

**TASK 3: Create a VCN and One Public Subnet and One Private Subnet, Internet Gateway, One Private Security List, One Public Security List, One private Route table, One Public Route Table These all Resources Creating Using Terraform init , plan, and apply.**

## 1. Terraform init:

```
User@User-PC MINGW64 /d/TASKS/VCN
$ terraform init
Initializing the backend...
Initializing the provider plugins...
- Finding oracle/oci versions matching "~> 6.27.0"...
- Installing oracle/oci v6.27.0...
- Installed oracle/oci v6.27.0 (signed by a HashiCorp partner, key ID 1533A49284137CEB)
Partner and community providers are signed by their developers.
If you'd like to know more about provider signing, you can read about it here:
https://www.terraform.io/docs/cli/plugins/signing.html
Terraform has created a lock file .terraform.lock.hcl to record the provider
selections it made above. Include this file in your version control repository
so that Terraform can guarantee to make the same selections by default when
you run "terraform init" in the future.

Terraform has been successfully initialized!

You may now begin working with Terraform. Try running "terraform plan" to see
any changes that are required for your infrastructure. All Terraform commands
should now work.

If you ever set or change modules or backend configuration for Terraform,
rerun this command to reinitialize your working directory. If you forget, other
commands will detect it and remind you to do so if necessary.
```

## 2. Terraform Plan:

```
User@User-PC MINGW64 /d/TASKS/VCN
$ terraform plan

Terraform used the selected providers to generate the following execution plan. Resource actions are indicated with the following symbols:
+ create

Terraform will perform the following actions:

# oci_core_internet_gateway.my_igw will be created
+ resource "oci_core_internet_gateway" "my_igw" {
  + compartment_id = "ocid1.tenancy.oci..aaaaaaaavc76ja77ynos2lfgdfwbbtn7l25ing2wpm4asuyighwsbsdyj6a"
  + defined_tags   = (known after apply)
  + display_name   = "InternetGateway"
  + enabled        = true
  + freeform_tags  = (known after apply)
  + id             = (known after apply)
  + route_table_id = (known after apply)
  + state          = (known after apply)
  + time_created   = (known after apply)
  + vcn_id         = (known after apply)
}

# oci_core_route_table.private_rt will be created
+ resource "oci_core_route_table" "private_rt" {
  + compartment_id = "ocid1.tenancy.oci..aaaaaaaavc76ja77ynos2lfgdfwbbtn7l25ing2wpm4asuyighwsbsdyj6a"
  + defined_tags   = (known after apply)
  + display_name   = "PrivateRouteTable"
  + freeform_tags  = (known after apply)
  + id             = (known after apply)
  + state          = (known after apply)
  + time_created   = (known after apply)
  + vcn_id         = (known after apply)
}
```

3. Terraform apply:

```
oci_core_route_table.private_rt: Creating...
oci_core_internet_gateway.my_igw: Creating...
oci_core_security_list.private_security_list: Creating...
oci_core_security_list.public_security_list: Creating...
oci_core_route_table.private_rt: Creation complete after 1s [id=ocid1.routetable.oc1.ap-mumbai-1.aaaaaaaaho32glh3jdlmgkrlepanmv
2etzcxcuya]
oci_core_internet_gateway.my_igw: Creation complete after 1s [id=ocid1.internetgateway.oc1.ap-mumbai-1.aaaaaaaayc5xgfpqha4k65ct
hs7zp2gwdytfhezea]
oci_core_route_table.public_rt: Creating...
oci_core_security_list.private_security_list: Creation complete after 1s [id=ocid1.securitylist.oc1.ap-mumbai-1.aaaaaaaaj5fcqi3
r4xvensxvmk4comvxxoawwrpa]
oci_core_security_list.public_security_list: Creation complete after 1s [id=ocid1.securitylist.oc1.ap-mumbai-1.aaaaaaaatr3q3q
invp2jcinwo4rlnxefmgr6yea]
oci_core_subnet.private_subnet: Creating...
oci_core_route_table.public_rt: Creation complete after 1s [id=ocid1.routetable.oc1.ap-mumbai-1.aaaaaaaajjbcmfex65ffcd4mpmw46c
za3nqrw7tq]
oci_core_subnet.public_subnet: Creating...
oci_core_subnet.private_subnet: Creation complete after 2s [id=ocid1.subnet.oc1.ap-mumbai-1.aaaaaaaalspgizmy62m7hxyzzgmdgkblisy
ndzksa]
oci_core_subnet.public_subnet: Creation complete after 2s [id=ocid1.subnet.oc1.ap-mumbai-1.aaaaaaaquh54wp7uq2zt65ifve67wjxyeoidkynxvesid6w5jy3uq57zagq]

Apply complete! Resources: 8 added, 0 changed, 0 destroyed.

Outputs:

internet_gateway_id = "ocid1.internetgateway.oc1.ap-mumbai-1.aaaaaaaayc5xgfpqha4k65ctgad2r7qjzo6ka2i7hawhs7zp2gwdytfhezea"
private_route_table_id = "ocid1.routetable.oc1.ap-mumbai-1.aaaaaaaaho32glh3jdlmgkrlepanmvd7pqtquvhv7j7l3ebya2etzcxcuya"
private_security_list_id = "ocid1.securitylist.oc1.ap-mumbai-1.aaaaaaaaj5fcqi3kx7bx6t5puxet73q4fyr4xvensxvmk4comvxxoawwrpa"
private_subnet_id = "ocid1.subnet.oc1.ap-mumbai-1.aaaaaaaalspgizmy62m7hxyzzgmdgkblisy3icnldn43a4bqtr2ylndzksa"
public_route_table_id = "ocid1.routetable.oc1.ap-mumbai-1.aaaaaaaajjbcmfex65ffcd4mpmw46q6unvbqruhgd2qoy2xdza3nqrw7tq"
public_security_list_id = "ocid1.securitylist.oc1.ap-mumbai-1.aaaaaaaatr3q3qas4pkldz53wy4wbb4accinvp2jcinwo4rlnxefmgr6yea"
public_subnet_id = "ocid1.subnet.oc1.ap-mumbai-1.aaaaaaaquh54wp7uq2zt65ifve67wjxyeoidkynxvesid6w5jy3uq57zagq"
vcn_id = "ocid1.vcn.oc1.ap-mumbai-1.amaaaaaaftxdyyaaa37j5vmsrqnn5lg6iy4hml6h2jqogviztrhm6yymr5za"
```

(Snapshot For oci Console):

1. VCN:

### Virtual Cloud Networks

Virtual Cloud Networks (VCNs) are private virtual networks you set up in Oracle Cloud Infrastructure. You can attach gateways, route tables, and security lists to specify routing and security rules.

To view service log metrics and additional information about service resources, click [View or manage logs](#)

Create VCNStart VCN Wizard

Name	State	IPv4 CIDR Block	IPv6 Prefix	Default Route Table	DNS Domain Name	Created
<a href="#">MyVCN</a>	● Available	10.0.0.0/16	—	<a href="#">Default Route Table for MyVCN</a>	myvcn.oraclevcn.com	Fri, Feb 28, 2025, 17:17:22 UTC

2. PUBLIC & PRIVATE SUBNET:

### Subnets

Create Subnet

Name	State	IPv4 CIDR Block	IPv6 Prefixes	Subnet Access	Created
<a href="#">PublicSubnet</a>	● Available	10.0.1.0/24	—	Public (Regional)	Fri, Feb 28, 2025, 17:17:25 UTC
<a href="#">PrivateSubnet</a>	● Available	10.0.2.0/24	—	Private (Regional)	Fri, Feb 28, 2025, 17:17:25 UTC

Showing 2 items < 1 of 1 >

### 3. INTERNET GATEWAY:

Internet Gateways			
Create Internet Gateway			
Name	State	Route Table	Created
InternetGateway	● Available	—	Fri, Feb 28, 2025, 17:17:24 UTC
Showing 1 item < 1 of 1 >			

### 4. PUBLIC & PRIVATE SECURITY LIST:

Security Lists		
If you're having problems, use <a href="#">Network Path Analyzer</a> to check your connections.		
Create Security List		
Name	State	Created
<a href="#">PrivateSecurityList</a>	● Available	Fri, Feb 28, 2025, 17:17:24 UTC
<a href="#">PublicSecurityList</a>	● Available	Fri, Feb 28, 2025, 17:17:24 UTC
<a href="#">Default Security List for MyVCN</a>	● Available	Fri, Feb 28, 2025, 17:17:22 UTC
Showing 3 items < 1 of 1 >		

### 5. PUBLIC & PRIVATE ROUTE TABLE:

Route Tables			
Create Route Table			
Name	State	Number of Rules	Created
<a href="#">PublicRouteTable</a>	● Available	1	Fri, Feb 28, 2025, 17:17:25 UTC
<a href="#">PrivateRouteTable</a>	● Available	0	Fri, Feb 28, 2025, 17:17:23 UTC