

## Assignment 10: Deploy a project from GitHub to EC2 by creating new Security Group and user data.

1. Open **AWS** and **GitHub** in two browsers.
2. In AWS, go to the left side panel of EC2 and go to **Security Groups**.
3. Delete all security groups except the default one. Click on **Create security group**.
4. Give the security group **name** and **description**.



### Create security group [Info](#)

A security group acts as a virtual firewall for your instance

#### Basic details

Security group name [Info](#)  
SG1  
Name cannot be edited after creation.

Description [Info](#)  
Security Group 1

VPC [Info](#)  
vpc-050077ab690dd0747

5. Go to **Inbound rules** and set the HTTP, HTTPS, and SSH rules. Set another Custom TCP rule with Port Range **4000**. Create the security group.

### Inbound rules [Info](#)

Type <a href="#">Info</a>	Protocol <a href="#">Info</a>	Port range <a href="#">Info</a>	Source <a href="#">Info</a>
HTTP ▼	TCP	80	Anywh... ▼ 0.0.0.0/0 ✕
HTTPS ▼	TCP	443	Anywh... ▼ 0.0.0.0/0 ✕
SSH ▼	TCP	22	Anywh... ▼ 0.0.0.0/0 ✕
Custom TCP ▼	TCP	4000	Anywh... ▼ 0.0.0.0/0 ✕

Add rule

sg-0750bfbac6c367e40 - SG1

Actions

Details

Security group name

SG1

Security group ID

sg-0750bfbac6c367e40

Description

Security Group 1

VPC ID

vpc-050077ab690dd0747

Owner

121667217816

Inbound rules count

4 Permission entries

Outbound rules count

1 Permission entry

Inbound rules (4)

Manage tags

Edit inbound rules

Filter security group rules

< 1 >

	Name	Security group rule...	IP version
<input type="checkbox"/>	-	sgr-06ef9d01edc86f34e	IPv4
<input type="checkbox"/>	-	sgr-01cc55843c3f425fd	IPv4
<input type="checkbox"/>	-	sgr-0ccc02b31a3267ea4	IPv4
<input type="checkbox"/>	-	sgr-0ce280a15e3a62652	IPv4

- Now go to **Instances** and click **Launch instance**. Give the name of the instance and select OS as **ubuntu**.
- Create a key pair and scroll down to **network settings**. Click on **Select existing security group**. Select the security group created.

Firewall (security groups) Info

A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.

Create security group

Select existing security group

Security groups Info

Select security groups

SG1 sg-0750bfbac6c367e40 X

VPC: vpc-050077ab690dd0747

Compare security group rules

- Now go to **Advanced Details**, scroll down and enter the **User Data** in the field.

```
#!/bin/bash
apt-get update
apt-get install -y nginx
systemctl start nginx
systemctl enable nginx
apt-get install -y git
curl -sL https://deb.nodesource.com/setup_18.x | sudo -E bash -
apt-get install -y nodejs
git clone https://github.com/Sayan-K-Dutta/Assign8-Repo2.git
cd Assign8-Repo2
npm install
node index.js
```

User data - optional Info

Enter user data in the field.

```
#!/bin/bash
apt-get update
apt-get install -y nginx
systemctl start nginx
systemctl enable nginx
apt-get install -y git
curl -sL https://deb.nodesource.com/setup_18.x | sudo -E bash -
apt-get install -y nodejs
git clone https://github.com/Sayan-K-Dutta/Assign8-Repo2.git
cd Assign8-Repo2
npm install
node index.js
```

- Now click on **Launch instance**.
- Select the instance and click **connect**.
- In the terminal of EC2 instance connected execute the commands:

```
git clone https://github.com/Sayan-K-Dutta/Assign8-Repo2.git
cd Assign8-Repo2
npm install
node index.js
```

(Give the username and password when prompted. Username is the GitHub user name and password is the token.)

```
ubuntu@ip-172-31-26-3:~$ git clone https://github.com/Sayan-K-Dutta/Assign8-Repo2.git
Cloning into 'Assign8-Repo2'...
```

```
Username for 'https://github.com': Sayan-K-Dutta
Password for 'https://Sayan-K-Dutta@github.com':
remote: Enumerating objects: 12, done.
remote: Counting objects: 100% (12/12), done.
```

```
ubuntu@ip-172-31-26-3:~$ cd Assign8-Repo2
ubuntu@ip-172-31-26-3:~/Assign8-Repo2$ npm install
npm WARN deprecated uuid@3.4.0: Please upgrade to v8
ic. See https://v8.dev/blog/math-random for details
added 258 packages, and audited 259 packages in 14s
```

```
ubuntu@ip-172-31-26-3:~/Assign8-Repo2$ node index.js
Started server
```

12. Open the Public IPv4 Address with its custom port number of the instance connected, in a web browser.

