

[version_1.0]

Note

The exercises in this course will have an associated charge in your AWS account. In this exercise, you will create the following resources:

- Amazon Elastic Compute Cloud (Amazon EC2) instance

Familiarize yourself with [Amazon E2 pricing](#) and the [AWS Free Tier](#).

Exercise 2: Creating a Network

Scenario: In this challenge, you will create a VPC with two public and two private subnets, then launch an EC2 instance in to the public subnet. A sample application will be loaded onto the instance through user data scripts so that you can check whether your instance is accessible from the internet.

Technical knowledge prerequisites

Remember that the following tasks are *requirements*. They are not steps. You must know how to create and connect the requested resources.

Similar to the exam, component names will be given for you to use. To meet the requirements on the exam, it is important that you use the resource names that are provided to you, where applicable.

Task 1: Creating the VPC

1. The VPC uses these requirements.

- **Resource name:** `practice-vpc`
- **Region:** `us-east-1`

Task 2: Creating the internet gateway

1. The internet gateway uses these requirements.

- **Resource name:** `practice-igw`
- **Attached to:** `practice-vpc`

Task 3: Creating subnets

1. The subnets use these requirements.

- **Total count:** Four subnets across two Availability Zones
- **AZ-a resource names:**
 - `Public 1`

- Private 1
- **AZ-b resource names:**
 - Public 2
 - Private 2

Task 4: Configuring the route table

1. The route table uses these requirements.

- **Resource name:** practice-rtb
- **Necessary route:** Internet gateway
- **Attached to:**
 - Public 1
 - Public 2

Task 5: Creating the EC2 instance and security group

1. The EC2 instance and security group uses these requirements.

- **AMI:** Amazon Linux 2 AMI (HVM), SSD Volume Type, x86
- **Instance type:** t2.micro
- **VPC:** practice-vpc
- **Subnet:** Public 1
- **Public IP address:** Yes
- **Security group resource name:** practice-sg
- **Security group rule type and port:** HTTP/80
- **Attached to:** Your instance
- **Key pair:** None
- **User data:**

```
#!/bin/bash
yum update -y
amazon-linux-extras install -y lamp-mariadb10.2-php7.2 php7.2
yum install -y httpd mariadb-server
systemctl start httpd
systemctl enable httpd
usermod -a -G apache ec2-user
chown -R ec2-user:apache /var/www
chmod 2775 /var/www
find /var/www -type d -exec chmod 2775 {} \;
find /var/www -type f -exec chmod 0664 {} \;
echo "<?php phpinfo(); ?>" > /var/www/html/phpinfo.php
```

Task 6: Verifying the application

1. Verify that the application launched by checking the public DNS name in the browser.
(Do not use the public IP address.)

Cleaning up

In this task, you delete the AWS resources that you created for this exercise.

1. Open the **Amazon EC2** console.
 - Delete your EC2 instance.
2. Open the **VPC console**.
 - Delete the **practice-vpc**.

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