**AWS Hands-On Assignment 05 (On Console and CLI)**

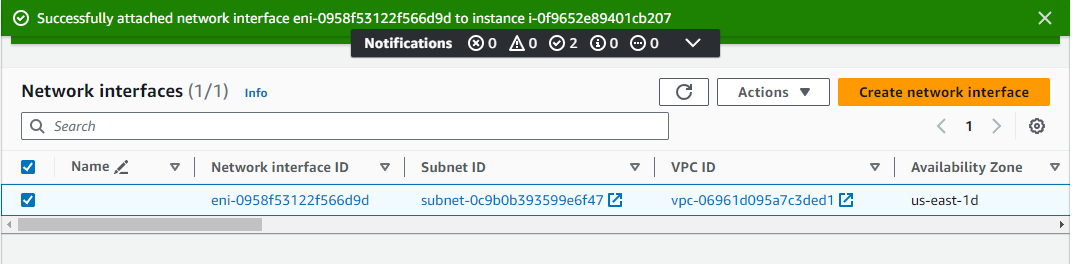
**CC: Sandeep Dawre**

**Network Interface + Hibernate Instance**

**QUESTION NO: 01**

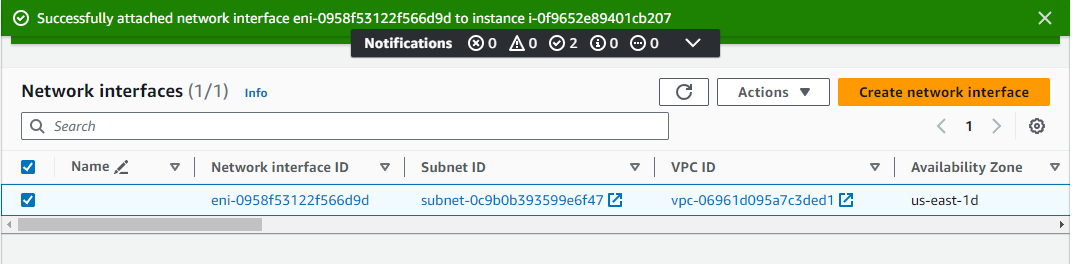
**Console:**

**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.

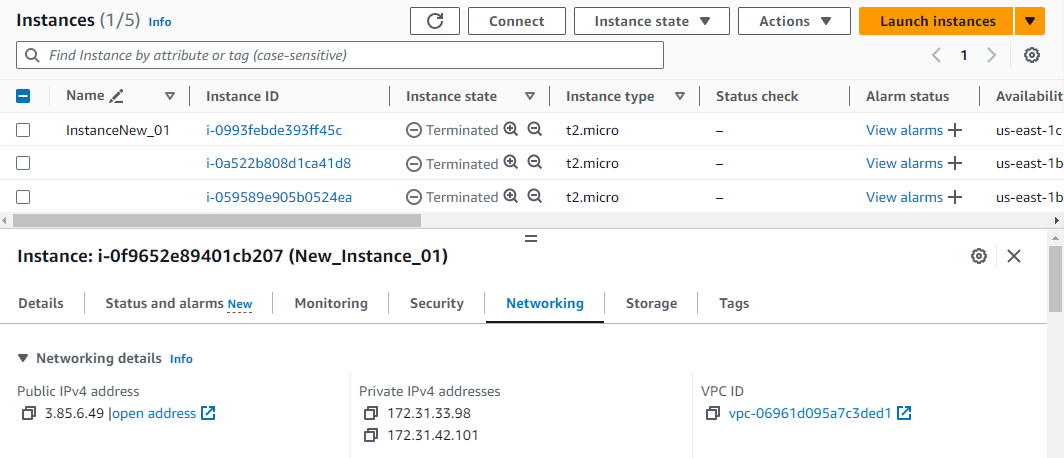


Private IP == 172.31.42.101

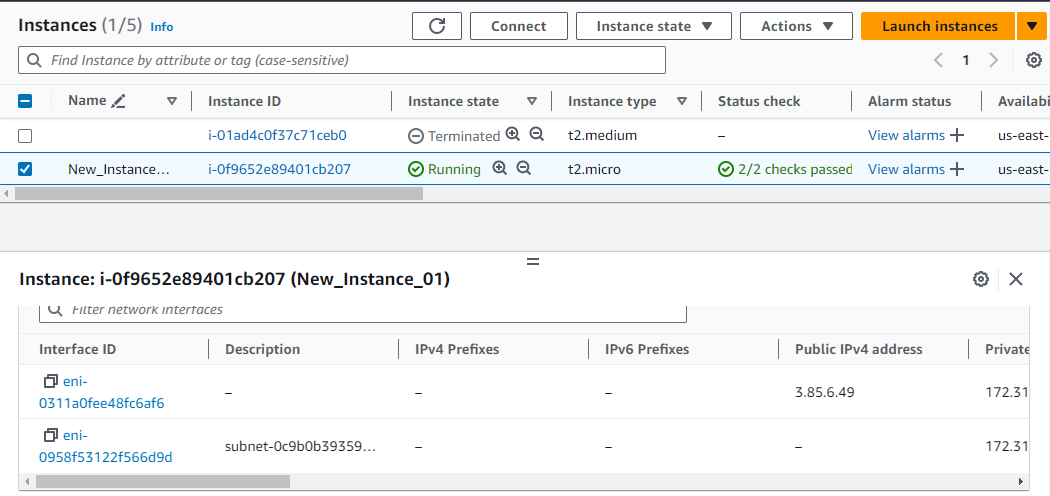
**2. Launch EC2 Instance and Associate NIC:**  
   - Launch a new EC2 instance using the AWS Management Console.  
   - During the instance launch, associate the previously created NIC with the instance.  
   - Confirm that the instance has the expected private IP address.

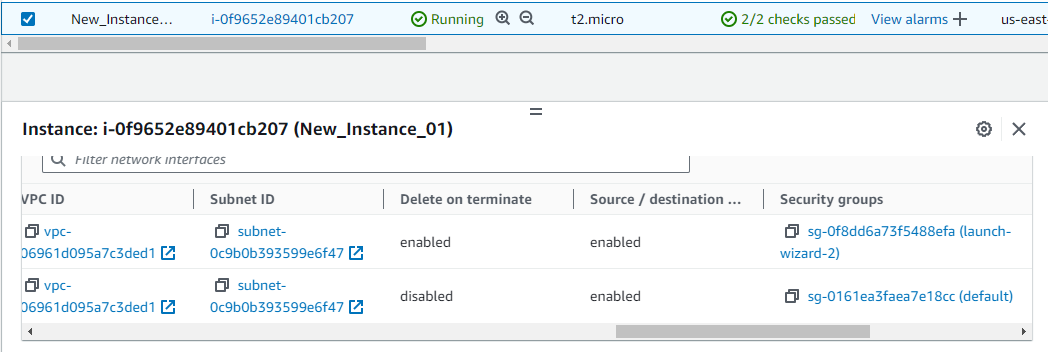


Private IP == 172.31.42.101



**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.





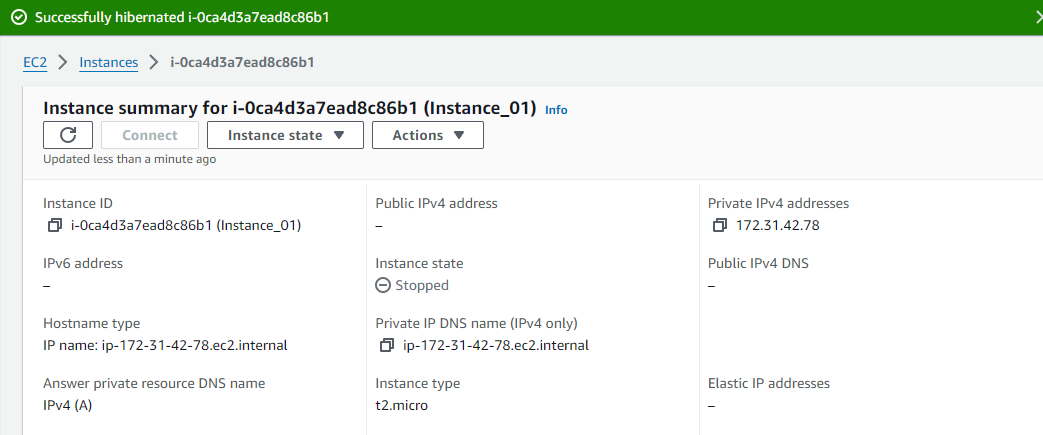
**QUESTION NO: 02**

**Hibernate Instance**

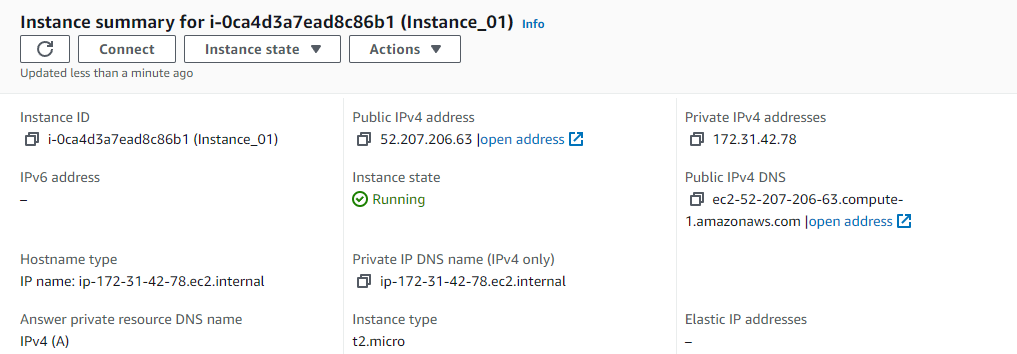
**Console:**

**1. Hibernate EC2 Instance on Console:**  
   - Launch a new EC2 instance using the AWS Management Console.

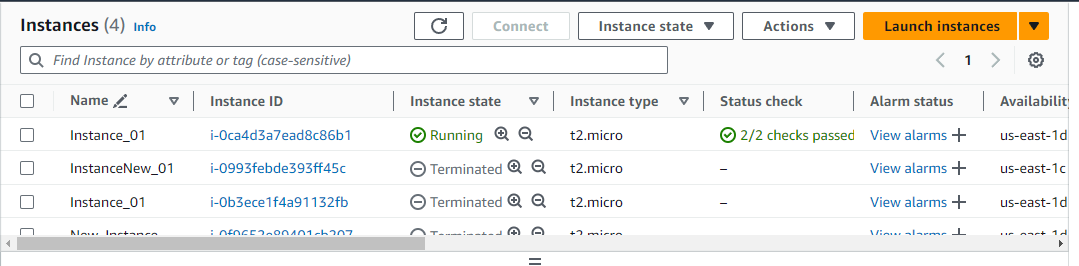
Access the console to hibernate the running instance.  
   - Confirm the status change to "hibernating."

   -

**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.

**CLI:**

**1. Create Network Interface (NIC) using AWS CLI:**  
   - root@DESKTOP-DA2RDP0:~# aws ec2 create-network-interface help

  - Associate the NIC with a security group.  
   - Note down the Private IP address assigned to the NIC.

root@DESKTOP-DA2RDP0:~# aws ec2 create-network-interface --subnet-id subnet-06a0d301bdce67b21 --description "My NIC" --groups sg-013232befb84f43a5

An error occurred (InvalidSubnetID.NotFound) when calling the CreateNetworkInterface operation: The subnet ID 'subnet-06a0d301bdce67b21' does not exist

root@DESKTOP-DA2RDP0:~# aws ec2 create-network-interface --subnet-id subnet-0004fb11f71926cf2 --description "My NIC" --groups sg-0161ea3faea7e18cc

{

"NetworkInterface": {

"AvailabilityZone": "us-east-1a",

"Description": "My NIC",

"Groups": [

{

"GroupName": "default",

"GroupId": "sg-0161ea3faea7e18cc"

}

],

"InterfaceType": "interface",

"Ipv6Addresses": [],

"MacAddress": "02:85:84:4b:d1:8b",

"NetworkInterfaceId": "eni-0892547db3d05defd",

"OwnerId": "112365962865",

"PrivateDnsName": "ip-172-31-1-30.ec2.internal",

"PrivateIpAddress": "172.31.1.30",

"PrivateIpAddresses": [

{

"Primary": true,

"PrivateDnsName": "ip-172-31-1-30.ec2.internal",

"PrivateIpAddress": "172.31.1.30"

}

],

"RequesterManaged": false,

"SourceDestCheck": true,

"Status": "pending",

"SubnetId": "subnet-0004fb11f71926cf2",

"TagSet": [],

"VpcId": "vpc-06961d095a7c3ded1"

}

}

root@DESKTOP-DA2RDP0:~#

root@DESKTOP-DA2RDP0:~#

**2. Launch EC2 Instance and Associate NIC using AWS CLI:**  
   - Use the AWS CLI to launch a new EC2 instance.  
   - During the instance launch, associate the previously created NIC with the instance.  
   - Confirm that the instance has the expected private IP address.

 root@DESKTOP-DA2RDP0:~# aws ec2 attach-network-interface --network-interface-id eni-0892547db3d05defd --instance-id i-0940ab66eba9b80f6 --device-index 1

{

"AttachmentId": "eni-attach-05411f7afcec02026",

"NetworkCardIndex": 0

}

root@DESKTOP-DA2RDP0:~#

**3. Verify Network Interface Configuration using AWS CLI:**  
   - Use the AWS CLI to check the details of the associated NIC and the EC2 instance.  
   - Confirm the network interface configuration.

root@DESKTOP-DA2RDP0:~# aws ec2 describe-network-interfaces --network-interface-ids eni-0892547db3d05defd

{

"NetworkInterfaces": [

{

"Attachment": {

"AttachTime": "2024-01-18T11:37:51.000Z",

"AttachmentId": "eni-attach-05411f7afcec02026",

"DeleteOnTermination": false,

"DeviceIndex": 1,

"NetworkCardIndex": 0,

"InstanceId": "i-0940ab66eba9b80f6",

"InstanceOwnerId": "112365962865",

"Status": "attached"

},

"AvailabilityZone": "us-east-1a",

"Description": "My NIC",

"Groups": [

{

"GroupName": "default",

"GroupId": "sg-0161ea3faea7e18cc"

}

],

"InterfaceType": "interface",

"Ipv6Addresses": [],

"MacAddress": "02:85:84:4b:d1:8b",

"NetworkInterfaceId": "eni-0892547db3d05defd",

"OwnerId": "112365962865",

"PrivateDnsName": "ip-172-31-1-30.ec2.internal",

"PrivateIpAddress": "172.31.1.30",

"PrivateIpAddresses": [

{

"Primary": true,

"PrivateDnsName": "ip-172-31-1-30.ec2.internal",

"PrivateIpAddress": "172.31.1.30"

}

],

"RequesterManaged": false,

"SourceDestCheck": true,

"Status": "in-use",

"SubnetId": "subnet-0004fb11f71926cf2",

"TagSet": [],

"VpcId": "vpc-06961d095a7c3ded1"

}

]

}

root@DESKTOP-DA2RDP0:~#

**CLI:**

**1. Hibernate EC2 Instance using AWS CLI:**  
   - Use the AWS CLI to launch a new EC2 instance.  
   - Use the AWS CLI to hibernate the running instance.  
   - Confirm the status change to "hibernating."

 root@DESKTOP-DA2RDP0:~# aws ec2 run-instances --image-id ami-0005e0cfe09cc9050 --instance-type t2.micro --key-name harsh --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-04e0b75c4188e4582",

"InstanceType": "t2.micro",

"KeyName": "harsh",

"LaunchTime": "2024-01-18T11:48:43.000Z",

"Monitoring": {

"State": "disabled"

},

"Placement": {

"AvailabilityZone": "us-east-1d",

"GroupName": "",

"Tenancy": "default"

},

"PrivateDnsName": "ip-172-31-44-71.ec2.internal",

"PrivateIpAddress": "172.31.44.71",

"ProductCodes": [],

"PublicDnsName": "",

"State": {

"Code": 0,

"Name": "pending"

},

"StateTransitionReason": "",

"SubnetId": "subnet-0c9b0b393599e6f47",

"VpcId": "vpc-06961d095a7c3ded1",

"Architecture": "x86\_64",

"BlockDeviceMappings": [],

"ClientToken": "a5aed4da-28c7-4e52-a4a7-9cf241d5ad34",

"EbsOptimized": false,

"EnaSupport": true,

"Hypervisor": "xen",

"NetworkInterfaces": [

{

"Attachment": {

"AttachTime": "2024-01-18T11:48:43.000Z",

"AttachmentId": "eni-attach-060dd4b1b18d8ae77",

"DeleteOnTermination": true,

"DeviceIndex": 0,

"Status": "attaching",

"NetworkCardIndex": 0

},

"Description": "",

"Groups": [

{

"GroupName": "default",

"GroupId": "sg-0161ea3faea7e18cc"

}

],

"Ipv6Addresses": [],

"MacAddress": "0e:6f:c4:24:c9:39",

"NetworkInterfaceId": "eni-0985a37570dddb4b1",

"OwnerId": "112365962865",

"PrivateDnsName": "ip-172-31-44-71.ec2.internal",

"PrivateIpAddress": "172.31.44.71",

"PrivateIpAddresses": [

{

"Primary": true,

"PrivateDnsName": "ip-172-31-44-71.ec2.internal",

"PrivateIpAddress": "172.31.44.71"

}

],

"SourceDestCheck": true,

"Status": "in-use",

"SubnetId": "subnet-0c9b0b393599e6f47",

"VpcId": "vpc-06961d095a7c3ded1",

"InterfaceType": "interface"

}

],

"RootDeviceName": "/dev/xvda",

"RootDeviceType": "ebs",

"SecurityGroups": [

{

"GroupName": "default",

"GroupId": "sg-0161ea3faea7e18cc"

}

],

"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": "112365962865",

"ReservationId": "r-0a7b7ec836bc90268"

}

root@DESKTOP-DA2RDP0:~#

root@DESKTOP-DA2RDP0:~# aws ec2 stop-instances --instance-ids i-04e0b75c4188e4582 --hibernate

{

"StoppingInstances": [

{

"CurrentState": {

"Code": 64,

"Name": "stopping"

},

"InstanceId": "i-04e0b75c4188e4582",

"PreviousState": {

"Code": 16,

"Name": "running"

}

}

]

}

root@DESKTOP-DA2RDP0:~#

**2. Resume Hibernated EC2 Instance using AWS CLI:**  
   - Use the AWS CLI to resume the hibernated instance.  
   - Confirm the instance state changes to "running."

 root@DESKTOP-DA2RDP0:~# aws ec2 start-instances --instance-ids i-04e0b75c4188e4582

{

"StartingInstances": [

{

"CurrentState": {

"Code": 0,

"Name": "pending"

},

"InstanceId": "i-04e0b75c4188e4582",

"PreviousState": {

"Code": 80,

"Name": "stopped"

}

}

]

}

root@DESKTOP-DA2RDP0:~#

**3. Verify Instance State using AWS CLI:**  
   - Use the AWS CLI to check the instance state and ensure successful hibernation and resumption.

root@DESKTOP-DA2RDP0:~# aws ec2 describe-instances --instance-ids i-04e0b75c4188e4582 --query 'Reservations[\*].Instances[\*].[InstanceId,State.Name]'

[

[

[

"i-04e0b75c4188e4582",

"running"

]

]

]

root@DESKTOP-DA2RDP0:~#