

Lab Assignment-5

ECSE304L: Cloud Computing

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Lab Scenario 1: Apply Network ACL on Subnet 1 only and Test its working.

Lab Scenario 2: Access AWS Resource Using VPC EndPoints.

Lab Scenario 1

The screenshot shows the AWS VPC Management Console interface. In the top navigation bar, there are tabs for 'My Classrooms', 'Workbench', and 'VPC Management Console'. Below the tabs, there's a search bar and a user profile section. On the left, a sidebar menu lists various VPC-related services like 'New VPC Experience', 'VPC Dashboard', 'Filter by VPC', 'Select a VPC', 'Your VPCs' (which is selected), 'Subnets', 'Route Tables', 'Internet Gateways', 'Egress Only Internet Gateways', 'Carrier Gateways', 'DHCP Options Sets', 'Elastic IPs', 'Managed Prefix Lists', 'Endpoints', 'Endpoint Services', 'NAT Gateways', and 'Peering Connections'. Under 'SECURITY', there are 'Network ACLs' (selected) and 'Security Groups'. At the bottom, there's a taskbar with icons for feedback, language selection (English (US)), a search bar, and system status indicators.

In the main content area, a green success message box says: "You successfully created vpc-03a9ee51ea2c7b8ef / E18CSE187 VPC 05". Below this, the 'Details' tab of the VPC configuration page is shown. The VPC details are as follows:

VPC ID	State	DNS hostnames	DNS resolution
vpc-03a9ee51ea2c7b8ef	Available	Disabled	Enabled
Tenancy	DHCP options set	Main route table	Main network ACL
Default	dopt-6baaea11	rtb-Od9487a840faf4383	acl-024ee137e2325a791
Default VPC	IPv4 CIDR	IPv6 pool	IPv6 CIDR (Network border group)
No	10.0.0.0/16	-	-
Owner ID			
143414798243			

My Classrooms Workbench Subnets | VPC Management Console

console.aws.amazon.com/vpc/home?region=us-east-1#subnetsSubnetId=subnet-0d45deb8181698a73

New VPC Experience Learn more

VPC Dashboard Filter by VPC: Select a VPC

Subnets

- Route Tables
- Internet Gateways
- Egress Only Internet Gateways
- Carrier Gateways
- DHCP Options Sets
- Elastic IPs
- Managed Prefix Lists
- Endpoints
- Endpoint Services
- NAT Gateways
- Peering Connections

SECURITY

- Network ACLs
- Security Groups

Feedback English (US) Type here to search

Subnets (1) Info Actions Create subnet

Filter subnets

Subnet ID: subnet-0d45deb8181698a73 X Clear filters

Name	Subnet ID	State	VPC	IPv4 CIDR	IPv6 CIDR
E18CSE187 Public	subnet-0d45deb8181698a73	Available	vpc-03a9ee51ea2c7b8ef E18...	10.0.0.0/24	-

Select a subnet

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My Classrooms Workbench VPC Management Console

console.aws.amazon.com/vpc/home?region=us-east-1#InternetGateway:id=igw-0d41d28eb8473d618

New VPC Experience Learn more

VPC Dashboard Filter by VPC: Select a VPC

Internet Gateways

- Egress Only Internet Gateways
- Carrier Gateways
- DHCP Options Sets
- Elastic IPs
- Managed Prefix Lists
- Endpoints
- Endpoint Services
- NAT Gateways
- Peering Connections

SECURITY

- Network ACLs
- Security Groups

Feedback English (US) Type here to search

The following internet gateway was created: igw-0d41d28eb8473d618 . You can now attach to a VPC to enable the VPC to communicate with the internet. Attach to a VPC

VPC > Internet gateways > igw-0d41d28eb8473d618

igw-0d41d28eb8473d618 / IGW 5

Actions

Details Info

Internet gateway ID	igw-0d41d28eb8473d618	State	Detached	VPC ID	-	Owner	143414798243
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Tags

Key	Value
Name	IGW 5

Manage tags

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My Classrooms Workbench VPC Management Console

console.aws.amazon.com/vpc/home?region=us-east-1#InternetGateway:id=igw-0d41d28eb8473d618 | N. Virginia Support

New VPC Experience Learn more

VPC Dashboard Filter by VPC: Select a VPC

VIRTUAL PRIVATE CLOUD Your VPCs Subnets Route Tables

Internet Gateways Egress Only Internet Gateways Carrier Gateways DHCP Options Sets Elastic IPs Managed Prefix Lists Endpoints Endpoint Services NAT Gateways Peering Connections

SECURITY Network ACLs Security Groups

Feedback English (US) Type here to search

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Internet gateway igw-0d41d28eb8473d618 successfully attached to vpc-03a9ee51ea2c7b8ef

VPC > Internet gateways > igw-0d41d28eb8473d618

igw-0d41d28eb8473d618 / IGW 5

Details Info

Internet gateway ID igw-0d41d28eb8473d618	State Attached	VPC ID vpc-03a9ee51ea2c7b8ef E18CSE187 VPC 05	Owner 143414798243
--	-------------------	---	-----------------------

Tags

Key	Value
Name	IGW 5

Manage tags

< 1 >

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My Classrooms Workbench Route Tables | VPC Management

console.aws.amazon.com/vpc/home?region=us-east-1#RouteTables:sort=routeTableId | N. Virginia Support

New VPC Experience Learn more

VPC Dashboard Filter by VPC: Select a VPC

VIRTUAL PRIVATE CLOUD Your VPCs Subnets

Route Tables Internet Gateways Egress Only Internet Gateways Carrier Gateways DHCP Options Sets Elastic IPs Managed Prefix Lists Endpoints Endpoint Services NAT Gateways Peering Connections

SECURITY Network ACLs Security Groups

Feedback English (US) Type here to search

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Create route table Actions

Filter by tags and attributes or search by keyword

Name	Route Table ID	Explicit subnet association	Edge associations	Main	VPC ID	Owner
E18CSE18...	rtb-05a3b640da88c5e38	-	-	No	vpc-03a9ee51ea2c7b8ef ...	143414798243
	rtb-0d9487a840fa4383	-	-	Yes	vpc-03a9ee51ea2c7b8ef ...	143414798243
	rtb-2349645d	-	-	Yes	vpc-1ef35563	143414798243

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My Classrooms Workbench Route Tables | VPC Management

console.aws.amazon.com/vpc/home?region=us-east-1#RouteTables:sort=routeTableId

New VPC Experience Learn more

VPC Dashboard Filter by VPC: Select a VPC

Route Tables

- Internet Gateways
- Egress Only Internet Gateways
- Carrier Gateways
- DHCP Options Sets
- Elastic IPs
- Managed Prefix Lists
- Endpoints
- Endpoint Services
- NAT Gateways
- Peering Connections

SECURITY

- Network ACLs
- Security Groups

Feedback English (US) Type here to search

Route Table: rtb-05a3b640da88c5e38

Summary Routes Subnet Associations Edge Associations Route Propagation Tags

Edit routes View All routes

Destination	Target	Status	Propagated
10.0.0.0/16	local	active	No
0.0.0.0/0	igw-0d41d28eb8473d618	active	No

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My Classrooms Workbench Route Tables | VPC Management

console.aws.amazon.com/vpc/home?region=us-east-1#RouteTables:sort=routeTableId

New VPC Experience Learn more

VPC Dashboard Filter by VPC: Select a VPC

Route Tables

- Internet Gateways
- Egress Only Internet Gateways
- Carrier Gateways
- DHCP Options Sets
- Elastic IPs
- Managed Prefix Lists
- Endpoints
- Endpoint Services
- NAT Gateways
- Peering Connections

SECURITY

- Network ACLs
- Security Groups

Feedback English (US) Type here to search

Route Table: rtb-05a3b640da88c5e38

Summary Routes Subnet Associations Edge Associations Route Propagation Tags

Edit subnet associations

Subnet ID	IPv4 CIDR	IPv6 CIDR
subnet-0d45deb8181698a...	10.0.0.0/24	-

The following subnets have not been explicitly associated with any route tables and are therefore associated with the main route table:

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My Classrooms Workbench Instances | EC2 Management Con...

console.aws.amazon.com/ec2/v2/home?region=us-east-1#instances:

vocstartsoft/user1199245=TP6145@bennett.edu.in @ 1434-1479-8243 N. Virginia Support

New EC2 Experience Learn more

EC2 Dashboard New

Events

Tags

Limits

Instances Instances New

Instance Types

Launch Templates

Spot Requests

Savings Plans

Reserved Instances

Dedicated Hosts

Scheduled Instances

Capacity Reservations

Images AMIs

Elastic Block Store Volumes

Feedback English (US)

Type here to search

Instances (1/1) Info

Filter instances

Name Instance ID Instance state Instance type Status check Alarm status Availability Zone Public IPv4 DNS

E18CSE187 L... i-0227cd9e457969e1f Running t2.micro Initializing 1/1 h... us-east-1a -

Instance: i-0227cd9e457969e1f (E18CSE187 Lab5 CC)

Details Security Networking Storage Status checks Monitoring Tags

Instance summary Info

Instance ID	Public IPv4 address	Private IPv4 addresses
i-0227cd9e457969e1f (E18CSE187 Lab5 CC)	54.172.186.48 open address	10.0.0.218
Instance state	Running	Private IPv4 DNS
Instance type	t2.micro	ip-10-0-0-218.ec2.internal
	Elastic IP addresses	VPC ID
	-	vpc-03a9ee51ea2c7b8ef (E18CSE187 VPC 05)

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07:32 PM 17-02-2021

My Classrooms Workbench Network ACLs | VPC Management ...

console.aws.amazon.com/vpc/home?region=us-east-1#acl:

vocstartsoft/user1199245=TP6145@bennett.edu.in @ 1434-1479-8243 N. Virginia Support

New VPC Experience Learn more

Route Tables

Internet Gateways

Egress Only Internet Gateways

Carrier Gateways

DHCP Options Sets

Elastic IPs

Managed Prefix Lists

Endpoints

Endpoint Services

NAT Gateways

Peering Connections

SECURITY Network ACLs

Network Groups

REACHABILITY Reachability Analyzer

AWS NETWORK FIREWALL Firewalls

Firewall policies

Network Firewall rule

Feedback English (US)

Type here to search

You successfully created acl-021bcfdb155301b4 / Lab 5 E18CSE187.

Network ACLs (3) Info

Filter network ACLs

Name	Network ACL ID	Associated with	Default	VPC ID
Lab 5 E18CSE187	acl-021bcfdb155301b4	-	No	vpc-03a9ee51ea2c7b8ef / E18CSE187
-	acl-024ee137e2325a791	subnet-0d45deb8181698a73 / E18CSE187 Pu...	Yes	vpc-03a9ee51ea2c7b8ef / E18CSE187
-	acl-cd838db0	6 Subnets	Yes	vpc-1ef35563

Select a network ACL

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07:31 PM 17-02-2021

My Classrooms Workbench Network ACLs | VPC Management

console.aws.amazon.com/vpc/home?region=us-east-1#acl:

New VPC Experience Learn more

VIRTUAL PRIVATE CLOUD Your VPCs Subnets Route Tables Internet Gateways Egress Only Internet Gateways Carrier Gateways DHCP Options Sets Elastic IPs Managed Prefix Lists Endpoints Endpoint Services NAT Gateways Peering Connections

SECURITY Network ACLs Security Groups

REACHABILITY Reachability Analyzer

AWS NETWORK FIREWALL

Feedback English (US) Type here to search

You have successfully updated subnet associations for acl-021bcfcdb155301b4 / Lab 5 E18CSE187.

Details

Network ACLs (1/3) Info

Filter network ACLs

Name	Network ACL ID	Associated with	Default	VPC ID
Lab 5 E18CSE187	acl-021bcfcdb155301b4	subnet-0d45deb8181698a73 / E18CSE187 P...	No	vpc-03a9ee51ea2c7b8ef / E18CSE187
-	acl-024ee137e2325a791	-	Yes	vpc-03a9ee51ea2c7b8ef / E18CSE187
-	acl-cd838db0	6 Subnets	Yes	vpc-1ef35563

acl-021bcfcdb155301b4 / Lab 5 E18CSE187

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The screenshot shows the AWS VPC Network ACLs management interface. A success message at the top indicates that subnet associations were updated for the ACL 'acl-021bcfcdb155301b4' under 'Lab 5 E18CSE187'. Below this, a table lists three Network ACLs: 'Lab 5 E18CSE187' (selected), 'acl-024ee137e2325a791' (with a minus sign icon), and 'acl-cd838db0' (with a minus sign icon). The table includes columns for Name, Network ACL ID, Associated with, Default status, and VPC ID. The 'Associated with' column shows the subnet ranges and VPC IDs for each ACL. The bottom section shows the details for 'acl-021bcfcdb155301b4 / Lab 5 E18CSE187', with tabs for Details, Inbound rules, Outbound rules, Subnet associations, and Tags. The Inbound rules tab is selected, displaying two rules: Rule 100 (RDP 3389, TCP 6, Port range 3389, Source 0.0.0.0/0, Allow) and a wildcard rule (All traffic, All, All, 0.0.0.0/0, Deny). The status bar at the bottom shows the date and time as 07:34 PM 17-02-2021.

My Classrooms Workbench Network ACLs | VPC Management

console.aws.amazon.com/vpc/home?region=us-east-1#acl:

New VPC Experience Learn more

VPC Dashboard Filter by VPC: Select a VPC

VIRTUAL PRIVATE CLOUD Your VPCs Subnets Route Tables Internet Gateways Egress Only Internet Gateways Carrier Gateways DHCP Options Sets Elastic IPs Managed Prefix Lists Endpoints Endpoint Services NAT Gateways Peering Connections

SECURITY Network ACLs Security Groups

Feedback English (US) Type here to search

Network ACLs (1/3) Info

Filter network ACLs

Name	Network ACL ID	Associated with	Default	VPC ID
Lab 5 E18CSE187	acl-021bcfcdb155301b4	subnet-0d45deb8181698a73 / E18CSE187 P...	No	vpc-03a9ee51ea2c7b8ef / E18CSE187
-	acl-024ee137e2325a791	-	Yes	vpc-03a9ee51ea2c7b8ef / E18CSE187
-	acl-cd838db0	6 Subnets	Yes	vpc-1ef35563

acl-021bcfcdb155301b4 / Lab 5 E18CSE187

Details Inbound rules Outbound rules Subnet associations Tags

Inbound rules (2)

Filter inbound rules

Rule number	Type	Protocol	Port range	Source	Allow/Deny
100	RDP (3389)	TCP (6)	3389	0.0.0.0/0	Allow
*	All traffic	All	All	0.0.0.0/0	Deny

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The screenshot shows the same AWS VPC Network ACLs management interface as the previous one, but with a different focus. The 'Inbound rules' tab is now selected, displaying two rules. Rule 100 is for RDP (TCP port 3389) and is set to 'Allow' from 0.0.0.0/0. There is also a wildcard rule for all traffic ('All traffic') which is set to 'Deny' from 0.0.0.0/0. The rest of the interface, including the table of ACLs and the status bar, remains identical to the first screenshot.

Screenshot of the AWS VPC Management console showing Network ACLs. The left sidebar shows various VPC-related services. The main table lists two Network ACLs: 'Lab 5 E18CSE187' and 'acl-024ee137e2325a791'. The 'Outbound rules' tab is selected for the first one, showing three rules: Rule 100 (Allow HTTP 80), Rule 200 (Allow HTTPS 443), and a catch-all rule for all traffic.

Name	Network ACL ID	Associated with	Default	VPC ID
Lab 5 E18CSE187	acl-021bcfcdb155301b4	subnet-0d45deb8181698a73 / E18CSE187 Pu...	No	vpc-03a9ee51ea2c7b8ef / E18CSE187
	acl-024ee137e2325a791	-	Yes	vpc-03a9ee51ea2c7b8ef / E18CSE187

Outbound rules (3)

Rule number	Type	Protocol	Port range	Destination	Allow/Deny
100	HTTP (80)	TCP (6)	80	0.0.0.0/0	Allow
200	HTTPS (443)	TCP (6)	443	0.0.0.0/0	Allow
*	All traffic	All	All	0.0.0.0/0	Deny

Screenshot of the AWS EC2 Instances page for instance i-0227cd9e457969e1f. A modal window titled 'Connect to instance' is open, showing the 'RDP client' tab. It displays connection details: Public IP 54.172.186.48, User name Administrator, and a copied password. A 'Remote Desktop Connection' error dialog is overlaid, stating that Remote Desktop can't connect to the remote computer for one of these reasons: 1) Remote access to the server is not enabled, 2) The remote computer is turned off, 3) The remote computer is not available on the network. The 'OK' button is visible at the bottom of the dialog.

My Classrooms Workbench Network ACLs | VPC Management

console.aws.amazon.com/vpc/home?region=us-east-1#acl: vocstartsoft/user1199245=TP6145@bennett.edu.in @ 1434-1479-8243 N. Virginia Support

New VPC Experience Learn more

VPC Dashboard Filter by VPC: Select a VPC

VIRTUAL PRIVATE CLOUD

- Your VPCs Subnets Route Tables Internet Gateways Egress Only Internet Gateways Carrier Gateways DHCP Options Sets Elastic IPs Managed Prefix Lists Endpoints Endpoint Services NAT Gateways Peering Connections

SECURITY

- Network ACLs** Security Groups

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You have successfully updated outbound rules for acl-021bcfcdb155301b4 / Lab 5 E18CSE187

Network ACLs (1/3) Info

Name: Lab 5 E18CSE187 Network ACL ID: acl-021bcfcdb155301b4 Associated with: subnet-0d45deb8181698a73 / E18CSE187 P... Default: No VPC ID: vpc-03a9ee51ea2c7b8ef / E18CSE187

Outbound rules (4)

Rule number	Type	Protocol	Port range	Destination	Allow/Deny
100	HTTP (80)	TCP (6)	80	0.0.0.0/0	Allow
200	HTTPS (443)	TCP (6)	443	0.0.0.0/0	Allow
250	Custom TCP	TCP (6)	1024 - 65535	0.0.0.0/0	Allow
*	All traffic	All	All	0.0.0.0/0	Deny

Edit outbound rules

My Classrooms Workbench Connect to Instance | EC2 Manager

console.aws.amazon.com/ec2/v2/home?region=us-east-1#ConnectToInstance:instanceId=i-0227cd9e457969e1f vocstartsoft/user1199245=TP6145@bennett.edu.in @ 1434-1479-8243 N. Virginia Support

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EC2 Instances i-0227cd9e457969e1f Connect to instance

Connect to instance Info

Connect to your instance i-0227cd9e457969e1f (E18CSE187 Lab5 CC) using any of these options

Session Manager RDP client

You can connect to your Windows instance using a remote desktop client of your choice, and by downloading running the RDP shortcut file below:

Download remote desktop file

When prompted, connect to your instance using the following details:

Public IP: 54.172.186.48 User name: Administrator Password: u@hTj3zVjZaEfHXT=ysron()\$UXM;b

If you've joined your instance to a directory, you can use your directory credentials to connect to your instance.

E18CSE187 Lab5 CC (2) - 54.172.186.48 - Remote Desktop Connection

Recycle Bin

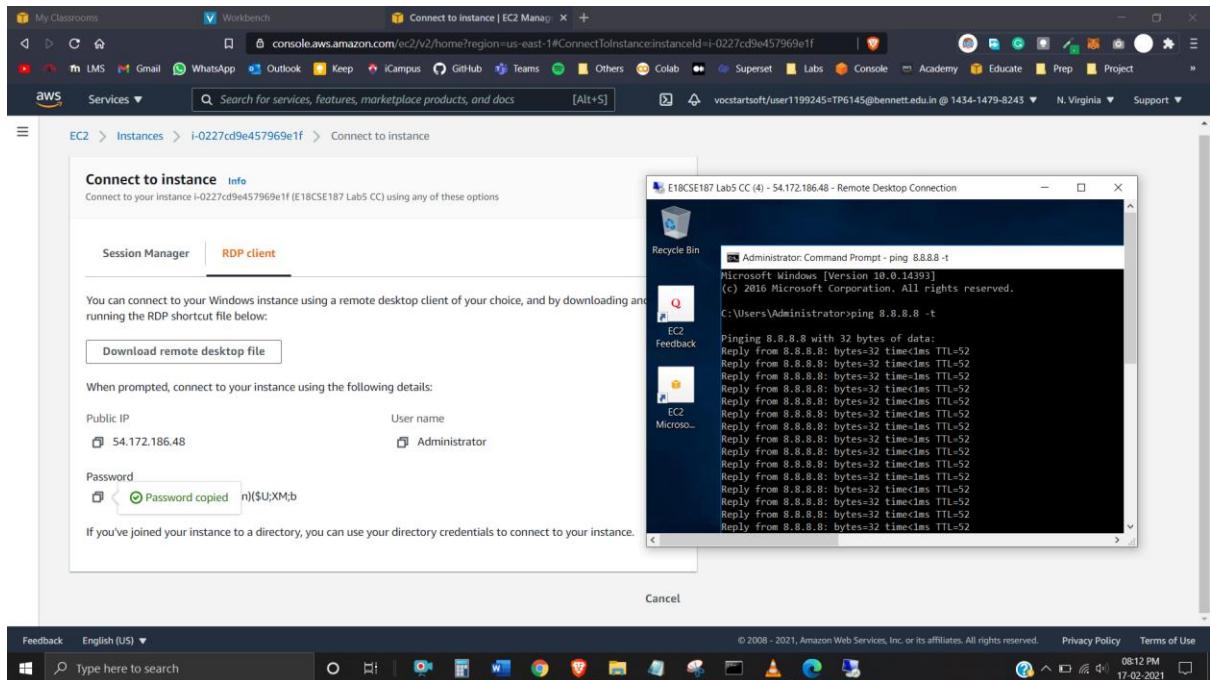
Q EC2 Feedback

EC2 Microsoft...

Cancel

Screenshot of the AWS Lambda console showing the creation of a new function named "HelloWorld". The "Code" tab is selected, showing the "Hello World" code in Python. The "Test" tab shows a successful test execution with the output "Hello World! 65". The "Logs" tab shows the log stream for the function.

Screenshot of the AWS Lambda console showing the creation of a new function named "HelloWorld". The "Code" tab is selected, showing the "Hello World" code in Python. The "Test" tab shows a successful test execution with the output "Hello World! 65". The "Logs" tab shows the log stream for the function.



Lab Scenario 2

The screenshot shows the AWS VPC Management Console. The left sidebar navigation menu includes "Your VPCs", "VPC Dashboard", "Filter by VPC", "Select a VPC", "VIRTUAL PRIVATE CLOUD", "Your VPCs", "Subnets", "Route Tables", "Internet Gateways", "Egress Only Internet Gateways", "Carrier Gateways", "DHCP Options Sets", "Elastic IPs", "Managed Prefix Lists", "Endpoints", "Endpoint Services", "NAT Gateways", and "Peering Connections".

The main content area displays a table titled "Your VPCs (1/2) Info" with one item listed:

Name	VPC ID	State	IPv4 CIDR	IPv6 CIDR (Network border group)
VPC 01	vpc-0a93667585b226db3	Available	10.0.0.0/16	-

Below the table, a detailed view for "vpc-0a93667585b226db3 / VPC 01" is shown with tabs for "Details", "CIDRs", "Flow logs", and "Tags".

Internet gateways | VPC Manager

console.aws.amazon.com/vpc/home?region=us-east-1#igws

New VPC Experience Tell us what you think

VPC Dashboard New

Filter by VPC: Select a VPC

VIRTUAL PRIVATE CLOUD

Your VPCs New

Subnets New

Route Tables

Internet Gateways New

Egress Only Internet Gateways New

Carrier Gateways New

DHCP Options Sets New

Elastic IPs New

Managed Prefix Lists New

Endpoints

Endpoint Services

NAT Gateways New

Feedback English (US) Type here to search Actions Create internet gateway

Internet gateways (1/2) Info Filter internet gateways

Name	Internet gateway ID	State	VPC ID	Owner
igw-03eedf78	igw-03eedf78	Attached	vpc-58448625	634102821134
<input checked="" type="checkbox"/> IGW 1	igw-0c28d3f9f7e9448f5	Attached	vpc-0a93667585b226db3 VPC 01	634102821134

igw-0c28d3f9f7e9448f5 / IGW 1 Details Tags

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Subnets | VPC Management Console

console.aws.amazon.com/vpc/home?region=us-east-1#subnets

New VPC Experience Tell us what you think

VPC Dashboard New

Filter by VPC: Select a VPC

VIRTUAL PRIVATE CLOUD

Your VPCs New

Subnets New

Route Tables

Internet Gateways New

Egress Only Internet Gateways New

Carrier Gateways New

DHCP Options Sets New

Elastic IPs New

Managed Prefix Lists New

Endpoints

Endpoint Services

NAT Gateways New

Peering Connections

Feedback English (US) Type here to search Actions Create subnet

Subnets (7) Info Filter subnets

Name	Subnet ID	State	VPC	IPv4 CIDR	IPv6 CIDR
subnet-eba71bca	subnet-eba71bca	Available	vpc-58448625	172.31.80.0/20	-
subnet-fdc674a2	subnet-fdc674a2	Available	vpc-58448625	172.31.32.0/20	-
subnet-bd4c0df0	subnet-bd4c0df0	Available	vpc-58448625	172.31.16.0/20	-
subnet-292e984f	subnet-292e984f	Available	vpc-58448625	172.31.0.0/20	-
subnet-2c076c22	subnet-2c076c22	Available	vpc-58448625	172.31.64.0/20	-
subnet-01f83d30	subnet-01f83d30	Available	vpc-58448625	172.31.48.0/20	-
Public subnet	subnet-088148ced47a78b35	Available	vpc-0a93667585b226db3 VPC 01	10.0.0.0/24	-

Select a subnet

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VPC Management Console

You have successfully created 1 subnet: subnet-0d74afb53047cc946

Subnets (8)

Name	Subnet ID	State	VPC	IPv4 CIDR	IPv6 CIDR
subnet-eba71bca	subnet-eba71bca	Available	vpc-58448625	172.31.80.0/20	-
subnet-fdc674a2	subnet-fdc674a2	Available	vpc-58448625	172.31.32.0/20	-
subnet-bd4c0df0	subnet-bd4c0df0	Available	vpc-58448625	172.31.16.0/20	-
subnet-29e984f	subnet-29e984f	Available	vpc-58448625	172.31.0.0/20	-
subnet-2c076c22	subnet-2c076c22	Available	vpc-58448625	172.31.64.0/20	-
Private subnet	subnet-0d74afb53047cc946	Available	vpc-0a93667585b226db3 VP...	10.0.1.0/24	-
subnet-01f85d30	subnet-01f85d30	Available	vpc-58448625	172.31.48.0/20	-
Public subnet	subnet-088148ced47a78b35	Available	vpc-0a93667585b226db3 VP...	10.0.0.0/24	-

Select a subnet

Feedback English (US) Type here to search

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Route Tables | VPC Management

Create route table Actions

Name	Route Table ID	Explicit subnet association	Edge associations	Main	VPC ID	Owner
Public RT	rtb-023177ff754a12309	subnet-088148ced47a78b35	-	No	vpc-0a93667585b226db3 ...	634102821134
	rtb-046cfbb27c9c2b75a	-	-	Yes	vpc-0a93667585b226db3 ...	634102821134
	rtb-67b7fe19	-	-	Yes	vpc-58448625	634102821134

Route Table: rtb-023177ff754a12309

Summary Routes Subnet Associations Edge Associations Route Propagation Tags

Edit routes

View All routes

Destination	Target	Status	Propagated
10.0.0.0/16	local	active	No
0.0.0.0/0	igw-0c28d3f9f7e9448f5	active	No

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Screenshot of the AWS VPC Management console showing Route Tables.

Route Tables

Name	Route Table ID	Explicit subnet association	Edge associations	Main	VPC ID	Owner
Public RT	rtb-023177ff754a12309	subnet-088148ced47a78b35	-	No	vpc-0a93667585b226db3 ...	634102821134
	rtb-046cf8b27c9c2b75a	-	-	Yes	vpc-0a93667585b226db3 ...	634102821134
	rtb-67b7fe19	-	-	Yes	vpc-58448625	634102821134

Route Table: rtb-023177ff754a12309

Subnet Associations

Subnet ID	IPv4 CIDR	IPv6 CIDR
subnet-088148ced47a78b35	10.0.0.0/24	-

The following subnets have not been explicitly associated with any route tables and are therefore associated with the main route table:

Screenshot of the AWS VPC Management console showing Route Tables.

Route Tables

Name	Route Table ID	Explicit subnet association	Edge associations	Main	VPC ID	Owner
Public RT	rtb-023177ff754a12309	subnet-088148ced47a78b35	-	No	vpc-0a93667585b226db3 ...	634102821134
	rtb-046cf8b27c9c2b75a	-	-	Yes	vpc-0a93667585b226db3 ...	634102821134
Private RT	rtb-094b8cda8ef6ba9d6	subnet-0d74afb53047cc946	-	No	vpc-0a93667585b226db3 ...	634102821134
	rtb-67b7fe19	-	-	Yes	vpc-58448625	634102821134

Route Table: rtb-094b8cda8ef6ba9d6

Subnet Associations

Subnet ID	IPv4 CIDR	IPv6 CIDR
subnet-0d74afb53047cc946	10.0.1.0/24	-

The following subnets have not been explicitly associated with any route tables and are therefore associated with the main route table:

Create Endpoint

A VPC endpoint enables you to securely connect your VPC to another service.

There are three types of **VPC endpoints** – Interface endpoints, Gateway Load Balancer endpoints, and gateway endpoints.

Interface endpoints and Gateway Load Balancer endpoints are powered by [AWS PrivateLink](#), and use an elastic network interface (ENI) as an entry point for traffic destined to the service.

Interface endpoints are typically accessed using the public or private DNS name associated with the service, while gateway endpoints and Gateway Load Balancer endpoints serve as a target for a route in your route table for traffic destined for the service.

Service category

- AWS services
- Find service by name
- Your AWS Marketplace services

Service Name com.amazonaws.us-east-1.s3

Service Name	Owner	Type
com.amazonaws.us-east-1.dynamodb	amazon	Gateway
com.amazonaws.us-east-1.s3	amazon	Gateway
com.amazonaws.us-east-1.storagegateway	amazon	Interface

VPC* vpc-0a93667585b226db3

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Configure route tables

A rule with destination **pl-63a5400a (com.amazonaws.us-east-1.s3)** and a target with this endpoint's ID (e.g. vpce-12345678) will be added to the route tables you select below.

Subnets associated with selected route tables will be able to access this endpoint.

rtb-094b8cda8ef6ba9d6

Route Table ID	Main	Associated With
<input checked="" type="checkbox"/> rtb-094b8cda8ef6ba9d6	No	subnet-0d74aftb53047cc946 Private subnet
<input type="checkbox"/> rtb-023177ff754a12309	No	subnet-088148ced47a78b35 Public subnet
<input type="checkbox"/> rtb-046cf8b27c9c2b75a	Yes	0 subnets

Warning

When you use an endpoint, the source IP addresses from your instances in your affected subnets for accessing the AWS service in the same region will be private IP addresses, not public IP addresses. Existing connections from your affected subnets to the AWS service that use public IP addresses may be dropped. Ensure that you don't have critical tasks running when you create or modify an endpoint.

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Policy*

Full Access - Allow access by any user or service within the VPC using credentials from any AWS accounts to any resources in this AWS service. All policies — IAM user policies, VPC endpoint policies, and AWS service-specific policies (e.g. Amazon S3 bucket policies, any S3 ACL policies) — must grant the necessary permissions for access to succeed.

Custom

Use the [policy creation tool](#) to generate a policy, then paste the generated policy below.

```
{  
    "Statement": [  
        {  
            "Action": "***",  
            "Effect": "Allow",  
            "Resource": "***",  
            "Principal": "***"  
        }  
    ]  
}
```

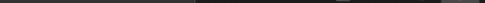
Key (128 characters maximum) **Value** (256 characters maximum)

Name X

Add Tag 49 remaining (Up to 50 tags maximum)

A screenshot of the AWS VPC Management console. The top navigation bar shows the URL as console.aws.amazon.com/vpc/home?region=us-east-1#CreateVpcEndpoint. The main content area is titled "Create Endpoint" under "Endpoints". A green success message box contains the text "The following VPC Endpoint was created:" followed by the VPC Endpoint ID "vpce-04b45f09a32fe040f". A blue "Close" button is at the bottom right of the message box.

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Screenshot of the AWS VPC Management Console showing Route Tables.

Route Tables | VPC Management

New VPC Experience
Tell us what you think

VPC Dashboard New

Filter by VPC:
Select a VPC

VIRTUAL PRIVATE CLOUD

Your VPCs New

Subnets New

Route Tables

Internet Gateways New

Egress Only Internet Gateways New

Carrier Gateways New

DHCP Options Sets New

Elastic IPs New

Managed Prefix Lists New

Endpoints

Endpoint Services

NAT Gateways New

Peering Connections

Create route table Actions

Search for services, features, marketplace products, and docs [Alt+S]

Route Table ID: rtb-094b8cda8ef8ba9d6

Summary Routes Subnet Associations Edge Associations Route Propagation Tags

Edit routes

View All routes

Destination	Target	Status	Propagated
10.0.0.16	local	active	No
pl-63a5400a (com.amazonaws.us-east-1.s3, 54.231.0.0/17, 52.216.0.0/15, 3.5.0.0/18)	vpc-e04b45f09a32fe040f	active	No

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Screenshot of the AWS EC2 Management Console showing Instances.

Instances | EC2 Management Con

New EC2 Experience
Tell us what you think

EC2 Dashboard New

Events

Tags

Limits

Instances

Instances New

Instance Types

Launch Templates

Spot Requests

Savings Plans

Reserved Instances

Dedicated Hosts

Scheduled Instances

Capacity Reservations

Images AMIs

Elastic Block Store Volumes

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Instances (1/2) Info

Filter instances

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS
Private EC2 E1...	i-0ede6d34dd08dee2a	Running	t2.micro	2/2 checks passed	No alarms	us-east-1c	-
Public EC2 E1...	i-05da95c2813b43172	Running	t2.micro	2/2 checks passed	No alarms	us-east-1c	ec2-54-80-79-13

Launch instances

Instance: i-05da95c2813b43172 (Public EC2 E18CSE187)

Details Security Networking Storage Status

Instance summary Info

Instance ID: i-05da95c2813b43172 (Public EC2 E18CSE187)

Instance state: Running

Instance type: t2.micro

Elastic IP addresses: -

VPC ID: vpc-0a93667585b226db3 (VPC 01)

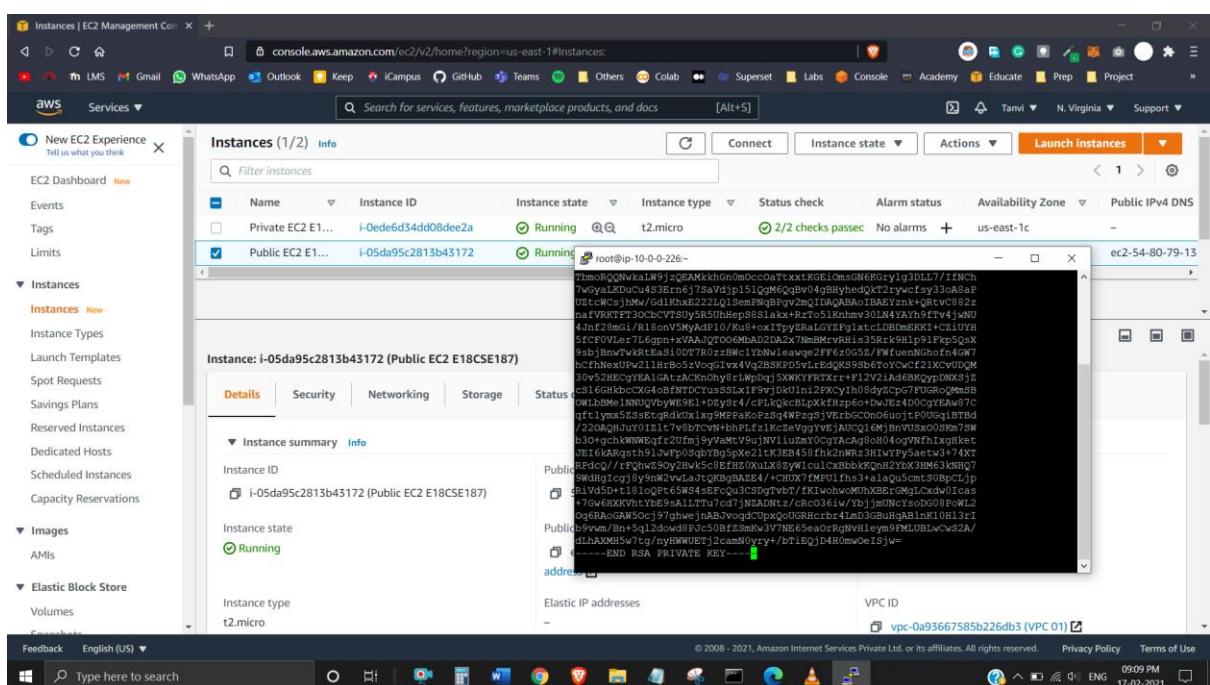
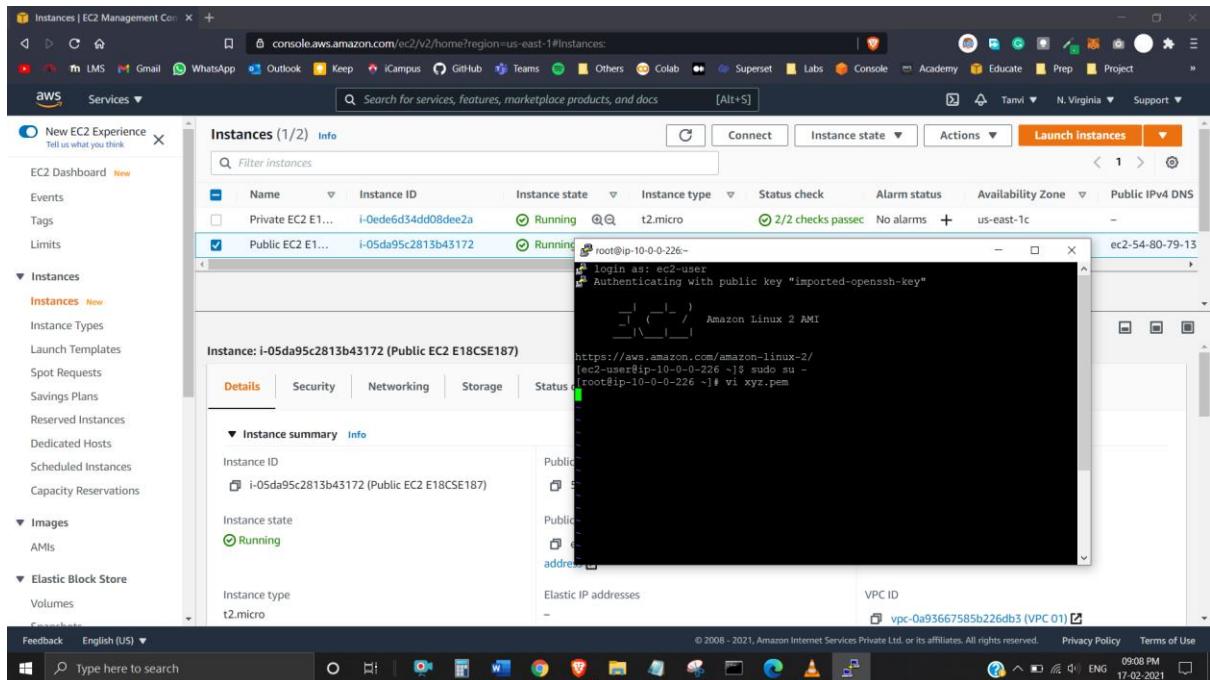
Log output:

```
ec2-user@ip-10-0-0-226:~$ login as: ec2-user
Authenticating with public key "imported-openssh-key"
[ec2-user@ip-10-0-0-226 ~]$
```

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Screenshot of the AWS EC2 Connect to Instance page. The instance ID is i-0ede6d34dd08dee2a. The SSH client tab is selected. A terminal window shows the command `ssh -i xyz.pem ec2-user@10.0.1.158` being run, followed by a warning about host key fingerprint mismatch.



Screenshot of the AWS IAM Management Console. The left sidebar shows the Identity and Access Management (IAM) section. In the main pane, the 'Access keys (access key ID and secret access key)' section is selected. It shows a single active access key named 'AKIAIEYZ7E66SPU...'. A terminal window shows the command `ssh -i xyz.pem ec2-user@10.0.1.158` being run, followed by a warning about host key fingerprint mismatch.



(done until this part in lab)