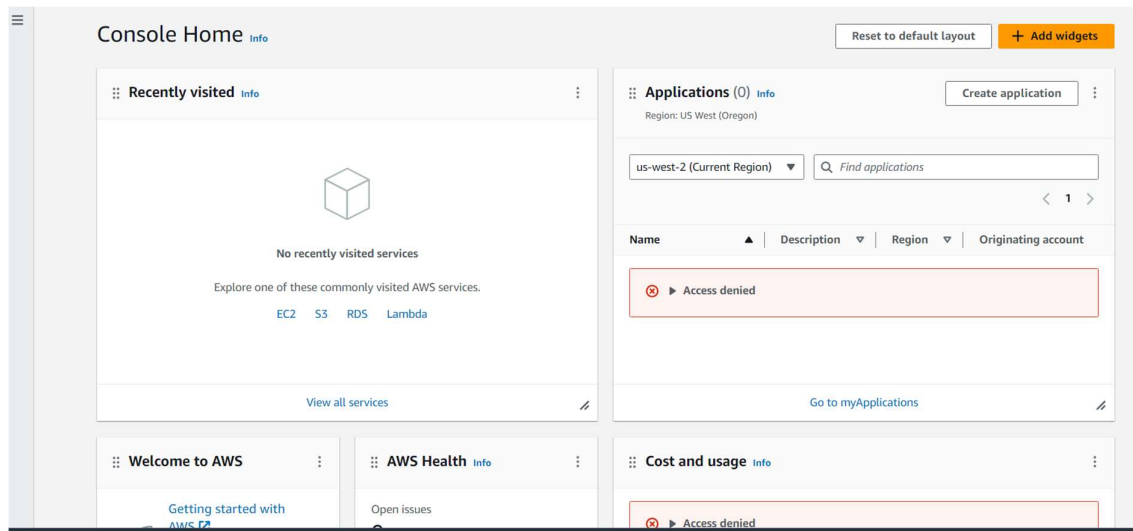


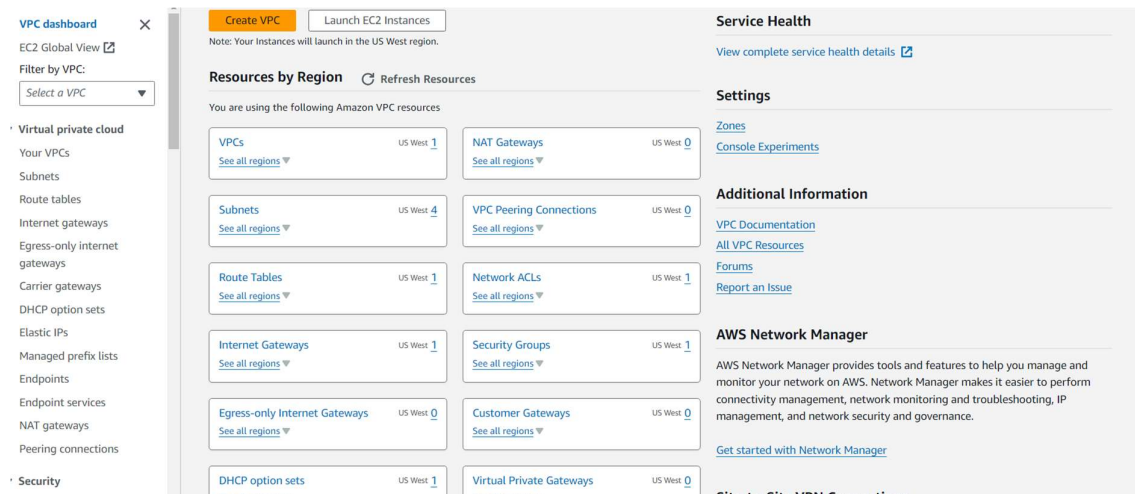
# Create Your VPC and Subnets

Log into the AWS Management Console and complete the following steps:

1. Log into the AWS Management Console using the credentials provided in the lab.



2. From the top search bar, type in and click on VPC.



3. In the navigation pane, choose Your VPCs, and then choose Create VPC.

[VPC](#) > [Your VPCs](#) > [Create VPC](#)

## Create VPC [Info](#)

A VPC is an isolated portion of the AWS Cloud populated by AWS objects, such as Amazon EC2 instances.

### VPC settings

#### Resources to create [Info](#)

Create only the VPC resource or the VPC and other networking resources.

☒ VPC only

☐ VPC and more

#### Name tag - *optional*

Creates a tag with a key of 'Name' and a value that you specify.

my-vpc-01

#### IPv4 CIDR block [Info](#)

☒ IPv4 CIDR manual input

☐ IPAM-allocated IPv4 CIDR block

#### IPv4 CIDR

10.0.0.0/24

CIDR block size must be between /16 and /28.

#### IPv6 CIDR block [Info](#)

☒ No IPv6 CIDR block

☐ IPAM-allocated IPv6 CIDR block

☐ Amazon-provided IPv6 CIDR block

4. On the Create VPC page, fill in the form and click Create VPC to submit the deployment. Use the following values:

Name tag: virtual-private-cloud

IPv4 CIDR: 10.0.0.0/16

IPv6 CIDR block: Leave default of No IPv6 CIDR block

Tenancy: Leave as Default

5. Click the Create VPC button.

The screenshot shows the AWS VPC console interface. At the top, a green notification bar states: "You successfully created vpc-07498777d1c613a82 / virtual-private-cloud". Below this, the breadcrumb navigation shows "VPC > Your VPCs > vpc-07498777d1c613a82". The main heading is "vpc-07498777d1c613a82 / virtual-private-cloud" with an "Actions" dropdown menu. The "Details" tab is selected, displaying a table of VPC attributes:

Details Info			
VPC ID vpc-07498777d1c613a82	State Available	DNS hostnames Disabled	DNS resolution Enabled
Tenancy Default	DHCP option set dopt-878df5ff	Main route table rtb-09725c16738398bed	Main network ACL acl-028e15fb079729c57
Default VPC No	IPv4 CIDR 10.0.0.0/16	IPv6 pool -	IPv6 CIDR (Network border group) -
Network Address Usage metrics Disabled	Route 53 Resolver DNS Firewall rule groups -	Owner ID 487138455697	

Below the table are tabs for "Resource map", "CIDRs", "Flow logs", "Tags", and "Integrations".

6. Click on VPC Dashboard in the navigation pane.

7. From the VPC Dashboard, choose Subnets and then click Create subnet.

The screenshot shows the "Create subnet" form in the AWS console. The form has a heading "Create subnet" with an "Info" link. It is divided into two main sections:

- VPC**: A section titled "VPC ID" with the instruction "Create subnets in this VPC." Below this is a dropdown menu labeled "Select a VPC" with a downward arrow.
- Subnet settings**: A section titled "Subnet settings" with the instruction "Specify the CIDR blocks and Availability Zone for the subnet." Below this is a message "Select a VPC first to create new subnets." and a button labeled "Add new subnet".

At the bottom right of the form are two buttons: "Cancel" and "Create subnet".

8. On the Create Subnet page, choose virtual-private-cloud from the VPC ID dropdown menu. This will expose the Subnet Settings form.

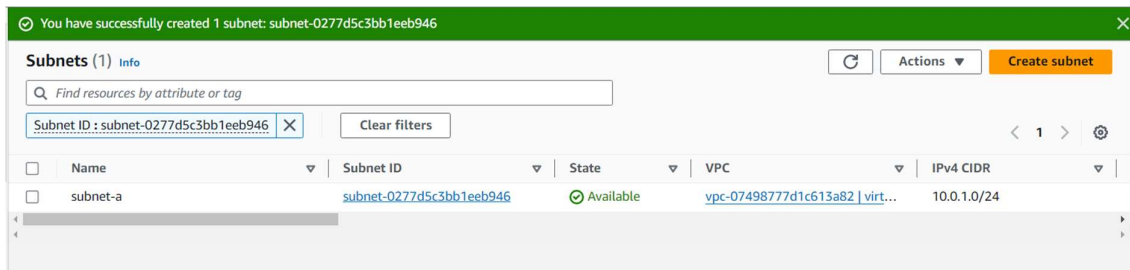
9. In the Subnet settings form, create a new subnet with the following values:

Subnet Name: Enter subnet-a

Availability Zone: Select us-west-2a

IPv4 CIDR block: Enter 10.0.1.0/24

## Click Create subnet.



## Launch an EC2 Instance into Your VPC

1. In the top search bar, type in and click on EC2.
2. In the left-hand menu, click Instances, then click the Launch instances dropdown and choose Launch instances.

## Launch an instance [Info](#)

Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.

### Name and tags [Info](#)

Name

*e.g. My Web Server*

[Add additional tags](#)

### ▼ Application and OS Images (Amazon Machine Image) [Info](#)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below

[Quick Start](#)

3. Under Name and tags, enter a Name of ec2-web-a.
4. Under Application and OS Images, in the search bar type in Amazon Linux 2 AMI (HVM) - Kernel 5.10, SSD Volume Type and press enter.
5. Ensure 64-bit (x86) is selected.
6. Under Instance type, ensure t2.micro is selected.
7. In the Key pair section, click Create a new key pair.
8. In the Create key pair pop-up, enter a Key pair name of ec2-web-a, then click Create key pair.

Make a note of where you downloaded the ec2-web-a.pem file on your computer, as you will need to run your SSH client from this directory later in the lab.

9. In the Network settings section, click Edit, then enter the following:

VPC: choose virtual-private-cloud from the drop-down menu

Subnet: Choose subnet-a from the dropdown menu (This should be the default)

Auto-assign public IP: Choose Enable from the dropdown menu

10. Still in the Network settings section, in the Inbound security groups rules sub-section, click Add security group rule, and enter the following for Security group rule 2:

Type: Choose HTTP from the drop-down menu

The Protocol will be automatically set to TCP, the Port range to 80.

Source type: Choose Anywhere from the drop-down menu

Description: Enter HTTP from Internet

Note: You will leave the first rule, the default one for ssh, as is.

11. Still in the Network settings section, expand the Advanced network configuration sub-section.

▼ Advanced network configuration

Network interface 1

Device index [Info](#)

0

Network interface [Info](#)

New interface ▼

Description [Info](#)

Subnet [Info](#)

subnet-031ff7ecf1e60b475

IP addresses available: 4091

Security groups [Info](#)

New security group

Primary IP [Info](#)

10.0.1.10

Secondary IP [Info](#)

Select ▼

IPv6 IPs [Info](#)

Select ▼

The selected subnet does not support IPv6 IPs.

IPv4 Prefixes [Info](#)

Select ▼

The selected instance type does not support IPv4 prefixes.

IPv6 Prefixes [Info](#)

Select ▼

The selected instance type does not support IPv6 prefixes.

Assign Primary IPv6 IP [Info](#)

Select ▼

A primary IPv6 address is only compatible with subnets that support IPv6.

Delete on termination [Info](#)

Select ▼

Elastic Fabric Adapter [Info](#)

Network card index [Info](#)

ENA Express [Info](#)

Under Network interface 1, for Primary IP enter 10.0.1.10

12. At the side of the page, click Launch instance.

Instance: i-0526dd409c724a4ed (ec2-web-a)

[Details](#)

[Status and alarms](#) [New](#)

[Monitoring](#)

[Security](#)

[Networking](#)

[Storage](#)

[Tags](#)

▼ Instance summary [Info](#)

Instance ID

i-0526dd409c724a4ed (ec2-web-a)

IPv6 address

–

Hostname type

IP name: ip-10-0-1-10.us-west-2.compute.internal

Public IPv4 address

54.185.13.73 [open address](#)

Instance state

⌚ Pending

Private IP DNS name (IPv4 only)

ip-10-0-1-10.us-west-2.compute.internal

Private IPv4 addresses

10.0.1.10

Public IPv4 DNS

–