**PRACTICAL: 9**

**AIM:**

Case study of “***Product Sample Approval Workflow”*** TCS live projects.

**TEAM MEMBERS:**

|  |  |
| --- | --- |
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**DESCRIPTION OF THE SCENARIO:**

For marketing of product, sales representative to raise a request to seek approval before providing sample product to their customers. System should provide features wherein sales representatives can raise a request and it is approved or rejected by the approver based on the details mentioned in the request.

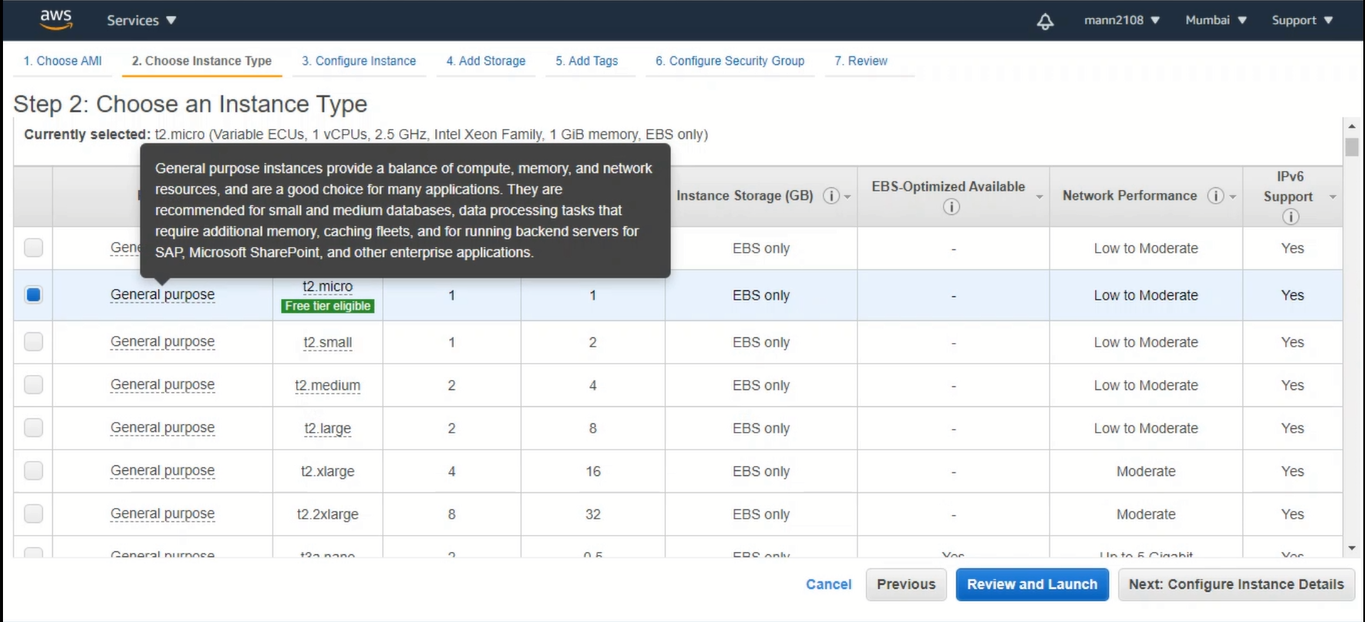
**PROBLEM:**

Product sample approval workflow is an application which should be available for any location throughout any location in India and having 24/7 usage along with maintaining a relational database which supports PostgreSQL with high scalability & maintainability.

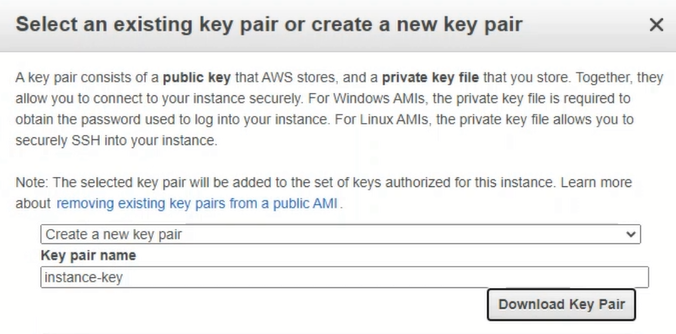
**SOLUTION USING AWS:**

AWS cloud provides an EC2 and RDS (Relational Database System) in this application we use PostgreSQL, using these two services we will deploy the application.

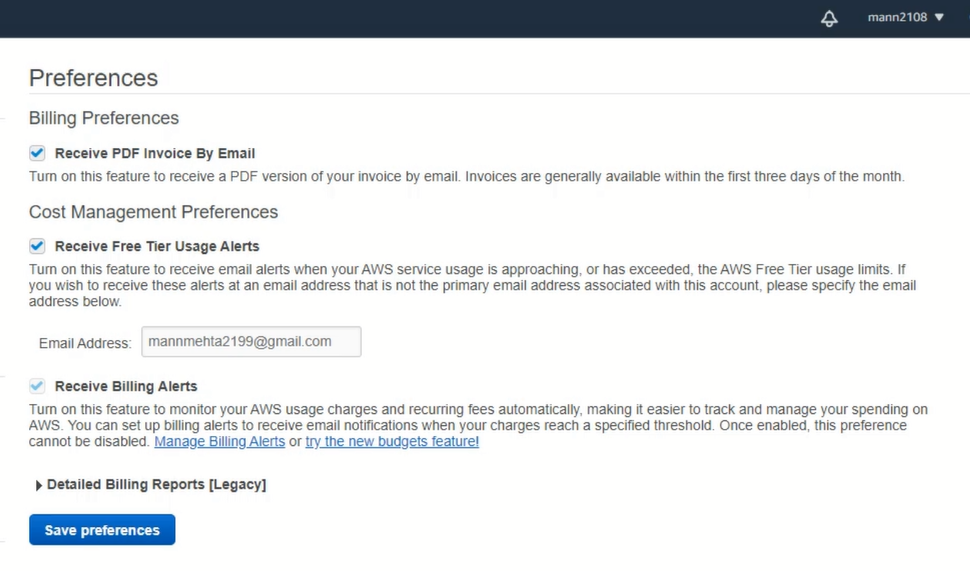
So here we will discuss all the steps for deployment of application on the EC2 Instance.



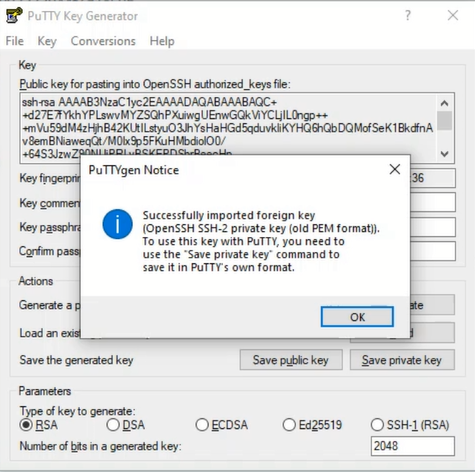
**Creating EC2 Instance with free tier access.**



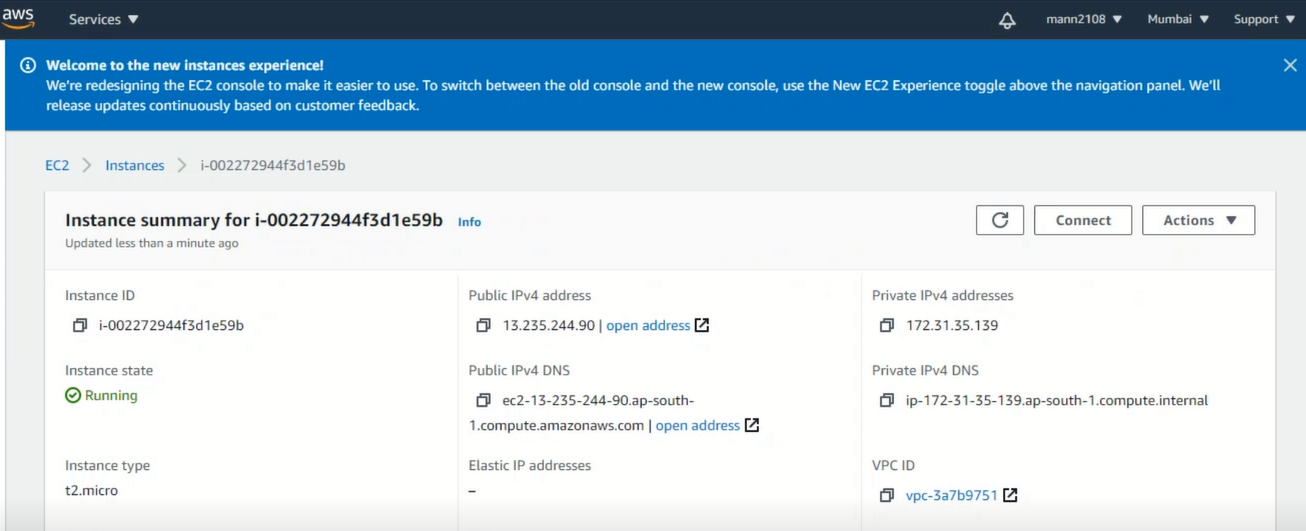
**Save the private key later we will need this to connect windows to EC2 instance**



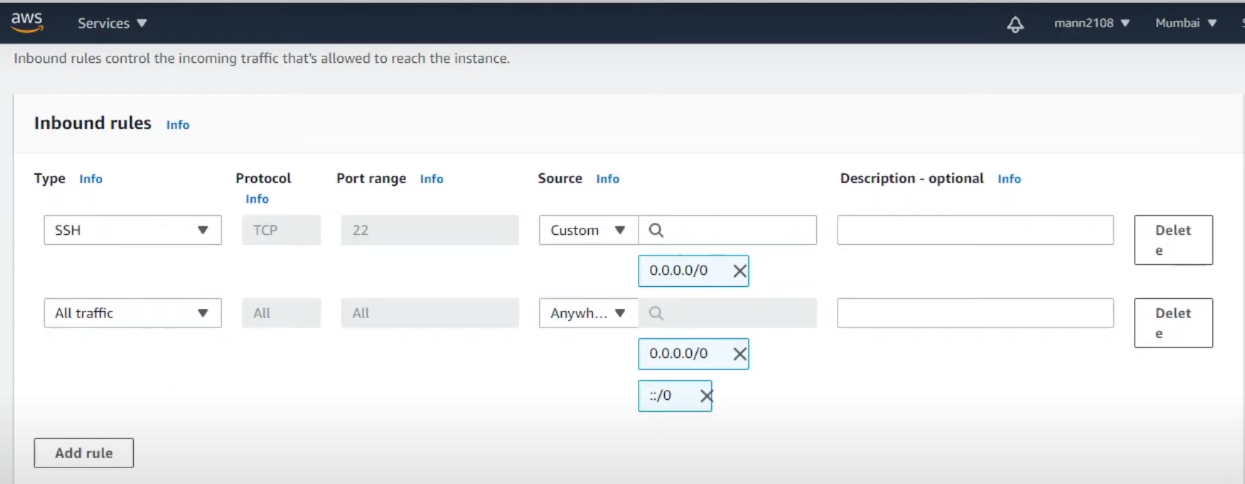
**It is good to set up billing notifications to notified whenever we exceeded the free tier usage**



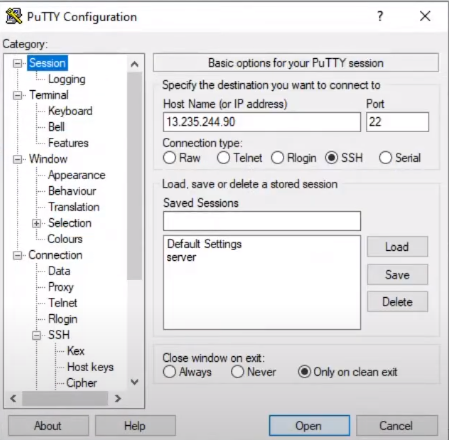
**We will be using PUTTY to connect with our EC2 instance before that PUTTY need an key to access the root directory of EC2 instance, but PUTTY not support (.pem) file because of that we need to use putty key generator to convert the key into readable format (.ppk).**



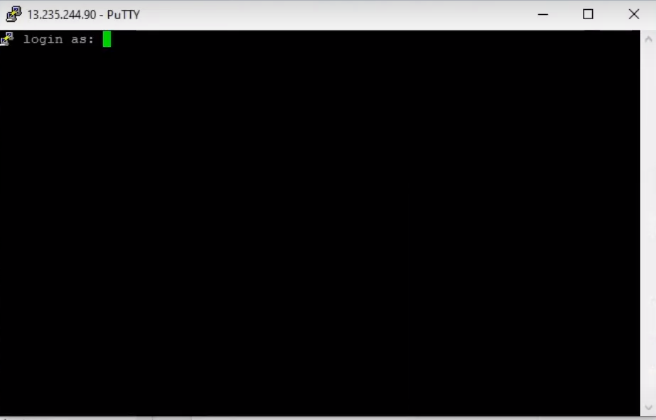
**EC2 Instance is now up and running. (We will use public IP address to connect with putty locally from the windows machine)**



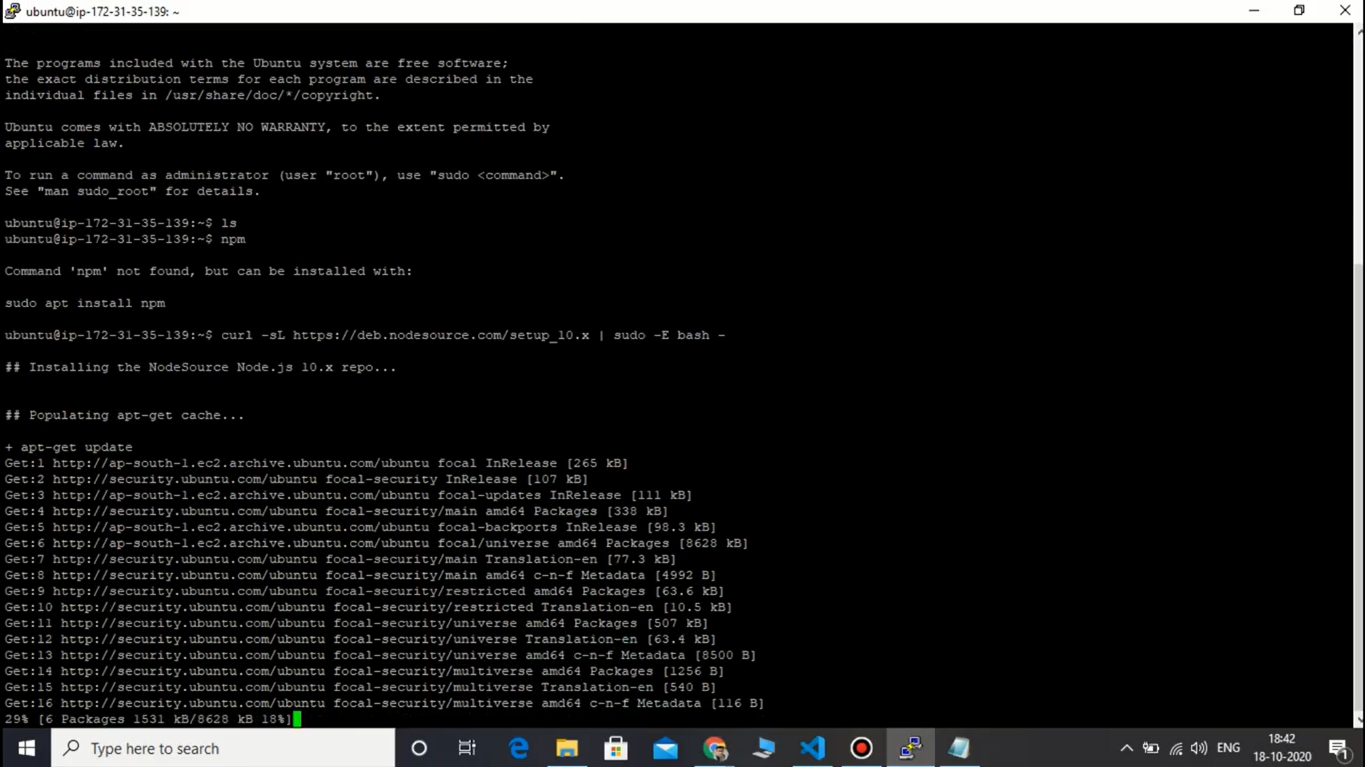
**For now, we allow all traffic from anywhere under inboud rules.**



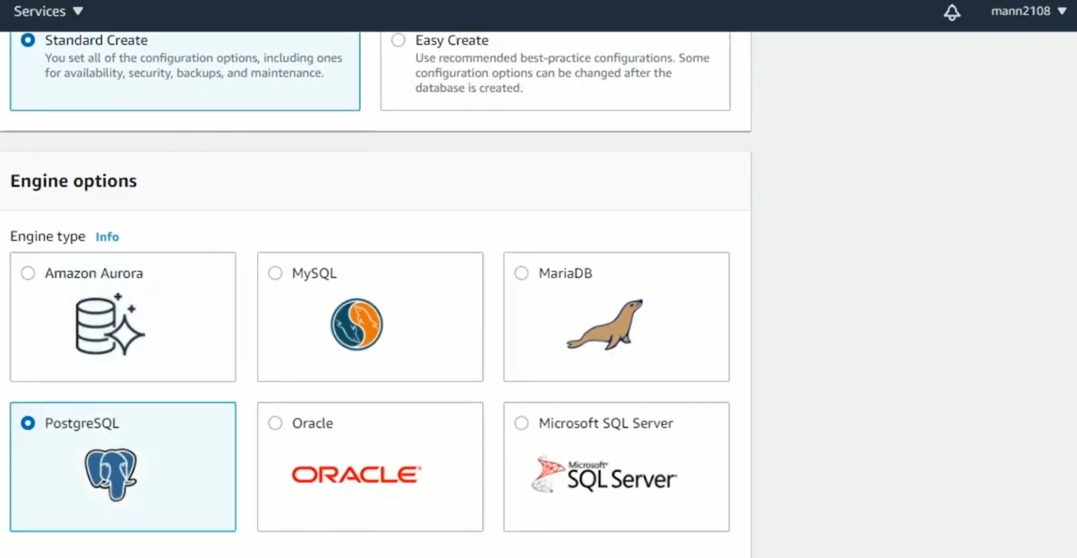
**Providing key and public IP address to the PUTTY to connect from the windows machine.**



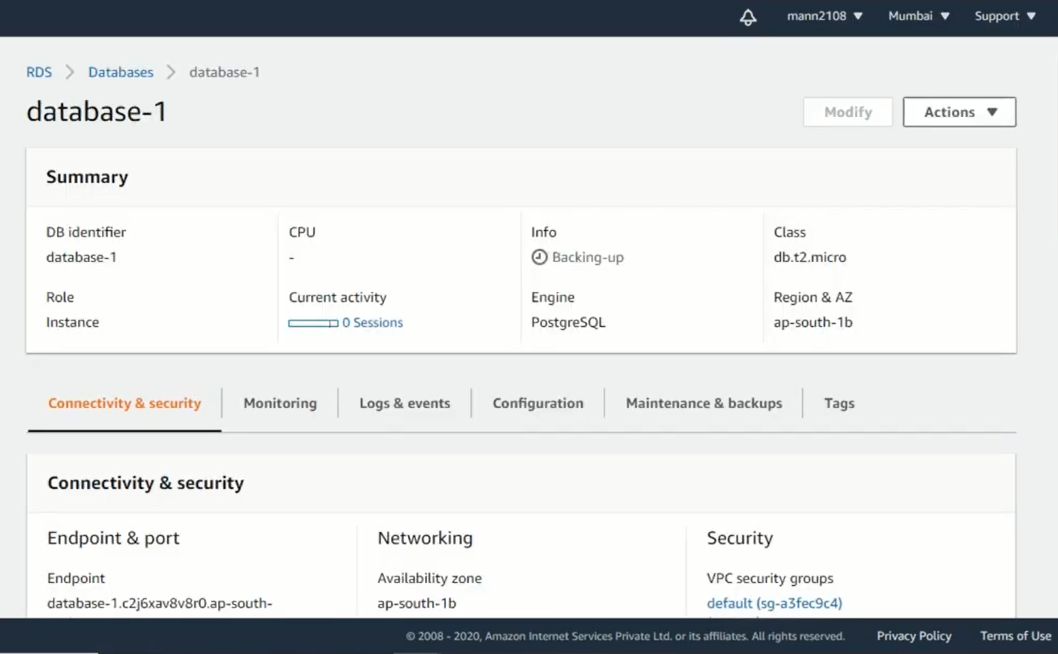
**Once we hit Open it will open a ssh terminal and ask for the username – by default ubuntu have username as “ubuntu”**



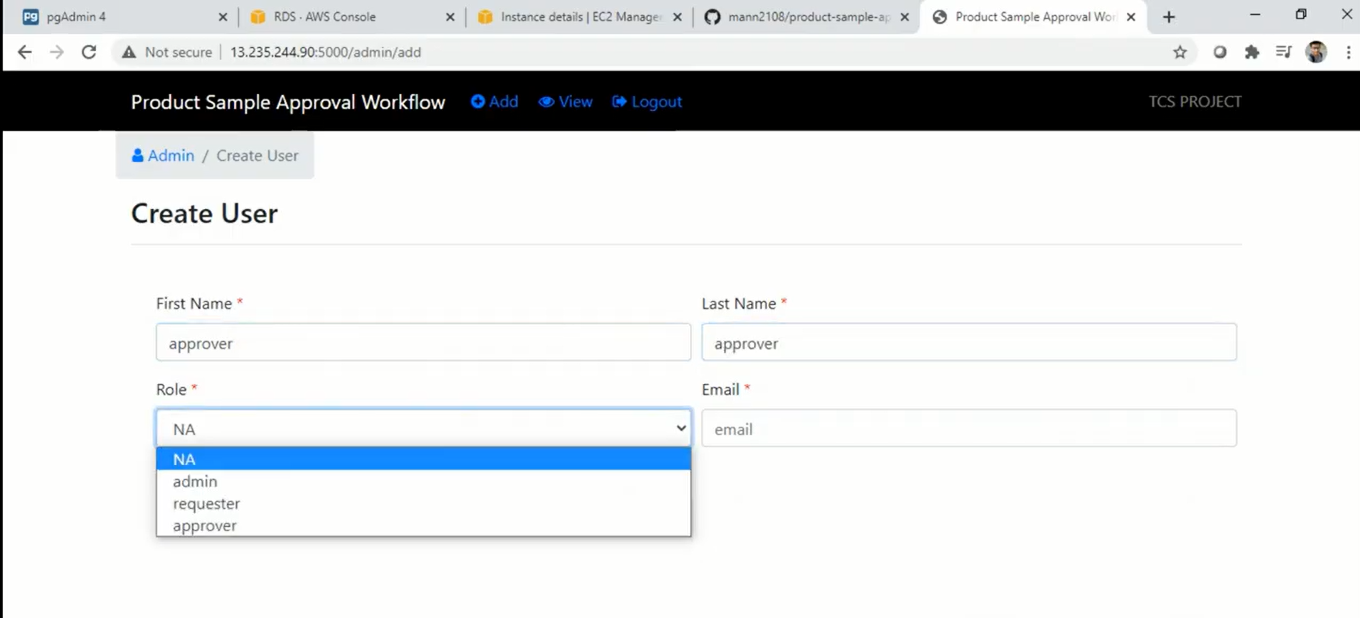
**Now installing react client and express server dependencies app in the EC2 instance. Along with creating frontend build folder and serving build files on port 5000 once server ready launch**



**Now configure a RDS (PostgreSQL)**



**After based on the requirement you can launch the database instance. Once it will launch, we need endpoint and port displayed in the bottom left corner to access database from the server**



**And finally after starting node server from the PUTTY terminal locally we will able to use EC2 public IP address to access application**

**LIST OF CLOUD SERVICES USED:**

1. EC2 Instance
2. RDS (Relational Database System) (PostgreSQL)
3. Billing Alerts

**DEMONSTRATION OF ABOVE STEPS (YOUTUBE LINK):**

<https://www.youtube.com/watch?v=tvDI7JdRBOU>

**LEARNING OUTCOME:**

In this we explore the EC2 Instance, connecting EC2 instance deployed app with aws RDS service along with setting up billing alerts for free tier usage and connecting ec2 instance with windows machine locally using PUTTY and private key pairs.

**REFERENCE:**

1. <https://www.ssh.com/ssh/putty/windows/>