AWS:

**IAM :**

**User and Group:**

IAM: standsfor --> identity Access Management

here we can create users and assign it ot Groups:

users are people with in our organization and can be grouped.

Examples : ALICE BOB Charles --> developer( Group)

David Edward Fred --> testet (Group)

Group contains only users and not other group.

one user can belong to multiple group.

**Permission:**

users and groups can be assigned JSON documents called Policy

These Policies defines the Permission to users.

in AWS you apply the least Privilege Principle dont give more permission than users needs.

IAM Policies Structer:

consits of Vesrion: Policy Language version. always include "2012-10-17"

and Id: an identifier for the Policy(Optional)

Statement Consists Of:

Sid: an identifier for statement

effect: whether the stetement allows or denies access (Allow,Deny)

Principal: account/user/role to which this policy applied

Action: list of actions this policy allows or denies.

Resource: list of resources to which the action applied to

condition: conditions for when this policy is in effect

IAM - Password Policy:

Strong password = higher security for your account

in AWS, you can setup a password Policy:

set a minimum password length

require specific character types:

MFA - Multi Factor Authentication

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users have access to your accout and can possible acchange configuration or delete resource in your AWS account.

ALice password +MFA(token number) ==> successfully

virtual MFA device: phone

google Authenticator and Authy (multi-device)

MFA token can be activated:

got Your Security Credentials under user and go to MFA tab and activate MFA

How Can User Acces AWS:

AWS Command Line Interface (CLI): protected by access Keys

AWS Management COnsole (protected by password +MFA)

AWS Software Developer kit(SDK) - for code: protected by access keys

Access Keys are secret, Just like Password :

Access Key ID = UserName

Secret Access Key = password

step1 : we need to instal AWS cli insall on windows

step2: we need to IM user to genarate the access keys:

for that go to My security credentials and after click on create access key button.

and after it will generate AWS access key

access key id is username and secret access key is password.

after that open cmd promt and enter below command.





IAM Security Tools:

IAM Credentials Report (Account Level)

a reports that lists all your account users and the status of their various credentials.

IAM Access Advisor (User -Level)

access advisor shows the services permission granted to user and when cheose services were last accessed.

you can use this information to revise your policies.