

## Practical 3

classmate

Date \_\_\_\_\_

Page \_\_\_\_\_

### IAM user groups

- An IAM user group is a collection of IAM users. User groups let you specify permissions for multiple users which can make it easier to manage those users. For ex, if you have a user group called 'Admins' & give that user group typical administrator permissions. Any users in that user group automatically have 'Admins' group permission. If a new user joins your organization & needs administrator privileges you can assign the appropriate permissions by adding the user to the 'Admins' user group. If a person changes jobs in your organization, instead of editing that user's permissions you can remove them.
- You can attach identity-based policy to a user group so that all of the users in the user group receive the policy's permission. You cannot add identity a user group as a principal in a policy (such as resource based policy) because groups relate to permissions, not authentication.
- Some important characteristics of user group are
  - A user group can contain many users and a user belong to multiple user groups.

- 3) User groups can be nested, they can contain only users not other user groups.
- 4) There is no default user groups that automatically include all users in the AWS account. If you want to have a user group like that, you must create it & assign each new user to it.
- i) The number & size of IAM resources in an AWS account, such as the no. of groups & the no. of groups that a user can be a member of is limited.
- \* USERS
- i) Root user:

The account owner with complete access to all AWS services & resources. You are the root user if you created the AWS account & you sign in using your root user email & password.

- ii) IAM identity center user:

A user whose AWS account is a part of AWS Organizations who signs in through the AWS access portal with a unique URL. These users can either be created directly in IAM identity center.

## Q1] IAM user -

An identity within your AWS account that's granted specific custom permissions. You're an IAM user if you didn't create the AWS account & your administrator or help desk employee provided you your sign-in credentials that include an AWS account.

## Q2] IAM

AWS identity & access management (IAM) is a web-service that helps you securely control access to AWS resources. With IAM, you can manage permission that control which AWS services users can access. You use IAM to control who is authenticated (signed in) & unauthorized (has permissions) to use resources.

## Identities.

When you create an AWS account, you begin with one sign-in identity that has complete access to all AWS services & resources in the account. This identity is called the AWS account root user & is accessed by signing in with an email ID & password.

## Access Management.

After a user is setup in IAM, they will sign up credentials to authenticate with AWS authentication provided by matching the origin credentials to a principal (an IAM user, federated user, IAM role) trusted by the AWS account.

Next, a request is made to grant the principal access to resources.

For eg. when you first sign in to the console & on the console homepage,

you aren't accessing a specific service.

When you select a service, the request for authorization is sent to that service & it looks to see if your identity is on the list of authorized users, what policies are being enforced to control the level of access.

### Q3 IAM Roles.

An IAM role is an IAM identity that you can create in your account that has specific permissions. An IAM role is similar to an IAM user in that it is an AWS identity with permission policies that determine what the identity can & cannot do in AWS. However, instead of being uniquely associated with one person, a role has credentials such as a password or access key associated with it.

You can use roles to delegate access to more apps, or services that don't normally have access to your AWS resources. For eg- you might want to grant users in your AWS account access to resources they don't usually have or grant user in one AWS account access to resources in another account. Or you sometimes- you want to give AWS access to users who already have identities defined outside of AWS, such as in your corporate directory. Or you access to your account to 3rd party so they can perform an audit on your resources.

## CC\_prac3

The screenshot shows two views of the AWS IAM service. The top view is a search results page for 'IAM' within the 'Services' category. It lists several services: IAM (Manage access to AWS resources), IAM Identity Center (Manage workforce user access to multiple AWS accounts and cloud applications), Resource Access Manager (Share AWS resources with other accounts or AWS Organizations), and AWS App Mesh (Easily monitor and control microservices). Below these are sections for 'Features' and 'Zones'. The bottom view is the 'IAM Dashboard', showing security recommendations (Add MFA for root user, Root user has no active access keys), IAM resources (User groups: 0, Users: 0, Roles: 2, Policies: 0, Identity providers: 0), and account details (Account ID: 481665128109, Account Alias: Create, Sign-in URL: https://481665128109.signin.aws.amazon.co m/console). Quick links include 'My security credentials'.

Screenshot of the AWS IAM Users page showing no users listed.

**Identity and Access Management (IAM)**

**Users (0) Info**

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

**Create user**

**Specify user details**

User name: faridaattaf

The user name can have up to 64 characters. Valid characters: A-Z, a-z, 0-9, and + = . @ \_ - (hyphen)

Provide user access to the AWS Management Console - optional

If you're providing console access to a person, it's a best practice [to manage their access in IAM Identity Center](#).

**Set permissions boundary - optional**

**Next**

**Set permissions**

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](#)

**Permissions options**

Add user to group  
Add user to an existing group, or create a new group. We recommend using groups to manage user permissions by job function.

Copy permissions  
Copy all group memberships, attached managed policies, and inline policies from an existing user.

Attach policies directly  
Attach a managed policy directly to a user. As a best practice, we recommend attaching policies to a group instead. Then, add the user to the appropriate group.

**Get started with groups**

Create a group and select policies to attach to the group. We recommend using groups to manage user permissions by job function, AWS service access, or custom permissions. [Learn more](#)

**Set permissions boundary - optional**

**Next**

**Review and create**

Review your choices. After you create the user, you can view and download the autogenerated password, if enabled.

User name	Console password type	Require password reset
faridaattar	None	No

**Permissions summary**

Name	Type	Used as
No resources		

**Tags - optional**

Tags are key-value pairs you can add to AWS resources to help identify, organize, or search for resources. Choose any tags you want to associate with this user.

No tags associated with the resource.

**User created successfully**

You can view and download the user's password and email instructions for signing in to the AWS Management Console.

**Users (1) Info**

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

User name	Path	Group	Last activity	MFA	Password age	Console last sign-in
faridaattar	/	-	-	-	-	-

**faridaattar**

**Summary**

ARN arn:aws:iam:481665128109:user/faridaattar	Console access Disabled	Access key 1 Create access key
Created August 10, 2024, 12:26 (UTC+05:30)	Last console sign-in -	-

**Permissions policies**

Permissions are defined by policies attached to the user directly or through groups.

Policy name	Type	Attached via

## Enable console access

Enable console access for faridaattar.

Console password

Autogenerated password

Custom password

User must create new password at next sign-in  
Users automatically get the IAMUserChangePassword policy to allow them to change their own password.

[Cancel](#) [Enable console access](#)

New Incognito Tab

https://481665128109.signin.aws.amazon.com/console

https://481665128109.signin.aws.amazon.com/console

https://481665128109.signin.aws.amazon.com/console - Google Search

You've gone Incognito

Others who use this device won't see your activity, so you can browse more privately. This won't change how data is collected by websites you visit and the services they use, including Google. Downloads, bookmarks and reading list items will be saved. [Learn more](#)

Chrome won't save:

- Your browsing history
- Cookies and site data
- Information entered in forms

Your activity might still be visible to:

- Websites you visit
- Your employer or school
- Your internet service provider

Block third-party cookies

When on, sites can't use cookies that track you across the web. Features on some sites may break.



## Sign in as IAM user

Account ID (12 digits) or account alias

481665128109

IAM user name

Farida Attar

Password

\*\*\*\*\*

Remember this account

**Sign in**

[Sign in using root user email](#)

[Forgot password?](#)



AWS Services Search [Alt+S] Stockholm faridaattar @ 4816-6512-8109 ▾ Widgets ⓘ ⓘ

Console Home [Info](#)

Recently visited [Info](#)

No recently visited services

Explore one of these commonly visited AWS services.

EC2 S3 RDS Lambda

View all services Go to myApplications

Welcome to AWS AWS Health Cost and usage

Applications (0) [Info](#)  
Region: Europe (Stockholm)

eu-north-1 (Current Region) Find applications

Name Description Region Originating account

Access denied

New: AWS User Notifications quick setup  
Enable common notifications for CloudWatch, EC2, and Health using the new quick setup feature in AWS User Notifications.

Done

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Policies (1222) <a href="#">Info</a>				
A policy is an object in AWS that defines permissions.				
<a href="#">Actions</a> <a href="#">Delete</a> <a href="#">Create policy</a>				
<a href="#">Search</a> <a href="#">Filter by Type</a>				
Policy name	Type	Used as	Description	
<a href="#">AlexaForBusinessNet...</a>	AWS managed	None	-	
<a href="#">AlexaForBusinessPoly...</a>	AWS managed	None	Provide access to Poly AVS devices	
<a href="#">AlexaForBusinessRead...</a>	AWS managed	None	Provide read only access to AlexaForB...	
<a href="#">AmazonAPIGatewayA...</a>	AWS managed	None	Provides full access to create/edit/delete...	
<a href="#">AmazonAPIGatewayIn...</a>	AWS managed	None	Provides full access to invoke APIs in A...	
<a href="#">AmazonAPIGatewayP...</a>	AWS managed	None	Allows API Gateway to push logs to us...	
<a href="#">AmazonAppFlowFullA...</a>	AWS managed	None	Provides full access to Amazon AppFlo...	
<a href="#">AmazonAppFlowRead...</a>	AWS managed	None	Provides read only access to Amazon A...	
<a href="#">AmazonAppStreamFu...</a>	AWS managed	None	Provides full access to Amazon AppStr...	
<a href="#">AmazonAppStreamPC...</a>	AWS managed	None	Amazon AppStream 2.0 access to AWS...	
<a href="#">AmazonAppStreamRe...</a>	AWS managed	None	Provides read only access to Amazon A...	

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IAM > Policies > Create policy

Step 1 Specify permissions [Info](#)

Add permissions by selecting services, actions, resources, and conditions. Build permission statements using the JSON editor.

Step 2 Review and create

Policy editor [Visual](#) [JSON](#) [Actions](#)

EC2 [Allow All actions](#)

Specify what actions can be performed on specific resources in EC2.

Actions allowed

Specify actions from the service to be allowed.

Filter Actions

Effect  Allow  Deny

Manual actions | Add actions  All EC2 actions (ec2:\*)

Access level [List \(Selected 175/175\)](#) [Read \(Selected 36/36\)](#) [Expand all](#) [Collapse all](#)

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IAM > Policies > Create policy

Step 1 Specify permissions [Info](#)

Add permissions by selecting services, actions, resources, and conditions. Build permission statements using the JSON editor.

Step 2 Review and create

Policy editor [Visual](#) [JSON](#) [Actions](#)

```

1  {
2    "Version": "2012-10-17",
3    "Statement": [
4      {
5        "Sid": "faridaattar",
6        "Effect": "Allow",
7        "Action": "ec2:*",
8        "Resource": "*"
9      }
10   ]
11 }

```

Edit statement [faridaattar](#) Remove

Add actions

Choose a service Filter services

Included EC2

Available AMP API Gateway API Gateway V2 ASC

**Permissions defined in this policy** Info

Permissions defined in this policy document specify which actions are allowed or denied. To define permissions for an IAM identity (user, user group, or role), attach a policy to it.

**Add tags - optional** Info

Tags are key-value pairs that you can add to AWS resources to help identify, organize, or search for resources.

No tags associated with the resource.

**Add new tag**  
You can add up to 50 more tags.

**Create policy**

**Identity and Access Management (IAM)**

**Policies (1223) Info**

A policy is an object in AWS that defines permissions.

Policy name	Type	Used as	Description
<a href="#">AccessAnalyzerService...</a>	AWS managed	None	-
<a href="#">AdministratorAccess</a>	AWS managed - job function	None	Provides full access to AWS services an...
<a href="#">AdministratorAccess-...</a>	AWS managed	None	Grants account administrative permissi...
<a href="#">AdministratorAccess-...</a>	AWS managed	None	Grants account administrative permissi...
<a href="#">AlexaForBusinessDevi...</a>	AWS managed	None	Provide device setup access to AlexaFo...
<a href="#">AlexaForBusinessFullA...</a>	AWS managed	None	Grants full access to AlexaForBusiness ...
<a href="#">AlexaForBusinessGate...</a>	AWS managed	None	Provide gateway execution access to A...
<a href="#">AlexaForBusinessLifes...</a>	AWS managed	None	Provide access to Lifesize AVS devices

**faridaattar** Info

**Summary**

ARN <a href="#">arn:aws:iam:481665128109:user/faridaattar</a>	Console access <span style="color: yellow;">⚠ Enabled without MFA</span>	Access key 1 <a href="#">Create access key</a>
Created August 10, 2024, 12:26 (UTC+05:30)	Last console sign-in <span style="color: grey;">⌚ Never</span>	

**Permissions**

**Permissions policies (0)**

Permissions are defined by policies attached to the user directly or through groups.

**Add permissions**

- [Add permissions](#)
- [Create inline policy](#)

Screenshot of the AWS IAM 'Add permissions' step 1: Add permissions. The page shows three options: 'Add user to group' (selected), 'Copy permissions', and 'Attach policies directly'. A 'Get started with groups' callout provides instructions and a 'Create group' button.

Screenshot of the AWS IAM 'Permissions policies' list. It shows one policy named 'IAM\_policy' (Customer managed). The search bar contains 'IAM\_pol'.

Screenshot of the AWS EC2 Dashboard for the Europe (Stockholm) Region. The sidebar shows navigation links like Instances, Images, and Elastic Block Store. The main area displays EC2 resources (0 instances running, 0 auto scaling groups, 0 dedicated hosts, etc.) and a note about launching instances. A service health section shows an error occurred retrieving service health information. A sidebar on the right provides EC2 Free Tier info and a log entry about a failed API call.

## Create key pair

X

### Key pair name

Key pairs allow you to connect to your instance securely.

The name can include up to 255 ASCII characters. It can't include leading or trailing spaces.

### Key pair type

RSA

RSA encrypted private and public key pair

ED25519

ED25519 encrypted private and public key pair

### Private key file format

.pem

For use with OpenSSH

.ppk

For use with PuTTY

**⚠️** When prompted, store the private key in a secure and accessible location on your computer. You will need it later to connect to your instance. [Learn more](#)

Cancel Create key pair

**Success**  
Successfully initiated launch of instance (i-003adc776953c5dbb)

▶ Launch log

**Next Steps**

What would you like to do next with this instance, for example "create alarm" or "create backup"

< 1 2 3 4 5 6 >

Create billing and free tier usage alerts  To manage costs and avoid surprise bills, set up email notifications for billing and free tier usage thresholds.  <a href="#">Create billing alerts</a>	Connect to your instance  Once your instance is running, log into it from your local computer.  <a href="#">Connect to instance</a> <a href="#">Learn more</a>	Connect an RDS database  Configure the connection between an EC2 instance and a database to allow traffic flow between them.  <a href="#">Connect an RDS database</a> <a href="#">Create a new RDS database</a> <a href="#">Learn more</a>	Create EBS snapshot policy  Create a policy that automates the creation, retention, and deletion of EBS snapshots.  <a href="#">Create EBS snapshot policy</a>
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