

# Utilizzando Terraform e AWS



# Components

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### VPC:

- "VPC (demo\_environment)".

### Subnets:

- `public_subnet_1` , `public_subnet_2` , `public_subnet_3` .
- `private_subnet_1` , `private_subnet_2` , `private_subnet_3` .

### Internet Gateway:

- "Internet Gateway (demo\_igw)".

### NAT Gateway:

- "NAT Gateway (demo\_nat\_gateway)".

### EIP:

- "EIP (demo\_igw\_eip)".

### Route Tables:

- "Public Route Table (demo\_public\_rtb)"
- "Private Route Table (demo\_private\_rtb)".

# Code

```
VS Code main.tf > 1 resource "aws_vpc" "vpc" > 2 cidr_block
1   # Configure the AWS Provider
2   provider "aws" {
3     region = "us-east-1"
4   }
5
6   #Retrieve the list of AZs in the current AWS region
7   data "aws_availability_zones" "available" {}
8   data "aws_region" "current" {}
9
10  #Define the VPC
11  resource "aws_vpc" "vpc" {
12    cidr_block = var.vpc_cidr
13
14    tags = {
15      Name      = var.vpc_name
16      Environment = "demo_environment"
17      Terraform  = "true"
18    }
19  }
20
21  #Deploy the private subnets
22  resource "aws_subnet" "private_subnets" {
23    for_each          = var.private_subnets
24    vpc_id            = aws_vpc.vpc.id
25    cidr_block        = cidrsubnet(var.vpc_cidr, 8, each.value)
26    availability_zone = tolist(data.aws_availability_zones.available.names)[each.value]
27
28    tags = {
29      Name      = each.key
30      Terraform = "true"
31    }
32  }
33
34  #Deploy the public subnets
35  resource "aws_subnet" "public_subnets" {
36    for_each          = var.public_subnets
37    vpc_id            = aws_vpc.vpc.id
38    cidr_block        = cidrsubnet(var.vpc_cidr, 8, each.value + 100)
39    availability_zone = tolist(data.aws_availability_zones.available.names)[each.value]
40    map_public_ip_on_launch = true
41
42    tags = {
43      Name      = each.key
44      Terraform = "true"
45    }
46  }
```

# terraform state list

```
● aquino@Aquino:~/Documents/Terraform/SECTION_1$ terraform state list
data.aws_availability_zones.available
data.aws_region.current
aws_eip.nat_gateway_eip
aws_internet_gateway.internet_gateway
aws_nat_gateway.nat_gateway
aws_route_table.private_route_table
aws_route_table.public_route_table
aws_route_table_association.private["private_subnet_1"]
aws_route_table_association.private["private_subnet_2"]
aws_route_table_association.private["private_subnet_3"]
aws_route_table_association.public["public_subnet_1"]
aws_route_table_association.public["public_subnet_2"]
aws_route_table_association.public["public_subnet_3"]
aws_subnet.private_subnets["private_subnet_1"]
aws_subnet.private_subnets["private_subnet_2"]
aws_subnet.private_subnets["private_subnet_3"]
aws_subnet.public_subnets["public_subnet_1"]
aws_subnet.public_subnets["public_subnet_2"]
aws_subnet.public_subnets["public_subnet_3"]
aws_vpc.vpc
```

# Results

Your VPCs (1/1) <a href="#">Info</a>				
<input type="text"/> <a href="#">Search</a>				
<input checked="" type="checkbox"/>	<a href="#">demo</a> <a href="#">X</a>	<a href="#">Clear filters</a>		
	Name	VPC ID	State	IPv4 CIDR
<input checked="" type="checkbox"/>	<a href="#">demo_vpc</a>	<a href="#">vpc-0b6820f44c0228053</a>	 Available	10.0.0.0/16

Subnets (6) <a href="#">Info</a>				
<input type="text"/> <a href="#">Find resources by attribute or tag</a>				
<input type="checkbox"/>	<a href="#">demo</a> <a href="#">X</a>	<a href="#">Clear filters</a>		
	Name	Subnet ID	State	VPC
<input type="checkbox"/>	<a href="#">private_subnet_3</a>	<a href="#">subnet-03447326777f632a4</a>	 Available	<a href="#">vpc-0b6820f44c0228053   demo_vpc</a>
<input type="checkbox"/>	<a href="#">public_subnet_2</a>	<a href="#">subnet-0c01dd07bd89927ce</a>	 Available	<a href="#">vpc-0b6820f44c0228053   demo_vpc</a>
<input type="checkbox"/>	<a href="#">public_subnet_3</a>	<a href="#">subnet-06e1dd2f18dee204a</a>	 Available	<a href="#">vpc-0b6820f44c0228053   demo_vpc</a>
<input type="checkbox"/>	<a href="#">private_subnet_1</a>	<a href="#">subnet-042dd648621425946</a>	 Available	<a href="#">vpc-0b6820f44c0228053   demo_vpc</a>
<input type="checkbox"/>	<a href="#">private_subnet_2</a>	<a href="#">subnet-039b7b5a4df787acf</a>	 Available	<a href="#">vpc-0b6820f44c0228053   demo_vpc</a>
<input type="checkbox"/>	<a href="#">public_subnet_1</a>	<a href="#">subnet-0414f44e806b0cdd1</a>	 Available	<a href="#">vpc-0b6820f44c0228053   demo_vpc</a>

# Results

Route tables (3) [Info](#) Last updated 5 minutes ago

Find resources by attribute or tag

	Name	Route table ID	Explicit subnet associations	Edge associations	Main	VPC
<input type="checkbox"/>	demo_public_rtb	<a href="#">rtb-029f50f47de3adf81</a>	3 subnets	-	No	vpc-0b6820f44c0228053   demo_vpc
<input type="checkbox"/>	demo_private_rtb	<a href="#">rtb-0db9307b24202a200</a>	3 subnets	-	No	vpc-0b6820f44c0228053   demo_vpc
<input type="checkbox"/>	-	<a href="#">rtb-02d7941efe8f2788e</a>	-	-	Yes	vpc-0b6820f44c0228053   demo_vpc

Internet gateways (1) [Info](#)

Search

	Name	Internet gateway ID	State	VPC ID
<input type="checkbox"/>	demo_igw	<a href="#">igw-0f7917dbe05ff7949</a>	Attached	vpc-0b6820f44c0228053   demo_vpc

NAT gateways (1) [Info](#)

Find resources by attribute or tag

	Name	NAT gateway ID	Connectivity...	State	State message
<input type="radio"/>	demo_nat_gateway	<a href="#">nat-088636185f5a3e3bb</a>	Public	Available	-

# terraform destroy

```
Plan: 0 to add, 0 to change, 18 to destroy.
```

**Do you really want to destroy all resources?**

Terraform will destroy all your managed infrastructure, as shown above.

There is no undo. Only 'yes' will be accepted to confirm.

Enter a value: yes

```
aws_route_table_association.private["private_subnet_3"]: Destroying... [id=rtbassoc-0954900a499c67e14]
aws_route_table_association.public["public_subnet_2"]: Destroying... [id=rtbassoc-04b3248e2ac508051]
aws_route_table_association.private["private_subnet_1"]: Destroying... [id=rtbassoc-0c3ff5b5e6adca8d8]
aws_route_table_association.public["public_subnet_1"]: Destroying... [id=rtbassoc-0655daa0bf89e823e]
aws_route_table_association.public["public_subnet_3"]: Destroying... [id=rtbassoc-09c980b740cef6b27]
aws_route_table_association.private["private_subnet_2"]: Destroying... [id=rtbassoc-0fb4f38a9c3114bce]
aws_route_table_association.private["private_subnet_2"]: Destruction complete after 1s
aws_route_table_association.public["public_subnet_2"]: Destruction complete after 1s
aws_route_table_association.private["private_subnet_3"]: Destruction complete after 1s
aws_route_table_association.public["public_subnet_1"]: Destruction complete after 1s
aws_route_table_association.public["public_subnet_3"]: Destruction complete after 1s
aws_route_table_association.private["private_subnet_1"]: Destruction complete after 1s
aws_route_table_association.private["private_subnet_2": Destroying... [id=rtb-029f50f47de3adf81]
aws_route_table_association.private["private_subnet_1"]: Destruction complete after 1s
aws_route_table.private_route_table: Destroying... [id=rtb-0db9307b24202a200]
aws_subnet.private_subnets["private_subnet_3": Destroying... [id=subnet-03447326777f632a4]
aws_subnet.private_subnets["private_subnet_2": Destroying... [id=subnet-039b7b5a4df787acf]
aws_subnet.private_subnets["private_subnet_1": Destroying... [id=subnet-042dd648621425946]
aws_route_table.public_route_table: Destruction complete after 1s
aws_route_table.private_route_table: Destruction complete after 1s
aws_nat_gateway.nat_gateway: Destroying... [id=nat-088636185f5a3e3bb]
aws_subnet.private_subnets["private_subnet_2": Destruction complete after 1s
aws_subnet.private_subnets["private_subnet_1": Destruction complete after 1s
aws_subnet.private_subnets["private_subnet_3": Destruction complete after 1s
aws_nat_gateway.nat_gateway: Still destroying... [id=nat-088636185f5a3e3bb, 10s elapsed]
```