
9. On the **Review Instance Launch** page, choose **Launch**
10. In the **Select an existing key pair or create a new key pair** dialog box, you can choose an existing key pair. Click next choose **Launch Instances**.

Assign Elastic IP Address

1. Open the Amazon VPC console at https://console.aws.amazon.com/vpc/
2. In the navigation pane, choose **Elastic Ips**
3. Choose **Allocate new address**, and then **Allocate**.
4. Select the Elastic IP address from the list, choose **Actions**, and then choose **Associate Address**.
5. For **Resource type**, Choose your instance from the **Instance** list. Choose **Associate**.

Clean Up

1. Open the Amazon EC2 console at https://console.aws.amazon.com/ec2/.
2. In the navigation pane, choose **Instances**.
3. Select your instance, choose **Actions**, then **Instance State**, and then select **Terminate**.
4. In the dialog box, expand the **Release attached Elastic IPs** section, and select the check box next to the Elastic IP address. Choose **Yes, Terminate**.

Clean Up

5. Open the Amazon VPC console at https://console.aws.amazon.com/vpc/.
6. In the navigation pane, choose **Your VPCs**.
7. Select the VPC, choose **Actions**, and then choose **Delete VPC**.
8. When prompted for confirmation, choose **Delete VPC**.

THANK YOU

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