Verify EC2 Instances Do Not Have Public DNS

You are on a Research and Development team at a large enterprise that is exploring the usage of Amazon Web Services. One of these exploratory projects is a "lift and shift", with the goal of migrating a set of virtual machines from an on-premises data center into the AWS cloud. Because of the hybrid environment (on-premises + cloud), your virtual machines require the ability to address each other using the Domain Name System (DNS) via the internet. To fulfill this requirement, you will update VPC (Virtual Private Cloud) configuration settings to support DNS for Amazon EC2.

In this first challenge, you will inspect the current EC2 instances and verify that they do not have public DNS names assigned to them.

1. Wait for the environment to load, then use the **user name**, **Password**, and button to the right of this content to log into the AWS Console.

   Note: It should take about two or three minutes for the environment to load.

2. At the top of the page in the search box, type in and click on **EC2**.

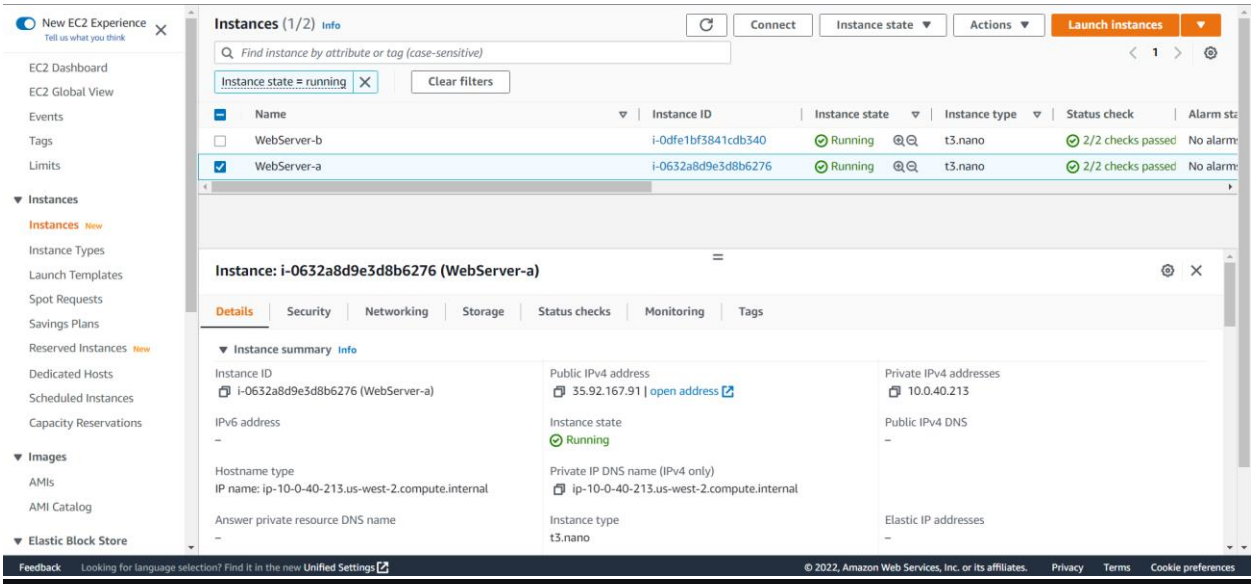
3. At the **EC2 Dashboard**, under the **Resources** section, click on the **Instances (running)** link.

4. On the **Instances** page, you should see two running instances named **WebServer-a** and **WebServer-b**.

5. Check the box next to **WebServer-a**.

On the **Instance** pane below, you should now be on the **Details** tab. Look for the **Public IPv4 DNS** attribute. Notice that the value for this attribute is not set, with a hyphen as a place holder. This means that the instance has not been assigned a publicly accessible DNS name from your VPC.

Congratulations! You've verified that the existing EC2 instances do not have public DNS names. Continue on to the next challenge where you will update the VPC settings to enable public DNS addresses for your EC2 instances.



Update VPC Settings to Enable DNS Services

In the previous challenge, you verified that your EC2 instances are not receiving public DNS names. In this challenge, you'll update your VPC configuration to enable public DNS names for EC2 instances.

1. In the top-left click on **Services,** then in the search box type in and click on **VPC**.
2. On the **VPC Dashboard** page, underneath **Resources by Region**, click the **VPCs** link.
3. Check the box next to the **main** VPC.

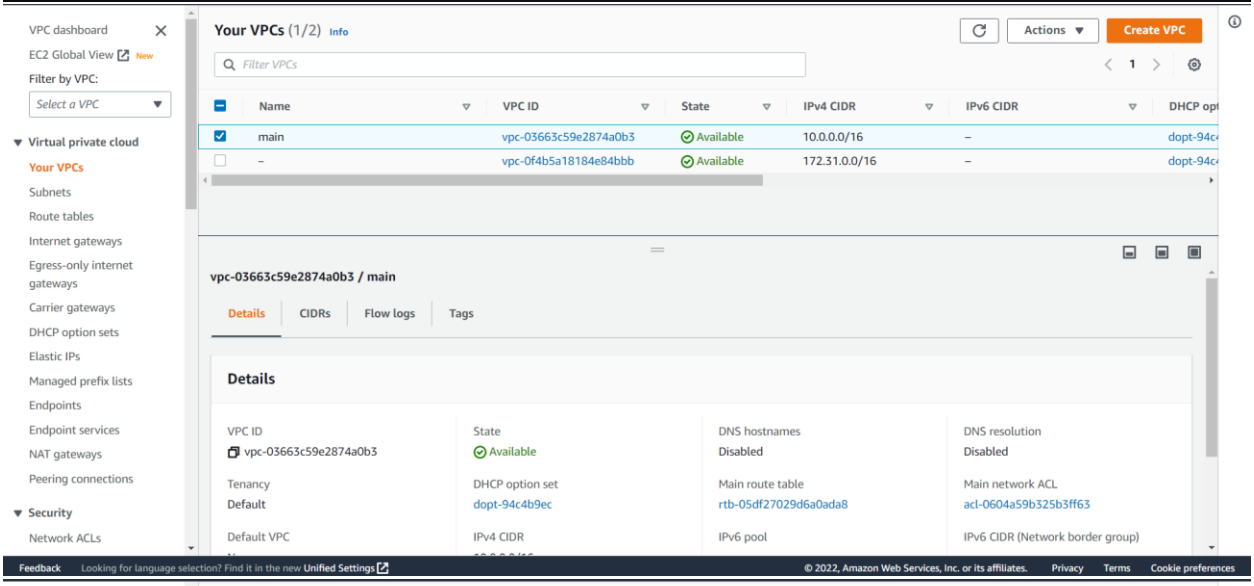
   Note: You will now see details for this VPC. Notice that on the **Details** tab the attributes for **DNS resolution** and **DNS hostnames** are **Disabled**.
4. Near the top-right, click **Actions** > **Edit DNS resolution** .
5. On the **Edit DNS resolution** page, check the box next to **DNS resolution**, and then click the **Save Changes** button.

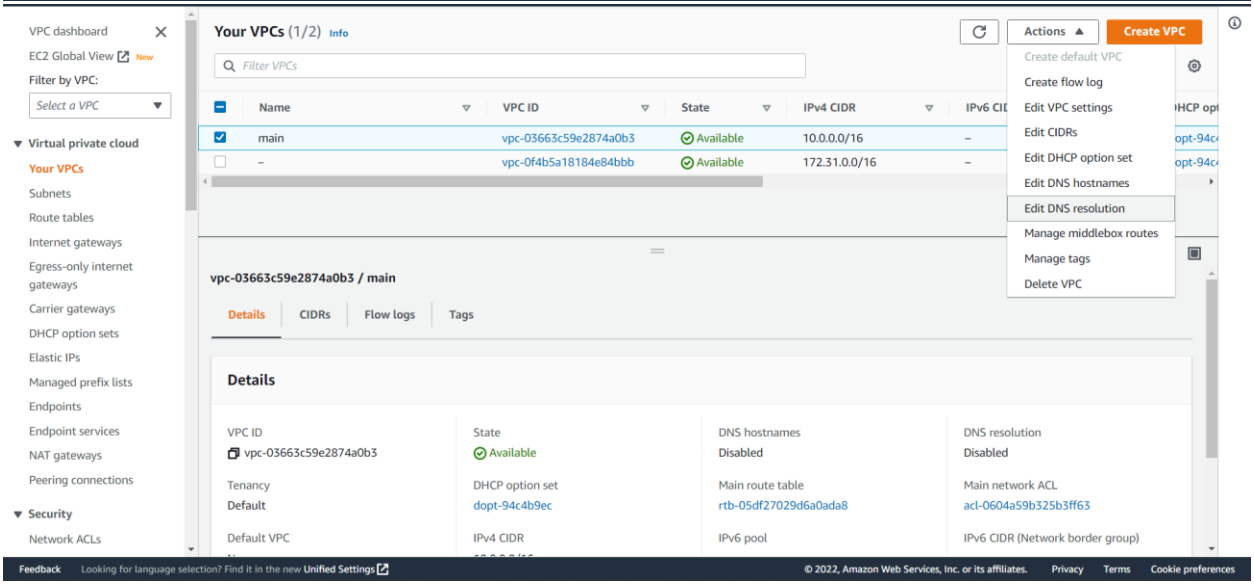
   Note: You should receive a confirmation in a green box that says **DNS resolution successfully updated.**
6. Click **Actions** > **Edit DNS hostnames**.

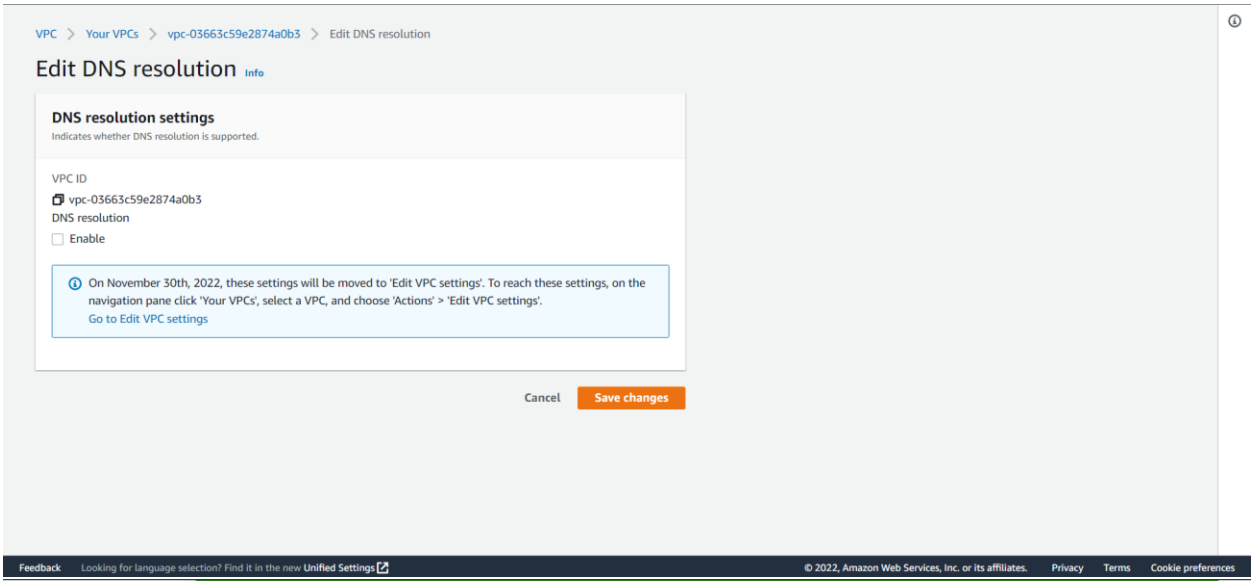
7. Check the box next to **DNS hostnames** to enable it, and then click the **Save Changes** button.

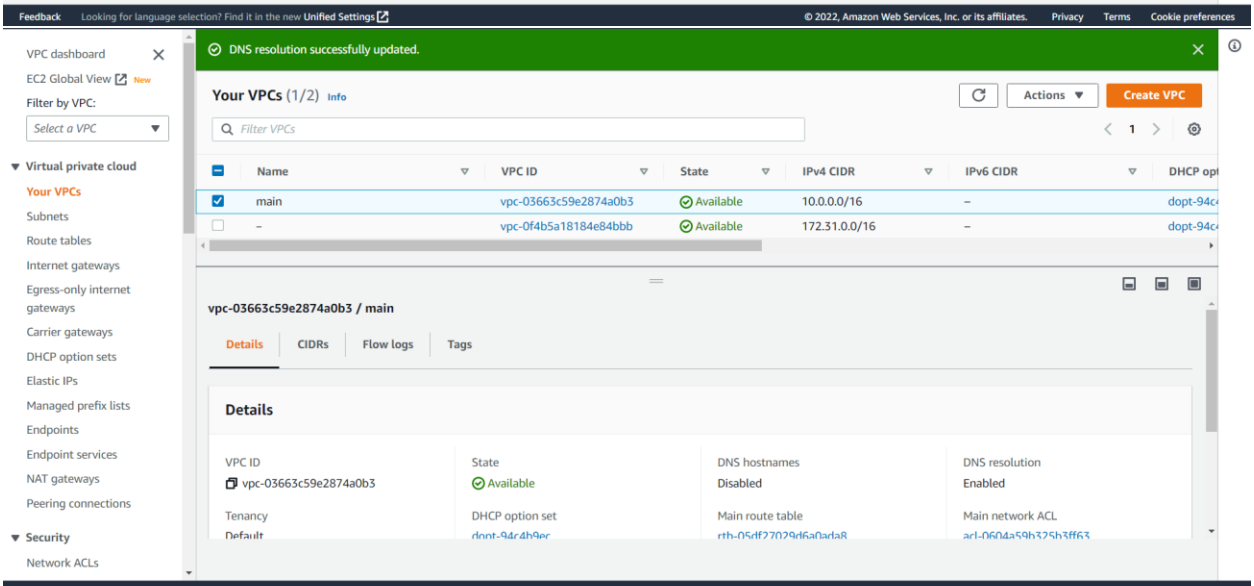
Notice that the VPC now shows both the **DNS hostnames** and **DNS resolution** as **Enabled**.

Congratulations! You have successfully edited your VPC configuration to implement DNS services for EC2.






VPC > Your VPCs > vpc-03663c59e2874a0b3 > Edit DNS resolution
Edit DNS resolution Info
DNS resolution settings
Indicates whether DNS resolution is supported.
VPC ID
vpc-03663c59e2874a0b3
DNS resolution
Enable
On November 30th, 2022, these settings will be moved to 'Edit VPC settings'. To reach these settings, on the navigation pane click 'Your VPCs', select a VPC, and choose 'Actions' > 'Edit VPC settings'.
Go to Edit VPC settings
Cancel
Save changes


Feedback
Looking for language selection? Find it in the new Unified Settings
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Privacy
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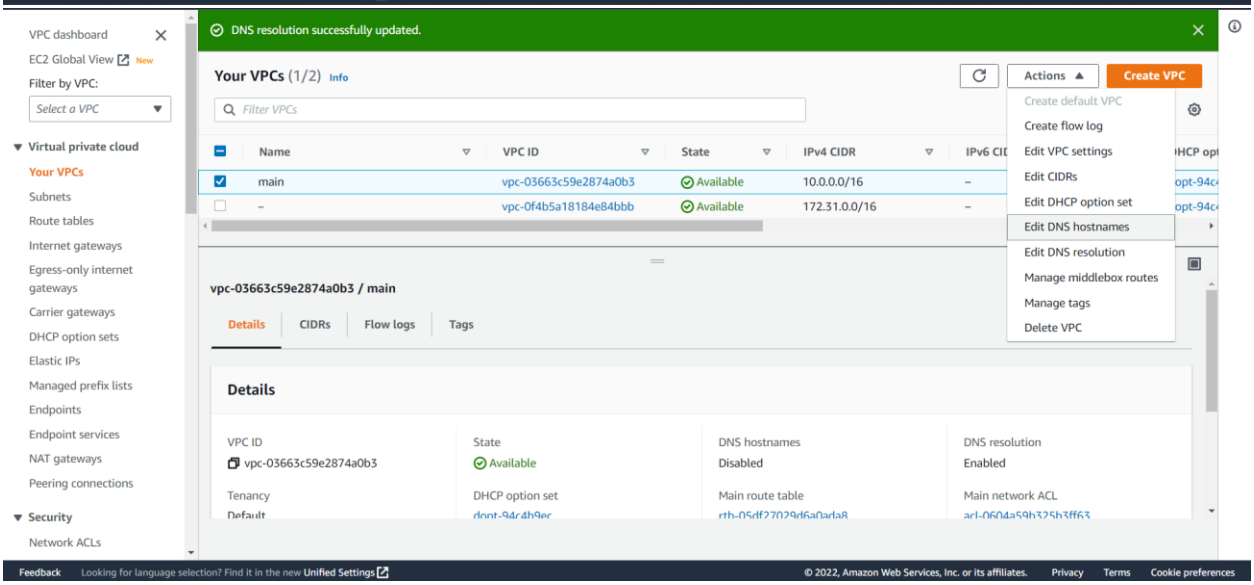
VPC dashboard
EC2 Global View
Filter by VPC:
Select a VPC
Virtual private cloud
Your VPCs
Subnets
Route tables
Internet gateways
Egress-only internet gateways
Carrier gateways
DHCP option sets
Elastic IPs
Managed prefix lists
Endpoints
Endpoint services
NAT gateways
Peering connections
Security
Network ACLs
DNS resolution successfully updated.
Your VPCs (1/2) Info
Actions
Create VPC
Filter VPCs
Name
VPC ID
State
IPv4 CIDR
IPv6 CIDR
main
vpc-03663c59e2874a0b3
Available
10.0.0.0/16
vpc-0f4b5a18184e84bbb
172.31.0.0/16
vpc-03663c59e2874a0b3 / main
Details
CIDRs
Flow logs
Tags
VPC ID
State
DNS hostnames
Disabled
DNS resolution
Enabled
Tenancy
Default
DHCP option set
Main route table
Main network ACL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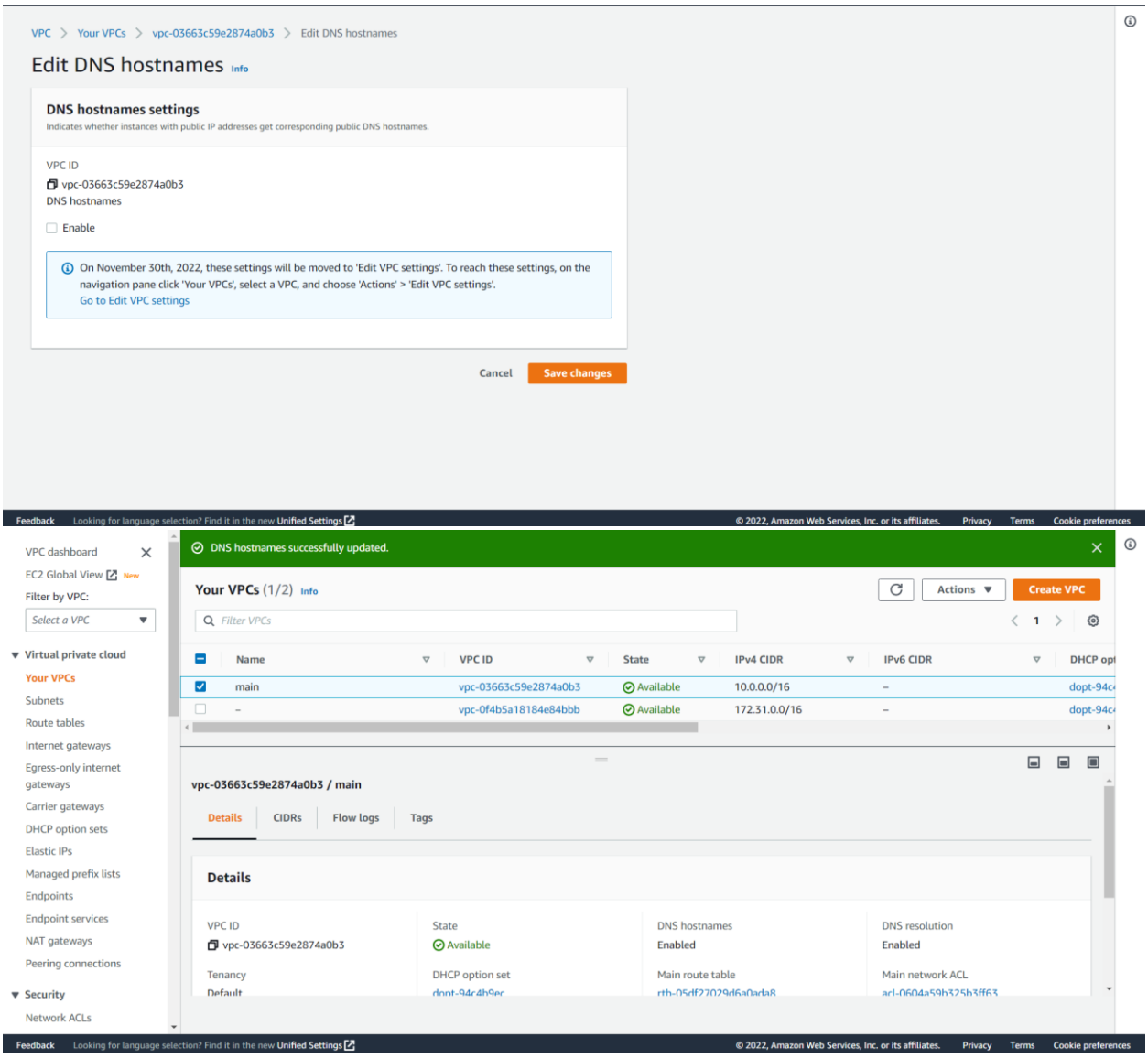
Endpoint services
NAT gateways
Peering connections
Security
Network ACLs
DNS resolution successfully updated.
Your VPCs (1/2) Info
Actions
Create VPC
Create default VPC
Create flow log
Edit VPC settings
Edit CIDRs
Edit DHCP option set
Edit DNS hostnames
Edit DNS resolution
Manage middlebox routes
Manage tags
Delete VPC
Filter VPCs
Name
VPC ID
State
IPv4 CIDR
main
vpc-03663c59e2874a0b3
Available
10.0.0.0/16
vpc-0f4b5a18184e84bbb
172.31.0.0/16
vpc-03663c59e2874a0b3 / main
Details
CIDRs
Flow logs
Tags
VPC ID
State
DNS hostnames
Disabled
DNS resolution
Enabled
Tenancy
Default
DHCP option set
Main route table
Main network ACL


VPC > Your VPCs > vpc-03663c59e2874a0b3 > Edit DNS hostnames
Edit DNS hostnames Info
DNS hostnames settings
Indicates whether instances with public IP addresses get corresponding public DNS hostnames.
VPC ID
vpc-03663c59e2874a0b3
DNS hostnames
Enable
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Available
10.0.0.0/16
dopt-94c
vpc-0f4b5a18184e84bbb
Available
172.31.0.0/16
dopt-94c
vpc-03663c59e2874a0b3 / main
Details
CIDRs
Flow logs
Tags
Details
VPC ID
vpc-03663c59e2874a0b3
State
Available
DNS hostnames
Enabled
DNS resolution
Enabled
Tenancy
Default
DHCP option set
dopt-94c4b9ec
Main route table
rtb-05df27029d6a0ada8
Main network ACL
acl-0604a59b325b3ff63
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Verify EC2 Instances Have Public DNS

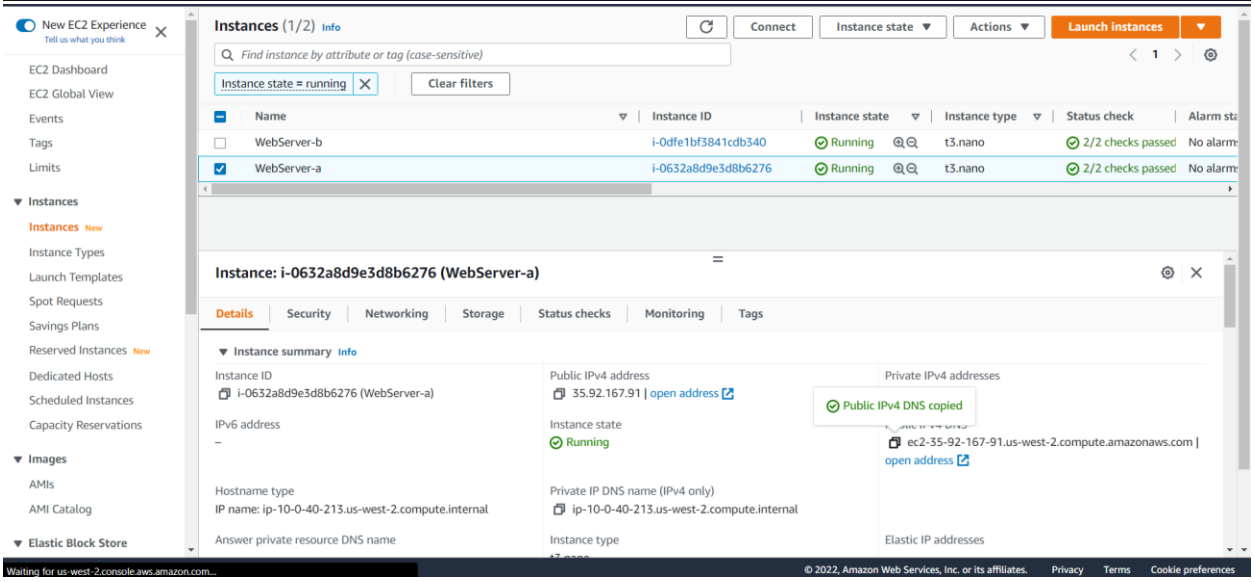
Now that your VPC has been updated to support public DNS for EC2 instances, you will verify that your running EC2 instances now have DNS records assigned to them.

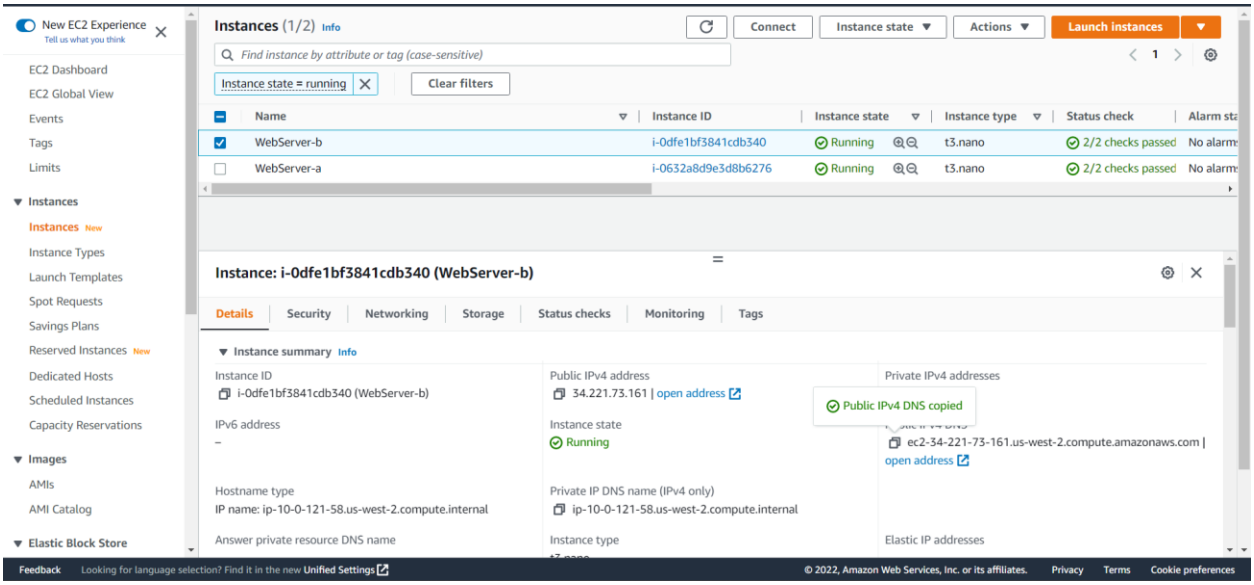
1. At the top of the page in the search box, type in and click on **EC2**.
2. Under the **Resources** section, click the **Instances (running)** link.
3. Check the box next to **WebServer-a**.

On the Instance pane below, you should now be on the **Details** tab.

Under the **Instance summary** section, look for the **Public IPv4 DNS** attribute. Notice that the value for this attribute is now set, with a value like **ec2-<unique-ip-address>.us-west-2.compute.amazonaws.com**. This means that the instance has been assigned a publicly accessible DNS name from your VPC. The EC2 instance can now be addressed over the internet using this DNS name.

Congratulations! With your newly enabled VPC DNS settings, you've verified that the existing EC2 instances now have public DNS names. Your lift and shift experiment into AWS can now proceed as planned, and your hybrid environment can now communicate with your Amazon EC2 hosts using public DNS.





Written Steps :-

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