

AWS Admin – L2 Hands-on Assignment

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Topic 1: User and Group Management

Assignment 1:

- Create user “trhol<EMP AD ID name>iam” using IAM.
- Rename user name to trhol<EMP AD ID name>iamnew”

The screenshot shows the AWS IAM console interface. At the top, there's a navigation bar with the AWS logo, 'Services' link, a search bar, and user information 'Global' and 'Snehl'. A green notification banner at the top states: 'The user trholSN40039533iam have been created.' The left sidebar is titled 'Identity and Access Management (IAM)' and contains a search bar and a menu with categories: 'Access management' (including User groups, Users, Roles, Policies, Identity providers, Account settings) and 'Access reports' (including Access analyzer, Archive rules, Analyzers, Settings, Credential report, Organization activity). The main content area is titled 'IAM > Users'. It shows 'Users {1}' with an 'Info' link and buttons for 'Delete' and 'Add users'. A description states: 'An IAM user is an identity with long-term credentials that is used to interact with AWS in an account.' Below this is a search bar 'Find users by username or access key' and a table of users. The table has columns: 'User name', 'Groups', 'Last activity', 'MFA', 'Password age', and 'Action'. One user is listed: 'trholSN40039533iam' with 'None' for Groups, 'Never' for Last activity, 'None' for MFA, 'Now' for Password age, and a '-' for Action.

	User name	Groups	Last activity	MFA	Password age	Action
<input type="checkbox"/>	trholSN40039533iam	None	Never	None	Now	-

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AWS CloudShell

ap-south-1

```
[cloudshell-user@ip-10-0-178-224 ~]$ Try these commands to get started:
aws help or aws <command> help or aws <command> --cli-auto-prompt
[cloudshell-user@ip-10-0-178-224 ~]$ aws iam list-users
{
  "Users": [
    {
      "Path": "/",
      "UserName": "trho1SN40039533iam",
      "UserId": "AIDAZV4TEDKLC2TGAG2Z",
      "Arn": "arn:aws:iam::671484158164:user/trho1SN40039533iam",
      "CreateDate": "2022-07-12T16:05:55+00:00",
      "PasswordLastUsed": "2022-07-12T16:12:51+00:00"
    }
  ]
}
[cloudshell-user@ip-10-0-178-224 ~]$
[cloudshell-user@ip-10-0-178-224 ~]$ aws iam update-user --user-name trho1SN40039533iam --new-user-name trho1SN40039533iamnew
[cloudshell-user@ip-10-0-178-224 ~]$
[cloudshell-user@ip-10-0-178-224 ~]$ aws iam list-users
{
  "Users": [
    {
      "Path": "/",
      "UserName": "trho1SN40039533iamnew",
      "UserId": "AIDAZV4TEDKLC2TGAG2Z",
      "Arn": "arn:aws:iam::671484158164:user/trho1SN40039533iamnew",
      "CreateDate": "2022-07-12T16:05:55+00:00",
      "PasswordLastUsed": "2022-07-12T16:12:51+00:00"
    }
  ]
}
```

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Global

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Identity and Access Management (IAM)

Dashboard

Access management

User groups

Users

Roles

Policies

Identity providers

Account settings

Access reports

Access analyzer

Archive rules

Analyzers

Settings

Credential report

Organization activity

IAM > Users

Users (1) Info

An IAM user is an identity with long-term credentials that is used to interact with AWS in an account.

Find users by username or access key

	User name	Groups	Last activity	MFA	Password a...	Active
<input type="checkbox"/>	trho1SN40039533iamnew	None	17 minutes ago	None	24 minutes ago	-

Assignment 2:

- Create IAM group “trhol<EMP AD ID name>grp” using IAM.
- Add users to this groups and assign permissions

Identity and Access Management (IAM)

Search IAM

Dashboard

Access management

User groups

Users

Roles

Policies

Identity providers

Account settings

Access reports

Access analyzer

Archive rules

Analyzers

Settings

Credential report

Organization activity

Service control policies (SCPs)

trholSN40039533grp user group created. View group

IAM > User groups

User groups (1) Info

A user group is a collection of IAM users. Use groups to specify permissions for a collection of users.

Filter User groups by property or group name and press enter

<input type="checkbox"/>	Group name	Users	Permissions	Creation time
<input type="checkbox"/>	trholSN40039533grp	1	Defined	Now

Identity and Access Management (IAM)

Search IAM

Dashboard

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Archive rules

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Settings

Credential report

Organization activity

Service control policies (SCPs)

IAM > User groups > trholSN40039533grp

trholSN40039533grp Delete Edit

Summary

User group name	Creation time	ARN
trholSN40039533grp	July 12, 2022, 22:07 (UTC+05:30)	arn:aws:iam::671484158164:group/trholSN40039533grp

Users Permissions Access Advisor

Users in this group (1) Info

An IAM user is an entity that you create in AWS to represent the person or application that uses it to interact with AWS.

Search

<input type="checkbox"/>	User name	Groups	Last activity	Creation time
<input type="checkbox"/>	trholSN40039533iamnew	1	28 minutes ago	35 minutes ago

Identity and Access Management (IAM)

Search IAM

Dashboard

Access management

User groups

Users

Roles

Policies

Identity providers

Account settings

Access reports

Access analyzer

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Analizers

Settings

Credential report

Organization activity

Service control policies (SCPs)

IAM

User groups

trhoISN40039533grp

trhoISN40039533grp

Delete

Edit

Summary

User group name

trhoISN40039533grp

Creation time

July 12, 2022, 22:07 (UTC+05:30)

ARN

arn:aws:iam::671484158164:group/trhoISN40039533grp

Users

Permissions

Access Advisor

Permissions policies (2)

Info

Simulate

Remove

Add permissions

Filter policies by property or policy name and press enter

< 1 >

	Policy name	Type	Description
<input type="checkbox"/>	<div><div></div>SupportUser</div>	AWS managed - job function	This policy grants permissions to troubleshoot and resolve issues in ...
<input type="checkbox"/>	<div><div></div>IAMUserChangePassword</div>	AWS managed	Provides the ability for an IAM user to change their own password.

Assignment 3:

- Create IAM role “trhol<EMP AD ID name>role”
- Using this Newly create IAM role to login to EC2 VM CLI without using Key pairs.

The screenshot shows the AWS IAM console interface. On the left is a navigation menu with options like 'Dashboard', 'Access management', 'Users', 'Roles', 'Policies', etc. The main content area displays the details for the IAM role 'trholSN40039533role'. The role's purpose is 'Allows EC2 instances to call AWS services on your behalf.' The 'Summary' tab is active, showing the creation date (July 12, 2022, 22:21 UTC+05:30), ARN, and instance profile ARN. Below the summary, there are tabs for 'Permissions', 'Trust relationships', 'Tags', 'Access Advisor', and 'Revoke sessions'. The 'Permissions' tab shows one attached policy: 'AdministratorAccess', which is AWS managed and provides full access.

Creation date	ARN	Instance profile ARN
July 12, 2022, 22:21 (UTC+05:30)	arn:aws:iam::671484158164:role/trholSN40039533role	arn:aws:iam::671484158164:instance-profile/trholSN40039533role

Last activity	Maximum session duration
None	1 hour

Policy name	Type	Description
AdministratorAccess	AWS managed - job function	Provides full access

The screenshot shows the AWS EC2 console interface. The left navigation menu includes 'EC2 Dashboard', 'Events', 'Tags', 'Limits', 'Instances', 'Images', and 'Elastic Block Store'. The main content area displays the 'Instance summary' for the instance 'i-0309b628a1e54aa1c' (trholSN40039533vm). The instance is in a 'Running' state. The summary includes details such as the instance ID, public IPv4 address (3.108.215.3), private IPv4 address (172.31.2.238), hostname type, IP name, answer private resource DNS name, auto-assigned IP address, IAM role (trholSN40039533role), VPC ID, and subnet ID. Below the summary, there are tabs for 'Details', 'Security', 'Networking', 'Storage', 'Status checks', 'Monitoring', and 'Tags'. The 'Details' tab is active, showing the instance details.

Instance ID	Public IPv4 address	Private IPv4 addresses
i-0309b628a1e54aa1c (trholSN40039533vm)	3.108.215.3 open address	172.31.2.238

IPV6 address	Instance state	Public IPv4 DNS
-	Running	ec2-3-108-215-3.ap-south-1.compute.amazonaws.com open address

Hostname type	Private IP DNS name (IPv4 only)	Elastic IP addresses
IP name: ip-172-31-2-238.ap-south-1.compute.internal	ip-172-31-2-238.ap-south-1.compute.internal	-

Answer private resource DNS name IPv4 (A)	Instance type	AWS Compute Optimizer finding
3.108.215.3 [Public IP]	t2.micro	Opt-in to AWS Compute Optimizer for recommendations. Learn more

Auto-assigned IP address	VPC ID	Auto Scaling Group name
3.108.215.3 [Public IP]	vpc-06d3a79c9371ea480	-

IAM Role	Subnet ID
trholSN40039533role	subnet-029c9216d7797a493

Topic 2: Compute

Assignment 1:

- Create EBS-Backed Linux AMI from the instance directly or from the EBS snapshot

The screenshot shows the AWS Management Console interface. On the left, the navigation menu includes 'New EC2 Experience', 'EC2 Dashboard', 'EC2 Global View', 'Events', 'Tags', 'Limits', 'Instances', 'Images', and 'Elastic Block Store'. The main content area displays the 'Instances (1/1)' page. A table lists one instance: 'trholSN40039533vm' with Instance ID 'i-0309b628a1e54aa1c', state 'Running', and type 't2.micro'. An 'Actions' dropdown menu is open, showing options like 'Connect', 'View details', 'Manage instance state', 'Instance settings', 'Networking', 'Security', 'Image and templates', and 'Monitor and troubleshoot'. The 'Image and templates' option is selected, leading to a detailed view of the instance. The 'Details' tab is active, showing a summary of the instance's configuration, including its ID, IP addresses, state, and DNS names.

Name	Instance ID	Instance state	Instance type	Status check
trholSN40039533vm	i-0309b628a1e54aa1c	Running	t2.micro	2/2 checks passed

Instance: i-0309b628a1e54aa1c (trholSN40039533vm)

Instance summary			
Instance ID	Public IPv4 address	Private IPv4 addresses	
i-0309b628a1e54aa1c (trholSN40039533vm)	3.108.215.3 open address	172.31.2.238	
IPv6 address	Instance state	Public IPv4 DNS	
-	Running	ec2-3-108-215-3.ap-south-1.compute.amazonaws.com open address	
Hostname type	Private IP DNS name (IPv4 only)		
IP name: ip-172-31-2-238.ap-south-1.compute.internal	ip-172-31-2-238.ap-south-1.compute.internal		

The screenshot shows the AWS Management Console interface for Amazon Machine Images (AMIs). The left navigation menu is the same as the previous screenshot. The main content area displays the 'Amazon Machine Images (AMIs) (1/1)' page. A table lists one AMI: 'ami-Of1918108a9a2bcc2' with AMI name 'trholSN40039533ami', source '671484158164/trholSN40039533ami', and owner '671484158164'. An 'Actions' dropdown menu is open, showing options like 'Recycle Bin', 'EC2 Image Builder', and 'Launch instance from AMI'. The 'Launch instance from AMI' option is selected, leading to a detailed view of the AMI. The 'Details' tab is active, showing a summary of the AMI's configuration, including its ID, image type, platform details, architecture, source, creation date, and block devices.

Name	AMI ID	AMI name	Source	Owner	Visibility
-	ami-Of1918108a9a2bcc2	trholSN40039533ami	671484158164/trholSN40039533ami	671484158164	Private

AMI ID: ami-Of1918108a9a2bcc2

Details			
AMI ID	Image type	Platform details	Root device type
ami-Of1918108a9a2bcc2	machine	Linux/UNIX	EBS
AMI name	Owner account ID	Architecture	Usage operation
trholSN40039533ami	671484158164	x86_64	RunInstances
Root device name	Status	Source	Virtualization type
/dev/xvda	Pending	671484158164/trholSN40039533ami	hvm
Boot mode	State reason	Creation date	Kernel ID
-	-	Sat Jul 16 2022 12:48:20 GMT+0530 (India Standard Time)	-
Block devices	Description	Product codes	RAM disk ID
/dev/xvda=8:true:gp2	-	-	-

Assignment 2:

- Create Instance Store-Backed Linux AMI

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EC2 > Instances > i-0d8fddd66d0a76c5d > Create image

Create image Info

An image (also referred to as an AMI) defines the programs and settings that are applied when you launch an EC2 instance. You can create an image from the configuration of an existing instance.

Instance ID
i-0d8fddd66d0a76c5d (trholSN40039533vm)

Image name

Maximum 127 characters. Can't be modified after creation.

Image description - optional

Maximum 255 characters

No reboot
☐ Enable

Instance volumes

Volume type	Device	Snapshot	Size	Volume type	IOPS	Throughput	Delete on termination	Encrypted
EBS	/dev/...	Create new snapshot fr...	8	EBS General Purpose S...	100		<input checked="" type="checkbox"/> Enable	<input type="checkbox"/> Enable
Insta...	/dev/...	Create new snapshot fr...	80		2000		<input type="checkbox"/> Enable	<input type="checkbox"/> Enable

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EC2 Dashboard
EC2 Global View
Events
Tags
Limits

▼ Instances
Instances New
Instance Types
Launch Templates
Spot Requests
Savings Plans
Reserved Instances New
Dedicated Hosts
Capacity Reservations

▼ Images
AMIs New
AMI Catalog

▼ Elastic Block Store

Amazon Machine Images (AMIs) (1/1) Info

Owned by me Search

<input checked="" type="checkbox"/>	Name	AMI ID	AMI name	Source	Owner	Visibility
<input checked="" type="checkbox"/>	-	ami-047c57b55fc58d067	trholSN40039533ami	671484158164/trholSN40039533ami	671484158164	Private

AMI ID: ami-047c57b55fc58d067

ami-047c57b55fc58d067	machine	Linux/UNIX	EBS
AMI name	Owner account ID	Architecture	Usage operation
trholSN40039533ami	671484158164	x86_64	RunInstances
Root device name	Status	Source	Virtualization type
/dev/xvda	Pending	671484158164/trholSN40039533ami	hvm
Boot mode	State reason	Creation date	Kernel ID
-	-	Sat Jul 16 2022 16:05:49 GMT+0530 (India Standard Time)	-
Block devices	Description	Product codes	RAM disk ID
/dev/xvda=snap-090ff0cc1b2953e61:8:true:gp2	-	-	-
/dev/sdb=ephemeral0	-	-	-

Assignment 3:

- Copy Amazon EBS-backed AMIs or instance store-backed AMIs and spin instance using copied AMI.

AMI copy operation for ami-0f1918108a9a2bcc2 initiated
It can take a few minutes for the AMI to be copied. You can check the progress of the operation in the AMI table in [ap-south-1](#). The AMI ID of the new AMI is ami-0bd15528e71dd1718.

Amazon Machine Images (AMIs) (1/2) Info

Owned by me

	Name	AMI ID	AMI name	Source	Owner	Visibility
<input checked="" type="checkbox"/>	-	ami-0bd15528e71dd1718	trholSN40039533ami2	671484158164/trholSN40039533ami2	671484158164	Private
<input type="checkbox"/>	-	ami-0f1918108a9a2bcc2	trholSN40039533ami	671484158164/trholSN40039533ami	671484158164	Private

AMI ID: ami-0bd15528e71dd1718

/dev/xvda	Pending	671484158164/trholSN40039533ami2	hvm
Boot mode	State reason	Creation date	Kernel ID
-	-	Sat Jul 16 2022 13:04:29 GMT+0530 (India Standard Time)	-
Block devices	Description	Product codes	RAM disk ID
/dev/xvda=8:true:gp2	[Copied ami-0f1918108a9a2bcc2 from ap-south-1] trholSN40039533ami	-	-
Deprecation time	Last launched time		
-	-		

Assignment 4:

- Spin up EBS Optimized instance VM with tag “trhol<EMP AD ID name>ebsopt”

Name and tags Info

Name: trholSN40039533ebsopt

Application and OS Images (Amazon Machine Image) Info

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AMI from catalog | Recents | My AMIs | Quick Start

Amazon Machine Image (AMI)

trholSN40039533ami2

ami-0bd15528e71dd1718

Published: 2022-07-16T07:34:29.00Z

Architecture: x86_64

Virtualization type: hvm

Root device type: ebs

ENA Enabled: Yes

Summary

Number of instances: 1

Software Image (AMI): [Copied ami-0f1918108a9a2bcc2 ...read more] ami-0bd15528e71dd1718

Virtual server type (instance type): t2.micro

Firewall (security group): New security group

Storage (volumes): 1 volume(s) - 8 GiB

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 30 GiB of EBS storage, 2 million I/Os, 1 GB of snapshots, and 100 GB of bandwidth to the internet.

Cancel | **Launch Instance**

Instances (1/2) Info

Search

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS
<input type="checkbox"/>	trholSN40039533vm	i-0309b628a1e54aa1c	Running	t2.micro	2/2 checks passed	No alarms	ap-south-1b	ec2-5-108-215-3.ap-so
<input checked="" type="checkbox"/>	trholSN40039533ebsopt	i-01dbca4d633ede00b	Running	t2.micro	Initializing	No alarms	ap-south-1b	ec2-65-2-5-41.ap-soutl

Instance: i-01dbca4d633ede00b (trholSN40039533ebsopt)

Instance details Info

Platform	AMI ID	Monitoring
Linux/UNIX (Inferred)	ami-0bd15528e71dd1718	disabled
Platform details	AMI name	Termination protection
Linux/UNIX	trholSN40039533ami2	Disabled
Stop protection	Launch time	AMI location
Disabled	Sat Jul 16 2022 13:10:06 GMT+0530 (India Standard Time) (1 minute)	671484158164/trholSN40039533ami2
Instance auto-recovery	Lifecycle	Stop-hibernate behavior
Default	normal	disabled
AMI Launch index	Key pair name	State transition reason
0	-	-
Credit specification	Kernel ID	State transition message
standard	-	-
Usage operation	RAM disk ID	Owner
RunInstances	-	671484158164

Topic 3: Networking

Assignment 1:

- Create VPC with tag “trhol<EMP AD ID name>vpc”
- Create two subnets (one public and private) within this VPC “trhol<EMP AD ID name>vpc” (Subnet Tag “trhol(<Emp AD ID>subnet1 and2) with appropriate security group, Internet gateway and NACL.

The screenshot shows the AWS Management Console interface. On the left, the 'Virtual private cloud' section is expanded, showing 'Your VPCs'. The main panel displays a table of VPCs. The VPC 'trholSN40039533vpc' is selected, and its details are shown below the table.

Name	VPC ID	State	IPv4 CIDR	IPv6 CIDR	DHCP
-	vpc-06d3a79c9371ea480	Available	172.31.0.0/16	-	dop
trholSN40039533vpc	vpc-09e0b15bc08da0246	Available	10.0.0.0/16	-	dop

Details

VPC ID vpc-09e0b15bc08da0246	State Available	DNS hostnames Enabled	DNS resolution Enabled
Tenancy Default	DHCP option set dopt-0ad54f630a65e3e80	Main route table rtb-011fa343cbaede284	Main network ACL acl-0dc0a207c69095ffe
Default VPC No	IPv4 CIDR 10.0.0.0/16	IPv6 pool -	IPv6 CIDR -

The screenshot shows the AWS Management Console interface. The left sidebar is the same as the previous screenshot. The main panel displays the details of the VPC 'vpc-09e0b15bc08da0246'.

Details

VPC ID vpc-09e0b15bc08da0246	State Available	DNS hostnames Enabled	DNS resolution Enabled
Tenancy Default	DHCP option set dopt-0ad54f630a65e3e80	Main route table rtb-011fa343cbaede284	Main network ACL acl-0dc0a207c69095ffe
Default VPC No	IPv4 CIDR 10.0.0.0/16	IPv6 pool -	IPv6 CIDR -
Route 53 Resolver DNS Firewall rule groups -	Owner ID 671484158164		

CIDRs

Info

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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

DHCP Option Sets

Elastic IPs

Managed prefix lists

Endpoints

Endpoint services

NAT gateways

Subnets (2) Info

Filter subnets

VPC: vpc-09e0b15bc08da0246

Clear filters

	Name	Subnet ID	State	VPC
<input type="checkbox"/>	trholSN40039533subnet2	subnet-02e55fe3ec60c3f13	Available	vpc-09e0b15bc08da0246 trholSN40039533vpc
<input type="checkbox"/>	trholSN40039533subnet1	subnet-0780a623df20ba684	Available	vpc-09e0b15bc08da0246 trholSN40039533vpc

Select a subnet

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EC2 Global View

Filter by VPC:

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Internet gateways

Egress-only internet gateways

DHCP Option Sets

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Endpoints

Endpoint services

NAT gateways

Peering connections

VPC > Subnets > subnet-0780a623df20ba684

subnet-0780a623df20ba684 / trholSN40039533subnet1

Actions

Details

Subnet ID	Subnet ARN	State	IPv4 CIDR
subnet-0780a623df20ba684	arn:aws:ec2:ap-south-1:671484158164:subnet/subnet-0780a623df20ba684	Available	10.0.0.0/20
Available IPv4 addresses	IPV6 CIDR	Availability Zone	Availability Zone ID
4091	-	ap-south-1a	aps1-az1
VPC	Route table	Network ACL	Default subnet
vpc-09e0b15bc08da0246 trholSN40039533vpc	rtb-0f74864bacb78fd4c trholSN40039533subnet1-rtb-public	acl-0dc0a207c69095ffe trholSN40039533nacl	No
Auto-assign public IPv4 address	Auto-assign IPv6 address	Auto-assign customer-owned IPv4 address	Customer-owned IPv4 pool
No	No	No	-
Outpost ID	IPv4 CIDR reservations	IPv6 CIDR reservations	IPv6-only
-	-	-	No
Hostname type	Resource name DNS A record	Resource name DNS AAAA record	DNS64
IP name	Disabled	Disabled	Disabled
Owner			
671484158164			

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New VPC Experience

Tell us what you think

VPC dashboard

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Filter by VPC:

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Peering connections

VPC > Subnets > subnet-02e55fe3ec60c3f13

subnet-02e55fe3ec60c3f13 / trholSN40039533subnet2

Actions

Details

Subnet ID

subnet-02e55fe3ec60c3f13

Available IPv4 addresses

4091

VPC

vpc-09e0b15bc08da0246 | trholSN40039533vpc

Auto-assign public IPv4 address

No

Outpost ID

-

Hostname type

-

IP name

-

Owner

671484158164

Subnet ARN

arn:aws:ec2:ap-south-1:671484158164:subnet/subnet-02e55fe3ec60c3f13

IPv6 CIDR

-

Route table

rtb-0264ac792ca650385 | trholSN40039533subnet2-rtb-private

Auto-assign IPv6 address

No

IPv4 CIDR reservations

-

Resource name DNS A record

Disabled

State

Available

Availability Zone

ap-south-1a

Network ACL

acl-0dc0a207c69095ffe | trholSN40039533nacl

Auto-assign customer-owned IPv4 address

No

IPv6 CIDR reservations

-

Resource name DNS AAAA record

Disabled

IPv4 CIDR

10.0.128.0/20

Availability Zone ID

aps1-az1

Default subnet

No

Customer-owned IPv4 pool

-

IPv6-only

No

DNS64

Disabled

Virtual private cloud

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Egress-only internet gateways

DHCP Option Sets

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Security

Network ACLs

Security groups

Network Analysis

Reachability Analyzer

Network Access Analyzer

Security Groups (1/1)

Info

Actions

Export security groups to CSV

Create security group

Filter security groups

VPC ID: vpc-09e0b15bc08da0246

Clear filters

Name

Security group ID

Security group na...

VPC ID

Description

Owner

trholSN40039655vpc-sg

sg-09eadbeaedcb85c58

default

vpc-09e0b15bc08da0246

default VPC security gr...

671484158164

sg-09eadbeaedcb85c58 - default

Details

Inbound rules

Outbound rules

Tags

Details

Security group name

default

Security group ID

sg-09eadbeaedcb85c58

Description

default VPC security group

VPC ID

vpc-09e0b15bc08da0246

Owner

671484158164

Inbound rules count

1 Permission entry

Outbound rules count

1 Permission entry

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New VPC Experience

Tell us what you think

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

DHCP Option Sets

Elastic IPs

Managed prefix lists

Endpoints

Endpoint services

NAT gateways

VPC > Internet gateways > igw-0cda89adb063b3238

igw-0cda89adb063b3238 / trholSN40039533vpc-igw

Actions

Details

Info

Internet gateway ID

igw-0cda89adb063b3238

State

Attached

VPC ID

vpc-09e0b15bc08da0246 | trholSN40039533vpc

Owner

671484158164

Tags

Manage tags

Search tags

< 1 >

Key

Value

Name

trholSN40039533vpc-igw

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Peering connections

Security

Network ACLs

Security groups

Network Analysis

Reachability Analyzer

Network Access Analyzer

Network ACLs (1/1)

Info

Filter network ACLs

VPC ID: vpc-09e0b15bc08da0246

Clear filters

< 1 >

Network ACL ID

Associated with

Default

VPC ID

trholSN40039533vpc-nacl

acl-0dc0a207c69095ffe

2 Subnets

Yes

vpc-09e0b15bc08da0246 / trholSN40039533vpc

acl-0dc0a207c69095ffe / trholSN40039533vpc-nacl

Details

Inbound rules

Outbound rules

Subnet associations

Tags

Network ACL ID

Associated with

Default

VPC ID

acl-0dc0a207c69095ffe

2 Subnets

Yes

vpc-09e0b15bc08da0246 / trholSN40039533vpc

Owner

671484158164

Assignment 2:

- Create VPC with tag “trhol<EMP AD ID name>vpc”
- Create ENI with tag “trhol<EMP AD ID name>eni” and attach it to the instance “trhol<EMP AD ID name>vm”

Your VPCs (1/2)

Name	VPC ID	State	IPv4 CIDR	IPv6 CIDR	DHCP
-	vpc-06d3a79c9371ea480	Available	172.31.0.0/16	-	dop
trholSN40039533vpc	vpc-0b0ad05444a0f9652	Available	10.0.0.0/16	-	dop

vpc-0b0ad05444a0f9652 / trholSN40039533vpc

Details

VPC ID	State	DNS hostnames	DNS resolution
vpc-0b0ad05444a0f9652	Available	Enabled	Enabled
Tenancy	DHCP option set	Main route table	Main network ACL
Default	dopt-0ad54f630a65e3e80	rtb-0289700fb2e727e26	acl-08c655b541aedfb31
Default VPC	IPv4 CIDR	IPv6 pool	IPv6 CIDR
No	10.0.0.0/16	-	-

vpc-0b0ad05444a0f9652 / trholSN40039533vpc

Details

VPC ID	State	DNS hostnames	DNS resolution
vpc-0b0ad05444a0f9652	Available	Enabled	Enabled
Tenancy	DHCP option set	Main route table	Main network ACL
Default	dopt-0ad54f630a65e3e80	rtb-0289700fb2e727e26	acl-08c655b541aedfb31
Default VPC	IPv4 CIDR	IPv6 pool	IPv6 CIDR
No	10.0.0.0/16	-	-
Route 53 Resolver DNS Firewall rule groups	Owner ID		
-	671484158164		

CIDRs

Address type	CIDR	Pool	Status
IPv4	10.0.0.0/16	-	Associated

Topic 4: Storage

Assignment 1:

- Create S3 Bucket with name “trhol<EMP AD ID name>s3” with versioning
- Create file name “trholaws1”.
- Upload the object onto S3
- View the Object and its proprieties
- Delete the Object
- Restore the object trholaws1 from versioned objects.
- Delete the bucket

The screenshot displays the AWS Management Console interface for the 'Buckets' section of Amazon S3. At the top, a green notification banner indicates that a bucket named 'trholn40039533s3' has been successfully created. Below this, a blue banner promotes Amazon S3 Glacier storage classes. The left-hand navigation pane shows the 'Amazon S3' service selected, with various options like 'Buckets', 'Access Points', and 'Storage Lens'. The main content area shows the 'Buckets (1)' section, which includes a search bar and a table listing the bucket. The table has columns for Name, AWS Region, Access, and Creation date. The bucket 'trholn40039533s3' is listed in the 'Asia Pacific (Mumbai) ap-south-1' region with 'Bucket and objects not public' access and a creation date of 'July 16, 2022, 15:11:20 (UTC+05:30)'. Above the table, there are buttons for 'Copy ARN', 'Empty', 'Delete', and 'Create bucket'. A 'View Storage Lens dashboard' button is also present in the 'Account snapshot' section above the buckets list.

Name	AWS Region	Access	Creation date
trholn40039533s3	Asia Pacific (Mumbai) ap-south-1	Bucket and objects not public	July 16, 2022, 15:11:20 (UTC+05:30)

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Bucket overview

AWS Region	Amazon Resource Name (ARN)	Creation date
Asia Pacific (Mumbai) ap-south-1	arn:aws:s3:::trholan40039533s3	July 16, 2022, 15:11:20 (UTC+05:30)

Bucket Versioning

Versioning is a means of keeping multiple variants of an object in the same bucket. You can use versioning to preserve, retrieve, and restore every version of every object stored in your Amazon S3 bucket. With versioning, you can easily recover from both unintended user actions and application failures. [Learn more](#)

Edit

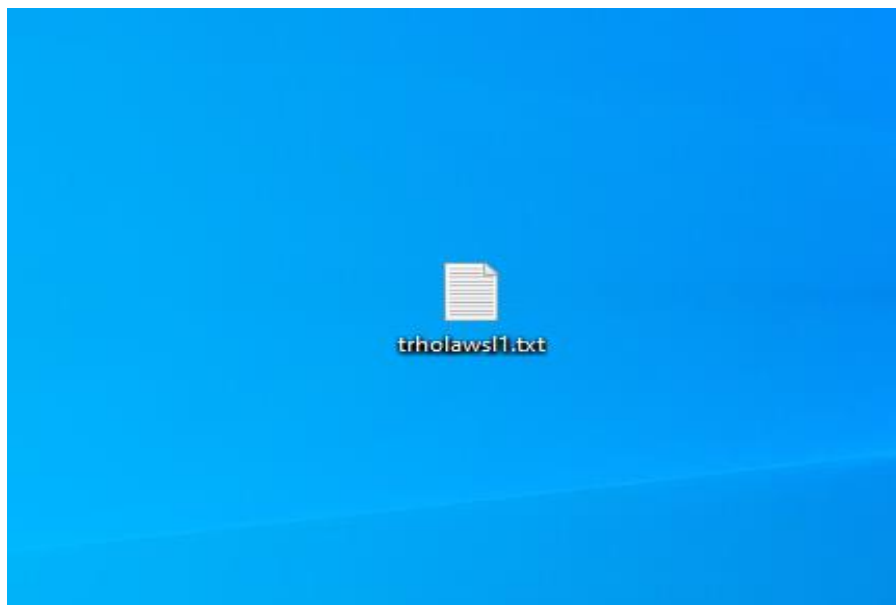
Bucket Versioning

Enabled

Multi-factor authentication (MFA) delete

An additional layer of security that requires multi-factor authentication for changing Bucket Versioning settings and permanently deleting object versions. To modify MFA delete settings, use the AWS CLI, AWS SDK, or the Amazon S3 REST API. [Learn more](#)

Disabled



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Global

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Amazon S3 > Buckets > trholns40039533s3

trholns40039533s3

Info

Objects | Properties | Permissions | Metrics | Management | Access Points

Objects (1)

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

Copy S3 URI

Copy URL

Download

Open

Delete

Actions

Create folder

Upload

Find objects by prefix

Show versions

< 1 >

<input type="checkbox"/>	Name	Type	Last modified	Size	Storage class
<input type="checkbox"/>	trholaws1.txt	txt	July 16, 2022, 15:17:41 (UTC+05:30)	0 B	Standard

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Amazon S3 > Buckets > trholns40039533s3 > trholaws1.txt

trholaws1.txt

Info

Copy S3 URI | Download | Open | Object actions

Properties | Permissions | Versions

Object overview

Owner

7443de62df71326928a35d6881d99fcee026f8c0f21ba127e364ac203594224

AWS Region

Asia Pacific (Mumbai) ap-south-1

Last modified

July 16, 2022, 15:17:41 (UTC+05:30)

Size

-

Type

txt

Key

trholaws1.txt

S3 URI

s3://trholns40039533s3/trholaws1.txt

Amazon Resource Name (ARN)

arn:aws:s3:::trholns40039533s3/trholaws1.txt

Entity tag (Etag)

d41d8cd98f00b204e9800998ecf8427e

Object URL

https://trholns40039533s3.s3.ap-south-1.amazonaws.com/trholaws1.txt

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Amazon S3 > Buckets > trholns40039533s3

trholns40039533s3

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Objects (2)

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

Copy S3 URI

Copy URL

Download

Open

Delete

Actions

Create folder

Upload

Find objects by prefix

Show versions

< 1 >

<input type="checkbox"/>	Name	Type	Version ID	Last modified	Size	Storage class
<input type="checkbox"/>	trholaws1.txt	txt	ig.kg8X4OV4amkBJO3FLHwPrRa8xbpDV	July 16, 2022, 15:29:03 (UTC+05:30)	9.0 B	Standard
<input type="checkbox"/>	trholaws1.txt	txt	kknwlRWn988gU83u_VCFczswu3rHDn	July 16, 2022, 15:28:31 (UTC+05:30)	5.0 B	Standard

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Amazon S3 > Buckets > trholns40039533s3 > Delete objects

Delete objects

Info

Deleting the specified objects can't be undone.

[Learn more](#)

Specified objects

Find objects by name

< 1 >

Name	Version ID	Type	Last modified	Size
trholaws1.txt	DWMiUBqyE.T_k1p8H8uJ5C5FBHMNPGRu	txt	July 16, 2022, 15:26:14 (UTC+05:30)	5.0 B

Permanently delete objects?

To confirm deletion, type *permanently delete* in the text input field.

permanently delete

Cancel

Delete objects



Delete bucket

[Info](#)

- Deleting a bucket cannot be undone.
- Bucket names are unique. If you delete a bucket, another AWS user can use the name.

[Learn more](#)

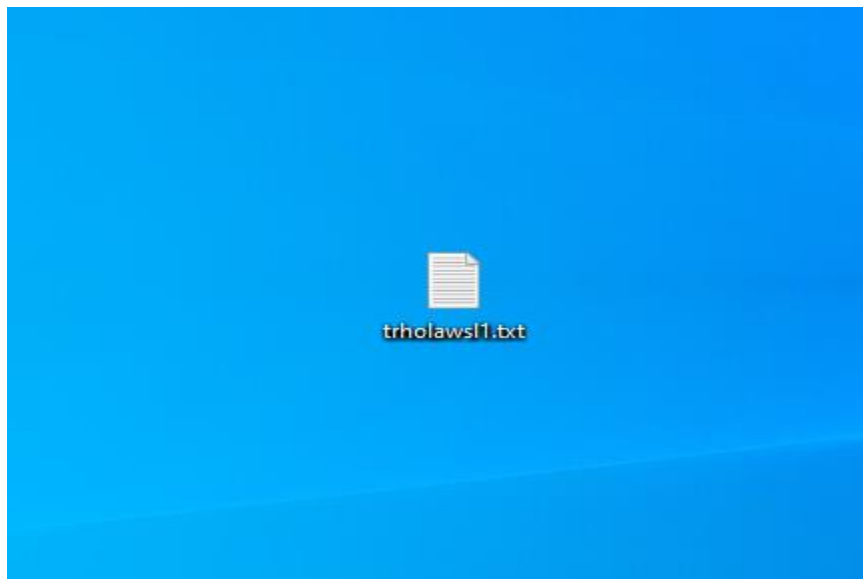
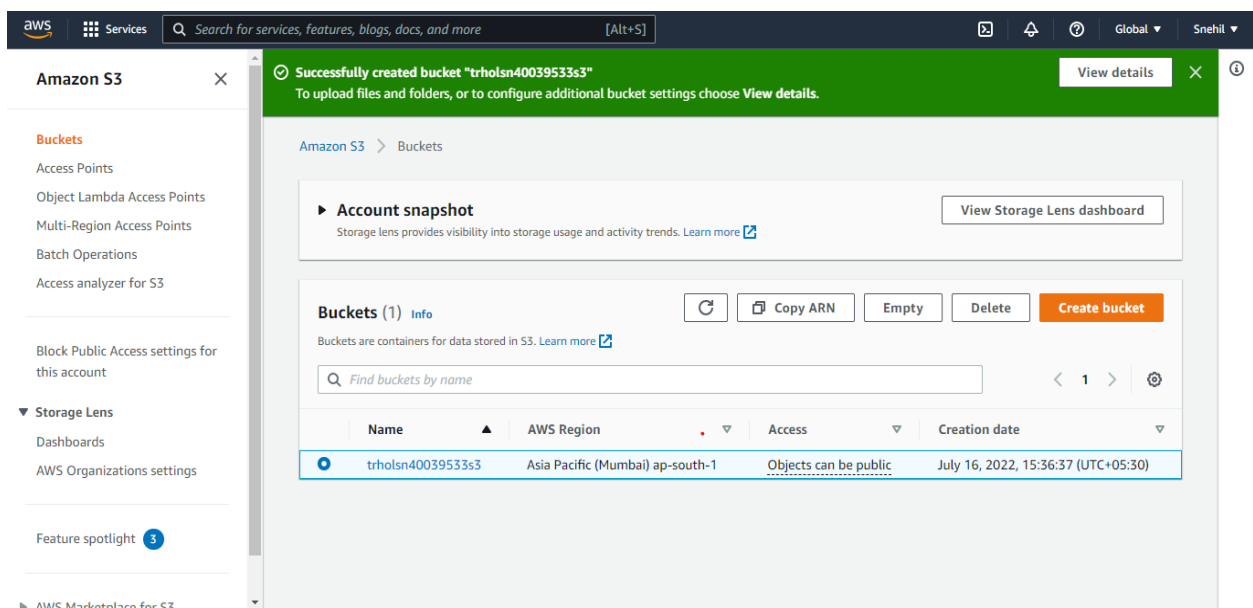
Delete bucket "trholns40039533s3"?

To confirm deletion, enter the name of the bucket in the text input field.

[Cancel](#)[Delete bucket](#)

Assignment 2:

- Create S3 Bucket with name “trhol<EMP AD ID name>s3”
- Create file name “trholaws1”
- Upload the object onto S3
- Setup lifecycle rule between Standard and Glacier.
- Test the object movement using lifecycle rule.



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Amazon S3 > Buckets > trholns40039533s3

trholns40039533s3

Info

Objects | Properties | Permissions | Metrics | Management | Access Points

Objects (1)
Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

Copy S3 URI

Copy URL

Download

Open

Delete

Actions

Create folder

Upload

Find objects by prefix

	Name	Type	Last modified	Size	Storage class
<input type="checkbox"/>	trholawsl1.txt	txt	July 16, 2022, 15:41:10 (UTC+05:30)	9.0 B	Standard

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Services

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Amazon S3 > Buckets > trholns40039533s3 > Lifecycle configuration > Create lifecycle rule

Create lifecycle rule

Lifecycle rule configuration

Lifecycle rule name
trholns40039533s3-lifecycle
Up to 255 characters

Choose a rule scope
☐ Limit the scope of this rule using one or more filters
☒ Apply to all objects in the bucket

 **Apply to all objects in the bucket**

If you want the rule to apply to specific objects, you must use a filter to identify those objects. Choose "Limit the scope of this rule using one or more filters". [Learn more](#)

☒ I acknowledge that this rule will apply to all objects in the bucket.

Lifecycle rule actions
Choose the actions you want this rule to perform. Per-request fees apply. [Learn more](#) or see [Amazon S3 pricing](#)

☒ Move current versions of objects between storage classes
☒ Move noncurrent versions of objects between storage classes
☐ Expire current versions of objects
☐ Permanently delete noncurrent versions of objects
☐ Delete expired object delete markers or incomplete multipart uploads
These actions are not supported when filtering by object tags or object size.

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Choose storage class transitions

Days after object creation

Glacier Flexible Retrieval (formerly... ▼

0

Remove

Add transition

Transitioning small objects to Glacier Flexible Retrieval (formerly Glacier) or Glacier Deep Archive will incur a per object cost
You will be charged for each object you transition to S3 Glacier Flexible Retrieval (formerly Glacier) or S3 Glacier Deep Archive. A fixed amount of storage is also added to each object to accommodate metadata for managing the object which increases storage costs. You can reduce these costs by limiting the number of objects to transition (by prefix, tag, or version), or by aggregating objects before transitioning them. Learn more about Glacier Flexible Retrieval (formerly Glacier) cost considerations or review the table on Requests and data retrievals tab on the Amazon S3 pricing page

☒ I acknowledge that this lifecycle rule will incur a one-time lifecycle request cost per object if it transitions small objects.

Review transition and expiration actions

Current version actions

Day 0

- Objects uploaded

↓

Day 0

- Objects move to Glacier Flexible Retrieval (formerly Glacier)

Noncurrent versions actions

Day 0

- No actions defined.

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The lifecycle configuration was updated. Lifecycle rule "trholsn40039533s3-lifecycle" was successfully added.
It may take some time for the configuration to be updated. Press the refresh button if changes to the rule are not displayed.

Amazon S3 > Buckets > trholsn40039533s3 > Lifecycle configuration

Lifecycle configuration

To manage your objects so that they are stored cost effectively throughout their lifecycle, configure their lifecycle. A lifecycle configuration is a set of rules that define actions that Amazon S3 applies to a group of objects. Lifecycle rules run once per day.

Lifecycle rules (1)

Use lifecycle rules to define actions you want Amazon S3 to take during an object's lifetime such as transitioning objects to another storage class, archiving them, or deleting them after a specified period of time. Learn more

Refresh

View details

Edit

Delete

Actions ▼

Create lifecycle rule

Find lifecycle rules by name

< 1 >

Lifecycle rule name	Status	Scope	Current version actions	Noncurrent versions actions	Expired object delete markers
trholsn40039533s3-lifecycle	Enabled	Entire bucket	Transition to Glacier Flexible Retrieval (formerly Glacier)	Transition to Glacier Flexible Retrieval (formerly Glacier)	-

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trholns40039533s3

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Objects (1)

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 Inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

Copy S3 URI

Copy URL

Download

Open

Delete

Actions

Create folder

Upload

Find objects by prefix

Name

Type

Last modified

Size

Storage class

trholawsl1.txt

txt

July 16, 2022, 15:41:10 (UTC+05:30)

9.0 B

Glacier Flexible Retrieval (formerly Glacier)

Assignment 3:

- Create VM (instance Type t2.micro) with tag “trhol<EMP AD ID name>vm” using Amazon Linux AMI
- Add ephemeral disks to the VM “trhol<EMP AD ID name>eph”
- Remove disks from VM “trhol<EMP AD ID name>eph”
- Delete VM “trhol<EMP AD ID name>vm”

The screenshot shows the AWS Management Console interface for launching an EC2 instance. The top navigation bar includes the AWS logo, 'Services' menu, a search bar, and a keyboard shortcut '[Alt+S]'. The main content area is titled 'Launch an instance' with an 'Info' link. Below the title, a brief description states: 'Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.'

The 'Name and tags' section contains a 'Name' input field with the value 'trholSN40039533vm' and an 'Add additional tags' link. The 'Application and OS Images (Amazon Machine Image)' section features a search bar with the placeholder 'Search our full catalog including 1000s of application and OS images'. Below the search bar, there are tabs for 'Recents' and 'Quick Start'. The 'Quick Start' tab is active, displaying a carousel of AMI cards for Amazon Linux, Ubuntu, Windows, Red Hat, and SUSE Linux. The Amazon Linux card is selected, showing details for 'Amazon Linux 2 AMI (HVM) - Kernel 5.10, SSD Volume Type' with AMI IDs 'ami-08df646e18b182346' and 'ami-0e0aaf29e73155b91'. It also indicates 'Free tier eligible'.

On the right side, the 'Summary' section lists the configuration: 'Number of instances' set to 1, 'Software Image (AMI)' as 'Amazon Linux 2 Kernel 5.10 AMI', 'Virtual server type (instance type)' as 't2.micro', 'Firewall (security group)' as 'New security group', and 'Storage (volumes)' as '1 volume(s) - 8 GiB'. A 'Free tier' notification box is present, stating: 'Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 30 GiB of EBS storage, 2 million I/Os, 1 GB of snapshots, and 100 GB of bandwidth to the internet.' At the bottom right, there are 'Cancel' and 'Launch instance' buttons.

Services

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EC2

Instances

i-0d8fdd66d0a76c5d

Create image

Create image

Info

An image (also referred to as an AMI) defines the programs and settings that are applied when you launch an EC2 instance. You can create an image from the configuration of an existing instance.

Instance ID

i-0d8fdd66d0a76c5d (trholSN40039533vm)

Image name

Enter image name

Maximum 127 characters. Can't be modified after creation.

Image description - optional

Image description

Maximum 255 characters

No reboot

☐ Enable

Instance volumes

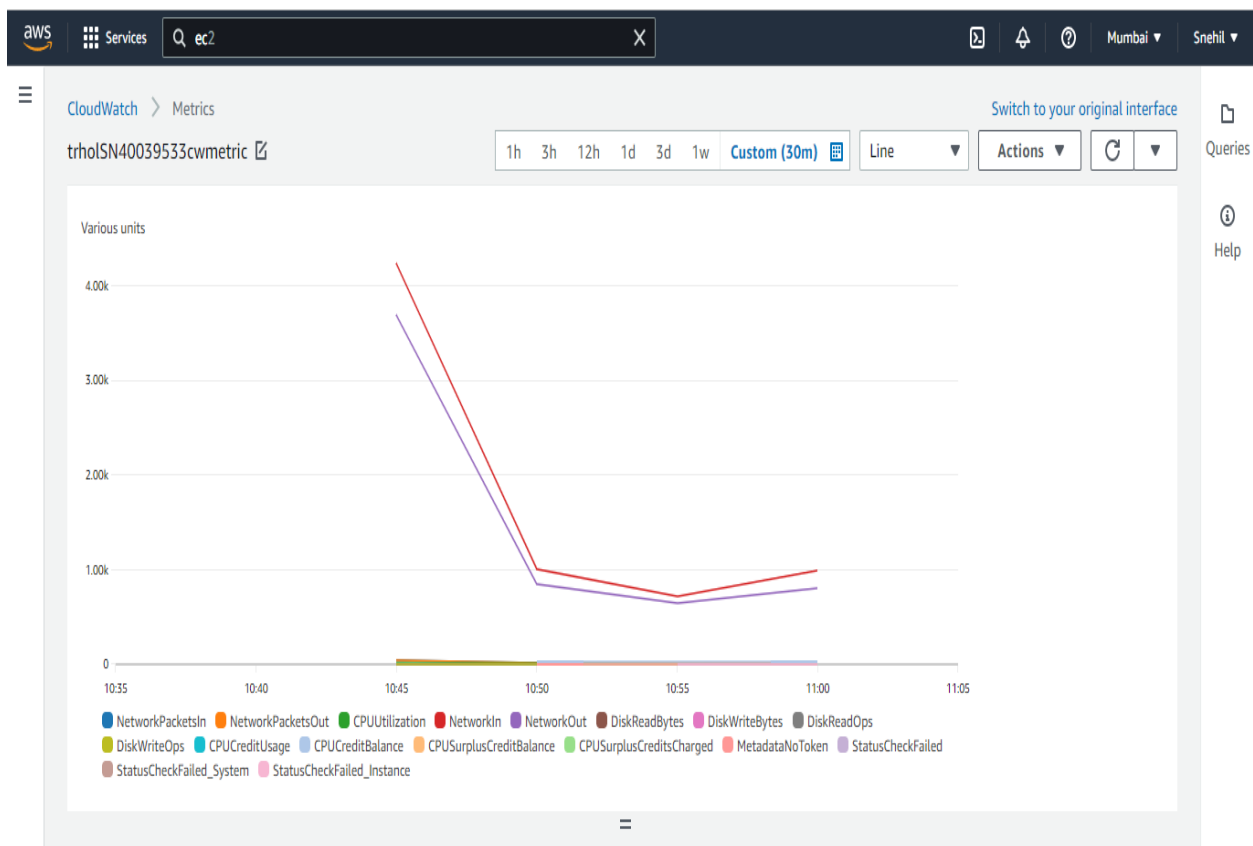
Volume type	Device	Snapshot	Size	Volume type	IOPS	Throughput	Delete on termination	Encrypted
EBS	/dev/...	Create new snapshot fr...	8	EBS General Purpose S...	100		<input checked="" type="checkbox"/> Enable	<input type="checkbox"/> Enable
Insta...	/dev/...	Create new snapshot fr...	80		2000		<input type="checkbox"/> Enable	<input type="checkbox"/> Enable

Add volume

Topic 6: Management & Monitoring

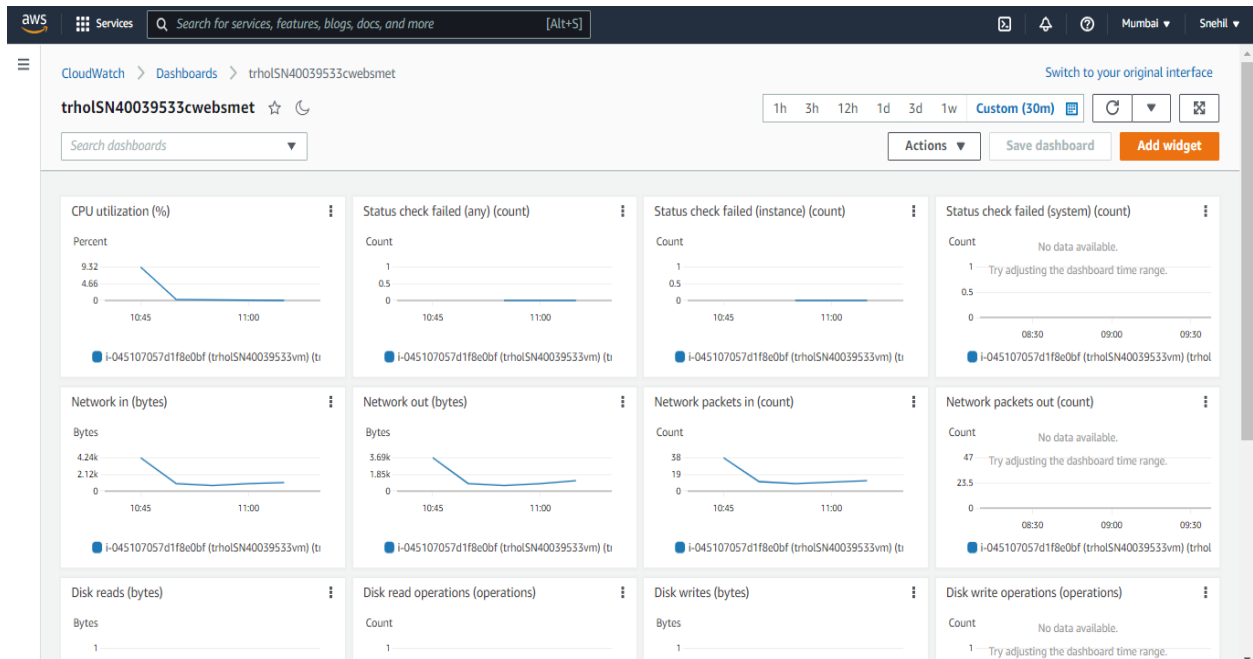
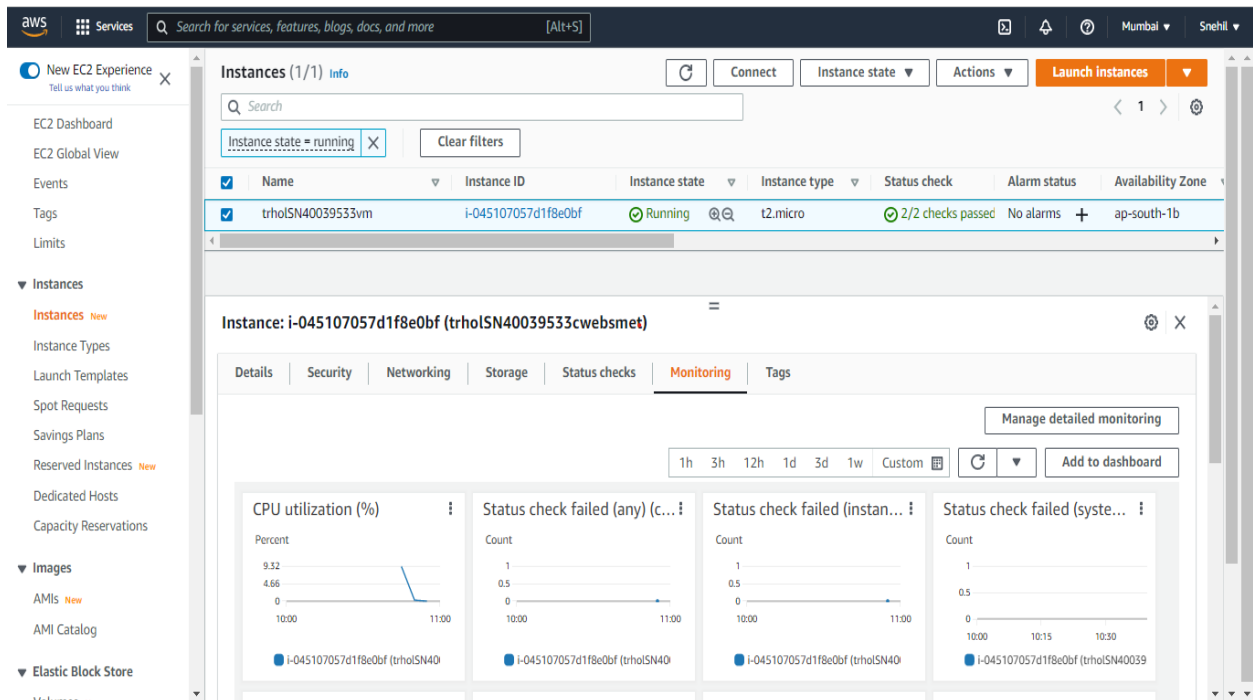
Assignment 1:

- Create **custom** CloudWatch metric to monitor with tag “trhol<EMP AD ID name>cwmetric”



Assignment 2:

- Configure CloudWatch monitoring on an EBS backed EC2 instance with tag “trhol<EMP AD ID name>cwebsmet”



Topic 6: Database

Assignment 1:

- Create RDS database using “t2.micro” instance class DB size as 20 Gib and tag “trhol<EMP AD ID name>rds”

