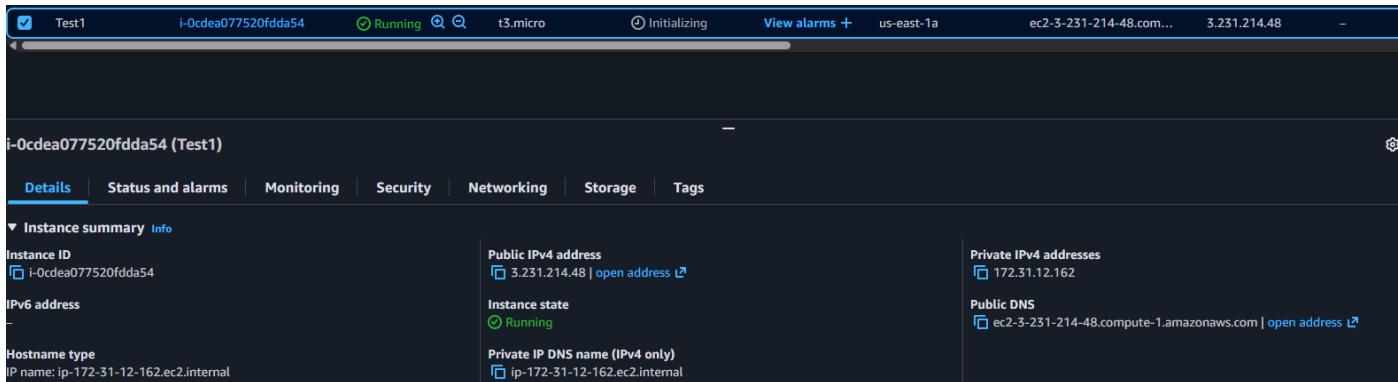


Cloud Server Challenges

- Launch one EC2 instance using Amazon Linux 2.



- Install Docker.

```
● docker.service - Docker Application Container Engine
  Loaded: loaded (/usr/lib/systemd/system/docker.service; disabled; preset: disabled)
  Active: active (running) since Wed 2025-12-31 07:08:50 UTC; 41s ago
TriggeredBy: ● docker.socket
    Docs: https://docs.docker.com
  Process: 5996 ExecStartPre=/bin/mkdir -p /run/docker (code=exited, status=0/SUCCESS)
  Process: 5997 ExecStartPre=/usr/libexec/docker/docker-setup-runtimes.sh (code=exited,
Main PID: 5998 (dockerd)
      Tasks: 11
     Memory: 54.7M
        CPU: 570ms
       CGroup: /system.slice/docker.service
```

- Install Jenkins.

The screenshot shows the Jenkins dashboard. At the top, there's a header with the Jenkins logo and the text 'Welcome'. Below the header, there are several sections:

- Build Queue:** A section with a dropdown menu set to 'Build Queue'. It contains the message 'No builds in the queue.'
- Build Executor Status:** A section with a dropdown menu set to '0/2'. It shows 'Built-In Node' with a status of '(offline)'.
- Create a job:** A button to start creating a new Jenkins job.
- Welcome:** A large 'Welcome' message with a link to 'Get Started'.
- Start building:** A button to start building a job.
- Set up a distri:** A button to set up a distribution.

Cloud Server Challenges

- Install Apache.

```
[root@ip-172-31-12-162 nginx]# systemctl status httpd
● httpd.service - The Apache HTTP Server
  Loaded: loaded (/usr/lib/systemd/system/httpd.service; enabled; preset: disabled)
  Active: active (running) since Wed 2025-12-31 06:48:10 UTC; 18min ago
    Docs: man:httpd.service(8)
 Main PID: 1410 (httpd)
   Status: "Total requests: 1; Idle/Busy workers 100/0; Requests/sec: 0.000908; Bytes serv...
     Tasks: 177 (limit: 1067)
    Memory: 16.9M
       CPU: 1.166s
      CGroup: /system.slice/httpd.service
              └─1410 /usr/sbin/httpd -DFOREGROUND
                ├─1411 /usr/sbin/httpd -DFOREGROUND
                ├─1412 /usr/sbin/httpd -DFOREGROUND
                ├─1413 /usr/sbin/httpd -DFOREGROUND
                └─1418 /usr/sbin/httpd -DFOREGROUND
```

- Install Nginx.

```
[root@ip-172-31-12-162 nginx]# systemctl status nginx
● nginx.service - The nginx HTTP and reverse proxy server
  Loaded: loaded (/usr/lib/systemd/system/nginx.service; disabled; preset: disabled)
  Active: active (running) since Wed 2025-12-31 07:13:19 UTC; 5s ago
    Process: 6522 ExecStartPre=/usr/bin/rm -f /run/nginx.pid (code=exited, status=0/SUCCESS)
    Process: 6523 ExecStartPre=/usr/sbin/nginx -t (code=exited, status=0/SUCCESS)
    Process: 6524 ExecStart=/usr/sbin/nginx (code=exited, status=0/SUCCESS)
 Main PID: 6525 (nginx)
   Tasks: 3 (limit: 1067)
  Memory: 4.8M
     CPU: 60ms
    CGroup: /system.slice/nginx.service
            ├─6525 "nginx: master process /usr/sbin/nginx"
            ├─6526 "nginx: worker process"
            └─6527 "nginx: worker process"
```

- Install Apache Tomcat.

```
[root@ip-172-31-12-162 tmp]# systemctl enable tomcat
Created symlink /etc/systemd/system/multi-user.target.wants/tomcat.service → /etc/systemd/system/tomcat.service.

[root@ip-172-31-12-162 tmp]# systemctl status tomcat
● tomcat.service - Apache Tomcat Web Application Container
  Loaded: loaded (/etc/systemd/system/tomcat.service; enabled; preset: disabled)
  Active: active (running) since Wed 2025-12-31 07:17:15 UTC; 20s ago
 Main PID: 6817 (java)
   Tasks: 18 (limit: 1067)
  Memory: 75.5M
     CPU: 4.019s
    CGroup: /system.slice/tomcat.service
             └─6817 /usr/lib/jvm/jre-17/bin/java -Djava.util.logging.config.file=/opt/tomcat/conf/logging.prop
```