

Lab1

1- Create aws account and set billing alarm

- **In Billing Preferences.**

The screenshot shows the AWS Billing Preferences page. On the left is a navigation menu with links: Home, Billing, Bills, Payments, Credits, Purchase orders, Cost & usage reports, Cost categories, Cost allocation tags, Free tier, Billing Conductor, Cost Management, and Cost explorer. The main content area is titled 'Preferences' and has a sub-header 'Billing Preferences'. It contains three sections: 1. 'Receive PDF Invoice By Email' with an unchecked checkbox and a description: 'Turn on this feature to receive a PDF version of your invoice by email. Invoices are generally available within the first three days of the month.' 2. 'Cost Management Preferences' with an unchecked checkbox for 'Receive Free Tier Usage Alerts' and a description: 'Turn on this feature to receive email alerts when your AWS service usage is approaching, or has exceeded, the AWS Free Tier usage limits. If you wish to receive these alerts at an email address that is not the primary email address associated with this account, please specify the email address below.' There is an 'Email Address:' input field. 3. 'Receive Billing Alerts' with a checked checkbox and a description: 'Turn on this feature to monitor your AWS usage charges and recurring fees automatically, making it easier to track and manage your spending on AWS. You can set up billing alerts to receive email notifications when your charges reach a specified threshold. Once enabled, this preference cannot be disabled. [Manage Billing Alerts](#) or [try the new budgets feature!](#)' At the bottom, there is a link 'Detailed Billing Reports [Legacy]'.

- Create alarm in cloudwatch:

The screenshot shows the 'Conditions' configuration page in AWS CloudWatch. It has two main sections. The first section, 'Threshold type', has two options: 'Static' (selected with a radio button, with the subtext 'Use a value as a threshold') and 'Anomaly detection' (unselected, with the subtext 'Use a band as a threshold'). The second section, 'Whenever EstimatedCharges is...', has the instruction 'Define the alarm condition.' and four options: 'Greater > threshold' (selected), 'Greater/Equal >= threshold', 'Lower/Equal <= threshold', and 'Lower < threshold'. Below this is a third section, 'than...', with the instruction 'Define the threshold value.' It contains an input field with the value '1' and the unit 'USD'. A note at the bottom says 'Must be a number'.

Step 1
Specify metric and conditions

Step 2
Configure actions

Step 3
Add name and description

Step 4
Preview and create

Add name and description

Name and description

Alarm name
Billing_Alerts

Alarm description - optional [View formatting guidelines](#)

Edit

Preview

Alert me when my usage exceed 1 dollar

Up to 1024 characters (39/1024)

Markdown formatting is only applied when viewing your alarm in the console. The description will remain in plain text in the alarm notifications.

Alarm state trigger

Define the alarm state that will trigger this action.

☒ **In alarm**
The metric or expression is outside of the defined threshold.

☐ **OK**
The metric or expression is within the defined threshold.

☐ **Insufficient data**
The alarm has just started or not enough data is available.

Remove

Send a notification to the following SNS topic

Define the SNS (Simple Notification Service) topic that will receive the notification.

☒ **Select an existing SNS topic**

☐ Create new topic

☐ Use topic ARN to notify other accounts

Send a notification to...

My_Billing_Alerts

Only email lists for this account are available.

Email (endpoints)

alsafawagdy24@gmail.com - [View in SNS Console](#)

Add notification

CloudWatch

Successfully created alarm Billing_Alerts. [View alarm](#)

Favorites and recents

Dashboards

Alarms

0

0

0

In alarm

All alarms

Billing

Logs New

Metrics

CloudWatch > Alarms

Alarms (1) ☐ Hide Auto Scaling alarms

Clear selection

Refresh

Create composite alarm

Actions

Create alarm

Search

Any state

Any type

Any actions ...

< 1 >

Settings

<input type="checkbox"/>	Name	State	Last state update	Conditions	Actions
<input type="checkbox"/>	Billing_Alerts	Insufficient data	2022-12-19 00:40:27	EstimatedCharges > 1 for 1 datapoints within 6 hours	<div>Actions enable</div>

2- IAM

- create 2 groups one admin and one for development

Admin

Delete

Summary

Edit

User group name	Creation time	ARN
Admin	December 19, 2022, 00:47 (UTC+02:00)	arn:aws:iam::422097883691:group/Admin

Users

Permissions

Access Advisor

Permissions policies (1) [Info](#)

You can attach up to 10 managed policies.

↺

Simulate

Remove

Add permissions ▼

🔍 Filter policies by property or policy name and press enter.

< 1 > ⚙️

<input type="checkbox"/>	Policy name ↗	Type	Description
<input type="checkbox"/>	🔗 AdministratorAccess	AWS managed - job function	Provides full access to AWS services and resources.

Development

Delete

Summary

Edit

User group name	Creation time	ARN
Development	December 19, 2022, 00:50 (UTC+02:00)	arn:aws:iam::422097883691:group/Development

Users

Permissions

Access Advisor

Permissions policies (1) [Info](#)

You can attach up to 10 managed policies.

↺

Simulate

Remove

Add permissions ▼

🔍 Filter policies by property or policy name and press enter.

< 1 > ⚙️

<input type="checkbox"/>	Policy name ↗	Type	Description
<input type="checkbox"/>	🔗 AmazonS3FullAccess	AWS managed	Provides full access to all buckets via the AWS Management Console.

- create admin-1 user console access and mfa enabled

Add user

1 2 3 4

Set user details

You can add multiple users at once with the same access type and permissions. [Learn more](#)

User name*


[Add another user](#)


Select AWS access type


Select how these users will primarily access AWS. If you choose only programmatic access, it does NOT prevent users from accessing the console using an assumed role. Access keys and autogenerated passwords are provided in the last step. [Learn more](#)

- Select AWS credential type*
- ☐ **Access key - Programmatic access**
Enables an **access key ID** and **secret access key** for the AWS API, CLI, SDK, and other development tools.
 - ☒ **Password - AWS Management Console access**
Enables a **password** that allows users to sign-in to the AWS Management Console.

Set permissions

 Add user to group

 Copy permissions from existing user

 Attach existing policies directly

Add user to an existing group or create a new one. Using groups is a best-practice way to manage user's permissions by job functions. [Learn more](#)

Add user to group

[Create group](#) [Refresh](#)

Showing 2 results

Group	Attached policies
<input checked="" type="checkbox"/> Admin	AdministratorAccess
<input type="checkbox"/> Development	AmazonS3FullAccess

[Cancel](#) [Previous](#) [Next: Tags](#)

Users (1) [Info](#)
An IAM user is an identity with long-term credentials that is used to interact with AWS in an account.

[Refresh](#) [Delete](#) [Add users](#)

	User name	Groups	Last activity	MFA	Password a...	Activ
<input type="checkbox"/>	Admin_1	Admin	Never	Virtual	3 minutes ago	-

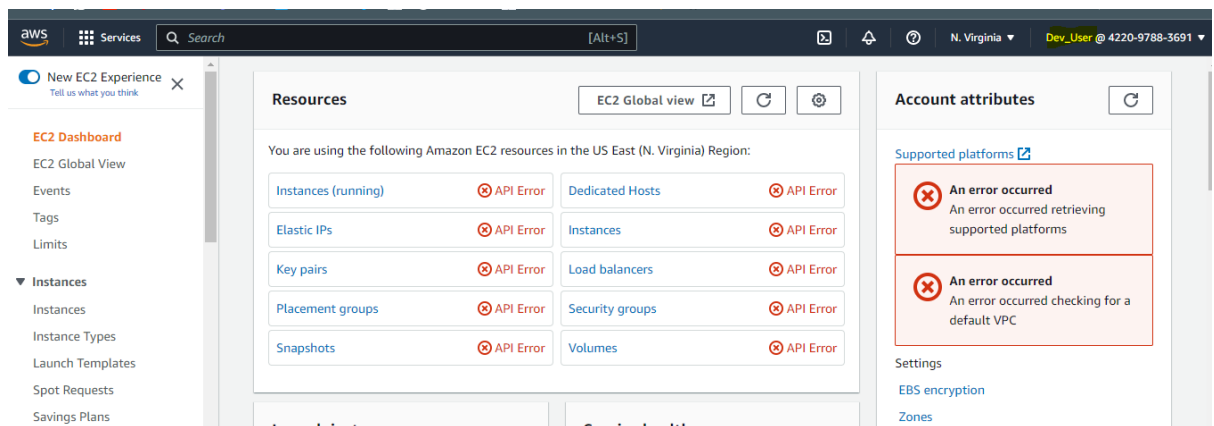
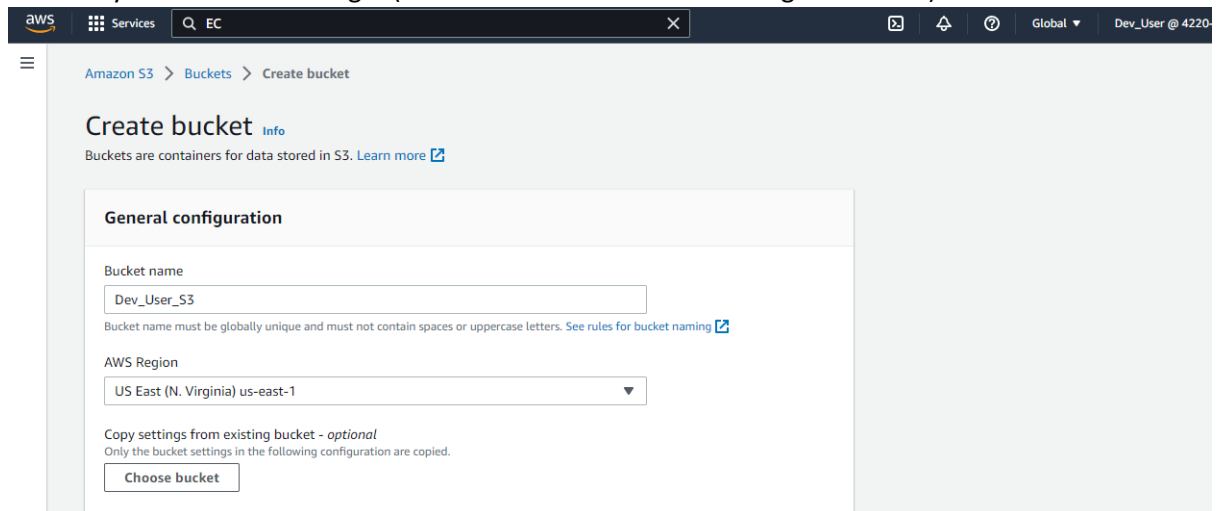
- admin2-prog with cli access only and list all users and groups using it commands not console

```
Islam@DESKTOP-G8INB1G MINGW64 ~  
$ aws configure  
AWS Access Key ID [*****KWZA]: AKIAWERX6SIVYFLVG5SW  
AWS Secret Access Key [*****3C5X]: 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  
Default region name [us-east-1]:  
Default output format [json]:
```

```
Islam@DESKTOP-G8INB1G MINGW64 ~  
$ aws iam list-users  
{  
  "Users": [  
    {  
      "Path": "/",  
      "UserName": "Admin_1",  
      "UserId": "AIDAWERX6SIVUETBQOK45",  
      "Arn": "arn:aws:iam::422097883691:user/Admin_1",  
      "CreateDate": "2022-12-18T22:56:47+00:00"  
    },  
    {  
      "Path": "/",  
      "UserName": "Admin_2",  
      "UserId": "AIDAWERX6SIV33NXZCBEH",  
      "Arn": "arn:aws:iam::422097883691:user/Admin_2",  
      "CreateDate": "2022-12-18T23:12:21+00:00"  
    }  
  ]  
}
```

```
$ aws iam list-groups  
{  
  "Groups": [  
    {  
      "Path": "/",  
      "GroupName": "Admin",  
      "GroupId": "AGPAWERX6SIV7UNYLYKLW",  
      "Arn": "arn:aws:iam::422097883691:group/Admin",  
      "CreateDate": "2022-12-18T22:47:05+00:00"  
    },  
    {  
      "Path": "/",  
      "GroupName": "Development",  
      "GroupId": "AGPAWERX6SIV2L6FDSBMI",  
      "Arn": "arn:aws:iam::422097883691:group/Development",  
      "CreateDate": "2022-12-18T22:50:00+00:00"  
    }  
  ]  
}
```

- in the development group create user with name dev-user with programmatic and. Admin access try to access aws using it (take a screenshot from accessing ec2 and s3)



- Also access cli using it and try to get all users and groups using it

```
Islam@DESKTOP-G8INB1G MINGW64 ~
$ aws configure
AWS Access Key ID [*****57HP]: AKIAMERX6SIVTVQC57HP
AWS Secret Access Key [*****Ynuz]: R2AeuDseRbWmRQKm4v880wM6KwB6wR54NaMYnuz
Default region name [us-east-1]:
Default output format [json]:

Islam@DESKTOP-G8INB1G MINGW64 ~
$ aws iam list-users

An error occurred (AccessDenied) when calling the ListUsers operation: User: arn:aws:iam::422097883691:user/Dev_User is not authorized to perform: iam:Li
resource: arn:aws:iam::422097883691:user/ because no identity-based policy allows the iam:ListUsers action

Islam@DESKTOP-G8INB1G MINGW64 ~
$ aws iam list-groups

An error occurred (AccessDenied) when calling the ListGroups operation: User: arn:aws:iam::422097883691:user/Dev_User is not authorized to perform: iam:L
resource: arn:aws:iam::422097883691:group/ because no identity-based policy allows the iam:ListGroups action

Islam@DESKTOP-G8INB1G MINGW64 ~
$ aws s3 ls

Islam@DESKTOP-G8INB1G MINGW64 ~
```

USERS:

Users (3) Info

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

Refresh

Delete

Add users

Find users by username or access key

< 1 >

Settings

<input type="checkbox"/>	User name	Groups	Last activity	MFA	Password a...	Activ
<input type="checkbox"/>	Admin_1	Admin	Never	Virtual	✔ 51 minutes ago	-
<input type="checkbox"/>	Admin_2	Admin	✔ 34 minutes ago	None	None	✔ 36
<input type="checkbox"/>	Dev_User	Development	✔ 6 minutes ago	None	✔ 16 minutes ago	✔ 19

Groups:

User groups (2) Info

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

Refresh

Delete

Create gro

Filter User groups by property or group name and press enter

< 1 >

<input type="checkbox"/>	Group name	Users	Permissions	Creation time
<input type="checkbox"/>	Admin	2	✔ Defined	1 hour ago
<input type="checkbox"/>	Development	1	✔ Defined	1 hour ago