
AWS HANDS ON LAB -05

Console:

1. Create Network Interface (NIC) on Console:

- **Navigate to the AWS Management Console.**
- **Create a new Network Interface (NIC) in a specific VPC and subnet.**
- **Associate the NIC with a security group.**
- **Note down the Private IP address assigned to the NIC.**

2. Launch EC2 Instance and Associate NIC:

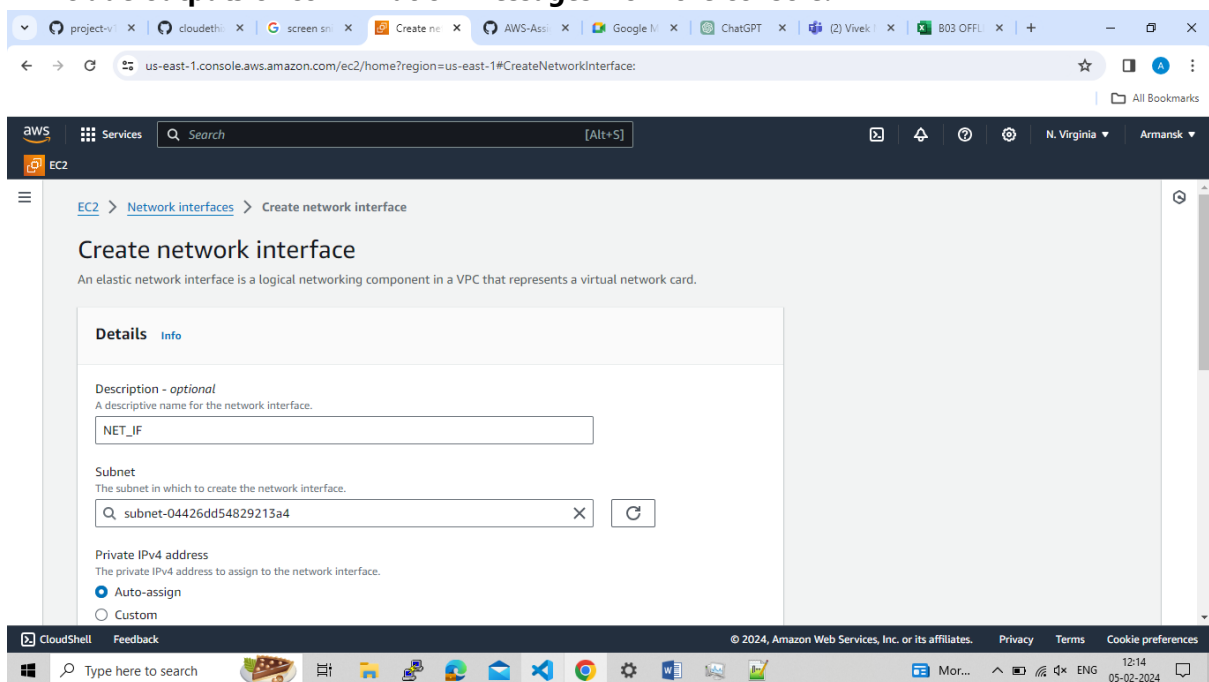
- **Launch a new EC2 instance using the AWS Management Console.**
- **During the instance launch, associate the previously created NIC with the instance.**
- **Confirm that the instance has the expected private IP address.**

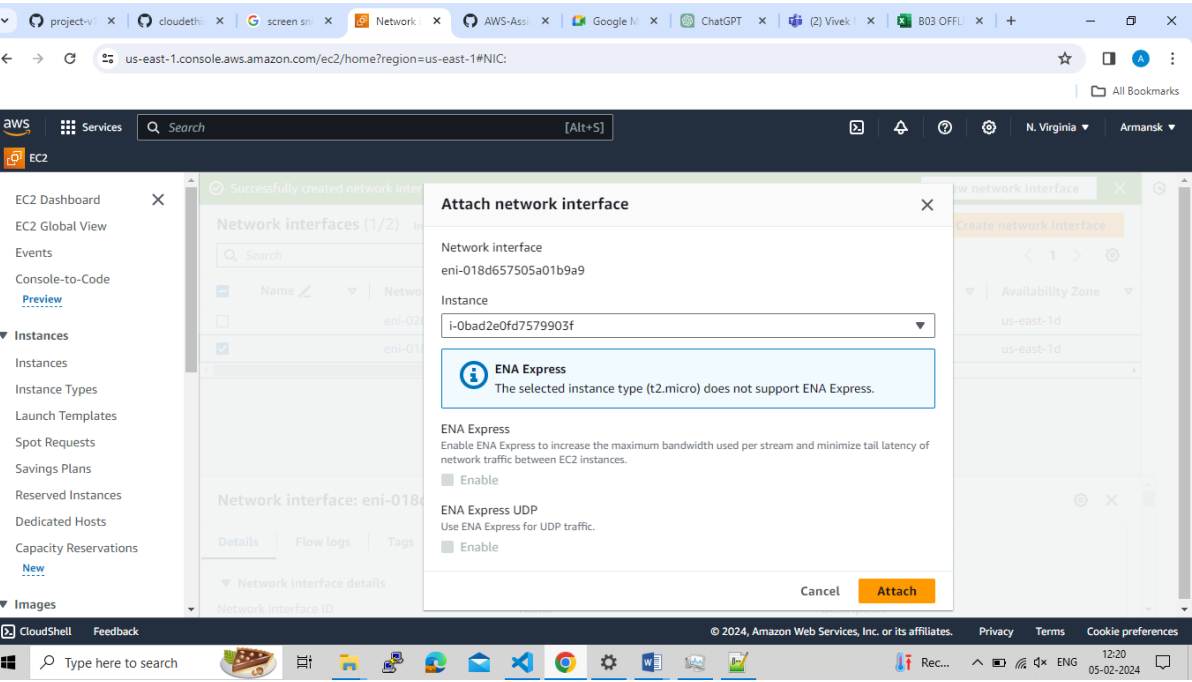
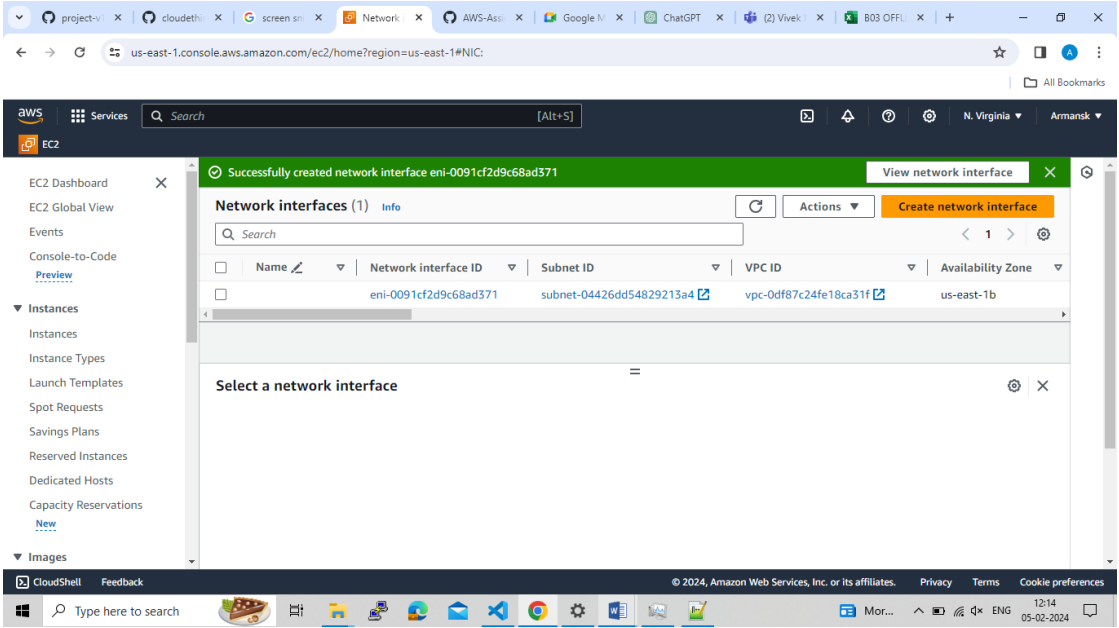
3. Verify Network Interface Configuration:

- **Access the EC2 instance and verify the network interface configuration.**
- **Use the console to check the details of the associated NIC.**

4. Documentation:

- **Provide a step-by-step guide with screenshots for creating a NIC, associating it with an EC2 instance, and verifying the configuration.**
- **Include outputs or confirmation messages from the console.**





| Filter network interfaces | | | | | |
|---------------------------|-------------|---------------|---------------|---------------------|----------------------|
| Interface ID | Description | IPv4 Prefixes | IPv6 Prefixes | Public IPv4 address | Private IPv4 address |
| eni-018d657505a01b9a9 | NET-IF | - | - | - | 172.31.16.16 |
| eni-0265f824b05eaa034 | - | - | - | 107.23.234.39 | 172.31.16.16 |

CLI:

```
root@DESKTOP-0ANCI6F:~# aws ec2 create-network-interface --description NIC --groups sg-0f2f43ec49dbd5e51 --subnet-id subnet-04b2f5518f2e3ad65
```

```
{
  "NetworkInterface": {
    "AvailabilityZone": "ap-south-1a",
    "Description": "NIC",
    "Groups": [
      {
        "GroupName": "default",
        "GroupId": "sg-0f2f43ec49dbd5e51"
      }
    ],
    "InterfaceType": "interface",
    "Ipv6Addresses": [],
    "MacAddress": "02:45:47:3d:69:bd",
    "NetworkInterfaceId": "eni-052c076ea10f0481a",
    "OwnerId": "842313196830",
    "PrivateDnsName": "ip-172-31-43-19.ap-south-1.compute.internal",
    "PrivateIpAddress": "172.31.43.19",
    "PrivateIpAddresses": [
      {
        "Primary": true,
        "PrivateDnsName": "ip-172-31-43-19.ap-south-1.compute.internal",
        "PrivateIpAddress": "172.31.43.19"
      }
    ],
    "RequesterId": "AIDA4IHOHMUPAWRRIYEQN",
    "RequesterManaged": false,
    "SourceDestCheck": true,
    "Status": "pending",
    "SubnetId": "subnet-04b2f5518f2e3ad65",
    "TagSet": [],
    "VpcId": "vpc-03c7f996950265179"
  }
}
```

```
root@DESKTOP-0ANCI6F:~# aws ec2 attach-network-interface --instance-id i-0686bb4d80ca7a317 --network-interface-id eni-052c076ea10f0481a --device-index 1
```

```
{
  "AttachmentId": "eni-attach-08abf1573e5be8b10",
  "NetworkCardIndex": 0
}
```

```
root@DESKTOP-0ANCI6F:~# aws ec2 describe-network-interfaces --network-interface-ids eni-052c076ea10f0481a
```

```
{
  "NetworkInterfaces": [
    {
```

```
"Attachment": {
  "AttachTime": "2024-01-18T11:07:44.000Z",
  "AttachmentId": "eni-attach-08abf1573e5be8b10",
  "DeleteOnTermination": false,
  "DeviceIndex": 1,
  "NetworkCardIndex": 0,
  "InstanceId": "i-0686bb4d80ca7a317",
  "InstanceOwnerId": "842313196830",
  "Status": "attached"
},
"AvailabilityZone": "ap-south-1a",
>Description": "NIC",
"Groups": [
  {
    "GroupName": "default",
    "GroupId": "sg-0f2f43ec49dbd5e51"
  }
],
"InterfaceType": "interface",
"Ipv6Addresses": [],
"MacAddress": "02:45:47:3d:69:bd",
"NetworkInterfaceId": "eni-052c076ea10f0481a",
"OwnerId": "842313196830",
"PrivateDnsName": "ip-172-31-43-19.ap-south-1.compute.internal",
"PrivateIpAddress": "172.31.43.19",
"PrivateIpAddresses": [
  {
    "Primary": true,
    "PrivateDnsName": "ip-172-31-43-19.ap-south-1.compute.internal",
    "PrivateIpAddress": "172.31.43.19"
  }
],
"RequesterId": "AIDA4IHOHMUPAWRRIYEQN",
"RequesterManaged": false,
"SourceDestCheck": true,
"Status": "in-use",
"SubnetId": "subnet-04b2f5518f2e3ad65",
"TagSet": [],
"VpcId": "vpc-03c7f996950265179"
}
]
```

Console:

1. Hibernate EC2 Instance on Console:

- Launch a new EC2 instance using the AWS Management Console.
- Access the console to hibernate the running instance.
- Confirm the status change to "hibernating."

2. Resume Hibernated EC2 Instance:

- Resume the hibernated instance using the console.
- Confirm the instance state changes to "running."

3. Verify Instance State:

- Check the instance state using the console to ensure successful hibernation and resumption.

4. Documentation:

- Provide a step-by-step guide with screenshots for hibernating and resuming an EC2 instance using the console.
- Include outputs or confirmation messages from the console.

▼ Storage (volumes) [Info](#)

Simple

EBS Volumes [Hide details](#)

▼ Volume 1 (AMI Root) (Custom)

Storage type [Info](#)

EBS

Device name - required [Info](#)

/dev/xvda

Snapshot [Info](#)

snap-0413f6dc2696c8086

Size (GiB) [Info](#)

8

Volume type [Info](#)

gp3 ▼

IOPS [Info](#)

3000

Delete on termination [Info](#)

Yes ▼

Encrypted [Info](#)

Encrypted ▼

KMS key [Info](#)

(default) aws/ebs
Key ID: 0d4f265f-f627-4359-82... ▼

Throughput [Info](#)

125

Add new volume

Stop - Hibernate behavior [Info](#)

Enable ▼

To enable hibernation, space is allocated on the root volume to store the instance memory (RAM). Make sure that the root volume is large enough to store the RAM contents and accommodate your expected usage, e.g. OS, applications. To use hibernation, the root volume must be an encrypted EBS volume. [Learn more](#)

CLI:

```
root@DESKTOP-0ANCI6F:~# aws ec2 run-instances --image-id ami-0005e0cfe09cc9050 --
instance-type t2.micro --key-name newkey --subnet-id subnet-091bb33c91a6992c8 --
hibernation-options Configured=true --block-device-mappings
'[{"DeviceName":"/dev/xvda","Ebs":{"VolumeSize":30,"VolumeType":"gp2","Encrypted":true}}]' --
tag-specifications 'ResourceType=instance,Tags=[{Key=Name,Value=MY-HIBERNATE-
INSTANCE}]'
```

```
{
  "Groups": [],
  "Instances": [
    {
      "AmiLaunchIndex": 0,
      "ImageId": "ami-0005e0cfe09cc9050",
      "InstanceId": "i-041525e86343e0476",
      "InstanceType": "t2.micro",
      "KeyName": "newkey",
      "LaunchTime": "2024-01-18T11:52:55.000Z",
      "Monitoring": {
        "State": "disabled"
      },
      "Placement": {
        "AvailabilityZone": "us-east-1b",
        "GroupName": "",
        "Tenancy": "default"
      },
      "PrivateDnsName": "ip-172-31-38-35.ec2.internal",
      "PrivateIpAddress": "172.31.38.35",
      "ProductCodes": [],
      "PublicDnsName": "",
      "State": {
        "Code": 0,
        "Name": "pending"
      },
      "StateTransitionReason": "",
      "SubnetId": "subnet-091bb33c91a6992c8",
      "VpcId": "vpc-0e40e229396d8047f",
      "Architecture": "x86_64",
      "BlockDeviceMappings": [],
      "ClientToken": "0b540773-cdc4-4fe0-9678-8a2dd79e3b84",
      "EbsOptimized": false,
      "EnaSupport": true,
      "Hypervisor": "xen",
      "NetworkInterfaces": [
        {
          "Attachment": {
            "AttachTime": "2024-01-18T11:52:55.000Z",
```

```
"AttachmentId": "eni-attach-07f080ecf55f495ae",
  "DeleteOnTermination": true,
  "DeviceIndex": 0,
  "Status": "attaching",
  "NetworkCardIndex": 0
},
"Description": "",
"Groups": [
  {
    "GroupName": "default",
    "GroupId": "sg-0cc769aee28fac070"
  }
],
"Ipv6Addresses": [],
"MacAddress": "0e:40:24:23:0e:e3",
"NetworkInterfaceId": "eni-076a48f9230990173",
"OwnerId": "842313196830",
"PrivateDnsName": "ip-172-31-38-35.ec2.internal",
"PrivateIpAddress": "172.31.38.35",
"PrivateIpAddresses": [
  {
    "Primary": true,
    "PrivateDnsName": "ip-172-31-38-35.ec2.internal",
    "PrivateIpAddress": "172.31.38.35"
  }
],
"SourceDestCheck": true,
"Status": "in-use",
"SubnetId": "subnet-091bb33c91a6992c8",
"VpcId": "vpc-0e40e229396d8047f",
"InterfaceType": "interface"
}
],
"RootDeviceName": "/dev/xvda",
"RootDeviceType": "ebs",
"SecurityGroups": [
  {
    "GroupName": "default",
    "GroupId": "sg-0cc769aee28fac070"
  }
],
"SourceDestCheck": true,
"StateReason": {
  "Code": "pending",
  "Message": "pending"
},
"Tags": [
```



```

    {
      "Key": "Name",

      "Value": "MY-HIBERNATE-INSTANCE"
    }
  ],
  "VirtualizationType": "hvm",
  "CpuOptions": {
    "CoreCount": 1,
    "ThreadsPerCore": 1
  },
  "CapacityReservationSpecification": {
    "CapacityReservationPreference": "open"
  },
  "HibernationOptions": {
    "Configured": true
  },
  "MetadataOptions": {
    "State": "pending",
    "HttpTokens": "required",
    "HttpPutResponseHopLimit": 2,
    "HttpEndpoint": "enabled",
    "HttpProtocolIpv6": "disabled",
    "InstanceMetadataTags": "disabled"
  },
  "EnclaveOptions": {
    "Enabled": false
  },
  "BootMode": "uefi-preferred",
  "PrivateDnsNameOptions": {
    "HostnameType": "ip-name",
    "EnableResourceNameDnsARecord": false,
    "EnableResourceNameDnsAAAARecord": false
  }
}
],
"OwnerId": "842313196830",
"ReservationId": "r-0df7008740509aee3"
}

```

```

root@DESKTOP-0ANCI6F:~# aws ec2 stop-instances --instance-ids i-041525e86343e0476 --hibernate

```

```

{
  "StoppingInstances": [
    {
      "CurrentState": {
        "Code": 64,
        "Name": "stopping"
      }
    }
  ]
}

```

```

    },
    "InstanceId": "i-041525e86343e0476",
    "PreviousState": {
      "Code": 16,

      "Name": "running"
    }
  ]
}

```

```

root@DESKTOP-0ANCI6F:~# aws ec2 start-instances --instance-ids i-041525e86343e0476

```

```

{
  "StartingInstances": [
    {
      "CurrentState": {
        "Code": 0,
        "Name": "pending"
      },
      "InstanceId": "i-041525e86343e0476",
      "PreviousState": {
        "Code": 80,
        "Name": "stopped"
      }
    }
  ]
}

```

```

root@DESKTOP-0ANCI6F:~# aws ec2 describe-instances --instance-ids i-041525e86343e0476 --
query 'Reservations[*].Instances[*].[InstanceId,State.Name]'

```

```

[
  [
    [
      "i-041525e86343e0476",
      "running"
    ]
  ]
]

```