Create vpc


```
vpc.tf                    ×

vpc.tf > 𝔈 resource "aws_vpc" "main"
  1    resource "aws_vpc" "main" {
  2      cidr_block        = "10.0.0.0/16"
  3      tags = {
  4        Name = "main"
  5      }
  6    }
```
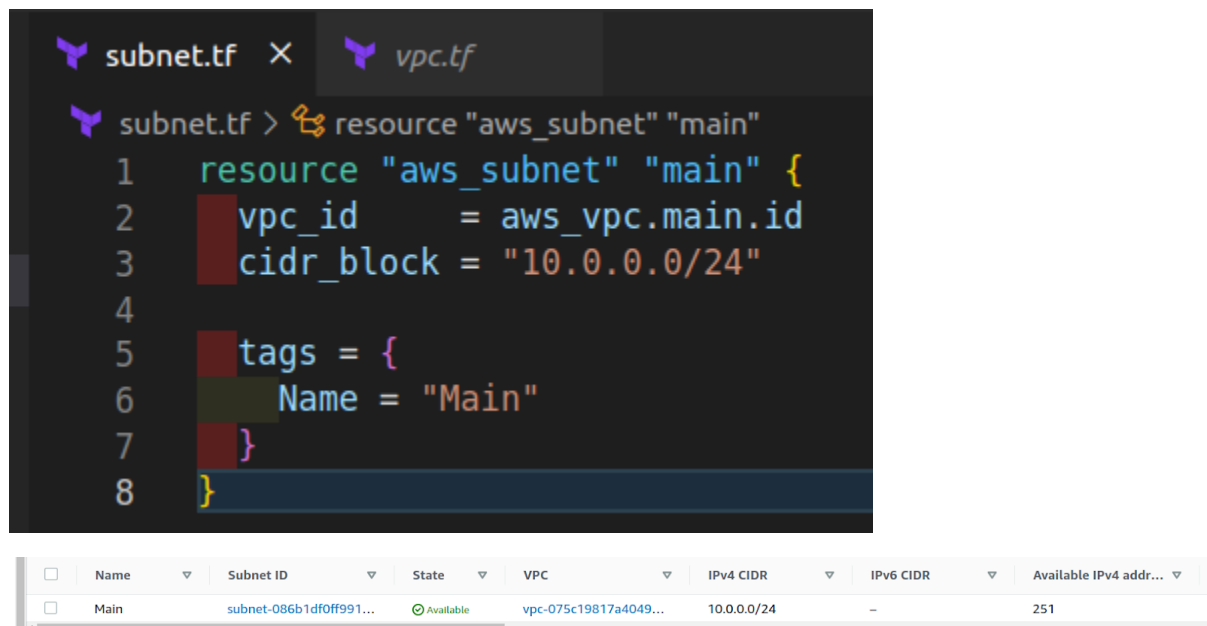
	main	vpc-075c19817a4...	⊘ Available	10.0.0.0/16	–	dopt-013f92f9f...	rtb-08811d0ce4da...

Create subnet


```
subnet.tf  ×      vpc.tf

subnet.tf > 𝔈 resource "aws_subnet" "main"
  1    resource "aws_subnet" "main" {
  2      vpc_id      = aws_vpc.main.id
  3      cidr_block = "10.0.0.0/24"
  4
  5      tags = {
  6        Name = "Main"
  7      }
  8    }
```

	Name ▽	Subnet ID ▽	State ▽	VPC ▽	IPv4 CIDR ▽	IPv6 CIDR ▽	Available IPv4 addr... ▽
	Main	subnet-086b1df0ff991...	⊘ Available	vpc-075c19817a4049...	10.0.0.0/24	–	251

Create internet getway

```
internetGetway.tf  ✕          subnet.tf

internetGetway.tf > ⅀ resource "aws_internet_gateway" "main"
1    resource "aws_internet_gateway" "main" {
2      vpc_id = aws_vpc.main.id
3
4      tags = {
5        Name = "Main"
6      }
7    }
```

☑	Name	▽	Internet gateway ID	▽	State	▽	VPC ID	▽	Owner
☑	Main		igw-0e42d86c0da10718e		⊘ Attached		vpc-075c19817a404937e | …		799041040511

Create route table

```
internetGetway.tf          routetable.tf  ✕        associate_subnet_rout

routetable.tf > ⅀ resource "aws_route_table" "main" > 🔲 tags > 🔤 Na
1    resource "aws_route_table" "main" {
2      vpc_id = aws_vpc.main.id
3
4      route {
5        cidr_block = "0.0.0.0/0"
6        gateway_id = aws_internet_gateway.main.id
7      }
8
9      tags = {
10       Name = "Main"
11     }
12   }
```

	Name	▽	Route table ID	▽	Explicit subnet a...	Edge associ...	M... ▽	VPC	▽	Owner ID
☐	–		rtb-0ba49aec0ab8...		–	–	Yes	vpc-08e6e86464b6d4...		799041040511
☐	–		rtb-08811d0ce4da...		–	–	Yes	vpc-075c19817a4049...		799041040511
☐	Main		rtb-0376f624bccd...		–	–	No	vpc-075c19817a4049...		799041040511

Associate the subnet with the route table

☑	Main		rtb-0376f624bccd...		subnet-086b1df0...	–	No	vpc-075c19817a4049...		799041040511

```
Create security group
```

```
resource "aws_security_group" "main" {
  name        = "allow_web_traffic"
  description = "Allow web traffic"
  vpc_id      = aws_vpc.main.id

  ingress {
    description = "HTTP"
    from_port   = 80
    to_port     = 80
    protocol    = "tcp"
    cidr_blocks = ["0.0.0.0/0"]
  }

  ingress {
    description = "HTTPS"
    from_port   = 443
    to_port     = 443
    protocol    = "tcp"
    cidr_blocks = ["0.0.0.0/0"]
  }

  egress {
    from_port   = 0
    to_port     = 0
    protocol    = "-1"
    cidr_blocks = ["0.0.0.0/0"]
  }

  tags = {
    Name = "Main"
  }
}
```

	Name	Security group... ▽	Security group name ▽	VPC ID ▽	Description ▽	Owner ▽	Inbound rule... ▽
☐	–	sg-0a2d8c99024...	default	vpc-075c19817a40...	default VPC sec...	799041040511	1 Permission entry
☑	Main	sg-0073291715e...	allow_web_traffic	vpc-075c19817a40...	Allow web traffic	799041040511	2 Permission ent...

Create key pair

Create ec2

```
1    resource "aws_instance" "main" {
2        ami              = "ami-06878d265978313ca"
3        instance_type    = "t2.micro"
4        key_name         = "myKey"
5        subnet_id        = aws_subnet.main.id
6        security_groups = [aws_security_group.main.id]
7        user_data = <<-EOF
8                    #!/bin/bash
9                    sudo apt update -y
10                   sudo apt install apache2 -y
11                   sudo systemctl start apache2
12                   sudo bash -c 'hello > /var/www/html/index.html'
13                   EOF
14
15       tags = {
16           Name = "main"
17       }
18   }
```

☑	main	i-0de6b795bc634a3b1	⊘ Running	⊕⊖	t2.micro	⊘ 2/2 checks passed	No alarms	+	us-east-1e

◄

═

Instance: i-0de6b795bc634a3b1 (main)

Details   Security   Networking   Storage   Status checks   Monitoring   Tags

▼ Instance summary Info

Instance ID	Public IPv4 address	Priv
⬚ i-0de6b795bc634a3b1 (main)	⬚ 54.90.2.218 | open address ⬚	⬚
IPv6 address	**Instance state**	**Pub**
–	⊘ Running	–
Hostname type	**Private IP DNS name (IPv4 only)**	
IP name: ip-10-0-0-11.ec2.internal	⬚ ip-10-0-0-11.ec2.internal	
Answer private resource DNS name	**Instance type**	**Elas**
–	t2.micro	–
Auto-assigned IP address	**VPC ID**	**AWS**
⬚ 54.90.2.218 [Public IP]	⬚ vpc-075c19817a404937e (main) ⬚	ⓘ
IAM Role	Subnet ID	Aut