

## Task\_Day\_1

### 1- Create AWS account

Done.

### 2- Create 2 IAM Groups, Create 2 users one for each group with different permissions

IAM > User groups > Development

## Development

Delete

### Summary

Edit

User group name	Creation time	ARN
Development	August 15, 2022, 15:17 (UTC+03:00)	arn:aws:iam::334316156435:group/Development

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.

Refresh Remove users Add users

Search

	User name	Groups	Last activity	Creation time
<input type="checkbox"/>	dina-aws	1	25 minutes ago	30 minutes ago

IAM > User groups > Development

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User group name	Creation time	ARN
Development	August 15, 2022, 15:17 (UTC+03:00)	arn:aws:iam::334316156435:group/Development

Users Permissions Access Advisor

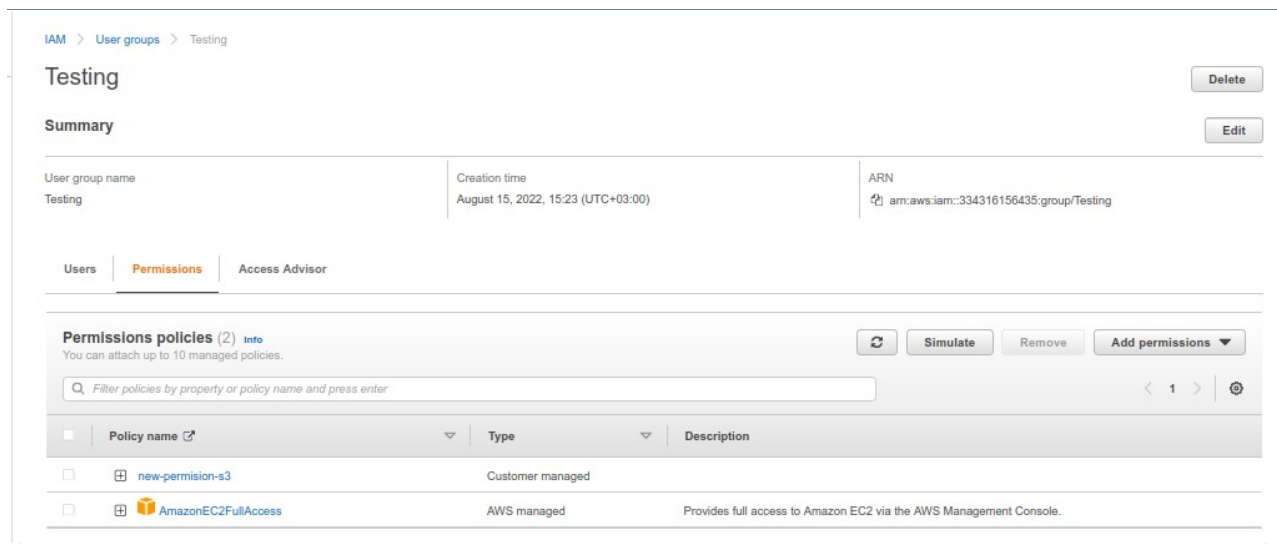
**Permissions policies (1)** [info](#)

You can attach up to 10 managed policies.

Refresh Simulate Remove Add permissions

Filter policies by property or policy name and press enter

	Policy name	Type	Description
<input type="checkbox"/>	AmazonEC2FullAccess	AWS managed	Provides full access to Amazon EC2 via the AWS Management Console.



4- Create EC2 instance with the given script in user data and try to access it from web browser.

5- Connect to your EC2 in (task 4) and download your static website (from github or local device) then add it to root directory of the apache server then access your website from your browser.

I used a simple node api application that communicates with patients database – docker composed.

```

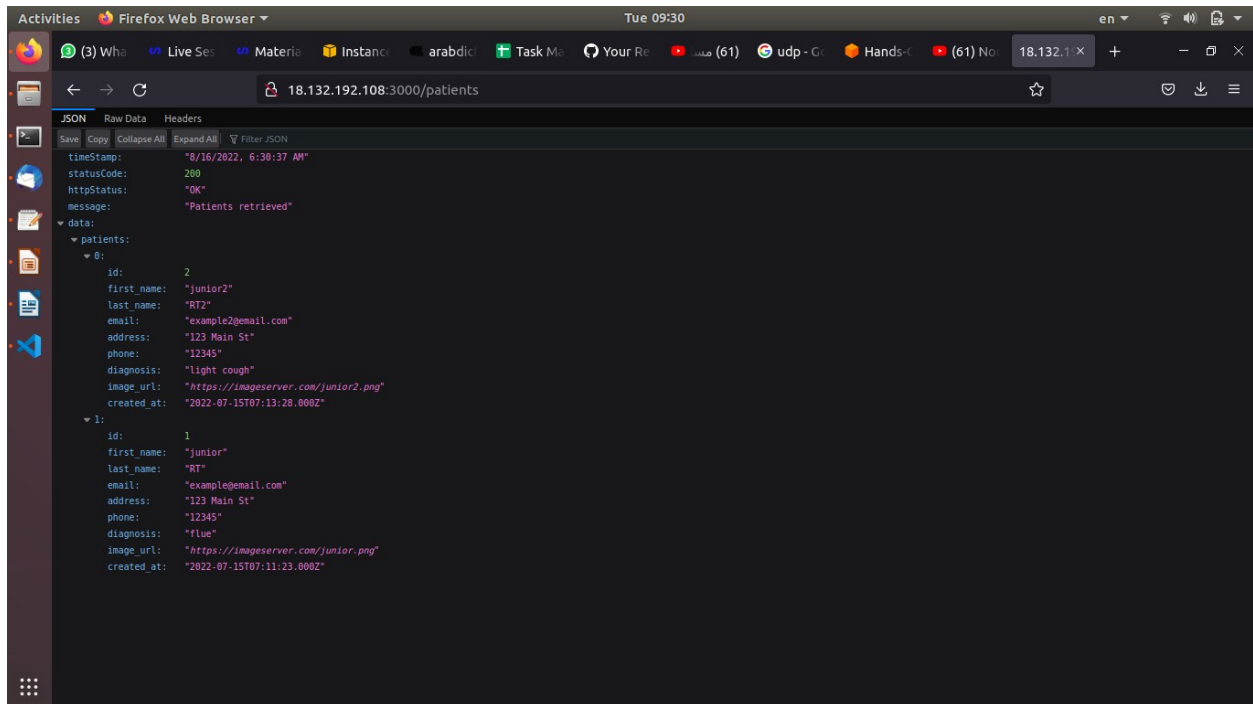
Activities  Terminal  Tue 09:43
ec2-user@ip-172-31-7-202:~/nodejsapi

File Edit View Search Terminal Help
dlnagidina:~/Documents/cloud computing/Sprints - DevOps/Nodejs$ ssh -l nodeapikey.pem ec2-user@18.192.108
Last login: Tue Aug 16 06:42:36 2022 from 176.236.160.132

      _ _ _ _ _
     /   / _  /   Amazon Linux 2 AMI
    /___/___/_/

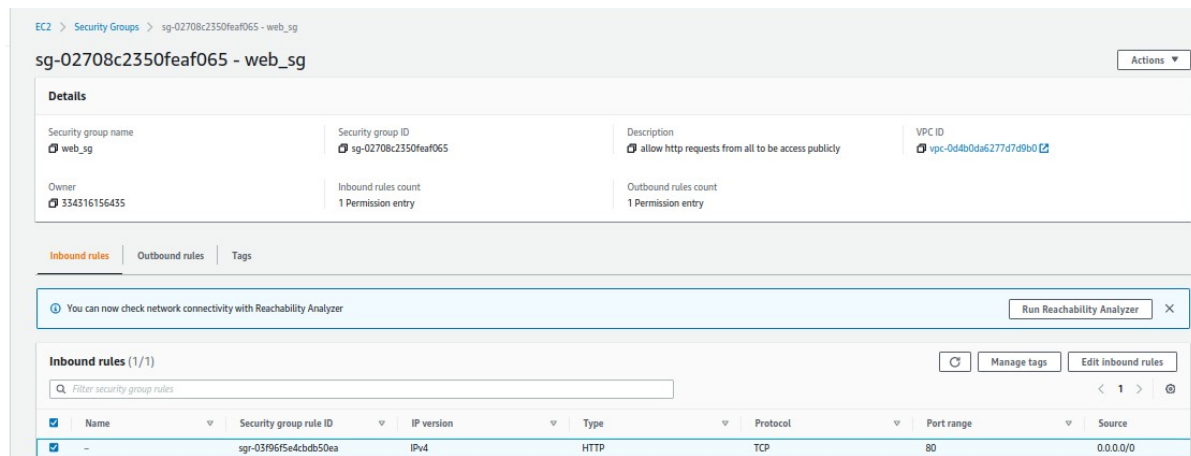
https://aws.amazon.com/amazon-linux-2/
15 package(s) needed for security, out of 31 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-172-31-7-202 ~]$ cd nodejsapi/
[ec2-user@ip-172-31-7-202 nodejsapi]$ docker-compose up
[+] Running 3/2
  :: Network nodejsapi_internalnet Created                                0.0s
  :: Container mysqlcontainer Created                                    0.0s
  :: Container nodeappcontainer Created                                0.0s
Attaching to mysqlcontainer, nodeappcontainer
mysqlcontainer | 2022-08-16 06:43:19+00:00 [Note] [Entrypoint]: Entrypoint script for MySQL Server 8.0.29-1debian10 started.
mysqlcontainer | 2022-08-16 06:43:19+00:00 [Note] [Entrypoint]: Switching to dedicated user 'mysql'
mysqlcontainer | 2022-08-16 06:43:19+00:00 [Note] [Entrypoint]: Entrypoint script for MySQL Server 8.0.29-1debian10 started.
mysqlcontainer | 2022-08-16T06:43:20.370384Z 0 [Warning] [MY-010918] [Server] 'default_authentication_plugin' is deprecated and will be removed in a future release. Please use authentication_policy instead.
mysqlcontainer | 2022-08-16T06:43:20.370413Z 0 [System] [MY-010116] [Server] /usr/sbin/mysqld (mysqld 8.0.29) starting as process 1
mysqlcontainer | 2022-08-16T06:43:20.396162Z 1 [System] [MY-013576] [InnoDB] InnoDB initialization has started.
mysqlcontainer | 2022-08-16T06:43:20.974039Z 1 [System] [MY-013577] [InnoDB] InnoDB initialization has ended.
mysqlcontainer | 2022-08-16T06:43:21.389721Z 0 [Warning] [MY-010068] [Server] CA certificate ca.pem is self signed.
mysqlcontainer | 2022-08-16T06:43:21.390310Z 0 [System] [MY-013602] [Server] Channel mysql_main configured to support TLS. Encrypted connections are now supported for this channel.
mysqlcontainer | 2022-08-16T06:43:21.392895Z 0 [Warning] [MY-011810] [Server] Insecure configuration for --pid-file: Location '/var/run/mysql' d' in the path is accessible to all OS users. Consider choosing a different directory.
nodeappcontainer | > nodejsapi@1.0.0 start:prod
nodeappcontainer | > NODE_ENV=prod node src/index.js
mysqlcontainer | 2022-08-16T06:43:21.447022Z 0 [System] [MY-011323] [Server] X Plugin ready for connections. Bind-address: '::' port: 33060, socket: /var/run/mysqld/mysqld.sock
mysqlcontainer | 2022-08-16T06:43:21.447569Z 0 [System] [MY-010931] [Server] /usr/sbin/mysqld: ready for connections. Version: '8.0.29' socket: '/var/run/mysqld/mysqld.sock' port: 3306 MySQL Community Server - GPL.

```



6- Create 3 SG:

web\_sg and allow http requests from all to be access publicly.



app\_sg and allow http requests only from SGs (web\_app and db\_app).

EC2 > Security Groups > sg-04b804e777c4a73e8 - app\_sg

sg-04b804e777c4a73e8 - app\_sg

Details

Security group name app_sg	Security group ID sg-04b804e777c4a73e8	Description allow http requests only from SGs (web_app and db_app).	VPC ID vpc-0d4b0da6277d7d9b0
Owner 334316156435	Inbound rules count 3 Permission entries	Outbound rules count 0 Permission entries	

Inbound rules (3)

Name	Security group rule ID	IP version	Type	Protocol	Port range	Source	Description
-	sgr-053d035c77afb620c	-	HTTP	TCP	80	sg-02708c2350feaf065 / web_sg	-
-	sgr-01cc15505a3bc55d	-	HTTP	TCP	80	sg-01fa87bfa3bb4a095 / db_sg	-
-	sgr-0133bfae8a712c05c	IPv4	SSH	TCP	22	0.0.0.0/0	-

db\_sg and allow http requests only from SG(web\_app) on port 3306.

EC2 > Security Groups > sg-01fa87bfa3bb4a095 - db\_sg

sg-01fa87bfa3bb4a095 - db\_sg

Details

Security group name db_sg	Security group ID sg-01fa87bfa3bb4a095	Description allow http requests only from SG(web_app) on port 3306	VPC ID vpc-0d4b0da6277d7d9b0
Owner 334316156435	Inbound rules count 1 Permission entry	Outbound rules count 1 Permission entry	

Inbound rules (1/1)

Name	Security group rule ID	IP version	Type	Protocol	Port range	Source	Description
-	sgr-0d7a26f505b12a44a	-	MySQL/Aurora	TCP	3306	sg-04b804e777c4a73e8 / app_sg	-

7- Create 3 EC2 with one tag (Name) for each one (web\_server, app\_server, db\_server) and attached each server with its respective SG.

Instances (3/4) [Info](#)