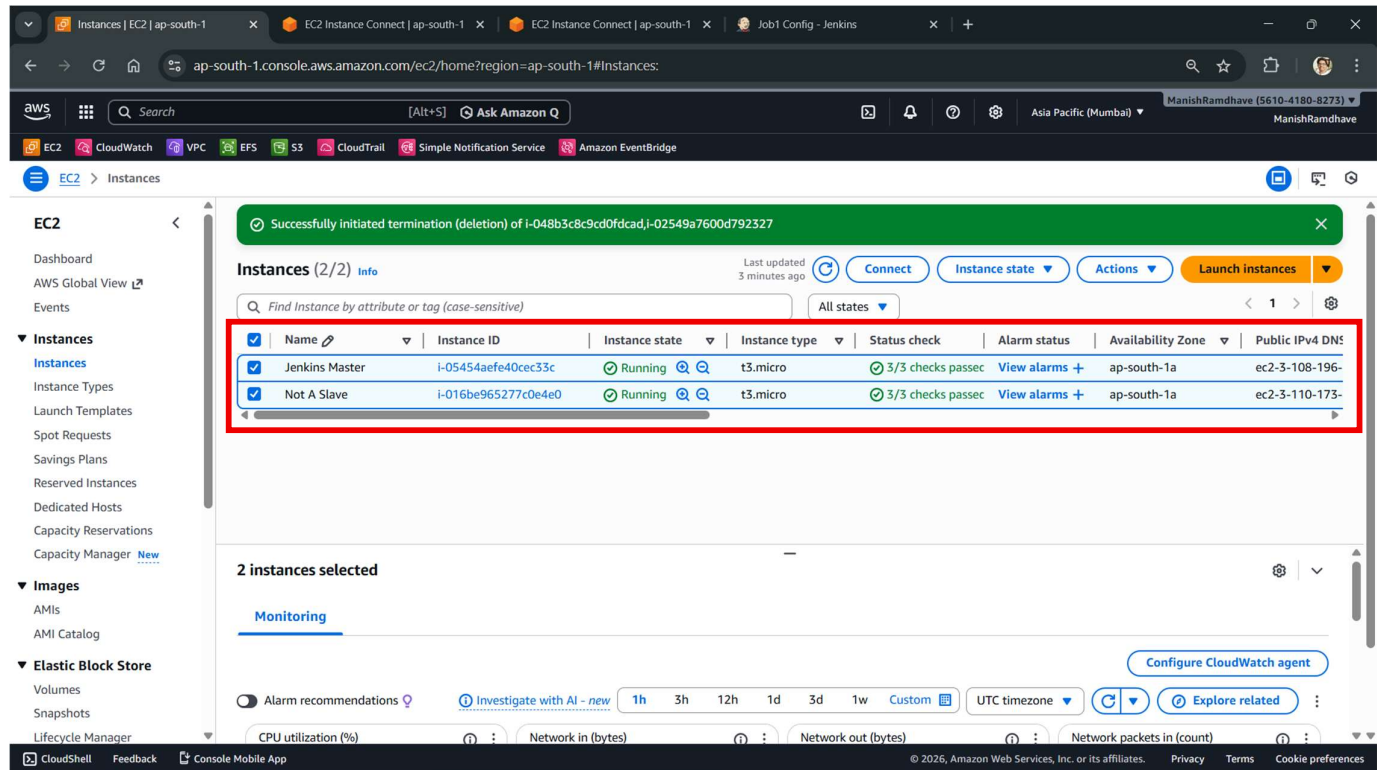
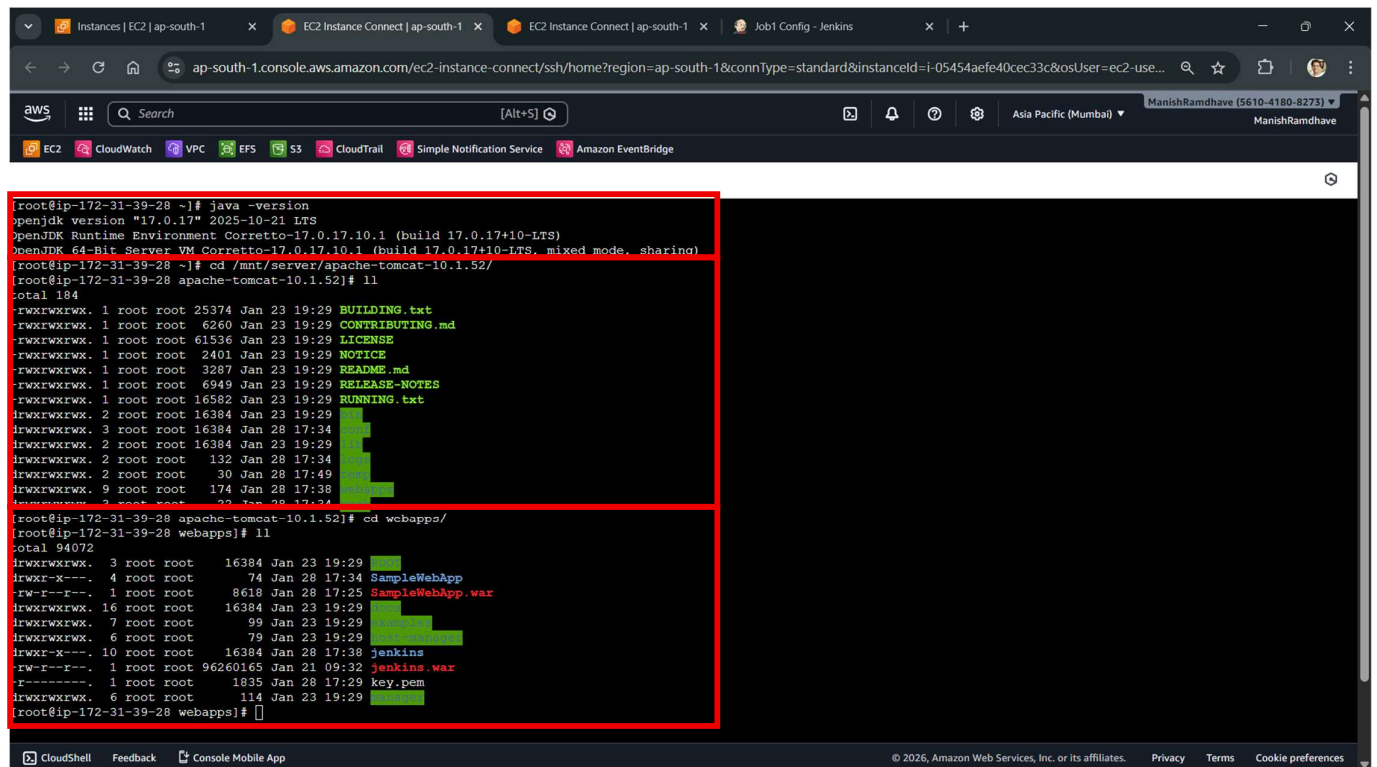


# Jenkins Assignment 2

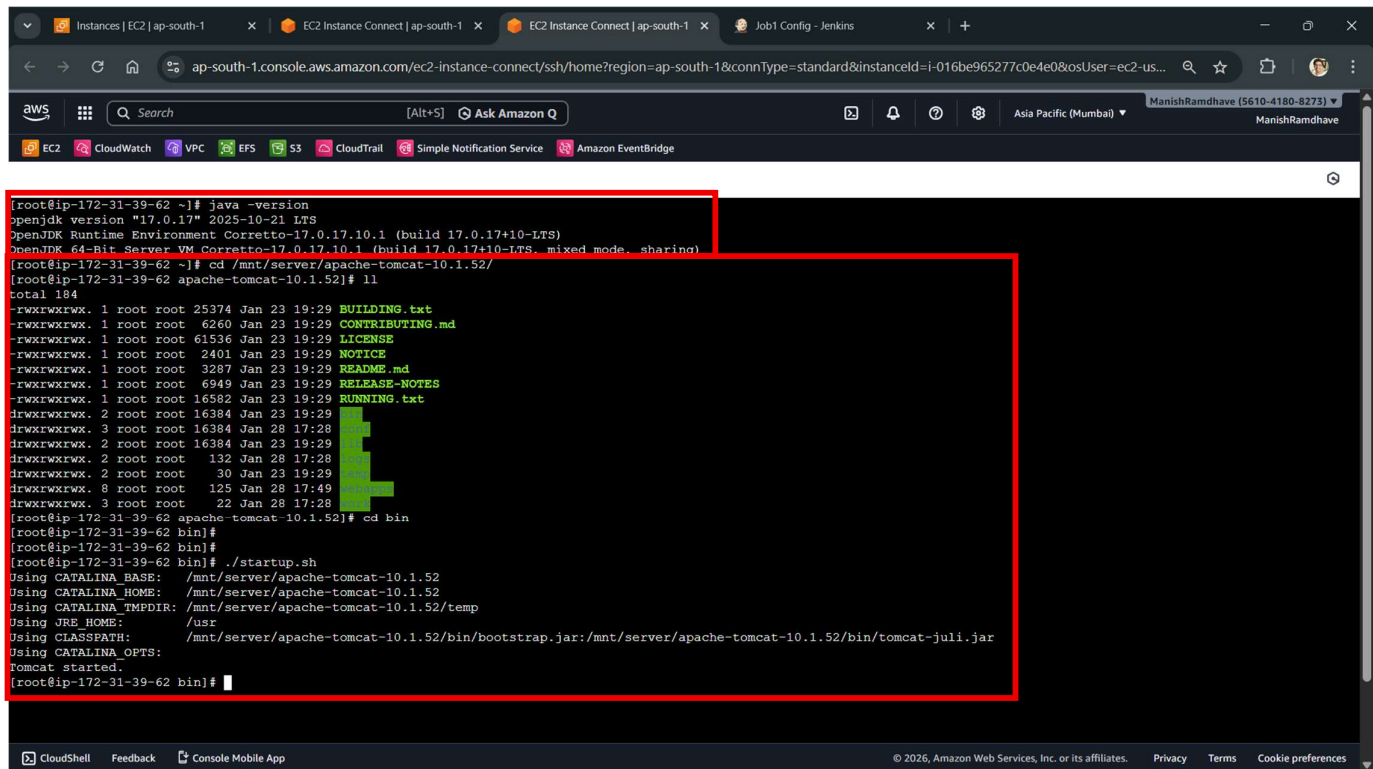
Step 1: Launched two EC2 instances, one for Jenkins Master and other one is not a Slave :



Step 2: Installed Java-17, Apache-Tomcat-10 and Jenkins on Jenkins Master Instance:



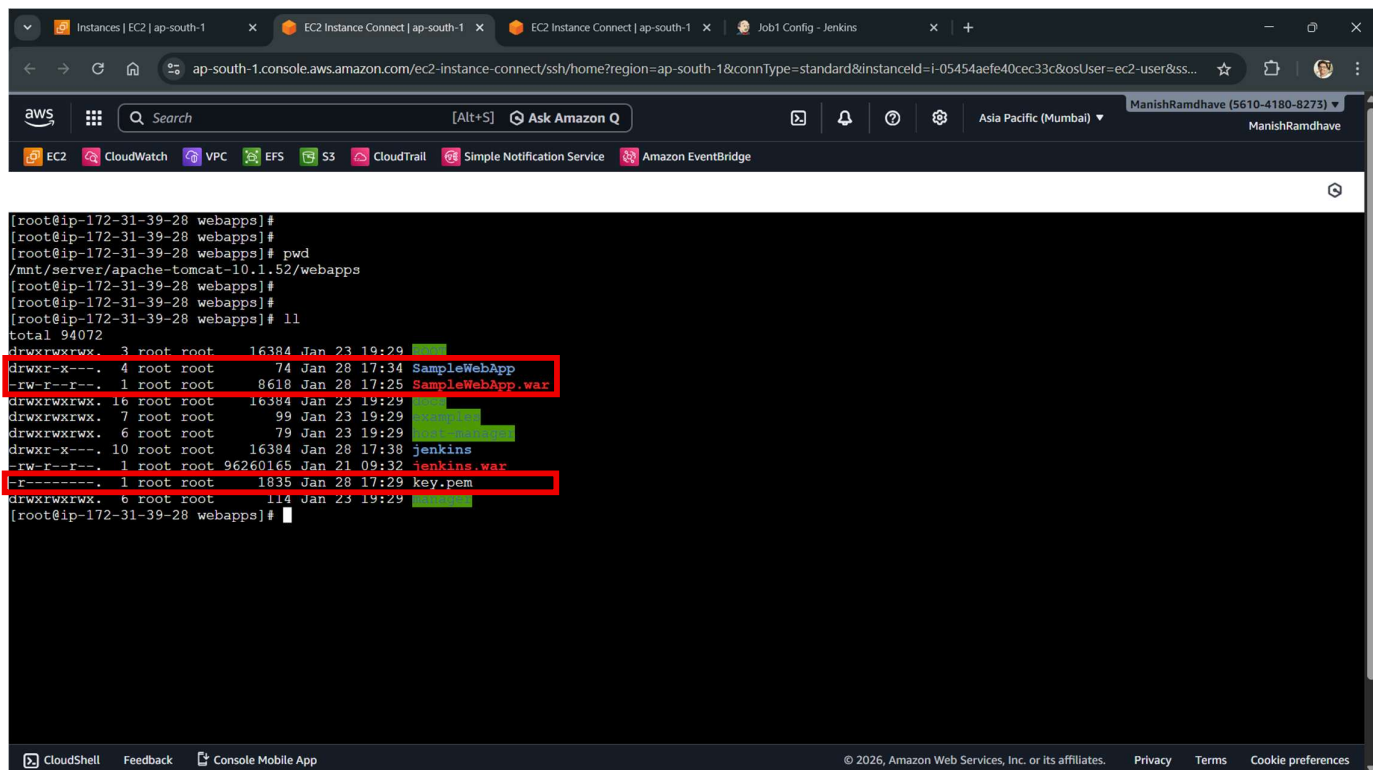
Step 3: Installed Java-17, Apache-Tomcat-10 on the instance which is not a slave:



```
[root@ip-172-31-39-62 ~]# java -version
openjdk version "17.0.17" 2025-10-21 LTS
OpenJDK Runtime Environment Corretto-17.0.17.10.1 (build 17.0.17+10-LTS)
OpenJDK 64-Bit Server VM Corretto-17.0.17.10.1 (build 17.0.17+10-LTS, mixed mode, sharing)

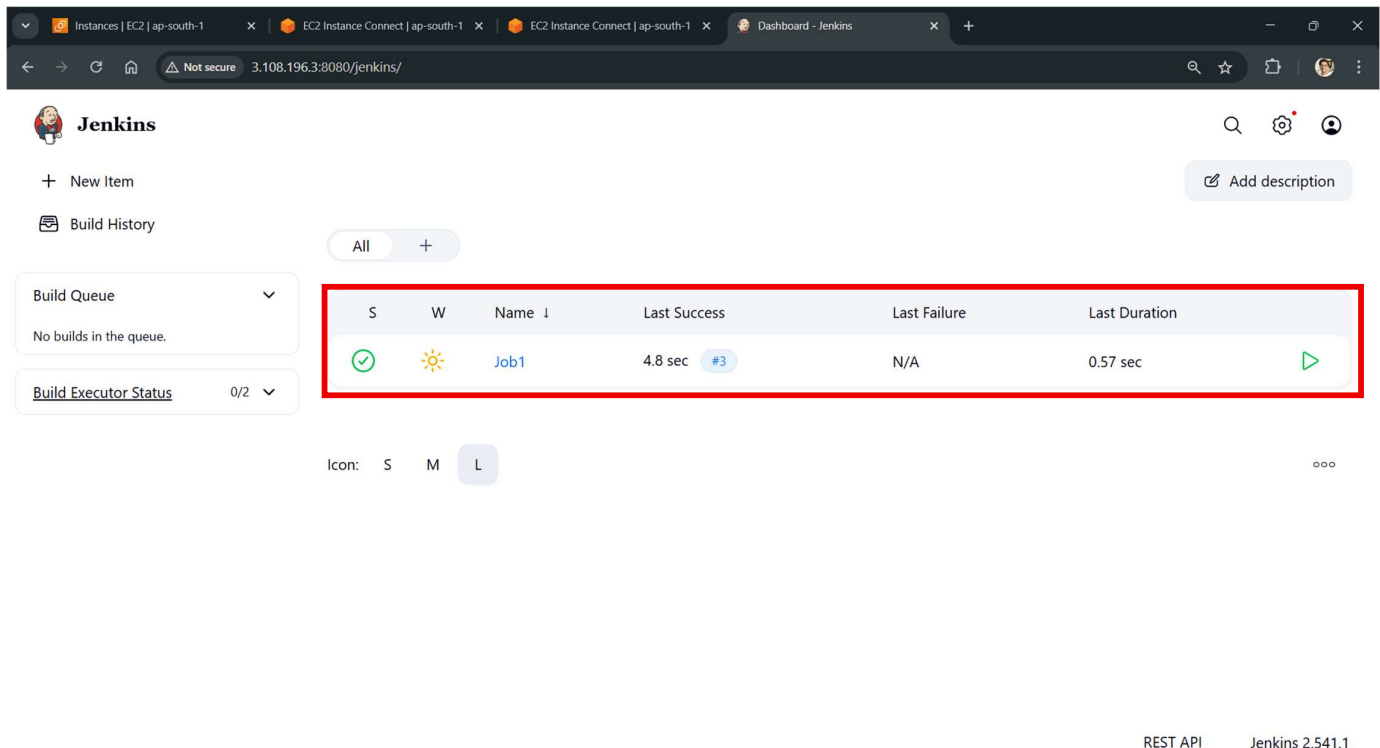
[root@ip-172-31-39-62 ~]# cd /mnt/server/apache-tomcat-10.1.52/
[root@ip-172-31-39-62 apache-tomcat-10.1.52]# ll
total 184
-rwxrwxrwx. 1 root root 25374 Jan 23 19:29 BUILDING.txt
-rwxrwxrwx. 1 root root 6260 Jan 23 19:29 CONTRIBUTING.md
-rwxrwxrwx. 1 root root 61536 Jan 23 19:29 LICENSE
-rwxrwxrwx. 1 root root 2401 Jan 23 19:29 NOTICE
-rwxrwxrwx. 1 root root 3287 Jan 23 19:29 README.md
-rwxrwxrwx. 1 root root 6949 Jan 23 19:29 RELEASE-NOTES
-rwxrwxrwx. 1 root root 16582 Jan 23 19:29 RUNNING.txt
drwxrwxrwx. 2 root root 16384 Jan 23 19:29 bin
drwxrwxrwx. 3 root root 16384 Jan 28 17:28 conf
drwxrwxrwx. 2 root root 16384 Jan 23 19:29 lib
drwxrwxrwx. 2 root root 132 Jan 28 17:28 logs
drwxrwxrwx. 2 root root 30 Jan 23 19:29 nio
drwxrwxrwx. 8 root root 125 Jan 28 17:49 tmp
drwxrwxrwx. 3 root root 22 Jan 28 17:28 webapps
[root@ip-172-31-39-62 apache-tomcat-10.1.52]# bin
[root@ip-172-31-39-62 bin]#
[root@ip-172-31-39-62 bin]# cd bin
[root@ip-172-31-39-62 bin]#
[root@ip-172-31-39-62 bin]# ./startup.sh
Using CATALINA_BASE: /mnt/server/apache-tomcat-10.1.52
Using CATALINA_HOME: /mnt/server/apache-tomcat-10.1.52
Using CATALINA_TMPDIR: /mnt/server/apache-tomcat-10.1.52/temp
Using JRE_HOME: /usr
Using CLASSPATH: /mnt/server/apache-tomcat-10.1.52/bin/bootstrap.jar:/mnt/server/apache-tomcat-10.1.52/bin/tomcat-juli.jar
Using CATALINA_OPTS:
Tomcat started.
[root@ip-172-31-39-62 bin]#
```

Step 4: Created 'Private Key-Pair File' of name 'key.pem' using the key-pair and also downloaded the 'SampleWebApp.war' file on Tomcat-Home/webapps folder:



```
[root@ip-172-31-39-28 webapps]#
[root@ip-172-31-39-28 webapps]#
[root@ip-172-31-39-28 webapps]# pwd
/mnt/server/apache-tomcat-10.1.52/webapps
[root@ip-172-31-39-28 webapps]#
[root@ip-172-31-39-28 webapps]#
[root@ip-172-31-39-28 webapps]# ll
total 94072
drwxrwxrwx. 3 root root 16384 Jan 23 19:29
drwxr-x---. 4 root root 74 Jan 28 17:34 SampleWebApp
-rw-r--r--. 1 root root 8618 Jan 28 17:25 SampleWebApp.war
drwxrwxrwx. 16 root root 16384 Jan 23 19:29
drwxrwxrwx. 7 root root 99 Jan 23 19:29
drwxrwxrwx. 6 root root 79 Jan 23 19:29
drwxr-x---. 10 root root 16384 Jan 28 17:38 jenkins
-rw-r--r--. 1 root root 96260165 Jan 21 09:32 jenkins.war
-r-----. 1 root root 1835 Jan 28 17:29 key.pem
drwxrwxrwx. 8 root root 114 Jan 23 19:29
[root@ip-172-31-39-28 webapps]#
```

## Step 5: Created a Freestyle Job in the Jenkins Dashboard named Job1:

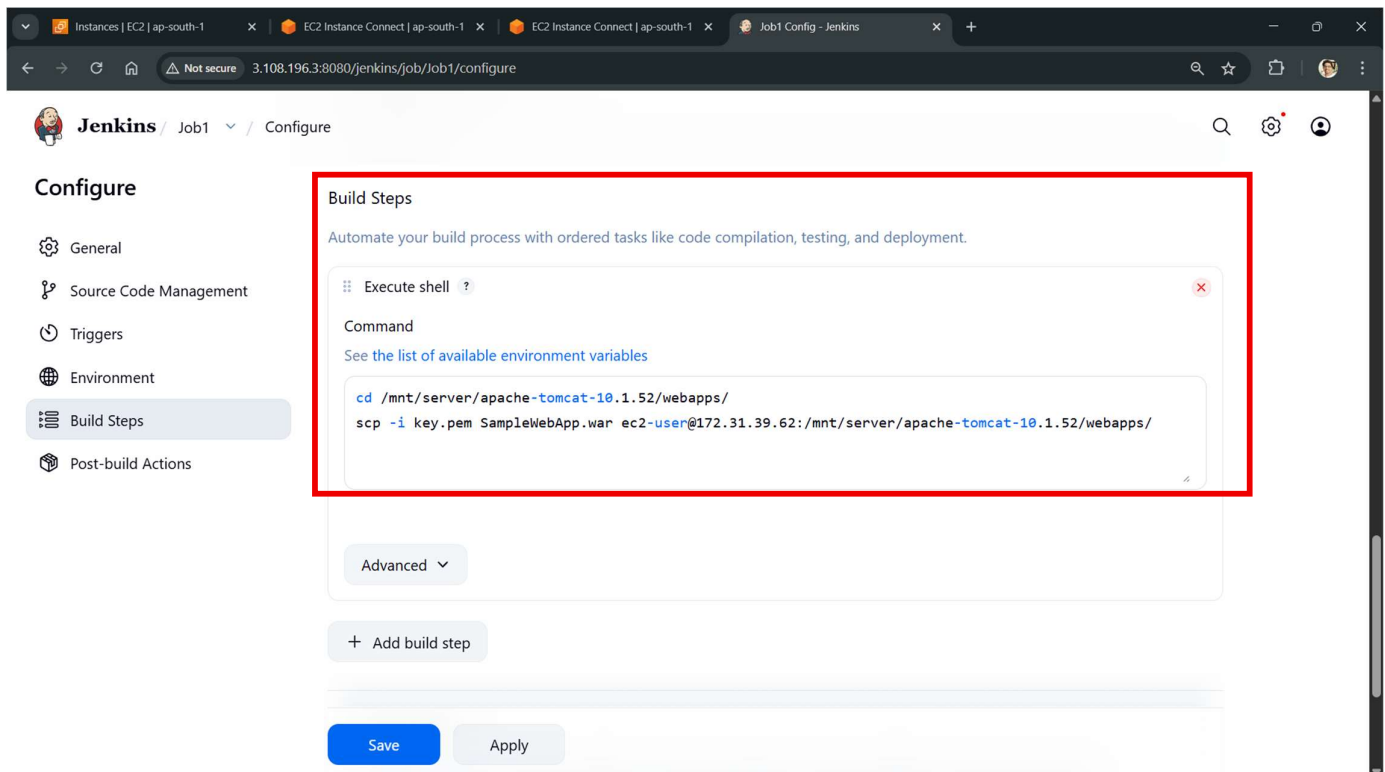


The screenshot shows the Jenkins Dashboard with a table of jobs. A red box highlights the row for 'Job1'. The table has columns for 'S' (Status), 'W' (Webhook), 'Name', 'Last Success', 'Last Failure', and 'Last Duration'. The 'Job1' row shows a successful status (green checkmark), a sun icon for webhooks, a last success of '4.8 sec' with a '#3' badge, and a last duration of '0.57 sec'. A green play button icon is visible at the end of the row.

S	W	Name	Last Success	Last Failure	Last Duration
✓	☀	Job1	4.8 sec #3	N/A	0.57 sec

REST API Jenkins 2.541.1

## Step 6: Executed the shell script using 'scp (secure copy)' command in Job Configuration and deployed the 'SampleWebApp' application on the instance which is not a slave:



The screenshot shows the Jenkins Job Configuration page for 'Job1'. The 'Build Steps' section is highlighted with a red box. It contains a single step named 'Execute shell' with the following command:

```
cd /mnt/server/apache-tomcat-10.1.52/webapps/  
scp -i key.pem SampleWebApp.war ec2-user@172.31.39.62:/mnt/server/apache-tomcat-10.1.52/webapps/
```

Below the command field, there is an 'Advanced' dropdown menu and a '+ Add build step' button. At the bottom of the configuration page, there are 'Save' and 'Apply' buttons.

## Result:

When Build is done by Job1, the 'SecureWebApp.war' file will be copied from Jenkins Master instance to the Tomcat-Home/webapps folder of the second instance which is not a slave and then the application will be deployed instantly on same path. We can see the SecureWebApp application is successfully hosted over the internet:

The image shows two side-by-side browser windows. The left window displays the Jenkins console output for Job1, build #4. The console output is as follows:

```
Started by user \[redacted\]  
Running as SYSTEM  
Building in workspace /root/.jenkins/workspace/Job1  
[WS-CLEANUP] Deleting project workspace...  
[WS-CLEANUP] Deferred wipeout is used...  
[WS-CLEANUP] Done  
[Job1] $ /bin/sh -xe /mnt/server/apache-tomcat-10.1.52/temp/jenkins15214457149448737083.sh  
+ cd /mnt/server/apache-tomcat-10.1.52/webapps/  
+ scp -i key.pem SampleWebApp.war ec2-user@172.31.39.62:/mnt/server/apache-tomcat-10.1.52/webapps/  
Finished: SUCCESS
```

A red box highlights the console output, and a red arrow points to it with the text "Build is done".

The right window shows a web browser at the URL `3.110.173.44:8080/SampleWebApp/`. The page title is "Sample Web Application To Deploy and Test". The page content includes a link "Click to Invoke a SnoopServlet" and a red box around the title and link. A red arrow points to the link with the text "Application site is hosted".