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# AWS VPC Tutorial – Part I Introduction

 November 23, 2016 (<http://www.studytrails.com/amazon-aws/aws-vpc-tutorial/>)  Mithil Shah[\(http://www.studytrails.com/author/user/\)](http://www.studytrails.com/author/user/)  0 Comment (<http://www.studytrails.com/amazon-aws/aws-vpc-tutorial/#respond>)

In this AWS VPC tutorial, we will learn how to create a VPC; create public and private subnets that cover Multiple Availability zone; create CIDR blocks for each subnet; add Internet Gateways and NAT Gateways, and modify route table.

## AWS VPC Tutorial – Introduction to Concepts

### What is AWS VPC

Amazon VPC is your own private network inside Amazon's cloud infrastructure. It is an alternative to maintaining your own data centre and is cheaper since it creates resources on demand. It is also more secure since Amazon takes care of the infrastructure security for you.

### What is a Subnet

We will not go into much detail about subnets from a networking point of view, but for this tutorial, you should know that subnet is a part of your VPC that can contain resources that share a common subnet mask and that contain instances and resources that can normally only be accessed within that subnet except if you use an internet gateway to make them public.

### What is an Internet Gateway?

An Internet Gateway allows you to make a subnet public by providing a route to the internet. All instances within the subnet can access the internet only through this gateway. Also, resources from the internet can access the instances in your subnet

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using this gateway.

## What is a NAT Gateway

You can allow instances from your private subnet to connect to the internet using a NAT gateway. The instances in the private subnet do not have an IP address, so the NAT gateway translates the private IP to a public IP before routing the traffic out to the internet. NAT stands for Network Address Translation and it does just that – translates private IPs to public IP.

## What is a CIDR block

CIDR or Classless Inter-Domain Routing is used to allocate IP address within a network. We will use CIDR blocks to mark a range of IP addresses for each subnet within a VPC. The VPC itself would have a CIDR block that lists all the IP addresses available with it.

## What is a Route table

A route table contains rules for routing traffic within a subnet and from the subnet to outside world. Amongst other things, we use routing tables to add internet gateways and NAT gateways to the subnet.

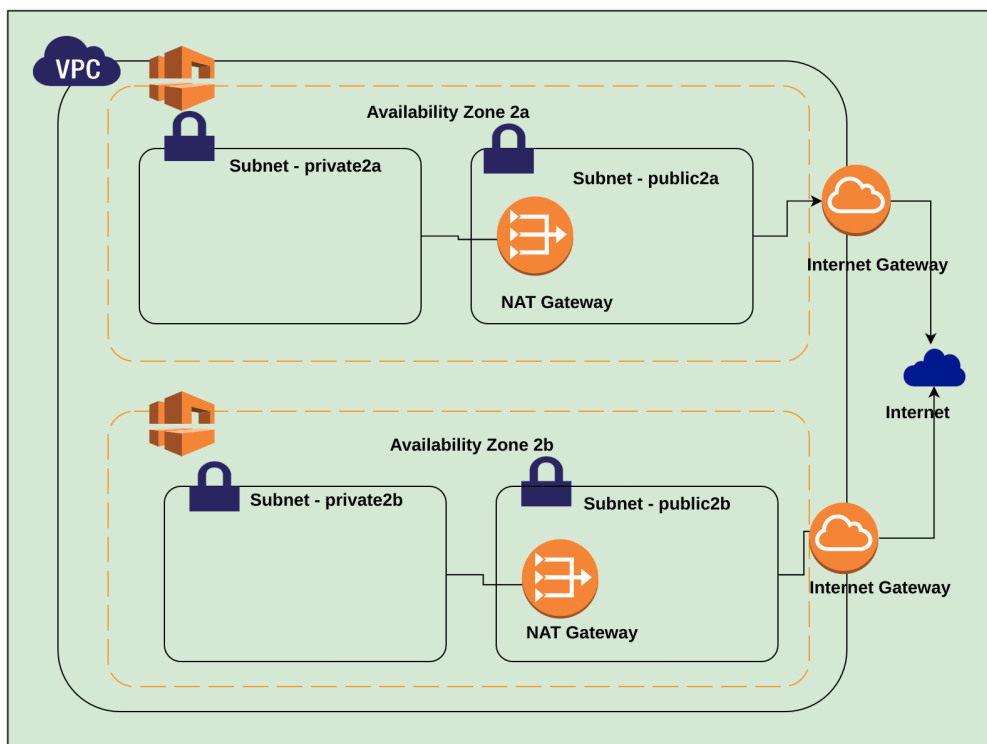
## Problem Statement for AWS VPC Tutorial

Here's the network that we are planning to build today. It has the following components:

1. A VPC spanning a region
2. Two public and two private subnets in two Availability Zones (AZ). (one AZ contains one public and one private network)
3. Internet Gateways for each public subnet in each AZ

One NAT Gateway for each private subnet.

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In the Next part, we will look at how to create the CIDR block for creating the subnets. We will also see how to create the VPC and the Subnets. In the third part we will see how to create internet gateways, NAT gateways and route tables.

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