

AWS

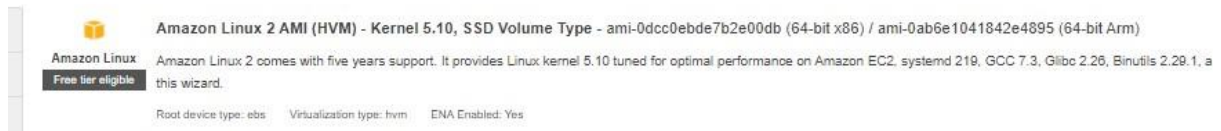
REPORT 2

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CREATING DATABASE IN A CLOUD

INSTANCE CREATING:

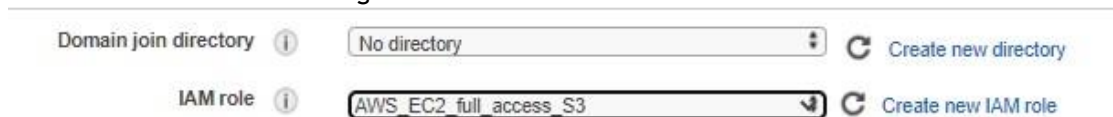


In EC2 amazon linux 2 AMI was chosen for purposes on task.



t2 micro
costs:

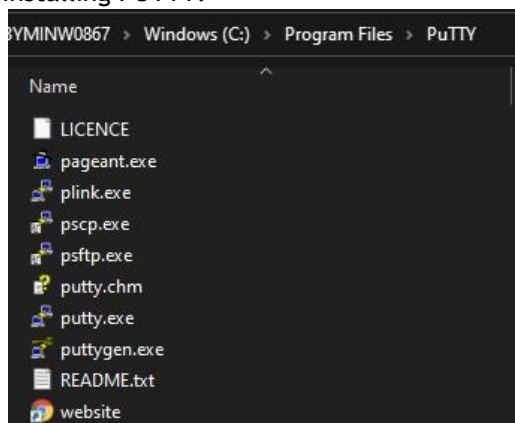
IAM role was chosen in “Configure instance” tab



Current security groups were chosen because my current location is Tbilisi and i don't know where my mentor is. Instance is running



Installing PUTTY:



Using puttygen.exe to convert key pair from .pem into .ppk
Pressing load > Selecting file > Saving private key

Actions

Generate a public/private key pair Generate

Load an existing private key file Load

Save the generated key Save public key Save private key

Parameters

Type of key to generate: ☒ RSA ☐ DSA ☐ ECDSA ☐ EdDSA ☐ SSH-1 (RSA)

Number of bits in a generated key:

PuTTY Configuration

Category:

- Session
- Logging
- Terminal
- Keyboard
- Bell
- Features
- Window
- Appearance
- Behaviour
- Translation
- Selection
- Colours
- Connection
- Data
- Proxy
- SSH
 - Kex
 - Host keys
 - Cipher
 - Auth
 - GSSAPI
 - TTY
 - X11
 - Tunnels

Basic options for your PuTTY session

Specify the destination you want to connect to

Host Name (or IP address) Port

Connection type: ☒ SSH ☐ Serial ☐ Other:

Load, save or delete a stored session

Saved Sessions

Default Settings	Load
Artiom EC2	

Save Delete

Close window on exit: ☐ Always ☐ Never ☒ Only on clean exit

About Help Open Cancel

```
login as: ec2-user
Authenticating with public key "imported-openssh-key"

 _ | _ | _ )
 _ | ( _ | /   Amazon Linux 2 AMI
 _ | \ _ | _ |

https://aws.amazon.com/amazon-linux-2/
[ec2-user@ip-172-31-40-251 ~]$
```

INSTALLING POSTGRESQL

```
[ec2-user@ip-172-31-40-155 ~]$ sudo systemctl start postgresql-13
[ec2-user@ip-172-31-40-155 ~]$ sudo systemctl enable postgresql-13
Created symlink from /etc/systemd/system/multi-user.target.wants/postgresql-13.service to /usr/lib/systemd/system/postgresql-13.service.
[ec2-user@ip-172-31-40-155 ~]$ sudo systemctl status postgresql-13
● postgresql-13.service - PostgreSQL 13 database server
   Loaded: loaded (/usr/lib/systemd/system/postgresql-13.service; enabled; vendor preset: disabled)
   Active: active (running) since Thu 2022-03-31 10:22:17 UTC; 6s ago
     Docs: https://www.postgresql.org/docs/13/static/
   Main PID: 3764 (postmaster)
   CGroup: /system.slice/postgresql-13.service
           └─3764 /usr/pgsql-13/bin/postmaster -D /var/lib/pgsql/13/data/
             └─3767 postgres: logger
               └─3769 postgres: checkpointer
                 └─3770 postgres: background writer
                   └─3771 postgres: walwriter
                     └─3772 postgres: autovacuum launcher
                       └─3773 postgres: stats collector
                         └─3774 postgres: logical replication launcher

Mar 31 10:22:17 ip-172-31-40-155.eu-central-1.compute.internal systemd[1]: Starting PostgreSQL 13 database....
Mar 31 10:22:17 ip-172-31-40-155.eu-central-1.compute.internal postmaster[3764]: 2022-03-31 10:22:17.870 UT...
Mar 31 10:22:17 ip-172-31-40-155.eu-central-1.compute.internal postmaster[3764]: 2022-03-31 10:22:17.870 UT...
Mar 31 10:22:17 ip-172-31-40-155.eu-central-1.compute.internal systemd[1]: Started PostgreSQL 13 database ....
Hint: Some lines were ellipsized, use -l to show in full.
```

CONNECTING TO DB

```
https://aws.amazon.com/amazon-linux-2/
[ec2-user@ip-172-31-41-5 ~]$ sudo nano /var/lib/pgsql/13/data/pg_hba.conf
[ec2-user@ip-172-31-41-5 ~]$ sudo nano /var/lib/pgsql/13/data/postgresql.conf
[ec2-user@ip-172-31-41-5 ~]$ sudo service postgresql-13 restart
Redirecting to /bin/systemctl restart postgresql-13.service
[ec2-user@ip-172-31-41-5 ~]$ ^C
[ec2-user@ip-172-31-41-5 ~]$ sudo nano /var/lib/pgsql/13/data/postgresql.conf
[ec2-user@ip-172-31-41-5 ~]$ sudo service postgresql-13 restart
Redirecting to /bin/systemctl restart postgresql-13.service
[ec2-user@ip-172-31-41-5 ~]$
```

sudo nano /var/lib/pgsql/13/data/pg_hba.conf

```
# "local" is for Unix domain socket connections only
host    all             all             0.0.0.0/0             md5
local   all             all                                     peer
# IPv4 local connections:
```

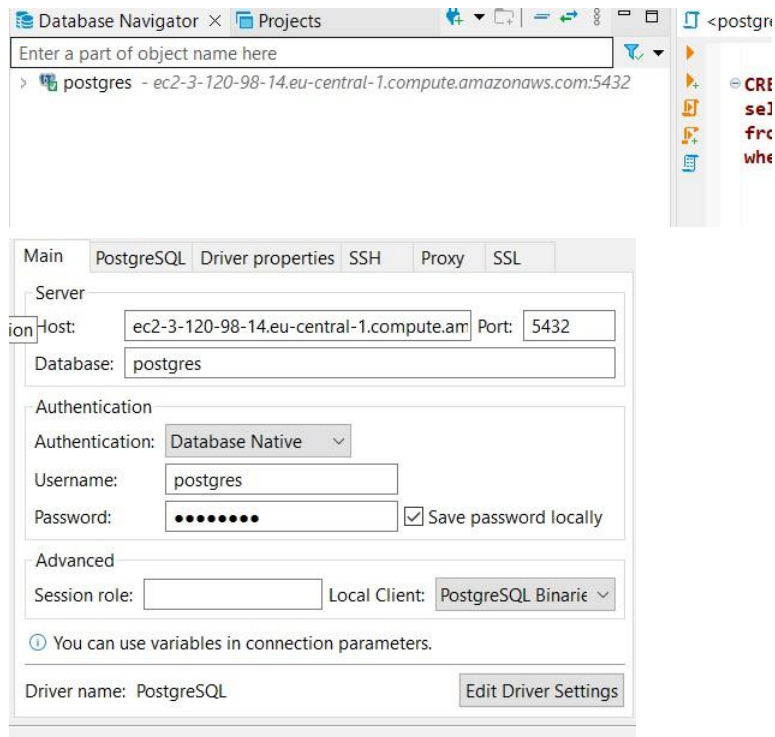
sudo nano /var/lib/pgsql/13/data/postgresql.conf

```
# - Connection Settings -

listen_addresses = '*'           # what IP address(es) to listen on;
                                  # comma-separated list of addresses;
                                  # defaults to 'localhost'; use '*' for all
                                  # (change requires restart)
```

INSERTING CONNECTION CONFIGURATION

Connect to database via DBeaver



MOVING FILE TO EC2

Installing CLI on ce2

```
creating: aws/dist/cryptography/hazmat/  
creating: aws/dist/cryptography/hazmat/bindings/  
inflating: aws/dist/cryptography/hazmat/bindings/_openssl.abi3.so  
ec2-user@ip-172-31-40-155 ~]$ sudo ./aws/install  
you can now run: /usr/local/bin/aws --version  
ec2-user@ip-172-31-40-155 ~]$
```

Putting file in ec2

aws s3 cp s3://artiom-dolzhenko-aws-bucket/files/pictures/pacman.png pacman.png

```
[root@ip-172-31-40-155 ec2-user]# aws s3 cp s3://artiom-dolzhenko-aws-bucket/files/pictures/pacman.png pacman.png  
download: s3://artiom-dolzhenko-aws-bucket/files/pictures/pacman.png to ./pacman.png  
[root@ip-172-31-40-155 ec2-user]# ls  
aws  awscliv2.zip  pacman.png  
[root@ip-172-31-40-155 ec2-user]#
```

CREATING SNAPSHOT:

snap-063cbb0ade2a53cdb (Artiom_Dolzhenko_snap)	
Snapshot settings	
Snapshot ID snap-063cbb0ade2a53cdb (Artiom_Dolzhenko_snap)	Size 8 GiB
Owner 260586643565	Volume ID vol-09ac126300b56d16a
Encryption Not encrypted	KMS key ID -
Fast snapshot restore -	Description -

RAISING COPY FROM IMAGE:

Image summary for ami-07997f8adc4645bb5 (Artiom_Dolzhenko_image)			
AMI ID	ami-07997f8adc4645bb5 (Artiom_Dolzhenko_image)		
Image type	machine		
AMI name	Artiom_Dolzhenko_image		
Owner account ID	260586643565		
Root device name	/dev/sda1		
Status	Available		
Boot mode	-		
State reason	-		
Block devices	/dev/sda1=snap-063cbb0ade2a53cdb:8:true:gp2		
Description	just an image		
Deprecation time	-		
Last launched time	-		

<input type="checkbox"/>	1_Artiom_Dolzhenko_inst	i-0e461ad467e83431a	Running
<input type="checkbox"/>	2_Artiom_Dolzhenko_ins_from_image	i-0bb19f38e5bdc8b58	Running
<input type="checkbox"/>	3_Artiom_Dolzhenko_cloudformation	i-0d0951451d7d7a6fd	Running

Same file in new ec from image

```
https://aws.amazon.com/amazon-linux-2/
[ec2-user@ip-172-31-40-155 ~]$ sudo su
[root@ip-172-31-40-155 ec2-user]# ls
aws  awscliv2.zip  pacman.png
[root@ip-172-31-40-155 ec2-user]#
```

CREATING WEB PAGE

Apache installation:

```
sudo yum update
sudo install httpd
cd /var/www/html
sudo nano h1.html
```

```
<html>
<head>
<title>Welcome</title>
</head>
<body>
<h1>Hey, it's Art, my site is working</h1>
</body>
</html>
#
```



Hey, it's Art, my site is working

#

TASK 6 SNS NOTIFICATIONS

I've created topic at first
Artiom_dolzhenko_topic

Details
Name
Artiom_dolzhenko_topic
ARN
arn:aws:sns:eu-central-1:260586643565:Artiom_dolzhenko_topic
Type
Standard

then subscription for emails

Subscription: 13aaf049-9401-4715-9bed-e74b85700124

Details
ARN
arn:aws:sns:eu-central-1:260586643565:Artiom_dolzhenko_topic:13aaf049-9401-4715-9bed-e74b85700124
Endpoint
artiom.dolzhenko@gmail.com

Notification

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

Select an 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

Send a notification to...

X

Only email lists for this account are available.

Email (endpoints)

arn:aws:sns:us-east-1:123456789012:alarm_dolzhenko_topic - View in SNS Console

Add notification

Auto Scaling action

Add Auto Scaling action

EC2 action

Add EC2 action

Systems Manager action [info](#)

This action will create an Incident or Opsitem in Systems Manager when the alarm is **In alarm** state.

Add Systems Manager action

Cancel

Previous

Next

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TASK 7 CREATING INSTANCE USING CLOUDFORMATION SCRIPT

I've had created yml file with this specifications

AWSTemplateFormatVersion: 2010-09-09

Resources:

EC2I3UXU3:

Type: 'AWS::EC2::Instance'

Properties:

InstanceType: t2.micro ImageId:

ami-0dcc0ebde7b2e00db

SecurityGroupIds:

- sg-033758f5cb3c86c01

- sg-

04263b4d0f2baa68eKeyName:

Artkeys Tags:

-

Key: Name

Value: Artiom_Dolzhenko_cloudformation

Create stack

Prerequisite - Prepare template


Prepare template
Every stack is based on a template. A template is a JSON or YAML file that contains configuration information about the AWS resources you want to include in the stack.

☒ Template is ready ☐ Use a sample template ☐ Create template in Designer

Specify template
A template is a JSON or YAML file that describes your stack's resources and properties.

Template source
Selecting a template generates an Amazon S3 URL where it will be stored.

☐ Amazon S3 URL ☒ Upload a template file

Upload a template file
Choose file  amazon_ins.yml
JSON or YAML formatted file

S3 URL: https://s3.eu-central-1.amazonaws.com/cf-templates-1cjanlr8stsp-eu-central-1/2022090zFQ-amazon_ins.yml [View in Designer](#)

[Cancel](#) [Next](#)

Uploaded it and it's all done and running.

<input type="checkbox"/>	1_Artiom_Dolzhenko_inst	i-0e461ad467e83431a	✓ Running	
<input type="checkbox"/>	2_Artiom_Dolzhenko_ins_from_image	i-0bb19f38e5bdc8b58	✓ Running	
<input type="checkbox"/>	3_Artiom_Dolzhenko_cloudformation 	i-0d0951451d7d7a6fd	✓ Running	