

Aim: To resolve the errors while installing Jenkins on Linux operating system.

Errors resolved:

- 1) 'jenkins' has no installation candidate
- 2) Warning: apt-key is deprecated. Manage keyring files in trusted.gpg.d instead (see apt-key(8)).
- 3) -bash: /etc/environment: Permission denied
- 4) After successful installation on any cloud platform Jenkins not working on port ("public_ip:8080")

To resolve all the issues, follow the following installation steps

- 1) `sudo su`
- 2) `sudo apt-get -y install openjdk-11-jdk openjdk-11-jre`
- 3) `java -version`
- 4) `cat >> /etc/environment <<EOL`
 `JAVA_HOME=/usr/lib/jvm/java-8-openjdk-amd64`
 `JRE_HOME=/usr/lib/jvm/java-8-openjdk-amd64/jre`
 `EOL`
- 5) `curl -fsSL https://pkg.jenkins.io/debian-stable/jenkins.io-2023.key | sudo tee \`
 `/usr/share/keyrings/jenkins-keyring.asc > /dev/null`
 `echo deb [signed-by=/usr/share/keyrings/jenkins-keyring.asc] \`
 `https://pkg.jenkins.io/debian-stable binary/ | sudo tee \`
 `/etc/apt/sources.list.d/jenkins.list > /dev/null`
- 6) `sudo apt-get update`
- 7) `sudo apt-get install jenkins`
- 8) `sudo systemctl start jenkins`

9) sudo systemctl status jenkins

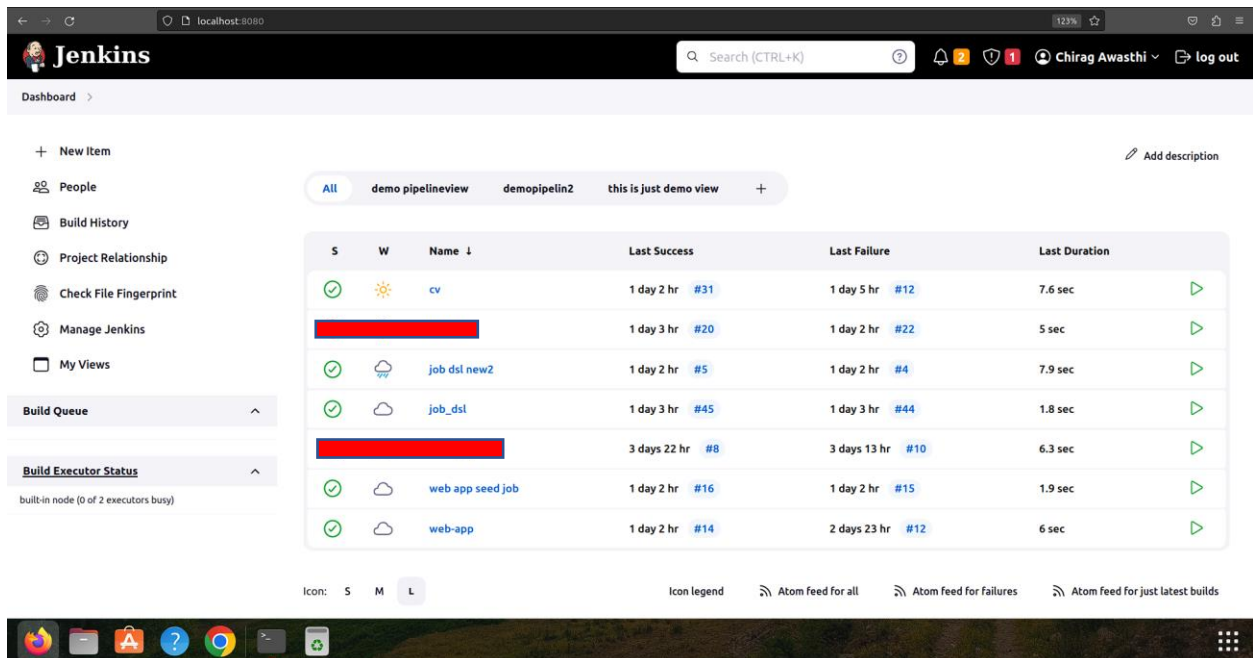
```
chirag@chirag-virtual-machine:~$ sudo systemctl start jenkins
chirag@chirag-virtual-machine:~$ sudo systemctl status jenkins
● jenkins.service - Jenkins Continuous Integration Server
   Loaded: loaded (/lib/systemd/system/jenkins.service; enabled; vendor preset: enabled)
   Active: active (running) since Fri 2023-04-14 02:58:07 IST; 1min 26s ago
     Main PID: 1010 (java)
       Tasks: 67 (limit: 4573)
      Memory: 1.1G
         CPU: 1min 42.631s
    CGroup: /system.slice/jenkins.service
           └─1010 /usr/bin/java -Djava.awt.headless=true -jar /usr/share/java/jenkins.war --webroot=/var/cache/jenkins/war --httpPort=8080
```

If status is Active that means we have successfully installed Jenkins in our system

Steps to use Jenkins in our system

To access/open the Jenkins follow the following steps

- 1) If installed in local environment directly go to the browser and access ("localhost:8080")



- 2) If installed inside cloud environment (AWS,GCP,AZURE) create new firewall rule so that we can access the port 8080 with ip address of our created instance

following is example of GCP

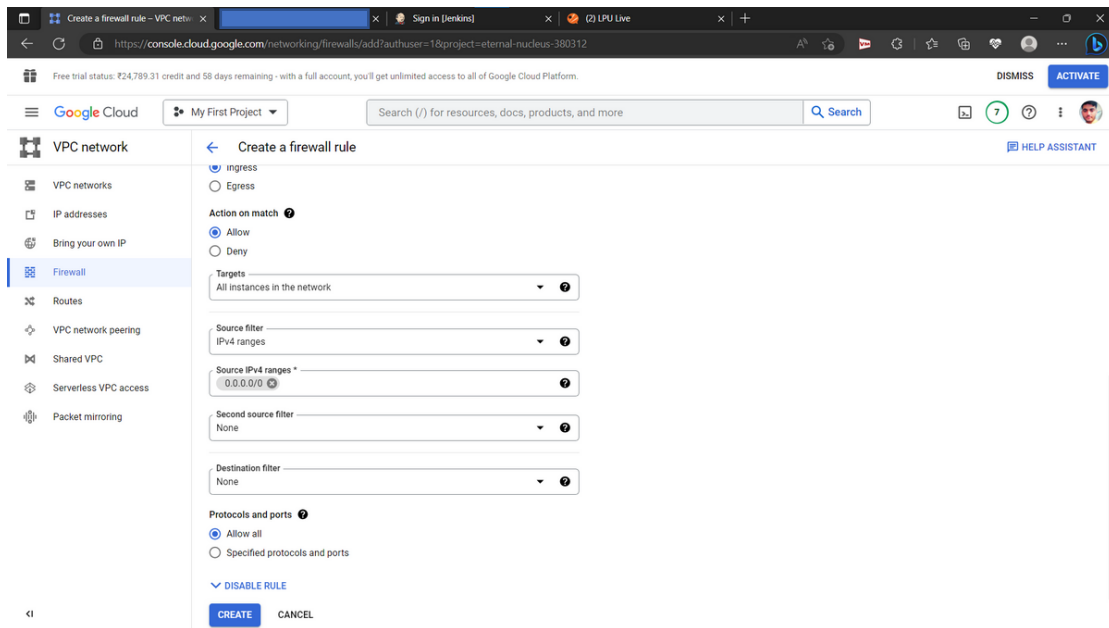
The image consists of two screenshots from the Google Cloud Platform (GCP) console, illustrating the process of creating a firewall rule for a VM instance.

Top Screenshot: VM instances page

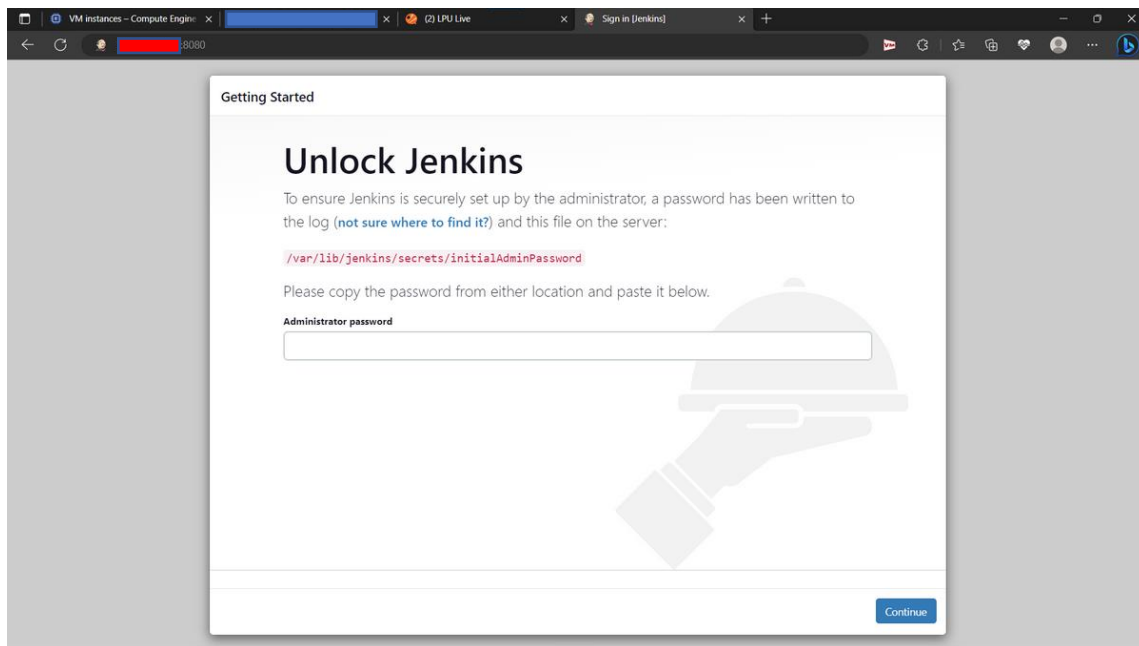
- The browser address bar shows the URL: `https://console.cloud.google.com/compute/instances?onCreate=true&authuser=1&project=eternal-nucleus-380312`.
- The page title is "VM instances - Compute Engine".
- The left sidebar shows the "Compute Engine" section expanded, with "VM instances" selected.
- The main content area shows the "VM instances" table with one instance named "instance-1" in the "us-west4-b" zone.
- A context menu is open for the "instance-1" row, showing actions like "Start / Resume", "Stop", "Suspend", "Reset", "Delete", "View network details", "Create new machine image", "View logs", and "View monitoring".
- A notification banner at the bottom states: "Successfully created firewall rule 'jenkins2'".

Bottom Screenshot: Create a firewall rule page

- The browser address bar shows the URL: `https://console.cloud.google.com/networking/firewalls/add?authuser=1&project=eternal-nucleus-380312`.
- The page title is "Create a firewall rule - VPC network".
- The left sidebar shows the "VPC network" section expanded, with "Firewall" selected.
- The main content area shows the "Create a firewall rule" form.
- The form includes a "Name" field with the value "jenkins2" and a "Description" field.
- The "Logs" section is set to "Off".
- The "Network" dropdown is set to "default".
- The "Priority" field is set to "1000".
- The "Direction of traffic" is set to "Ingress".
- A red error message at the top of the form states: "Make sure all fields are correct to continue".



- Now go to the browser run ("public_ip:8080") example (24.19.337.233:8080)



- Go to the file `/var/lib/jenkins/secrets/initialAdminPassword` here you will find your initial admin password which will allow you to enter into jenkins and create your personal account .

Now rest of the steps are easy just setup the personal details and you are good to go !

I Hope this resolves the issue 😊.

(Chirag Awasthi)