AWS

REPORT 2

CONTENTS

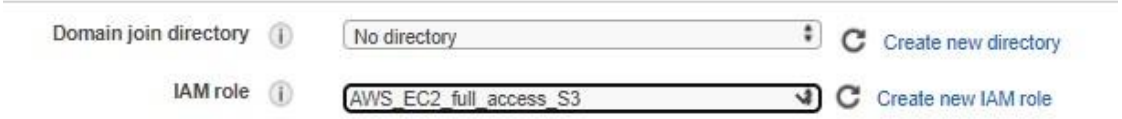
CREATING DATABASE IN A CLOUD

INSTANCE CREATING:

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

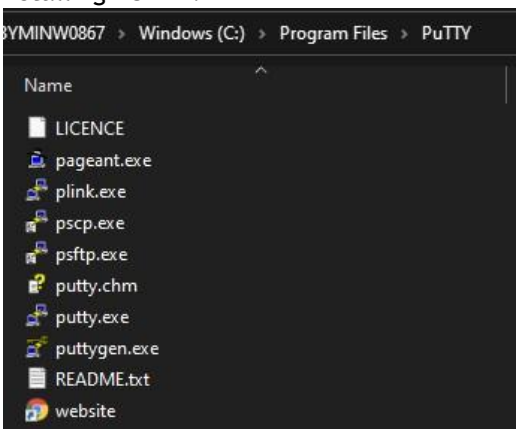
t2 micro
costs:

IAM role was chosen in “Configure instance” tab



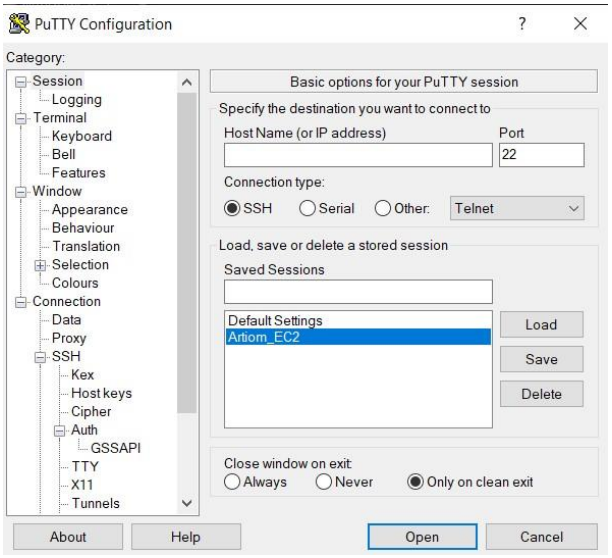
Current security groups were chosen because my current location is Tbilisi and i don’t know where my mentor is. Instance is running

Installing PUTTY:



Using puttygen.exe to conavers key pair from .pem into .pkk
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:
2048


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
22
Connection type:
SSH
Serial
Other:
Telnet
Load, save or delete a stored session
Saved Sessions
Default Settings
Artiom_EC2
Load
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/sys
tem/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:
```

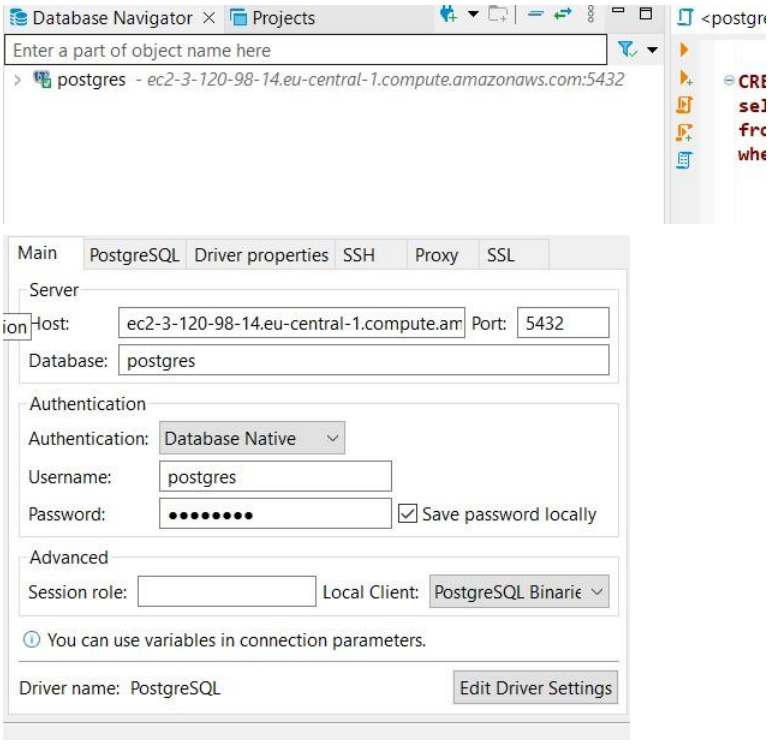
sudo nano /var/lib/pgsql/13/data/postgresql.conf

```
# - 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


Database Navigator
Projects
Enter a part of object name here
postgres - ec2-3-120-98-14.eu-central-1.compute.amazonaws.com:5432
Main
PostgreSQL
Driver properties
SSH
Proxy
SSL
Server
Host:
ec2-3-120-98-14.eu-central-1.compute.am
Port:
5432
Database:
postgres
Authentication
Authentication:
Database Native
Username:
postgres
Password:
Save password locally
Advanced
Session role:
Local Client:
PostgreSQL Binarie
You can use variables in connection parameters.
Driver name: PostgreSQL
Edit Driver Settings

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
ou can now run: /usr/local/bin/aws --version
ec2-user@ip-172-31-40-155 ~]$
```

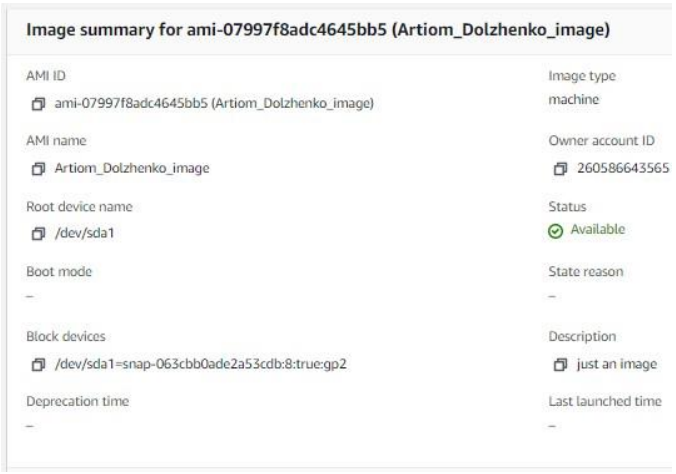
Putting file in ec2

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

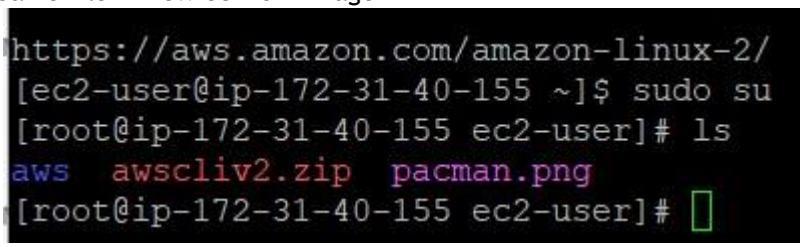
```
[root@ip-172-31-40-155 ec2-user]# aws s3 cp s3://artiom-dolzhenko-aws-bucket/fil
es/pictures/pacman.png pacman.png
download: s3://artiom-dolzhenko-aws-bucket/files/pictures/pacman.png to ./pacman
.png
[root@ip-172-31-40-155 ec2-user]# ls
aws  awscliv2.zip  pacman.png
[root@ip-172-31-40-155 ec2-user]#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

CREATING SNAPSHOT:

RAISING COPY FROM IMAGE:



Same file in new ec from image

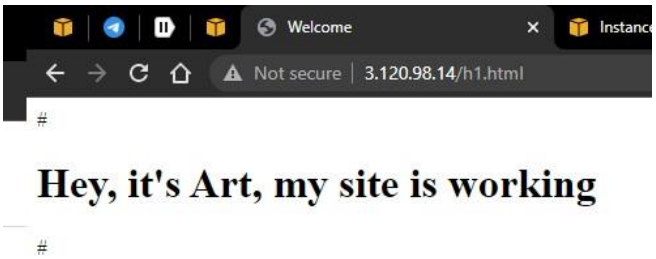


CREATING WEB PAGE

Apache installation:

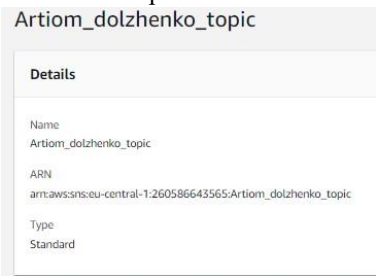
sudo yum update
sudo install httpd
cd /var/www/html
sudo nano h1.html

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

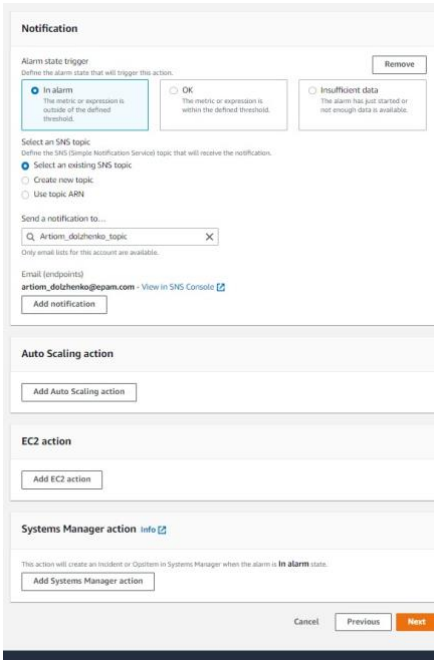


TASK 6 SNS NOTIFICATIONS

I've created topic at first



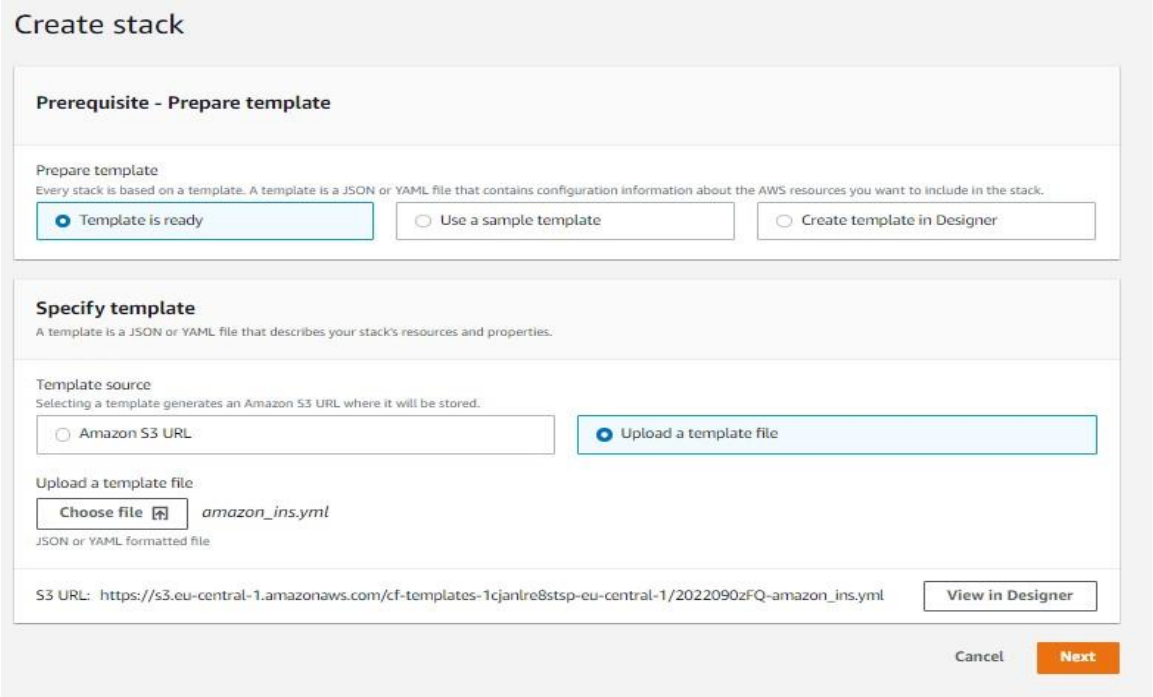
then subscription for emails


Notification
Alarm state trigger
Define the alarm state that will trigger this action.
Remove
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.
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...
Artiom_dolzhenko_topic
Only email lists for this account are available.
Email (endpoints)
artiom_dolzhenko@epam.com - 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

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
```



Uploaded it and it's all done and running.