

AWS VPC Setup Steps

Not like architectural diagram, setting up a VPC environment is not that simple, because it requires to click lots of menus in AWS Console after creating that VPC. Based on my experience, that is not easy to remember, because it's rarely happening process and its complex clicking labors. So I think easy video guide is good enough.

Followings are overall steps associated with VPC

STEP 1. Create two Elastic IP addresses for connection

<https://ap-northeast-2.console.aws.amazon.com/ec2/v2/home?region=ap-northeast-2#Addresses:>

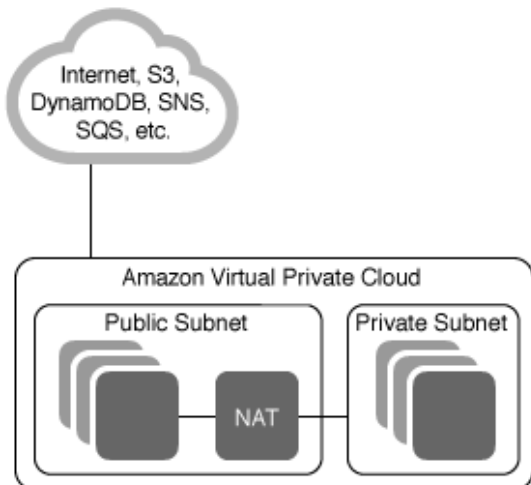
- Allocate Elastic IP address and name it

STEP 2. Create VPC

1) AWS Management Console Services from Top menu type "vpc". You can directly connect to that menu at <https://ap-northeast-2.console.aws.amazon.com/vpc/home?region=ap-northeast-2>

2) Launch VPC wizard: <https://ap-northeast-2.console.aws.amazon.com/vpc/home?region=ap-northeast-2#wizardSelector:>

- Select VPC with Public and Private Subnets



- Put proper name to VPC Name, Public subnet, Private subnet associated with Availability Zone1.
- Assign Elastic IP designed at STEP 1
- Leave other values as default like IPv4 CIDR block, Hardware tenancy, and etc.

STEP 3. Create internet gateway

- Your gateway would be automatically created. Just name it.

STEP 4. Create Subnets

<https://ap-northeast-2.console.aws.amazon.com/vpc/home?region=ap-northeast-2#subnets:sort=SubnetId>

| Name | IPv4 CIDR | Availability Zone |
|-----------------------|-------------|-------------------|
| PublicSubnet-az1 | 10.0.0.0/24 | az1 |
| PrivateSubnet-app-az1 | 10.0.1.0/24 | az1 |
| PrivateSubnet-db-az1 | 10.0.2.0/24 | az1 |
| PublicSubnet-az2 | 10.0.3.0/24 | az3 |
| PrivateSubnet-app-az2 | 10.0.4.0/24 | az3 |

| | | |
|----------------------|-------------|-----|
| PrivateSubnet-db-az2 | 10.0.5.0/24 | az3 |
|----------------------|-------------|-----|

STEP 5. Set Route Tables

<https://ap-northeast-2.console.aws.amazon.com/vpc/home?region=ap-northeast-2#RouteTables:sort=routeTableId>

Name Route Table ID by "Explicit subnet association" and "Main" like below:

| Name | Explicit subnet association | Main |
|-----------|-----------------------------|------|
| PublicRT | subnet-**** | No |
| PrivateRT | | Yes |

~~STEP 8. Create security group~~

1) One default inbound rule will be listed

2) Add one more a rule : set Type to "SSH" set Protocol to "TCP" set Port Range to 22 set Source to "My IP" Your IP will be automatically assigned or you can simply assign 0.0.0.0/0

~~STEP 9. Create network ACL~~

1) One default ACL will be listed, and just rename it in your own way

2) Set Inbound Rules

STEP 11. Create Load Balancer

<https://ap-northeast-2.console.aws.amazon.com/ec2/v2/home?region=ap-northeast-2#LoadBalancers:sort=loadBalancerName>

Required for scalable service design. You will need to assign VPC Availability Zone that you created at STEP 2 like below:

VPC ⓘ vpc-0... (10.0.0.0/16) | N... PC ⌵

Availability Zones ☒ ap-northeast-2a

subnet-... () Public sub ⌵

IPv4 address ⓘ Assigned by AWS

STEP 10. Creating instances

<https://ap-northeast-2.console.aws.amazon.com/ec2/v2/home?region=ap-northeast-2#Instances:>

- 1) Launching Instances Choose an AMI (Amazon Machine Image) Free Tier only (if you are new)
- 2) Select Network by VPC designed at STEP 2
- 3) Select Subnet designed at STEP 3 and STEP 5
- 4) Enable "Auto Assign Public IP"
- 5) Configure Security Group based on you created at STEP 8
- 6) Download key Pair for secure connection Launch Instances

Reference: <https://www.youtube.com/watch?v=gUesnoDzNr4>