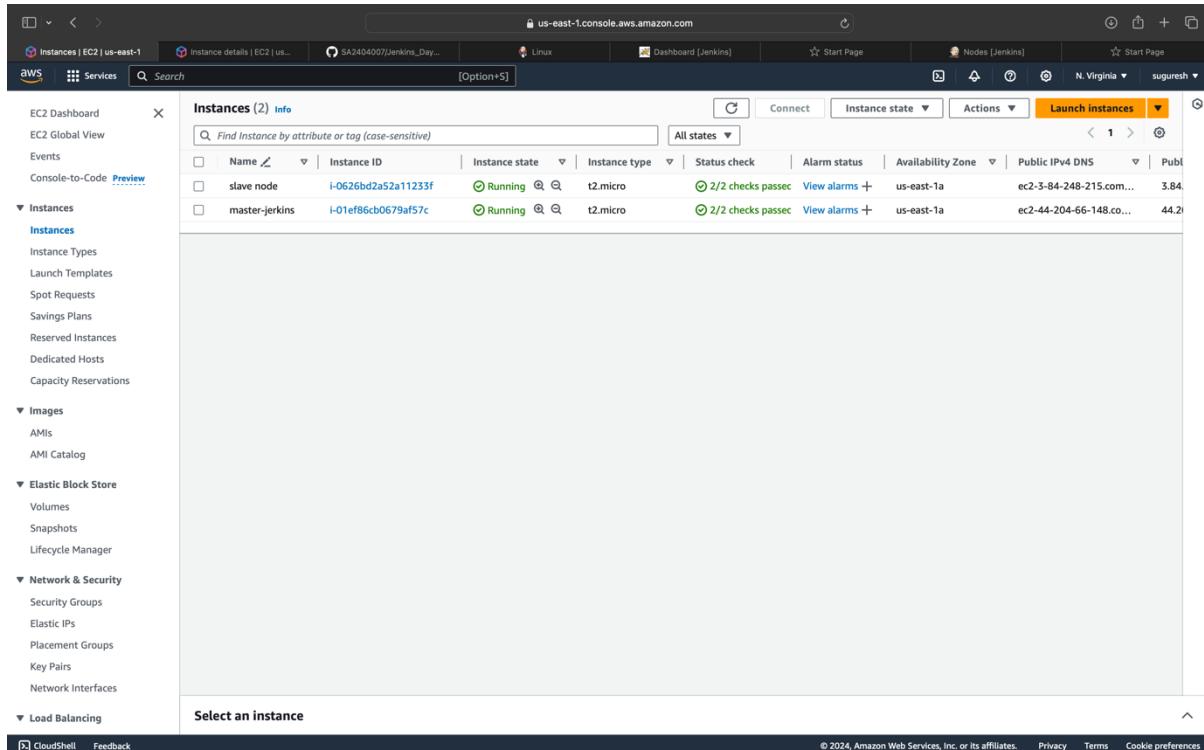


Assignments Continuous Integration Using Jenkins:

(SUGURESH)

L1 - Create Jenkins Master-Slave Configurations and Create a workspace in Jenkins Slave Node using Jenkins Free-style project



The screenshot shows the AWS EC2 Instances page with two instances listed:

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4	DNS	Publ
slave node	i-0626bd2a52a11233f	Running	t2.micro	2/2 checks passed	View alarms	us-east-1a	ec2-3-84-248-215.com...	3.84	
master-jenkins	i-01ef86cb0679af57c	Running	t2.micro	2/2 checks passed	View alarms	us-east-1a	ec2-44-204-66-148.co...	44.21	


```
~Downloads - ubuntu@clave: ~ -- ssh -i sugresh.pem ubuntu@ec2-3-84-248-215.compute-1.amazonaws.com +  
ubuntu@clave:~$ java -version  
openjdk 17.0.12+7-ubuntu-0ubuntu224.04  
OpenJDK Runtime Environment (build 17.0.12+7-ubuntu-0ubuntu224.04)  
OpenJDK 64-Bit Server VM (build 17.0.12+7-ubuntu-0ubuntu224.04, mixed mode, sharing)  
ubuntu@clave:~$ pwd  
/home/ubuntu@clave:  
ubuntu@clave:~$
```

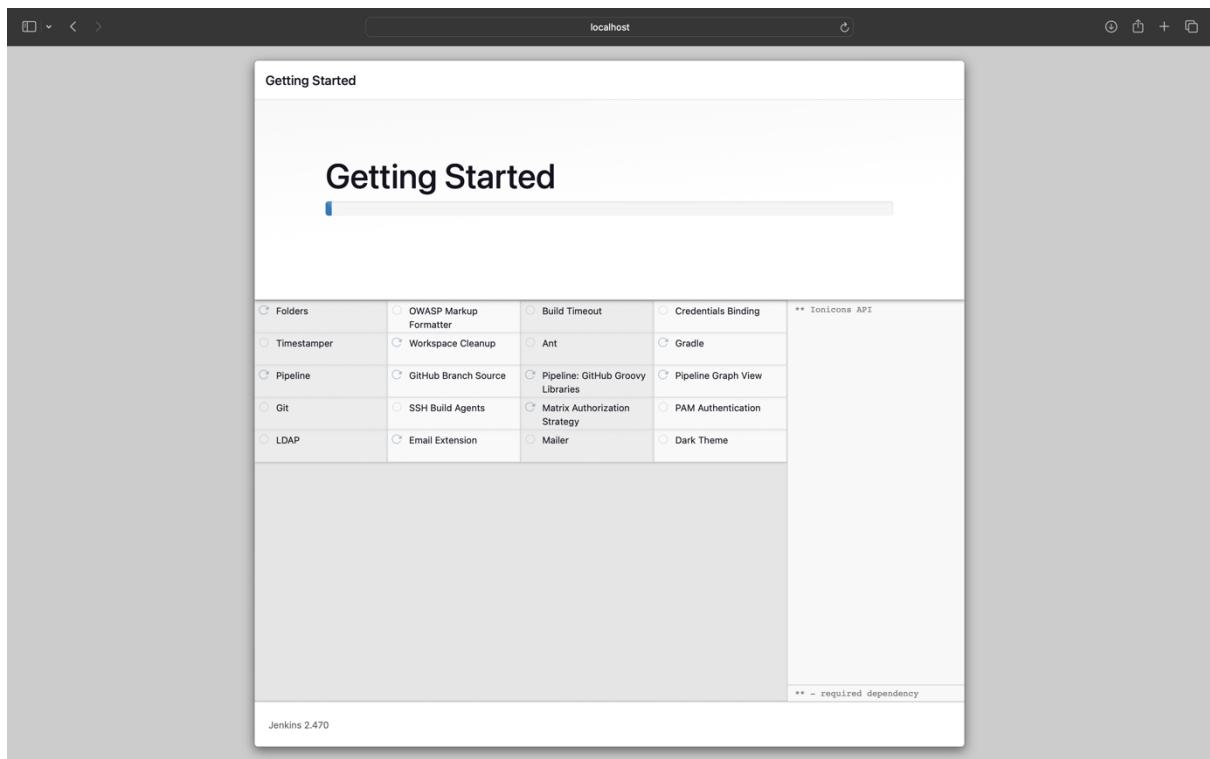
```
-/Downloads - ubuntu@clave: ~ -- ssh -l sugresh.pem ubuntu@ec2-3-84-248-215.compute-1.amazonaws.com
ubuntu@jenkins:~$ sudo wget -O /usr/share/keyrings/jenkins-keyring.asc \
https://pkg.jenkins.io/debian/jenkins.io-2023.key
echo "jenkins-keyring" | sudo tee -a /etc/apt/sources.list.d/jenkins.list > /dev/null
sudo apt-get update
sudo apt-get install jenkins
--2024-08-01 10:19:42-- https://pkg.jenkins.io/debian/jenkins.io-2023.key
Resolving pkg.jenkins.io... (pkg.jenkins.io), 346.75.34.133, 2a04:4e42:78::645
Connecting to pkg.jenkins.io|346.75.34.133|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 3175 [application/pgp-keys]
Saving to: '/usr/share/keyrings/jenkins-keyring.asc'

/usr/share/keyrings/jenkins-keyring.asc          100%[=====]   3.18K  --.-KB/s  in 0s

2024-08-01 10:19:42 (39.1 MB/s) - '/usr/share/keyrings/jenkins-keyring.asc' saved [3175/3175]

Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble InRelease
Hit:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates InRelease
Hit:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports InRelease
Ign:4 https://pkg.jenkins.io/debian binary/ InRelease
Hit:5 https://pkg.jenkins.io/debian binary/ Release
Hit:6 https://pkg.jenkins.io/debian-security binary/ InRelease
Reading package lists... Done
Reading package lists... Done
Building dependency tree... Done
Reading status information... Done
The following additional packages will be installed:
  net-tools
The following NEW packages will be installed:
  jenkins net-tools
0 upgraded, 2 newly installed, 0 to remove and 4 not upgraded.
Need to get 96.7 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/main amd64 net-tools amd64 2.10-0.1ubuntu4 [204 kB]
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/main amd64 jenkins 2.478 [96.7 MB]
Fetches: 96.9 MB in 8s (12.1 MB/s)
Selecting previously unselected package net-tools.
(Reading database ... 13381 files and directories currently installed.)
Preparing to unpack .../net-tools_2.10-0.1ubuntu4_amd64.deb ...
Unpacking net-tools (2.10-0.1ubuntu4) ...
Selecting previously unselected package jenkins.
Preparing to unpack .../jenkins_2.478_all.deb ...
Unpacking jenkins (2.478) ...
Setting up net-tools (2.10-0.1ubuntu4) ...
Setting up jenkins (2.478) ...
Create symlink /etc/systemd/system/multi-user.target.wants/jenkins.service → /usr/lib/systemd/system/jenkins.service.
Processing triggers for man-db (2.12.0-4build2) ...
Scanning processes...
Scanning processes...
Scanning linux images...
Pending kernel upgrade!
Running kernel version: 6.8.0-1009-aws
Diagnostics:
  The currently running kernel version is not the expected kernel version 6.8.0-1012-aws.
Restarting the system to load the new kernel will not be handled automatically, so you should consider rebooting.
Restarting services...
Service restarts being deferred:
  /etc/init.d/start_dibus.service
  systemctl restart network-dispatcher.service
  systemctl restart systemd-logind.service
  systemctl restart unattended-upgrades.service
No containers need to be restarted.
```

```
[ubuntu@jenkins:~$ sudo systemctl enable jenkins
Synchronizing state of jenkins.service with SysV service script with /usr/lib/systemd/systemd-sysv-install.
Executing: /usr/lib/systemd/systemd-sysv-install enable jenkins
[ubuntu@jenkins:~$ sudo systemctl start jenkins
[ubuntu@jenkins:~$ sudo cat/var/lib/jenkins/secrets/initialAdminPassword
sudo: cat/var/lib/jenkins/secrets/initialAdminPassword: command not found
[ubuntu@jenkins:~$ sudo cat /var/lib/jenkins/secrets/initialAdminPassword
ba22265c20d24c42be1636d6041225f5
[ubuntu@jenkins:~$ java --version
openjdk 17.0.12 2024-07-16
OpenJDK Runtime Environment (build 17.0.12+7-Ubuntu-1ubuntu224.04)
OpenJDK 64-Bit Server VM (build 17.0.12+7-Ubuntu-1ubuntu224.04, mixed mode, sharing)
```



The screenshot shows the Jenkins Dashboard. At the top, there's a navigation bar with icons for back, forward, and search. The main header says 'Jenkins' with a logo. To the right are search, user profile, and log out buttons. Below the header, the 'Dashboard' link is underlined. On the left, there's a sidebar with links for 'New Item', 'Build History', 'Manage Jenkins', and 'My Views'. A 'Build Queue' section shows 'No builds in the queue.' A 'Build Executor Status' section shows '0/2'. In the center, there's a 'Welcome to Jenkins!' message with a sub-instruction: 'This page is where your Jenkins jobs will be displayed. To get started, you can set up distributed builds or start building a software project.' Below this, there are sections for 'Start building your software project' (with a 'Create a job' button) and 'Set up a distributed build' (with links for 'Set up an agent', 'Configure a cloud', and 'Learn more about distributed builds'). The footer of the page displays 'REST API' and 'Jenkins 2.470'.

Not Secure – 44.204.66.148

Connect to Instance | EC2... Instance details | EC2 | us... SA2404007/Jenkins_Day... Linux Dashboard [Jenkins] Start Page Nodes [Jenkins] Start Page sugresh log out

Jenkins

Dashboard > Nodes >

Nodes

Build Queue

No builds in the queue.

Build Executor Status 0/2

Icon: S M L

Legend

S	Name ↓	Architecture	Clock Difference	Free Disk Space	Free Swap Space	Free Temp Space	Response Time
	Built-in Node	Linux (amd64)	In sync	3.70 GiB	0 B	3.70 GiB	0ms
	Data obtained		38 sec	38 sec	38 sec	38 sec	38 sec

+ New Node Configure Monitors

REST API Jenkins 2.470

The screenshot shows the Jenkins Nodes page. It displays a table of nodes with one entry: 'Data obtained'. The node is a 'Built-in Node' running on 'Linux (amd64)'. It is 'In sync' with the master. It has 3.70 GiB of free disk space, 0 B of free swap space, and 3.70 GiB of free temp space. Its response time is 0ms. A red warning icon is present next to the free swap space value. There are tabs for 'Build Queue' (empty) and 'Build Executor Status' (0/2). A legend at the bottom right indicates icons for Slave (S), Master (M), and Label (L).

Not Secure – 44.204.66.148

Connect to Instance | EC2... Instance details | EC2 | us... SA2404007/Jenkins_Day... Linux Dashboard [Jenkins] Start Page Jenkins Start Page

Dashboard > Nodes >

Labels ? devops

Usage ? Use this node as much as possible

Launch method ? Launch agents via SSH

Host ? 172.31.87.54

Credentials ? ubuntu (slave-cred)

+ Add +

Host Key Verification Strategy ? Non verifying Verification Strategy

Advanced

Availability ? Keep this agent online as much as possible

Node Properties

Disable deferred wipeout on this node ?

Save

The screenshot shows the 'New Node' configuration page. It includes fields for Labels ('devops'), Usage ('Use this node as much as possible'), Launch method ('Launch agents via SSH'), Host ('172.31.87.54'), Credentials ('ubuntu (slave-cred)'), Host Key Verification Strategy ('Non verifying Verification Strategy'), Availability ('Keep this agent online as much as possible'), and a checkbox for 'Disable deferred wipeout on this node'. A 'Save' button is at the bottom.

The screenshot shows the Jenkins 'Nodes' page. At the top, there are tabs for 'Connect to Instance | EC2...', 'Instance details | EC2 | us...', 'SA2404007/Jenkins_Day...', 'Linux', 'Dashboard [Jenkins]', 'Start Page', 'Nodes [Jenkins]', 'Start Page', and a user profile for 'sugresh'. Below the tabs, the page title is 'Not Secure – 44.204.66.148'. The main content area has a header 'Nodes' with a 'New Node' button and 'Configure Monitors' link. On the left, there are sections for 'Build Queue' (empty) and 'Build Executor Status' (1/2). The main table lists two nodes:

S	Name	Architecture	Clock Difference	Free Disk Space	Free Swap Space	Free Temp Space	Response Time
	Built-in Node	Linux (amd64)	In sync	3.70 GiB	0 B	3.70 GiB	0ms
	slave1		N/A	N/A	N/A	N/A	N/A
		Data obtained	3 ms	2 ms	19 ms	2 ms	17 ms

Icons for sorting (S), modifying (M), and launching (L) are shown below the table. A legend link is at the bottom right.

REST API Jenkins 2.470

The screenshot shows the Jenkins 'slave1 log' page. At the top, there are tabs for 'Connect to instance | EC2...', 'Instance details | EC2 | us...', 'SA2404007/Jenkins_Day...', 'Linux', 'Dashboard [Jenkins]', 'Start Page', 'slave1 log [Jenkins]', 'Start Page', and a user profile for 'sugresh'. Below the tabs, the page title is 'Not Secure – 44.204.66.148'. The main content area shows the log output for the slave1 node:

```
UID=1000
USER=ubuntu
XDG_RUNTIME_DIR=/run/user/1000
XDG_SESSION_CLASS=user
XDG_SESSION_ID=24
XDG_SESSION_TYPE=tty
_='
Checking Java version in the PATH
openjdk version "17.0.12" 2024-07-16
OpenJDK Runtime Environment (build 17.0.12+7-Ubuntu-1ubuntu224.04)
OpenJDK 64-Bit Server VM (build 17.0.12+7-Ubuntu-1ubuntu224.04, mixed mode, sharing)
[08/01/24 10:52:42] [SSH] Checking java version of /home/ubuntu/jdk/bin/java
Couldn't figure out the Java version of /home/ubuntu/jdk/bin/java
bash: line 1: /home/ubuntu/jdk/bin/java: No such file or directory

[08/01/24 10:52:42] [SSH] Checking java version of java
[08/01/24 10:52:42] [SSH] java -version returned 17.0.12.
[08/01/24 10:52:42] [SSH] Starting sftp client.
[08/01/24 10:52:42] [SSH] Copying latest remoting.jar...
[08/01/24 10:52:42] [SSH] Copied 1,390,076 bytes.
Expanded the channel window size to 4MB
[08/01/24 10:52:42] [SSH] Starting agent process: cd "/home/ubuntu" && java -jar remoting.jar -workDir /home/ubuntu -jar-cache /home/ubuntu/remoting/jarCache
Aug 01, 2024 10:52:42 AM org.jenkinsci.remoting.engine.WorkDirManager initializeWorkDir
INFO: Using /home/ubuntu/remoting as a remoting work directory
Aug 01, 2024 10:52:42 AM org.jenkinsci.remoting.engine.WorkDirManager setupLogging
INFO: Both error and output logs will be printed to /home/ubuntu/remoting
<===[JENKINS REMOTING CAPACITY]==>channel started
Remoting version: 3256.v88a_f6e922152
Launcher: SSHLauncher
Communication Protocol: Standard in/out
This is a Unix agent
Agent successfully connected and online
```

Three dots at the bottom indicate more log entries.

REST API Jenkins 2.470

Not Secure – 44.204.66.148

Connect to Instance | EC2... Instance details | EC2 | us... SA2404007/Jenkins_Day... Linux Dashboard [Jenkins] Start Page New Item [Jenkins] Start Page sugresh log out

Dashboard > New Item

New Item

Enter an item name
slavenodework

Select an item type

- Freestyle project**
Classic, general-purpose job type that checks out from up to one SCM, executes build steps serially, followed by post-build steps like archiving artifacts and sending email notifications.
- Pipeline**
Orchestrates long-running activities that can span multiple build agents. Suitable for building pipelines (formerly known as workflows) and/or organizing complex activities that do not easily fit in free-style job type.
- Multi-configuration project**
Suitable for projects that need a large number of different configurations, such as testing on multiple environments, platform-specific builds, etc.
- Folder**
Creates a container that stores nested items in it. Useful for grouping things together. Unlike view, which is just a filter, a folder creates a separate namespace, so you can have multiple things of the same name as long as they are in different folders.
- Multibranch Pipeline**
Creates a set of Pipeline projects according to detected branches in one SCM repository.
- Organization Folder**
Creates a set of multibranch project subfolders by scanning for repositories.

OK

Not Secure – 44.204.66.148

Connect to Instance | EC2... Instance details | EC2 | us... SA2404007/Jenkins_Day... Linux Dashboard [Jenkins] Start Page slavenodework Config [J... Start Page

Dashboard > slavenodework > Configuration

Configure

Description

General

Source Code Management

Build Triggers

Build Environment

Build Steps

Post-build Actions

Discard old builds ?

GitHub project

This project is parameterized ?

Throttle builds ?

Execute concurrent builds if necessary ?

Restrict where this project can be run ?

Label Expression ?

slave1
slave1

Advanced

Source Code Management

None

Git ?

Save Apply

Not Secure – 44.204.66.148

Connect to Instance | EC2... Instance details | EC2 | us... SA2404007/Jenkins_Day... Linux Dashboard [Jenkins] Start Page slavenodework [Jenkins] Start Page suguresh log out

Jenkins

Dashboard > slavenodework >

slavenodework

Status Changes Workspac Build scheduled Build Now Configure Delete Project Rename

Permalinks Add description

Builds *** ↻

Today #1 10:57 am

REST API Jenkins 2.470

```
->/Downloads - ubuntu@clave: ~ -- ssh -i suguresh.pem ubuntu@ec2-3-84-248-215.compute-1.amazonaws.com
ubuntu@clave:~/home$ pwd
/home
ubuntu@clave:~/home$ ls
ubuntu
ubuntu@clave:~/home$ cd ubuntu/
ubuntu@clave:$ ls
jenkins remoting remoting.jar sugu workspace
ubuntu@clave:$
```

+ | | | |

The screenshot shows the Jenkins interface for a specific build. The URL is <http://44.204.66.148:8080/job/slavenodework/4/consoleText>. The page title is "Console Output". On the left, there's a sidebar with links: Status, Changes, Console Output (which is selected), Edit Build Information, Delete build '#4', Timings, and Previous Build. The main content area displays the build log:

```
Started by user suguresh
Running as SYSTEM
Building remotely on slave1 (devops) in workspace /home/ubuntu/workspace/slavenodework
[slavenodework] $ /bin/sh -xe /tmp/jenkins5571363161174869471.sh
+ sudo mkdir /home/suguresh
Finished: SUCCESS
```

At the bottom right of the content area are three buttons: Download, Copy, and View as plain text.

The screenshot shows the Jenkins interface for the project "slavenodework". The URL is <http://44.204.66.148:8080/job/slavenodework/>. The page title is "slavenodework". On the left, there's a sidebar with links: Status (selected), Changes, Workspace, Build Now, Configure, Delete Project, and Rename. The main content area has a section titled "Permalinks" with a bulleted list of recent builds:

- Last build (#4), 41 sec ago
- Last stable build (#4), 41 sec ago
- Last successful build (#4), 41 sec ago
- Last failed build (#3), 1 min 19 sec ago
- Last unsuccessful build (#3), 1 min 19 sec ago
- Last completed build (#4), 41 sec ago

Below this is a "Builds" section with a table:

Build	Timestamp	Status
#4	11:02 am	Success
#3	11:02 am	Failure
#2	10:57 am	Failure
#1	10:57 am	Success

At the bottom right of the content area is a link "Add description".

```

~/Downloads -- ubuntu@clave:/home -- ssh -i suguresh.pem ubuntu@ec2-3-84-248-215.compute-1.amazonaws.com
ubuntu@clave:/home$ pwd
/home
ubuntu@clave:/home$ ls
ubuntu
ubuntu@clave:/home$ cd ubuntu/
ubuntu@clave:~/ubuntu$ ls
jenkins   remoting.jar  sugu  workspace
ubuntu@clave:$ ls
jenkins  remoting  remoting.jar  sugu  workspace
ubuntu@clave:~/ubuntu$ cd ..
ubuntu@clave:/home$ ls
suguresh  ubuntu
ubuntu@clave:/home$ 

```

L2 - Create CICD Pipeline to Clone and Build Java Maven Web Application

The screenshot shows a Mac OS X desktop environment with a Jenkins application window open. The window title is "New Item". Inside, there's a form to "Enter an item name" with "Java Maven Web Application" typed in. Below it, a section titled "Select an item type" lists five options:

- Freestyle project**: Described as a "Classic, general-purpose job type that checks out from up to one SCM, executes build steps serially, followed by post-build steps like archiving artifacts and sending email notifications." It has a small icon of a cube.
- Pipeline**: Described as "Orchestrates long-running activities that can span multiple build agents. Suitable for building pipelines (formerly known as workflows) and/or organizing complex activities that do not easily fit in free-style job type." It has a small icon of a circular arrow.
- Multi-configuration project**: Described as "Suitable for projects that need a large number of different configurations, such as testing on multiple environments, platform-specific builds, etc." It has a small icon of a document with a gear.
- Folder**: Described as "Creates a container that stores nested items in it. Useful for grouping things together. Unlike view, which is just a filter, a folder creates a separate namespace, so you can have multiple things of the same name as long as they are in different folders." It has a small icon of a folder.
- Multibranch Pipeline**: Described as "Creates a set of Pipeline projects according to detected branches in one SCM repository." It has a small icon of two people.

At the bottom of the dialog is an "OK" button. The background shows a dock with various Mac OS X application icons like Finder, Mail, Safari, and others. The top of the screen shows the Mac OS X menu bar and a system status bar indicating the date and time.

Safari File Edit View History Bookmarks Window Help

localhost

Jenkins

Search (⌘+K)

sugresh log out

Dashboard > Java Maven Web Application > Configuration

Configure General Enabled

Description: CI/CD Pipeline to Clone and Build Java Maven Web Application

Source Code Management: None

Build Triggers: None

Build Environment: None

Build Steps: None

Post-build Actions: None

Advanced

Save Apply

github.com

maven-web-app-sugu

Type ⌘ to search

Code Pull requests Actions Projects Wiki Security Insights Settings

maven-web-app-sugu (Public) forked from KastroVKiran/maven-web-app-kastro1

main 1 Branch 0 Tags Go to file Add file Code Local Codespaces

Clone HTTPS SSH GitHub CLI Copy url to clipboard https://github.com/suguslove10/maven-web-...

src/main/webapp Update index.jsp Dockerfile Create Dockerfile pom.xml web app files README

Add a README

Add a README

About: No description, website, or topics provided.

Activity: 0 stars 0 watching 0 forks

Releases: No releases published Create a new release

Packages: No packages published Publish your first package

Languages: Java 61.5% Dockerfile 38.5%

Suggested workflows: Java with Maven Configure

The screenshot shows the Jenkins configuration interface for a Java Maven Web Application. The left sidebar lists navigation items: Dashboard, Java Maven Web Application, Configuration, General, Source Code Management (selected), Build Triggers, Build Environment, Build Steps, and Post-build Actions. The main panel is titled "Source Code Management" under the "Configure" section. It shows a "Repositories" section with a "Repository URL" input field containing "https://github.com/suguslove10/maven-web-app-sugu.git" and a "Branch Specifier" input field containing "/main". At the bottom, there are "Save" and "Apply" buttons.

Safari File Edit View History Bookmarks Window Help

localhost

Thu 1 Aug 7:41PM

Dashboard > Java Maven Web Application > Configuration

Configure

Source Code Management

General

Source Code Management **Git**

Build Triggers

Build Environment

Build Steps

Post-build Actions

None

Git

Repositories

Repository URL

https://github.com/suguslove10/maven-web-app-sugu.git

Credentials

- none -

+ Add

Advanced

Add Repository

Branches to build

Branch Specifier (blank for 'any')

/main

Add Branch

Save Apply

Safari File Edit View History Bookmarks Window Help

localhost

Thu 1 Aug 7:41PM

The screenshot shows a Jenkins configuration page for a Java Maven Web Application. The left sidebar lists navigation items: General, Source Code Management, Build Triggers (selected), Build Environment, Build Steps, and Post-build Actions. The main content area shows configuration sections for Build Triggers, Build Environment, and Build Steps. In the Build Steps section, a modal dialog is open, titled "Add build step", listing various build steps like Execute Windows batch command, Execute shell, Invoke Ant, Invoke Gradle script, Invoke top-level Maven targets (which is selected and highlighted in blue), Run with timeout, and Set build status to "pending" on GitHub commit.

Safari File Edit View History Bookmarks Window Help

localhost

Dashboard > Java Maven Web Application > Configuration

Configure

General

Source Code Management

Build Triggers

Build Environment

Build Steps

Post-build Actions

Build Environment

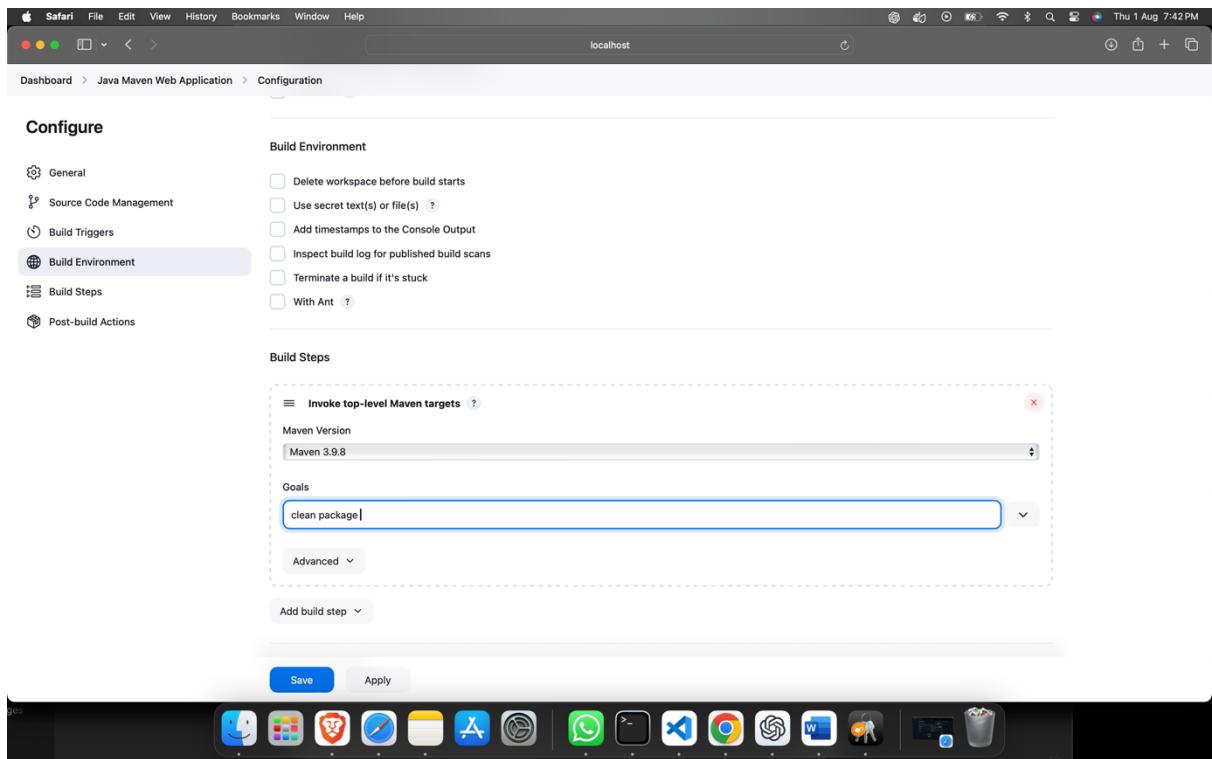
- Delete workspace before build starts
- Use secret text(s) or file(s) ?
- Add timestamps to the Console Output
- Inspect build log for published build scans
- Terminate a build if it's stuck
- With Ant ?

Build Steps

Add build step ^

Filter

- Execute Windows batch command
- Execute shell
- Invoke Ant
- Invoke Gradle script
- Invoke top-level Maven targets
- Run with timeout
- Set build status to "pending" on GitHub commit



Screenshot of the Jenkins web interface. The title bar shows "Jenkins" and the URL "localhost". The main content area displays the "Java Maven Web Application" project. The status bar indicates "Build scheduled". A sidebar on the left lists project management options: Status, Changes, Workspace, Build Now, Configure, Delete Project, and Rename. The "Builds" section shows a single build entry: "#1 7:42 pm" with a progress bar indicating it is still in progress.

Screenshot of the Jenkins web interface, identical to the first one but with a green checkmark icon next to the project name "Java Maven Web Application", indicating a successful build. The "Builds" section now lists four entries: "Last build (#1), 3 min 32 sec ago", "Last stable build (#1), 3 min 32 sec ago", "Last successful build (#1), 3 min 32 sec ago", and "Last completed build (#1), 3 min 32 sec ago".

Safari File Edit View History Bookmarks Window Help

localhost

Jenkins

Search (⌘+K) suguresh log out

Dashboard > Java Maven Web Application > #1 > Console Output

Status
 Changes
 Console Output
 Edit Build Information
 Delete build '#1'
 Timings
 Git Build Data

Console Output

Started by user suguresh
Running as SYSTEM
Building on the built-in node in workspace /Users/suguresh/.jenkins/workspace/Java Maven Web Application
The recommended git tool is: NONE
No credentials specified
> git rev-parse --resolve-git-dir /Users/suguresh/.jenkins/workspace/Java Maven Web Application/.git # timeout=10
Fetching changes from the remote Git repository
> git config remote.origin.url https://github.com/suguresh/Java Maven Web Application.git # timeout=10
Fetching upstream changes from https://github.com/suguresh/Java Maven Web Application.git
> git --version # timeout=10
> git --version # 'git version 2.39.3 (Apple Git-146)'
> git fetch --tags --force --progress -- https://github.com/suguresh/Java Maven Web Application.git +refs/heads/*:refs/remotes/origin/* # timeout=10
> git rev-parse refs/remotes/origin/main^{commit} # timeout=10
Checking out Revision 9445ff9a12240f79619cf92792432de433519dc0 (refs/remotes/origin/main)
> git config core.sparsecheckout # timeout=10
> git checkout -f 9445ff9a12240f79619cf92792432de433519dc0 # timeout=10
Commit message: "Update index.jsp"
First time build. Skipping changelog.
[Java Maven Web Application] \$ /Users/suguresh/.jenkins/tools/hudson.tasks.Maven_MavenInstallation/Maven_3.9.8/bin/mvn clean package
[INFO] Scanning for projects...
[INFO]
[INFO] -----< in.ashokit:01-maven-web-app >-----
[INFO] Building 01-maven-web-app 3.0-RELEASE
[INFO] from pom.xml
[INFO] [war]
[INFO]
[INFO] --- clean:3.2.0:clean (default-clean) @ 01-maven-web-app ---
[INFO] Deleting /Users/suguresh/.jenkins/workspace/Java Maven Web Application/target
[INFO]
[INFO] --- resources:3.1:resources (default-resources) @ 01-maven-web-app ---

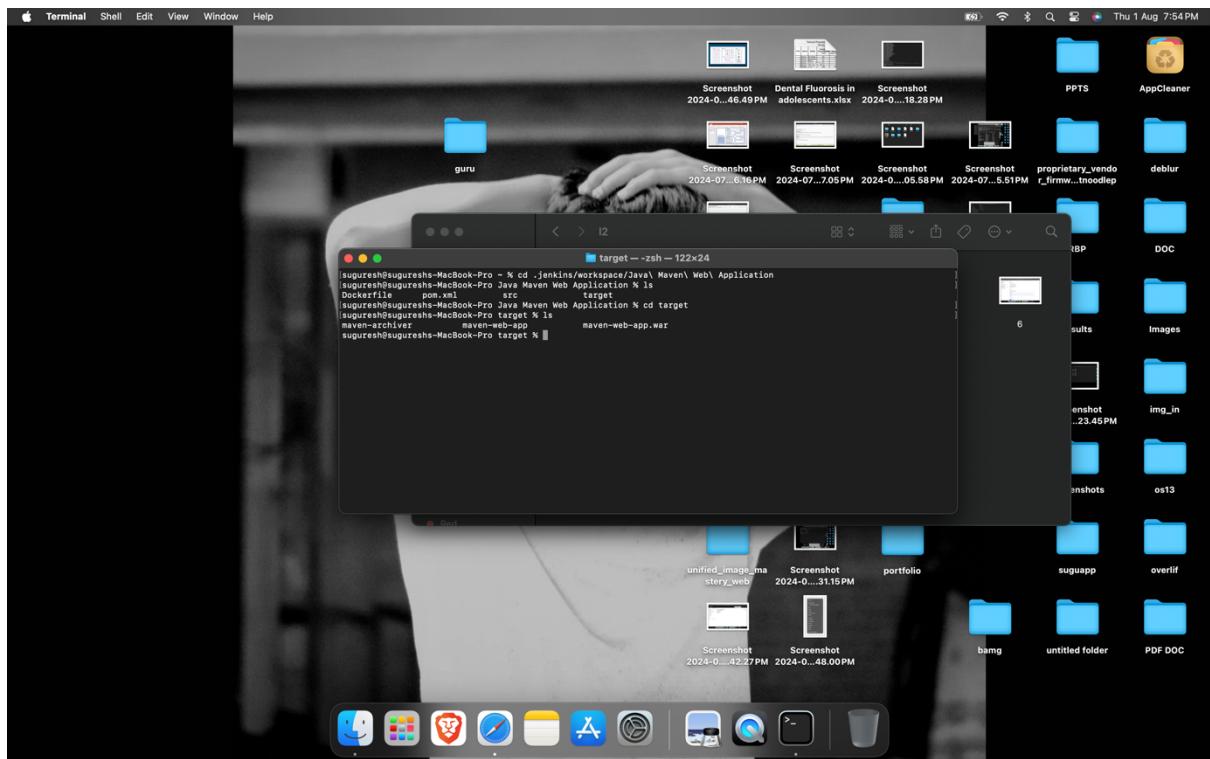
Safari File Edit View History Bookmarks Window Help

localhost

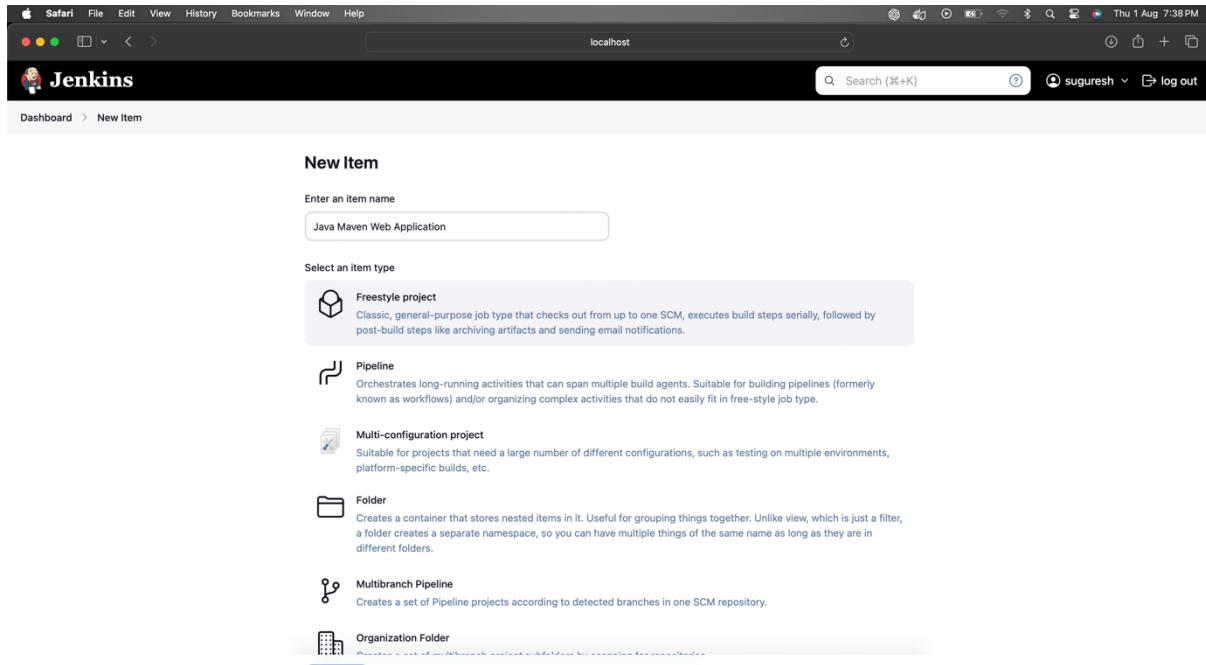
Dashboard > Java Maven Web Application > #1 > Console Output

```
[INFO]
[INFO] --- resources:3.1:resources (default-resources) @ 01-maven-web-app ---
[WARNING] Using platform encoding (UTF-8 actually) to copy filtered resources, i.e. build is platform dependent!
[INFO] skip non existing resourceDirectory /Users/suguresh/.jenkins/workspace/Java Maven Web Application/src/main/resources
[INFO]
[INFO] --- compiler:3.13.0:compile (default-compile) @ 01-maven-web-app ---
[INFO] No sources to compile
[INFO]
[INFO] --- resources:3.1:testResources (default-testResources) @ 01-maven-web-app ---
[WARNING] Using platform encoding (UTF-8 actually) to copy filtered resources, i.e. build is platform dependent!
[INFO] skip non existing resourceDirectory /Users/suguresh/.jenkins/workspace/Java Maven Web Application/src/test/resources
[INFO]
[INFO] --- compiler:3.13.0:testCompile (default-testCompile) @ 01-maven-web-app ---
[INFO] No sources to compile
[INFO]
[INFO] --- surefire:3.2.5:test (default-test) @ 01-maven-web-app ---
[INFO] No tests to run.
[INFO]
[INFO] --- war:3.3.1:war (default-war) @ 01-maven-web-app ---
[INFO] Packaging webapp
[INFO] Assembling webapp [01-maven-web-app] in [/Users/suguresh/.jenkins/workspace/Java Maven Web Application/target/maven-web-app]
[INFO] Processing war project
[INFO] Copying webapp resources [/Users/suguresh/.jenkins/workspace/Java Maven Web Application/src/main/webapp]
[INFO] Building war: /Users/suguresh/.jenkins/workspace/Java Maven Web Application/target/maven-web-app.war
[INFO]
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 0.911 s
[INFO] Finished at: 2024-08-01T19:42:28+05:30
[INFO]
Finished: SUCCESS
```

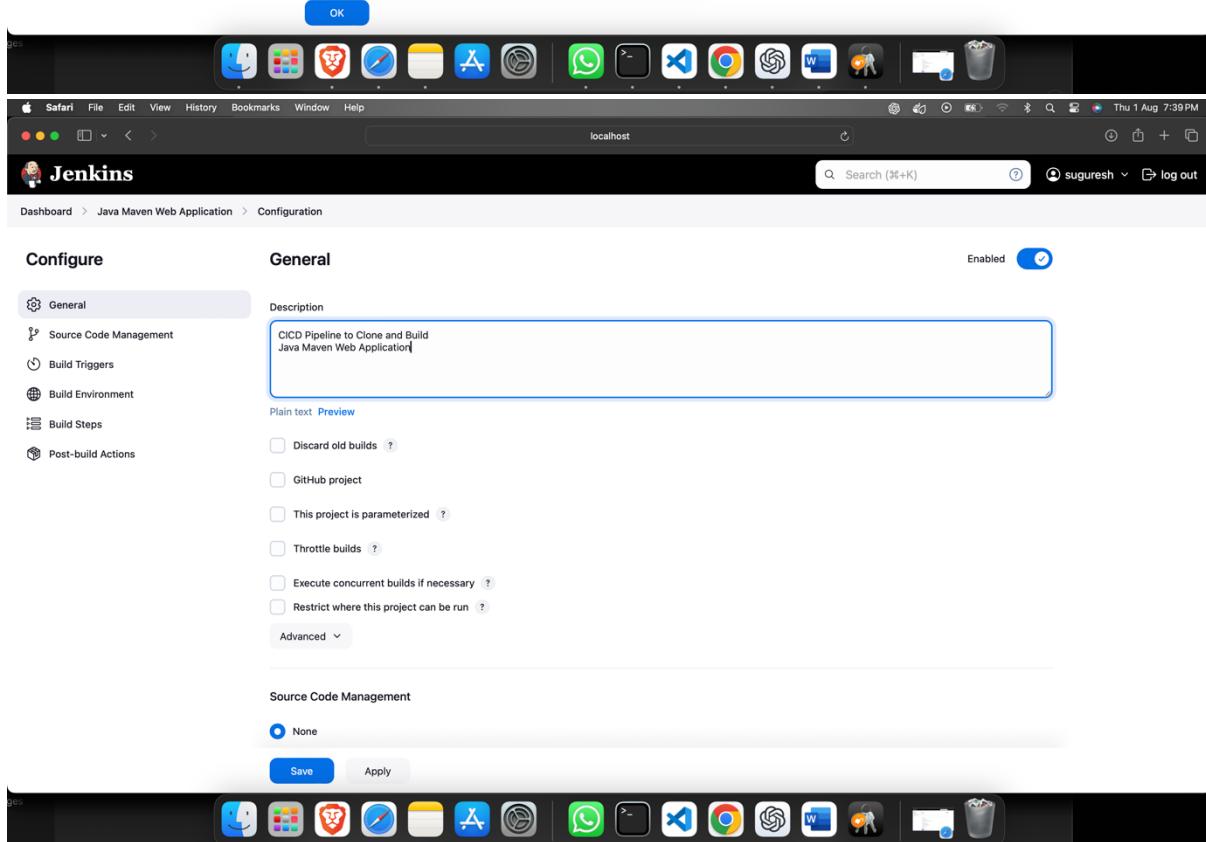
REST API Jenkins 2.470



L3 - Create CICD Pipeline to Deploy the Maven Web Application in Tomcat Server



The screenshot shows the Jenkins 'New Item' creation dialog. In the 'Enter an item name' field, 'Java Maven Web Application' is typed. Below it, under 'Select an item type', the 'Freestyle project' option is selected, described as a 'Classic, general-purpose job type'. Other options like 'Pipeline', 'Multi-configuration project', 'Folder', 'Multibranch Pipeline', and 'Organization Folder' are also listed. A blue 'OK' button is at the bottom.



The screenshot shows the Jenkins configuration page for the 'Java Maven Web Application' item. The 'General' tab is selected. The 'Description' field contains the text 'CICD Pipeline to Clone and Build Java Maven Web Application'. Under the 'Source Code Management' section, 'None' is selected. At the bottom, there are 'Save' and 'Apply' buttons.

The screenshot captures a dual-Safari setup on a Mac. The top window is a GitHub repository page for 'maven-web-app-sugu' (Public), forked from 'KastroVKiran/maven-web-app-kastro'. It shows a single file, 'index.jsp', updated by 'KastroVKiran'. The bottom window is the Jenkins configuration interface for a 'Java Maven Web Application' job, specifically on the 'Configuration' tab. The configuration includes a 'Source Code Management' section set to Git, with a repository URL of 'https://github.com/suguslove10/maven-web-app-sugu.git'. The 'Branches to build' field contains the pattern '*:main'. Both windows are displayed against a dark-themed desktop background.

Safari File Edit View History Bookmarks Window Help

localhost

Thu 1 Aug 7:41 PM

Dashboard > Java Maven Web Application > Configuration

Configure

Build periodically ?
 GitHub hook trigger for GITScm polling ?
 Poll SCM ?

General
 Source Code Management
 Build Triggers
 Build Environment
 Build Steps
 Post-build Actions

Build Environment

Delete workspace before build starts
 Use secret text(s) or file(s) ?
 Add timestamps to the Console Output
 Inspect build log for published build scans
 Terminate a build if it's stuck
 With Ant ?

Build Steps

Add build step ^

Filter

Execute Windows batch command
Execute shell
Invoke Ant
Invoke Gradle script
Invoke top-level Maven targets
Run with timeout
Set build status to "pending" on GitHub commit

REST API Jenkins 2.470

Safari File Edit View History Bookmarks Window Help

localhost

Thu 1 Aug 7:42 PM

Dashboard > Java Maven Web Application > Configuration

Configure

General
 Source Code Management
 Build Triggers
 Build Environment
 Build Steps
 Post-build Actions

Build Environment

Delete workspace before build starts
 Use secret text(s) or file(s) ?
 Add timestamps to the Console Output
 Inspect build log for published build scans
 Terminate a build if it's stuck
 With Ant ?

Build Steps

Invoke top-level Maven targets ?

Maven Version
Maven 3.9.8

Goals
clean package

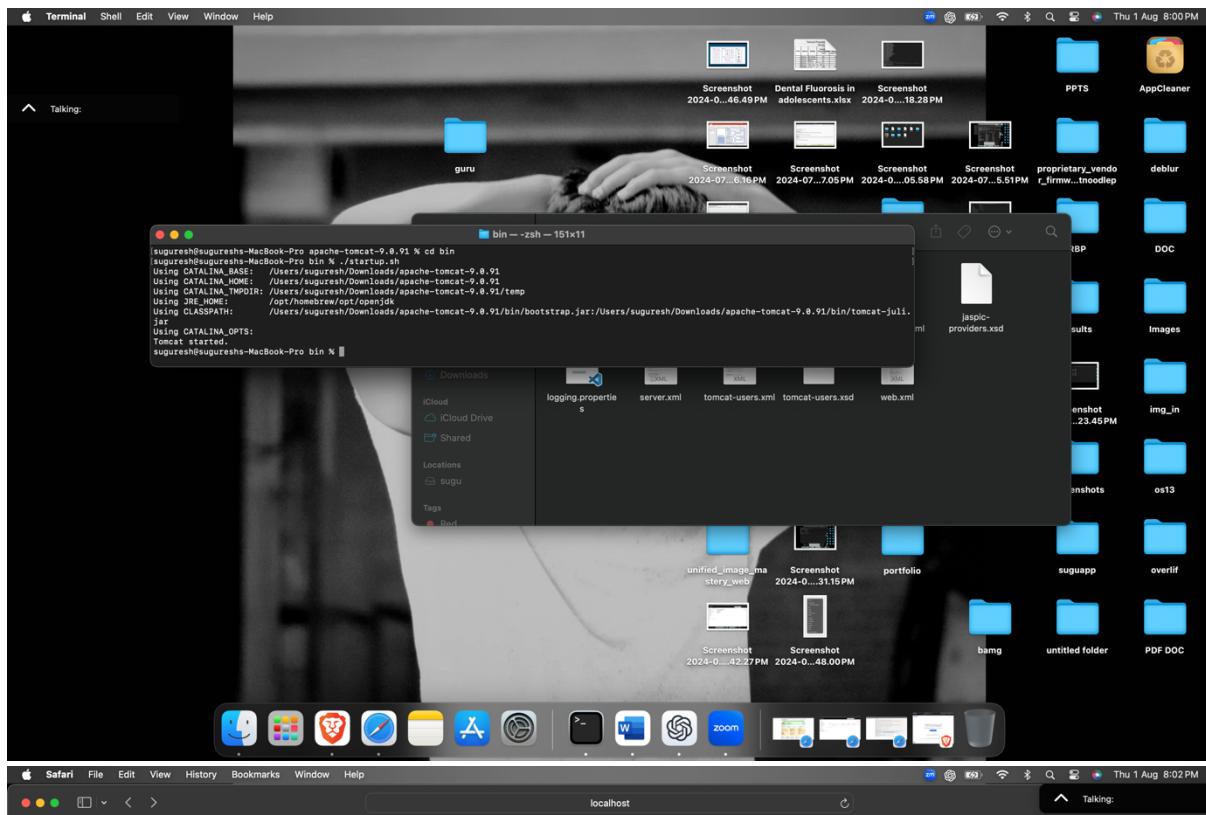
Advanced

Add build step ^

Save Apply

Safari File Edit View History Bookmarks Window Help

localhost



A screenshot of the Apache Tomcat 9.0.91 documentation website. The header includes links for Home, Documentation, Configuration, Examples, Wiki, and Mailing Lists. The Apache logo is in the top right. A green banner at the top says 'If you're seeing this, you've successfully installed Tomcat. Congratulations!' Below it is a cartoon cat icon. To the right are buttons for Server Status, Manager App, and Host Manager. The main content area is divided into three columns: 'Developer Quick Start' (with sections for Tomcat Setup, First Web Application, Realms & AAA, JDBC DataSources, Examples, Servlet Specifications, and Tomcat Versions), 'Managing Tomcat' (with sections for Recommended Reading, Security Considerations How-To, Manager Application How-To, Clustering/Session Replication How-To, Release Notes, Changelog, Migration Guide, and Security Notices), 'Documentation' (with sections for Tomcat 9.0 Documentation, Tomcat 9.0 Configuration, Tomcat Wiki, and Tomcat 9.0 RUNNING.txt), and 'Getting Help' (with sections for FAQ and Mailing Lists, and a list of available mailing lists: tomcat-announce, tomcat-users, taglibs-user, and tomcat-dev). At the bottom are links for Other Downloads, Other Documentation, Get Involved, Miscellaneous, and the Apache Software Foundation. A dark-themed dock is visible at the very bottom.



"http-nio-9090"

Max threads: 200 Current thread count: 10 Current threads busy: 1 Keep alive sockets count: 1
Max processing time: 487 ms Processing time: 0.715 s Request count: 20 Error count: 0.00 MiB Bytes sent: 0.11 MiB

Stage	Time	Bytes Sent	Bytes Recv	Client (Forwarded)	Client (Actual)	VHost	Request
R	?	?	?	?	?	?	
R	?	?	?	?	?	?	
R	?	?	?	?	?	?	
S	10 ms	0 Kib	0 Kib	0:0:0:0:0:0:1	0:0:0:0:0:0:1	localhost	GET /manager/status HTTP/1.1

P: Parse and prepare request S: Service F: Finishing R: Ready K: Keepalive

The screenshot shows a Mac OS X desktop with a Safari browser window open. The address bar at the top of the browser says "localhost". The main content area of the browser displays the Apache Software Foundation's "Tomcat Web Application Manager" page. At the top of this page is the Apache logo. Below it is a navigation bar with tabs: "Manager", "List Applications", "HTML Manager Help", "Manager Help", and "Server Status". The "Manager" tab is selected. The "Applications" tab is also highlighted in blue, and its content shows a list of available applications:

Path	Version	Display Name	Running	Sessions	Commands
/	None specified	Welcome to Tomcat	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/docs	None specified	Tomcat Documentation	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/examples	None specified	Servlet and JSP Examples	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/host-manager	None specified	Tomcat Host Manager Application	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/manager	None specified	Tomcat Manager Application	true	3	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes

Deploy

Deploy directory or WAR file located on server

Context Path:
Version (for parallel deployment):
XML Configuration file path:
WAR or Directory path:
Deploy

WAR file to deploy

Select WAR file to upload Choose File no file selected

The screenshot shows a Mac OS X desktop with a Safari browser window open. The address bar at the top of the browser says "localhost". The main content area of the browser displays the Apache Software Foundation's "Tomcat Web Application Manager" page. At the top of this page is the Apache logo. Below it is a navigation bar with tabs: "Manager", "List Applications", "HTML Manager Help", "Manager Help", and "Server Status". The "Manager" tab is selected. The "Deploy" tab is also highlighted in blue, and its content shows a form for deploying a WAR file:

Context Path:
Version (for parallel deployment):
XML Configuration file path:
WAR or Directory path:
Deploy

Select WAR file to upload Choose File no file selected

Safari File Edit View History Bookmarks Window Help

Not hearing anything? Turn up volume

Talking: StarAgile Support

Thu 1 Aug 8:43 PM

Dashboard > Java Maven Web Application > Configuration

Configure

Post-build Actions

- General
- Source Code Management
- Build Triggers
- Build Environment
- Build Steps
- Post-build Actions

Deploy war/ear to a container

WAR/EAR files: target/*.war

Context path: maven-web-app

Tomcat 9.x Remote

Credentials: deployer/*********

+ Add

Tomcat URL: http://localhost:9090/

Advanced

Add Container

Save Apply

Jenkins

Dashboard > Java Maven Web Application

Java Maven Web Application

Status Changes Workspace Build Now Configure Delete Project Rename

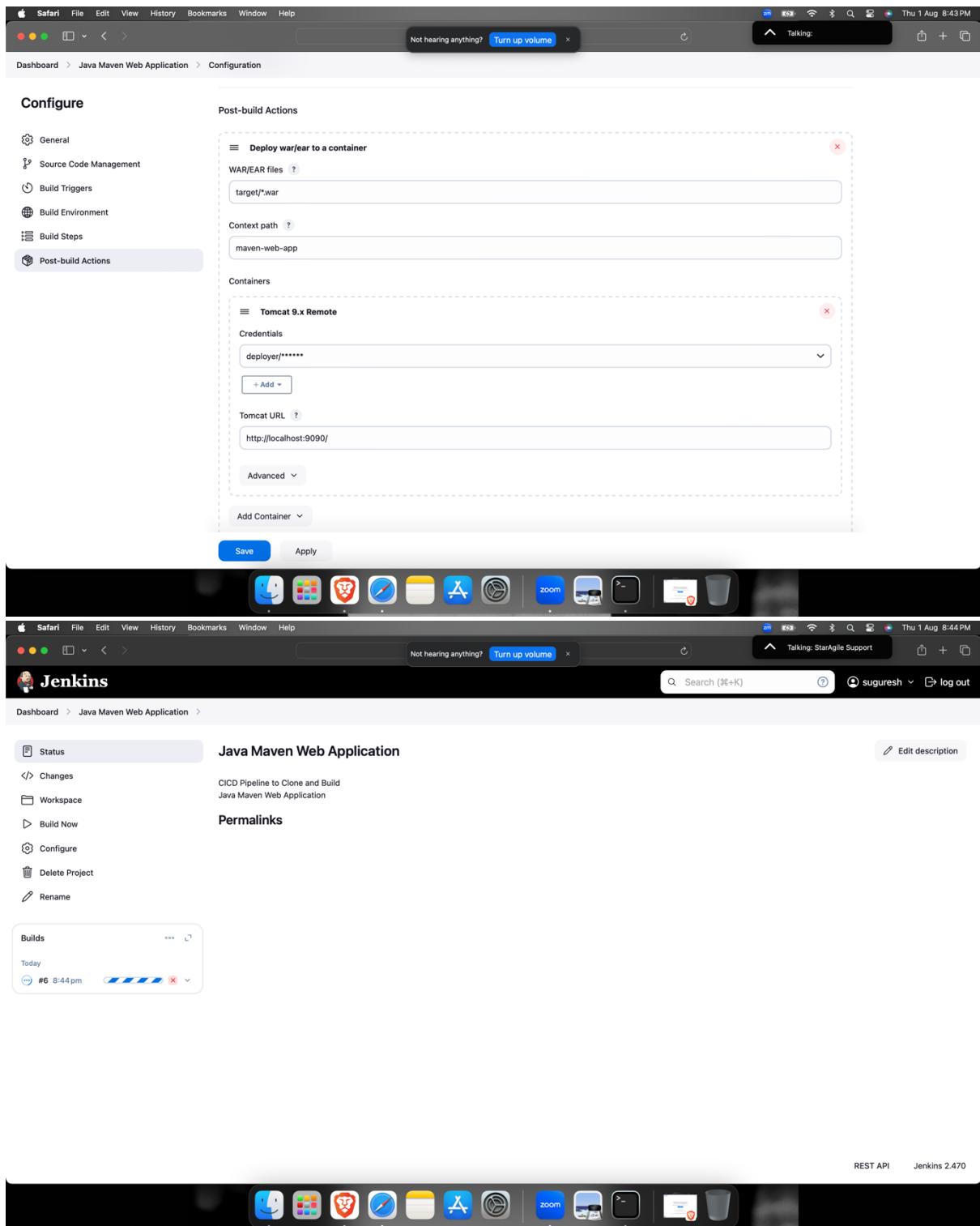
CICD Pipeline to Clone and Build Java Maven Web Application

Permalinks

Builds

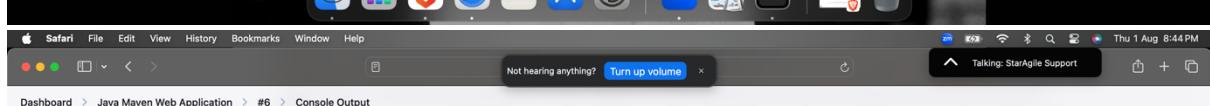
Today #6 8:44pm

REST API Jenkins 2.470





```
Started by user suguresh
Running as SYSTEM
Building on the built-in node in workspace /Users/suguresh/.jenkins/workspace/Java Maven Web Application
[WS-CLEANUP] Deleting project workspace...
[WS-CLEANUP] Deferred wipeout is used...
[WS-CLEANUP] Done
The recommended git tool is: NONE
No credentials specified
Cloning the remote Git repository
Cloning repository https://github.com/suguslove10/maven-web-app-sugu.git
> git init /Users/suguresh/.jenkins/workspace/Java Maven Web Application # timeout=10
Fetching upstream changes from https://github.com/suguslove10/maven-web-app-sugu.git
> git --version # timeout=10
> git --version # 'git version 2.39.3 (Apple Git-146)'
> git fetch --tags --force --progress -- https://github.com/suguslove10/maven-web-app-sugu.git +refs/heads/*:refs/remotes/origin/* # timeout=10
> git config remote.origin.url https://github.com/suguslove10/maven-web-app-sugu.git # timeout=10
> git config --add remote.origin.fetch +refs/heads/*:refs/remotes/origin/* # timeout=10
Avoid second fetch
> git rev-parse refs/remotes/origin/main{commit} # timeout=10
Checking out Revision 5e02e66992955af48e53a1388ac95762715ef563 (refs/remotes/origin/main)
> git config core.sparsecheckout # timeout=10
> git checkout -f 5e02e66992955af48e53a1388ac95762715ef563 # timeout=10
Commit message: "Update index.jsp"
First time build. Skipping changelog.
[Java Maven Web Application] $ /Users/suguresh/.jenkins/tools/hudson.tasks.Maven_MavenInstallation/Maven_3.9.8/bin/mvn clean package
[INFO] Scanning for projects...
[INFO]
[INFO] -----< in.ashokit:01-maven-web-app >-----
[INFO] Building 01-maven-web-app 3.0-RELEASE
[INFO]   from pom.xml
[INFO] -----[ war ]-----
[INFO]
```



```
[INFO] --- compiler:3.13.0:compile (default-compile) @ 01-maven-web-app ---
[INFO] No sources to compile
[INFO]
[INFO] --- resources:3.3.1:testResources (default-testResources) @ 01-maven-web-app ---
[WARNING] Using platform encoding (UTF-8 actually) to copy filtered resources, i.e. build is platform dependent!
[INFO] skip non existing resourceDirectory /Users/suguresh/.jenkins/workspace/Java Maven Web Application/src/test/resources
[INFO]
[INFO] --- compiler:3.13.0:testCompile (default-testCompile) @ 01-maven-web-app ---
[INFO] No sources to compile
[INFO]
[INFO] --- surefire:3.2.5:test (default-test) @ 01-maven-web-app ---
[INFO] No tests to run.
[INFO]
[INFO] --- war:3.3.1:war (default-war) @ 01-maven-web-app ---
[INFO] Packaging webapp
[INFO] Assembling webapp [01-maven-web-app] in [/Users/suguresh/.jenkins/workspace/Java Maven Web Application/target/maven-web-app]
[INFO] Processing war project
[INFO] Copying webapp resources [/Users/suguresh/.jenkins/workspace/Java Maven Web Application/src/main/webapp]
[INFO] Building war: /Users/suguresh/.jenkins/workspace/Java Maven Web Application/target/maven-web-app.war
[INFO]
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 0.676 s
[INFO] Finished at: 2024-08-01T20:44:30+05:30
[INFO]
[DeployPublisher][INFO] Attempting to deploy 1 war file(s)
[DeployPublisher][INFO] Deploying /Users/suguresh/.jenkins/workspace/Java Maven Web Application/target/maven-web-app.war to container Tomcat 9.x
Remote with context maven-web-app
[Users/suguresh/.jenkins/workspace/Java Maven Web Application/target/maven-web-app.war] is not deployed. Doing a fresh deployment.
Deploying (/Users/suguresh/.jenkins/workspace/Java Maven Web Application/target/maven-web-app.war)
Finished: SUCCESS
```



REST API Jenkins 2.470

The screenshot shows a Mac OS X desktop with two Safari browser windows open. The top window is titled 'Talking: StarAgile Support' and displays the 'Tomcat Web Application Manager' interface. The manager shows a list of deployed applications under the 'Applications' section:

Path	Version	Display Name	Running	Sessions	Commands
/	None specified	Welcome to Tomcat	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/docs	None specified	Tomcat Documentation	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/examples	None specified	Servlet and JSP Examples	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/host-manager	None specified	Tomcat Host Manager Application	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/manager	None specified	Tomcat Manager Application	true	3	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/maven-web-app	None specified	Archetype Created Web Application	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes

The bottom window is also titled 'Talking: StarAgile Support' and shows a blank page with the URL 'localhost' in the address bar. The Mac OS X Dock is visible at the bottom of the screen.

hey this is sugresh i have Successfully Deployed maven-web-app in Tomcat Server

[Click Here To See My LinkedIn profile](#)

Thank you

Happy Learning!!!



L4 - Automate the CICD Pipeline using GitHub webhook and Poll-SCM

The image consists of two screenshots of a Mac OS X desktop environment.

The top screenshot shows a "New Item" dialog in a web browser. The URL is "localhost". The title bar says "Dashboard > All > New Item". The main area is titled "NEW ITEM". It has a text input field labeled "Enter an item name" containing "Webhook". Below it, a section titled "Select an item type" lists several options:

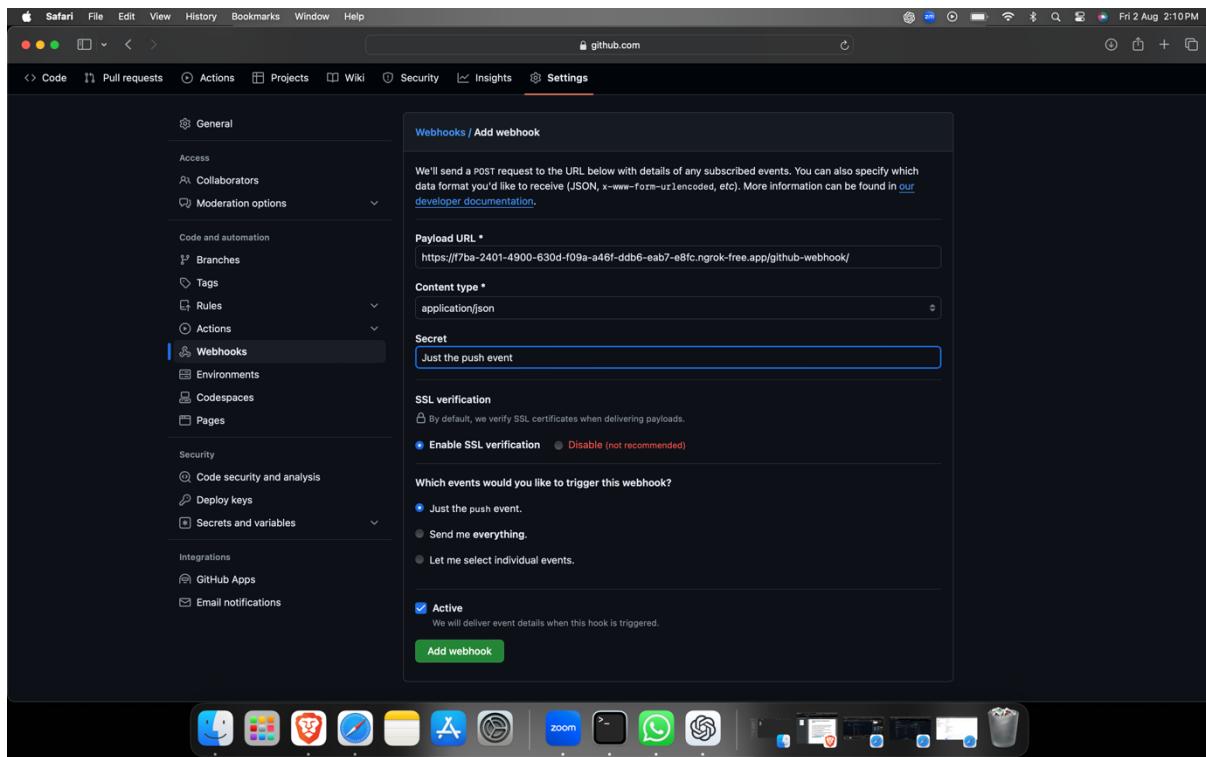
- Freestyle project**: Classic, general-purpose job type that checks out from up to one SCM, executes build steps serially, followed by post-build steps like archiving artifacts and sending email notifications.
- Pipeline**: Orchestrates long-running activities that can span multiple build agents. Suitable for building pipelines (formerly known as workflows) and/or organizing complex activities that do not easily fit in free-style job type.
- Multi-configuration project**: Suitable for projects that need a large number of different configurations, such as testing on multiple environments, platform-specific builds, etc.
- Folder**: Creates a container that stores nested items in it. Useful for grouping things together. Unlike view, which is just a filter, a folder creates a separate namespace, so you can have multiple things of the same name as long as they are in different folders.
- Multibranch Pipeline**: Creates a set of Pipeline projects according to detected branches in one SCM repository.
- Organization Folder**: Creates a set of multibranch project subfolders by scanning for repositories.

Below this, a note says: "If you want to create a new item from other existing, you can use this option:" followed by an "OK" button.

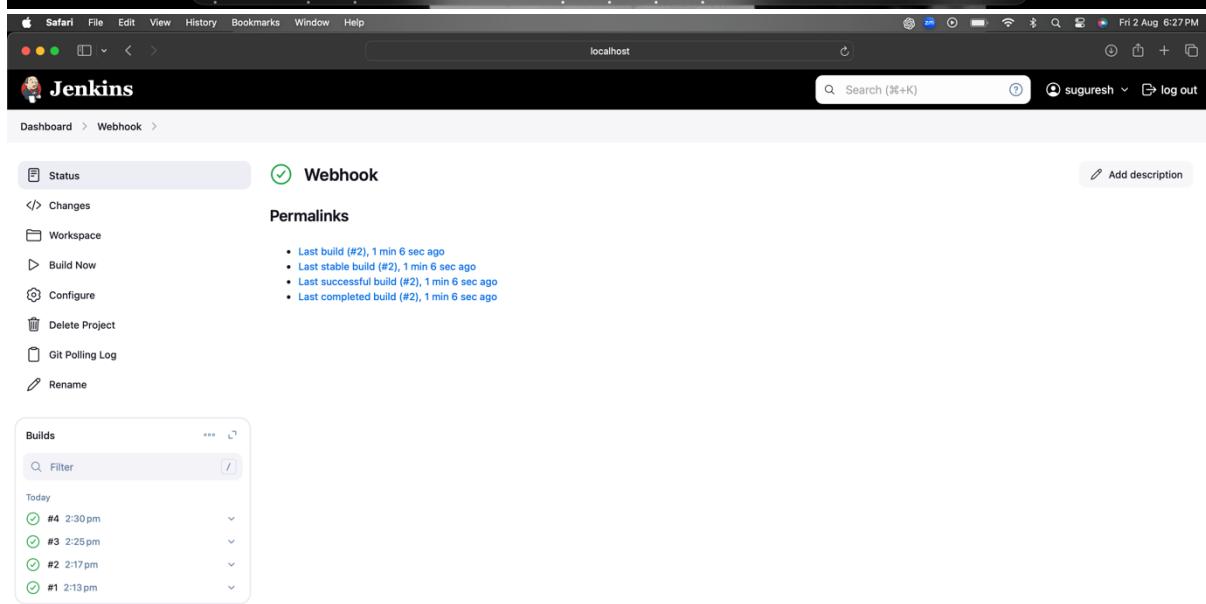
The bottom screenshot shows a GitHub settings page for the repository "suguslove10 / maven-web-app-sugu". The "Settings" tab is selected. On the left, a sidebar menu includes "General", "Access", "Collaborators", "Moderation options", "Code and automation", "Branches", "Tags", "Rules", "Actions", "Webhooks" (which is currently selected), "Environments", "Codespaces", and "Pages".

The main content area is titled "Webhooks / Add webhook". It contains the following fields and options:

- Payload URL ***:
- Content type ***:
- Secret**: A text input field.
- SSL verification**: A note: "By default, we verify SSL certificates when delivering payloads." Options: Enable SSL verification, Disable (not recommended).
- Which events would you like to trigger this webhook?**
 - Just the push event.
 - Send me everything.
 - Let me select individual events.
- Active**: A checkbox that is checked.



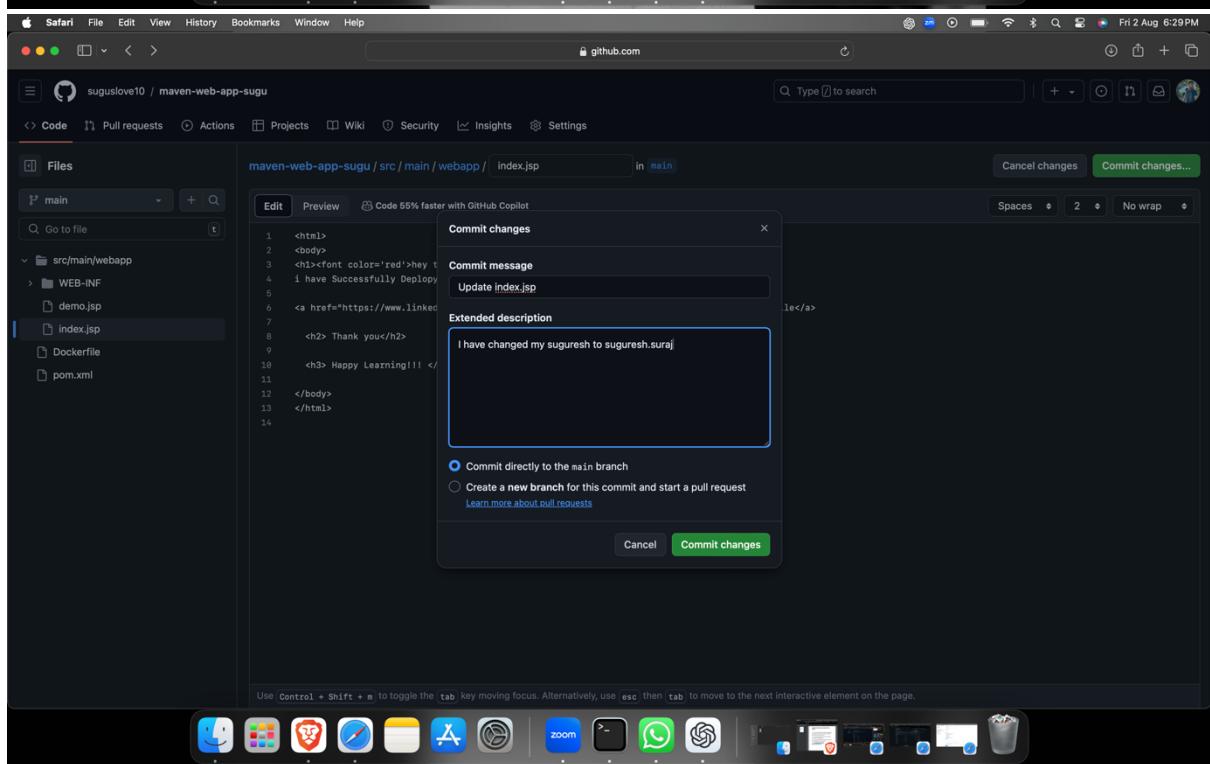
The screenshot shows the GitHub settings interface for managing webhooks. On the left, a sidebar lists various GitHub features like General, Access, Collaborators, Moderation options, Code and automation, Webhooks (which is selected and highlighted in blue), Environments, Codespaces, Pages, Security, Code security and analysis, Deploy keys, Secrets and variables, Integrations, GitHub Apps, and Email notifications. The main content area is titled "Webhooks / Add webhook". It contains fields for "Payload URL" (set to "https://f7ba-2401-4900-630d-f09a-a46f-ddb6-eab7-e8fc.ngrok-free.app/github-webhook/"), "Content type" (set to "application/json"), and "Secret" (set to "Just the push event"). There's also a section for "SSL verification" with a radio button for "Enable SSL verification" (selected) and "Disable (not recommended)". Below that, it asks "Which events would you like to trigger this webhook?" with three options: "Just the push event." (selected), "Send me everything.", and "Let me select individual events.". A checkbox for "Active" is checked, with a note: "We will deliver event details when this hook is triggered." At the bottom is a green "Add webhook" button.



The screenshot shows the Jenkins dashboard with a "Webhook" project selected. The left sidebar includes links for Status, Changes, Workspace, Build Now, Configure, Delete Project, Git Polling Log, and Rename. The main content area is titled "Webhook" and shows a "Permalinks" section with a list of recent builds: "Last build (#2), 1 min 6 sec ago", "Last stable build (#2), 1 min 6 sec ago", "Last successful build (#2), 1 min 6 sec ago", and "Last completed build (#2), 1 min 6 sec ago". Below this is a "Builds" section with a table showing four builds: #4 (2:30pm), #3 (2:25pm), #2 (2:17pm), and #1 (2:13pm). The Jenkins logo is visible in the top right corner of the dashboard header, along with the user name "sugresh" and a "log out" link. The status bar at the bottom indicates "REST API" and "Jenkins 2.470".

Screenshot of a GitHub code editor interface. The repository is `suguslove10 / maven-web-app-sugu`. The file being edited is `src/main/webapp/index.jsp` in the `main` branch. The code content is:

```
1 <html>
2   <body>
3     <h1><font color='red'>hey this is suguresh i have Successfully Deployed maven-web-app in Tomcat Server </font></h1>
4
5   <a href="https://www.linkedin.com/in/suguresh-a03522218">Click Here To See My Linkedin profile</a>
6
7   <h2> Thank you</h2>
8
9   <h3> Happy Learning!!! </h3>
10
11 </body>
12 </html>
```



The screenshot shows a Mac desktop with two open Safari browser windows.

Top Window: The URL is `github.com`. The page shows the code for `index.jsp` from a repository named `maven-web-app-sugu`. The code contains the following text:

```
1 <html>
2 <body>
3 <h1><font color='red'>i hey this is suguresh.suraJ
4 i have Successfully Deployed maven-web-app in Tomcat Server <font></h1>
5
6 <a href="https://www.linkedin.com/in/sugresh-a83522218">Click Here To See My LinkedIn profile</a>
7
8 <h2> Thank you</h2>
9
10 <h3> Happy Learning!!! </h3>
11
12 </body>
13 </html>
```

Bottom Window: The URL is `localhost`. The page shows the Jenkins dashboard under the "Webhook" section. It indicates a successful build (#4) at 2:30pm. The sidebar on the left shows project navigation options like Status, Changes, Workspace, Build Now, Configure, Delete Project, Git Polling Log, and Rename.

The screenshot shows a Mac desktop with a single open Jenkins browser window.

The Jenkins dashboard is displayed, showing the "Webhook" section. It indicates a successful build (#4) at 2:30pm. The sidebar on the left shows project navigation options like Status, Changes, Workspace, Build Now, Configure, Delete Project, Git Polling Log, and Rename.

Builds Section: The table shows the following builds:

Build	Time
#4	2:30pm
#3	2:25pm
#2	2:17pm
#1	2:13pm

Footer: REST API Jenkins 2.470

Safari File Edit View History Bookmarks Window Help

localhost

Jenkins

Search (⌘+K) suguresh log out

Dashboard > Webhook >

Status Webhook

Add description

</> Changes

Workspace

Build Now

Configure

Delete Project

Git Polling Log

Rename

Builds

Filter

Today

- Last build (#5), 1 min 21 sec ago
- Last stable build (#5), 1 min 21 sec ago
- Last successful build (#5), 1 min 21 sec ago
- Last completed build (#5), 1 min 21 sec ago

REST API Jenkins 2.470

The screenshot shows a Jenkins project named "Webhook". The main content area displays the last five builds, all of which are successful (indicated by green checkmarks). The sidebar on the left provides navigation links for the project. The bottom of the screen shows the Mac OS X Dock with various application icons.