Name : Khaled Mofdhi Alshammri

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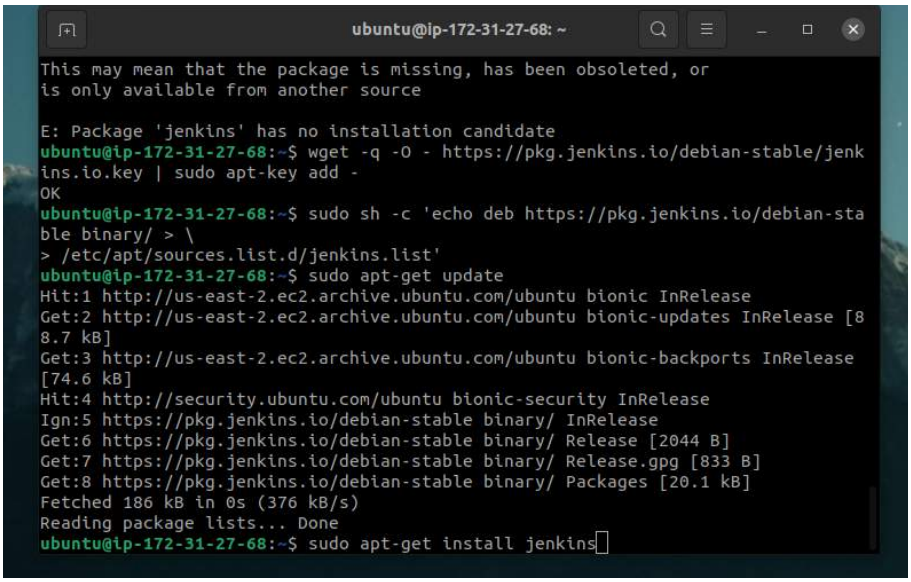
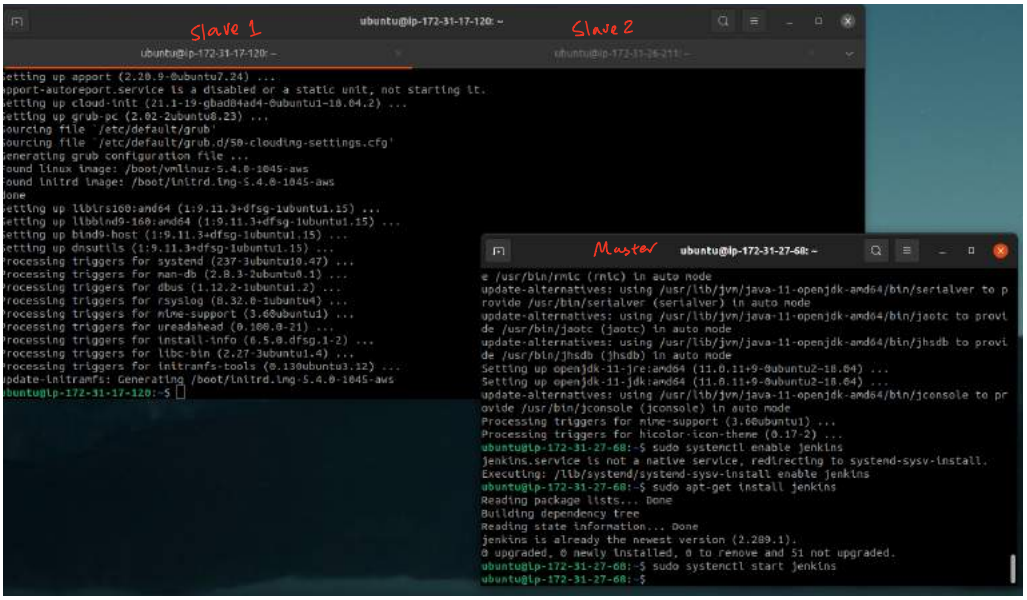
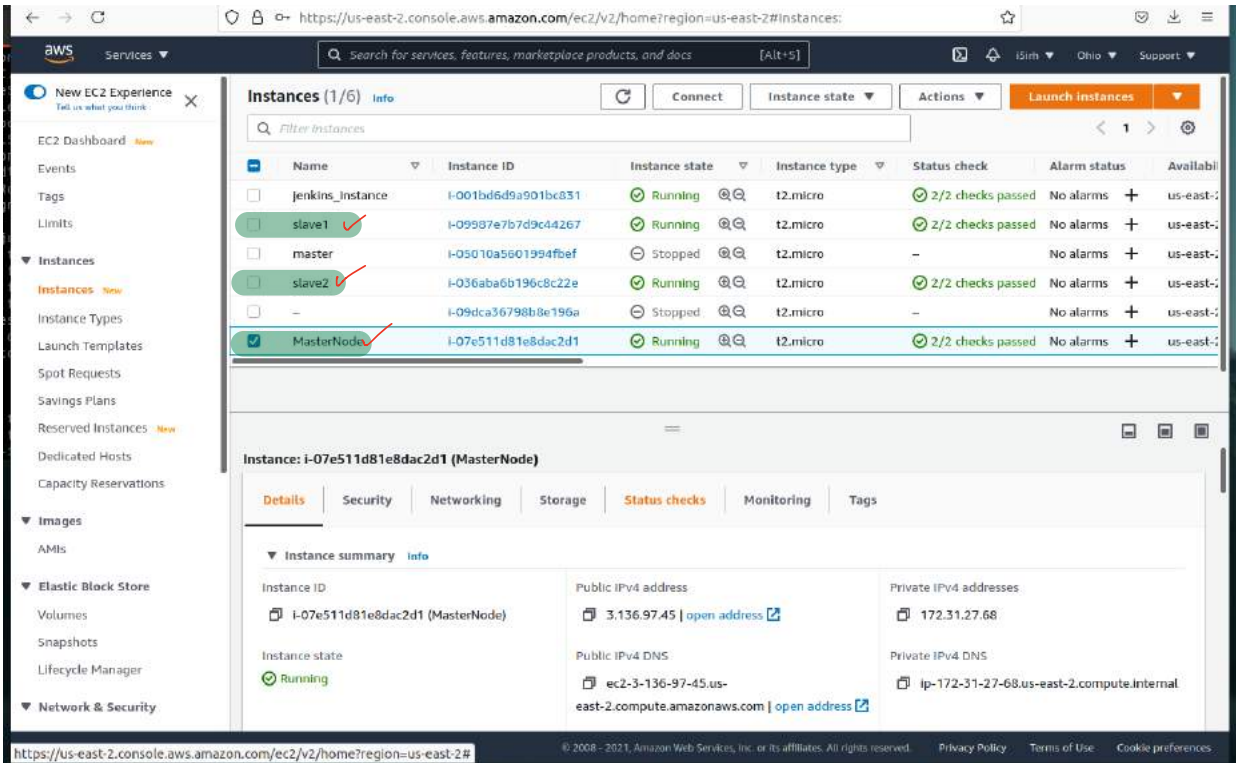
Project title : Architecting Jenkins Pipeline for Scale






https://us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#Instances:
Services
Search for services, features, marketplace products, and docs [Alt+S]
Ohio
Support
New EC2 Experience
EC2 Dashboard
Events
Tags
Limits
Instances
Instance Types
Launch Templates
Spot Requests
Savings Plans
Reserved Instances
Dedicated Hosts
Capacity Reservations
Images
AMIs
Elastic Block Store
Volumes
Snapshots
Lifecycle Manager
Network & Security
Instances (1/6) Info
Connect
Instance state
Actions
Launch instances
Filter instances
Name
Instance ID
Instance state
Instance type
Status check
Alarm status
jenkins_instance i-001bd6d9a901bc831 Running t2.micro 2/2 checks passed No alarms
slave1 i-09987e7b7d9c44267 Running t2.micro 2/2 checks passed No alarms
master i-05010a5601994fbef Stopped t2.micro – No alarms
slave2 i-036aba6b196c8c22e Running t2.micro 2/2 checks passed No alarms
– i-09dca36798b8e196a Stopped t2.micro – No alarms
MasterNode i-07e511d81e8dac2d1 Running t2.micro 2/2 checks passed No alarms
Instance: i-07e511d81e8dac2d1 (MasterNode)
Details
Security
Networking
Storage
Status checks
Monitoring
Tags
Instance summary Info
Instance ID
i-07e511d81e8dac2d1 (MasterNode)
Instance state
Running
Public IPv4 address
3.136.97.45 | open address
Public IPv4 DNS
ec2-3-136-97-45.us-east-2.compute.amazonaws.com | open address
Private IPv4 addresses
172.31.27.68
Private IPv4 DNS
ip-172-31-27-68.us-east-2.compute.internal
https://us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#
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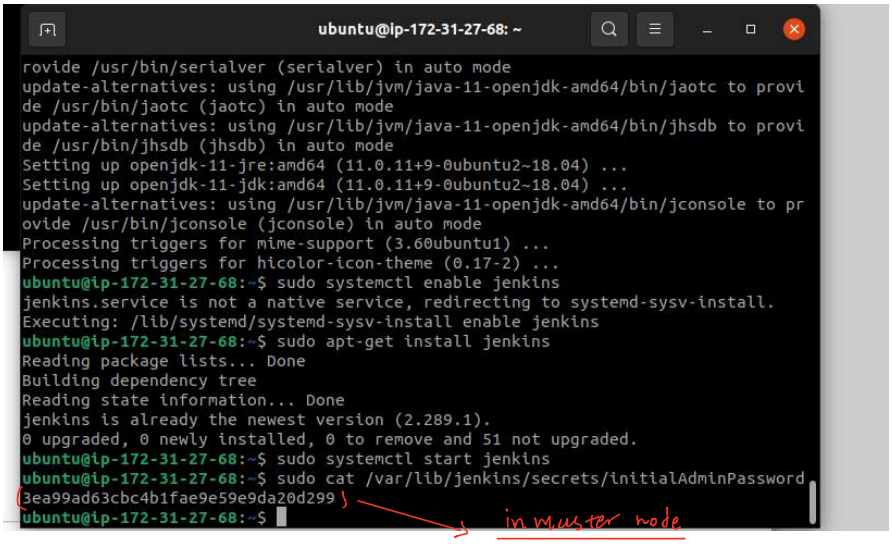
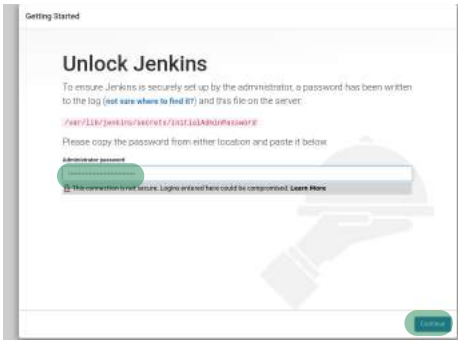
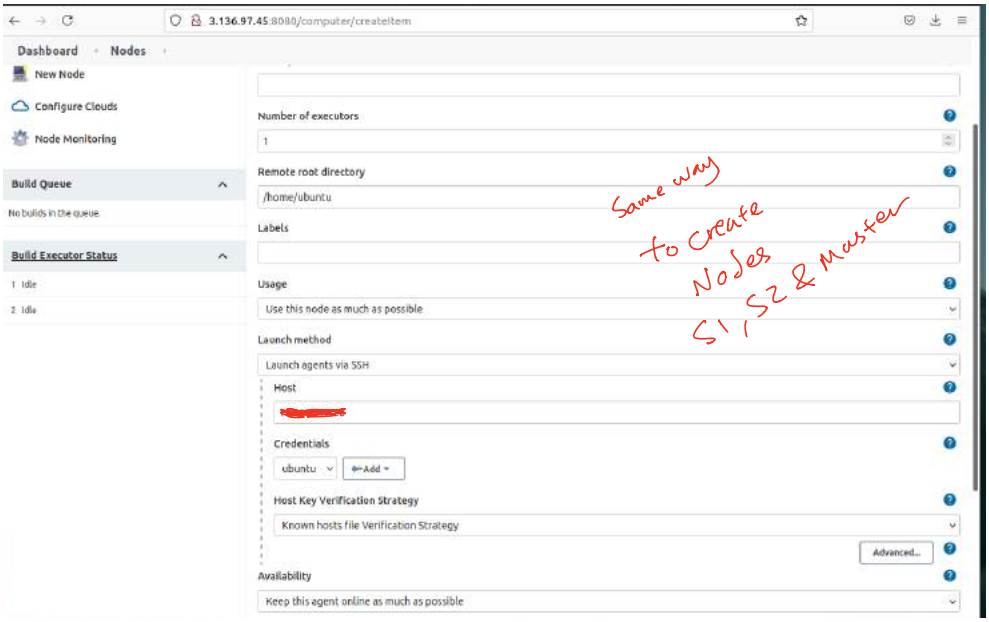
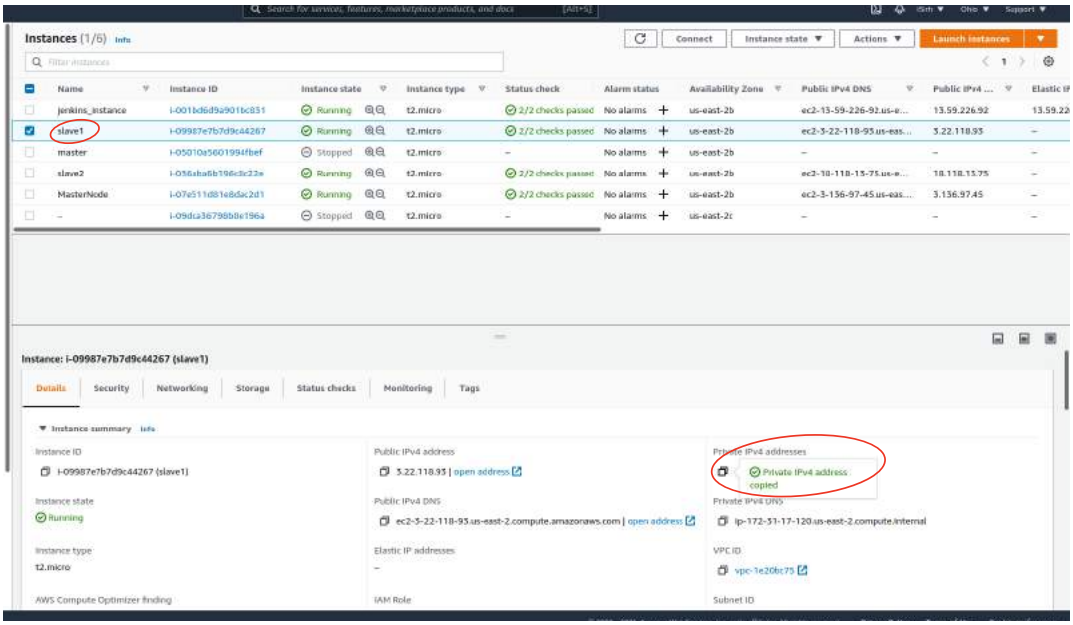
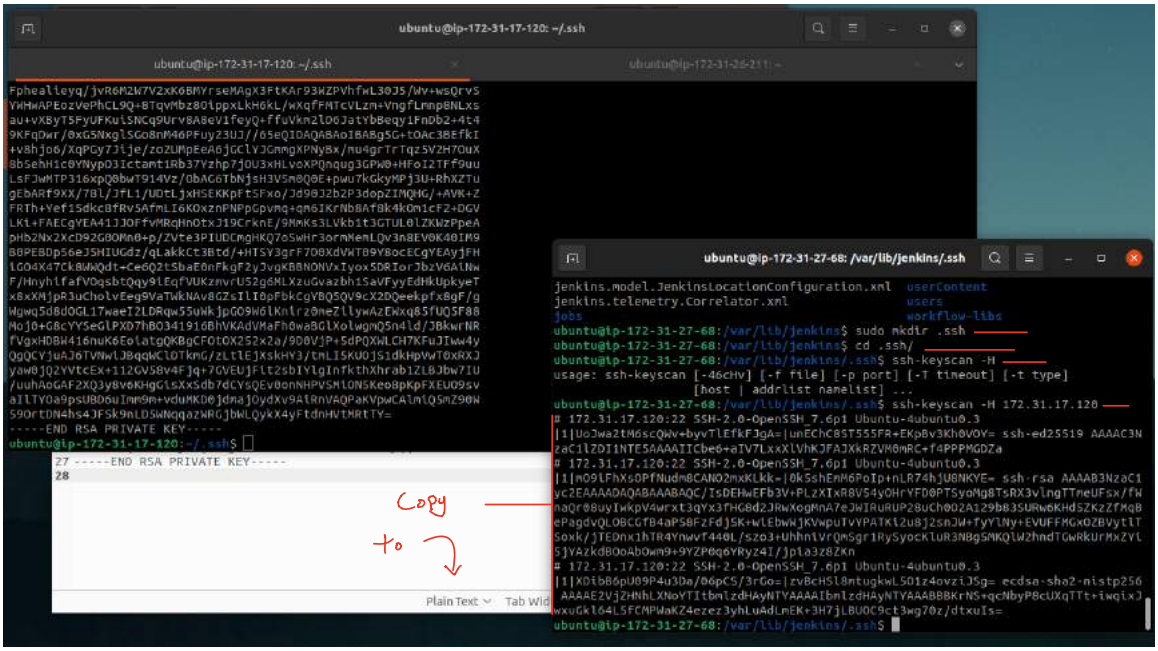
Privacy Policy
Terms of Use
Cookie preferences

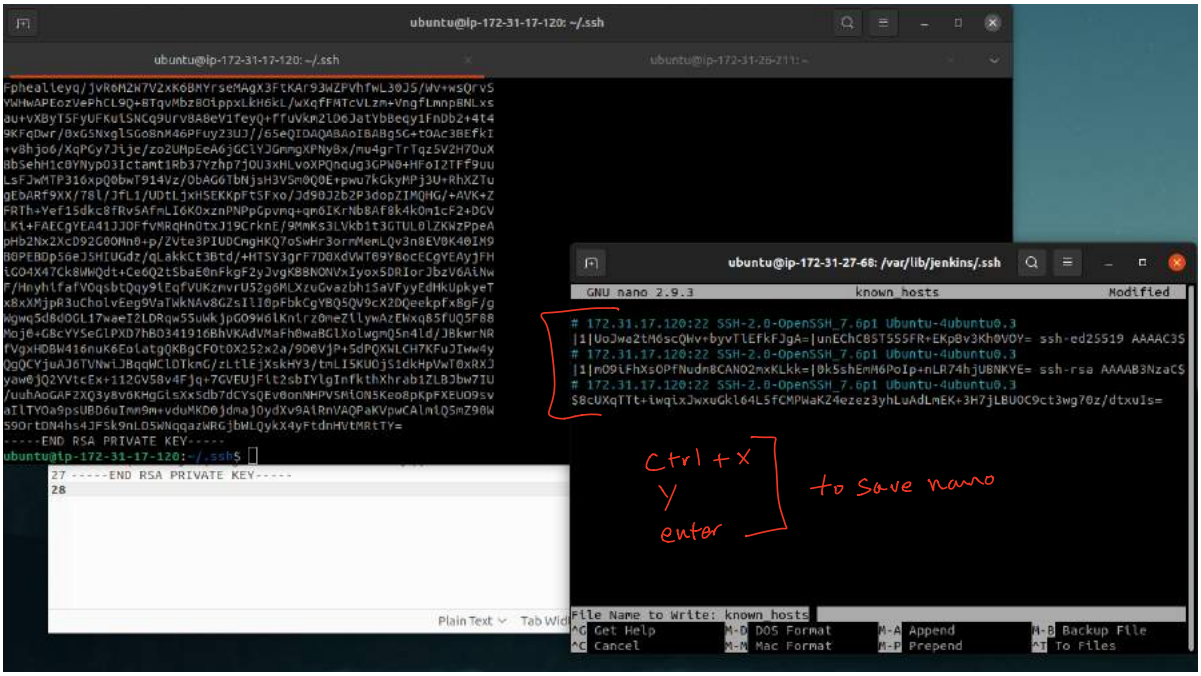

ubuntu@ip-172-31-27-68: ~
rovide /usr/bin/serialver (serialver) in auto mode
update-alternatives: using /usr/lib/jvm/java-11-openjdk-amd64/bin/jaotc to provi
de /usr/bin/jaotc (jaotc) in auto mode
update-alternatives: using /usr/lib/jvm/java-11-openjdk-amd64/bin/jhsdb to provi
de /usr/bin/jhsdb (jhsdb) in auto mode
Setting up openjdk-11-jre:amd64 (11.0.11+9-0ubuntu2~18.04) ...
Setting up openjdk-11-jdk:amd64 (11.0.11+9-0ubuntu2~18.04) ...
update-alternatives: using /usr/lib/jvm/java-11-openjdk-amd64/bin/jconsole to pr
ovide /usr/bin/jconsole (jconsole) in auto mode
Processing triggers for mime-support (3.60ubuntu1) ...
Processing triggers for hicolor-icon-theme (0.17-2) ...
ubuntu@ip-172-31-27-68:~$ sudo systemctl enable jenkins
jenkins.service is not a native service, redirecting to systemd-sysv-install.
Executing: /lib/systemd/systemd-sysv-install enable jenkins
ubuntu@ip-172-31-27-68:~$ sudo apt-get install jenkins
Reading package lists... Done
Building dependency tree
Reading state information... Done
jenkins is already the newest version (2.289.1).
0 upgraded, 0 newly installed, 0 to remove and 51 not upgraded.
ubuntu@ip-172-31-27-68:~$ sudo systemctl start jenkins
ubuntu@ip-172-31-27-68:~$ sudo cat /var/lib/jenkins/secrets/initialAdminPassword
3ea99ad63cbc4b1fae9e59e9da20d299
ubuntu@ip-172-31-27-68:~$
in master node

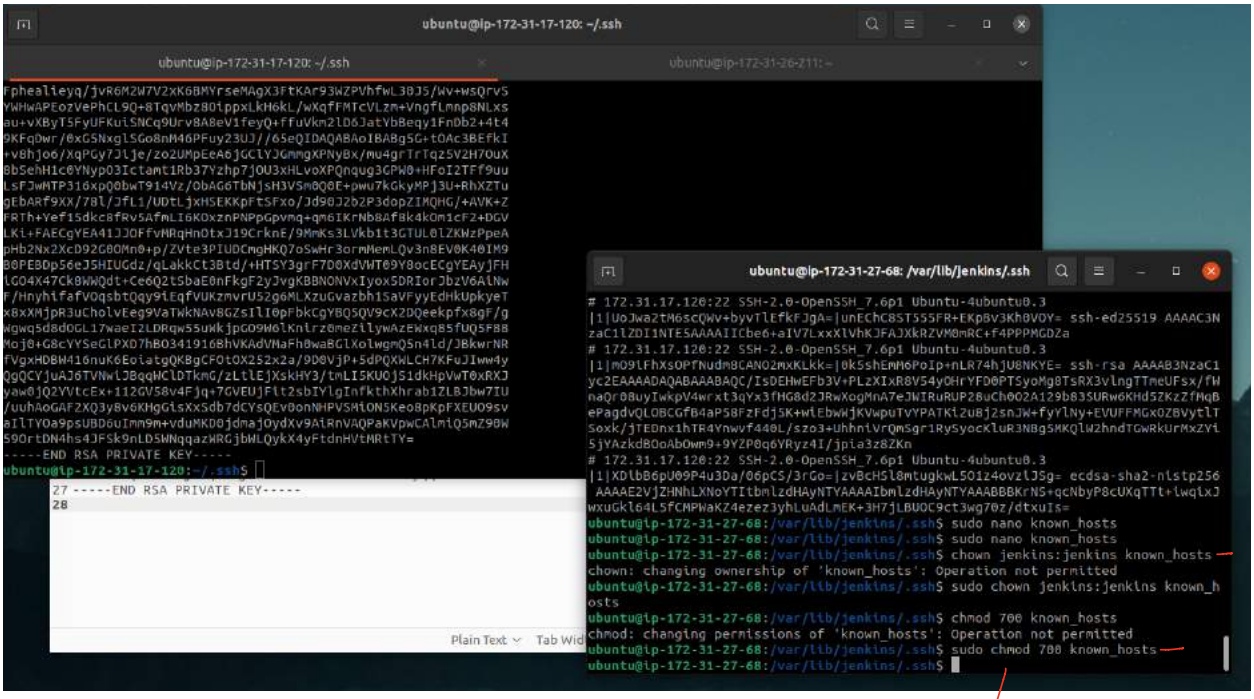

Getting Started
Unlock Jenkins
To ensure Jenkins is securely set up by the administrator, a password has been written to the log (not sure where to find it?) and this file on the server:
Please copy the password from either location and paste it below.
Administrator password


3.136.97.45:8080/computer/createItem
Dashboard
Nodes
New Node
Configure Clouds
Node Monitoring
Build Queue
No builds in the queue.
Build Executor Status
1 Idle
2 Idle
Number of executors
1
Remote root directory
/home/ubuntu
Labels
Usage
Use this node as much as possible
Launch method
Launch agents via SSH
Host
Credentials
ubuntu
Add
Host Key Verification Strategy
Known hosts file Verification Strategy
Advanced...
Availability
Keep this agent online as much as possible
Same way
to Create
Nodes
S1, S2 & Master

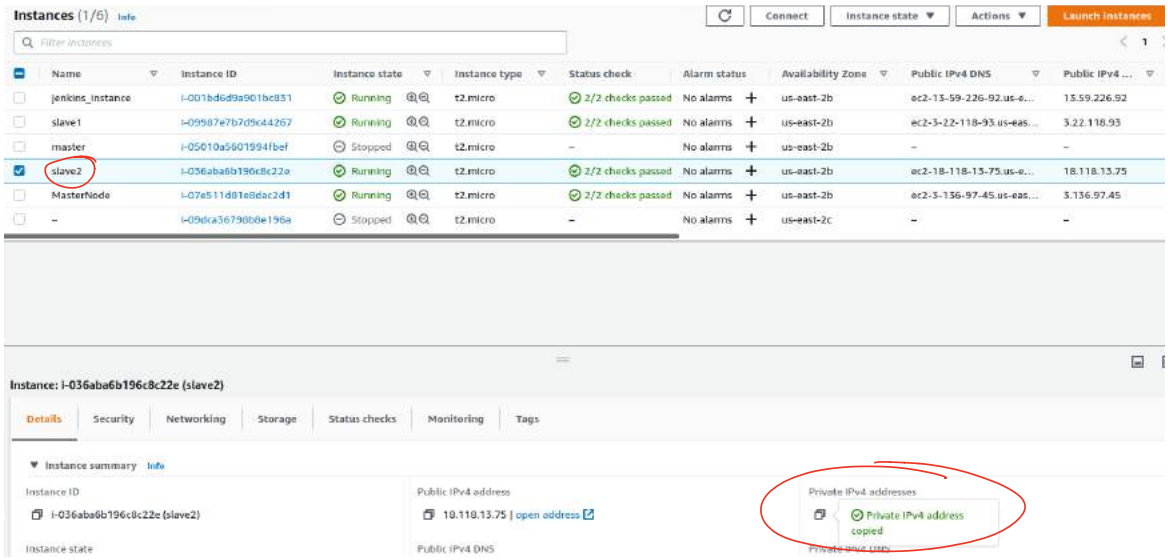

Instances (1/6)
Connect
Instance state
Actions
Launch instances
jenkins_instance
slave1
master
slave2
MasterNode
Instance: i-09987e7b7d9c44267 (slave1)
Details
Security
Networking
Storage
Status checks
Monitoring
Tags
Instance summary
Public IPv4 address
3.22.118.93 | open address
Private IPv4 addresses
Private IPv4 address copied
Public IPv4 DNS
Private IPv4 DNS
Instance state
Running
Instance type
t2.micro
Elastic IP addresses
VPC ID
AWS Compute Optimizer finding
IAM Role
Subnet ID

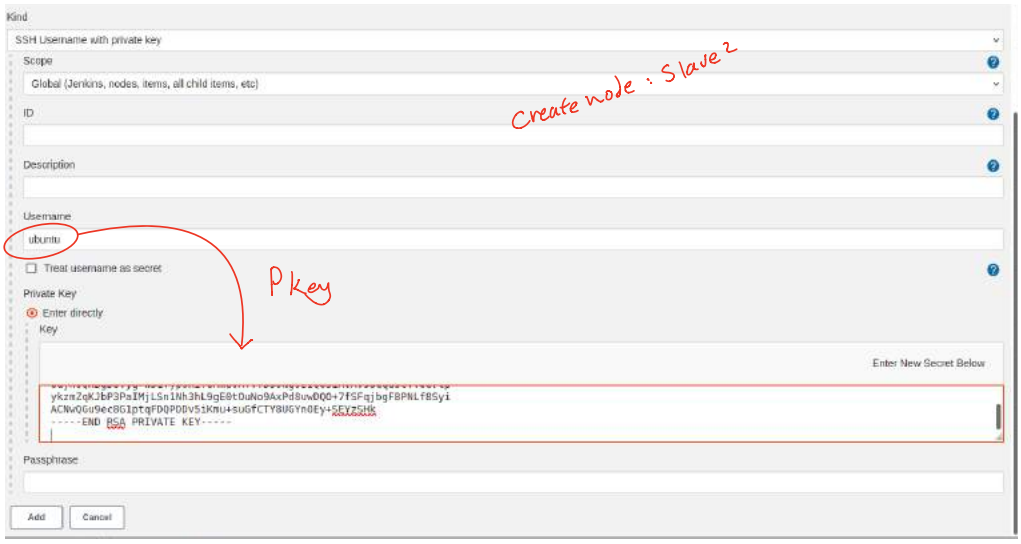

ubuntu@ip-172-31-17-120: ~/.ssh
ubuntu@ip-172-31-27-68: /var/lib/jenkins/.ssh
ubuntu@ip-172-31-17-120:~/.ssh$ sudo mkdir .ssh
ubuntu@ip-172-31-17-120:~/.ssh$ cd .ssh/
ubuntu@ip-172-31-17-120:~/.ssh$ ssh-keyscan -H
ubuntu@ip-172-31-27-68:/var/lib/jenkins/.ssh$ ssh-keyscan -H 172.31.17.120
-----END RSA PRIVATE KEY-----
Copy
to


ubuntu@ip-172-31-17-120: ~/.ssh
ubuntu@ip-172-31-27-68: /var/lib/jenkins/.ssh
GNU nano 2.9.3 known_hosts Modified
-----END RSA PRIVATE KEY-----
Ctrl + X
Y
enter
to Save nano
File Name to Write: known_hosts
Get Help
Cancel
DOS Format
Mac Format
Append
Prepend
Backup File
To Files

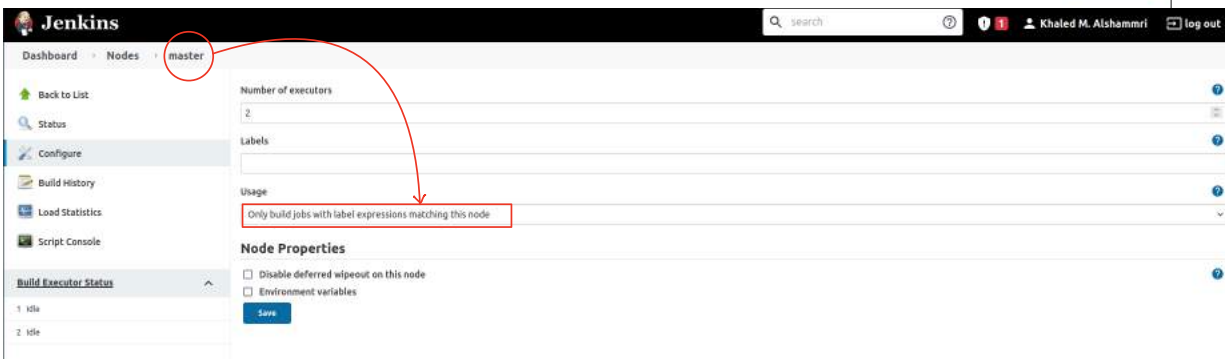


for permission
user owner
7
xwr



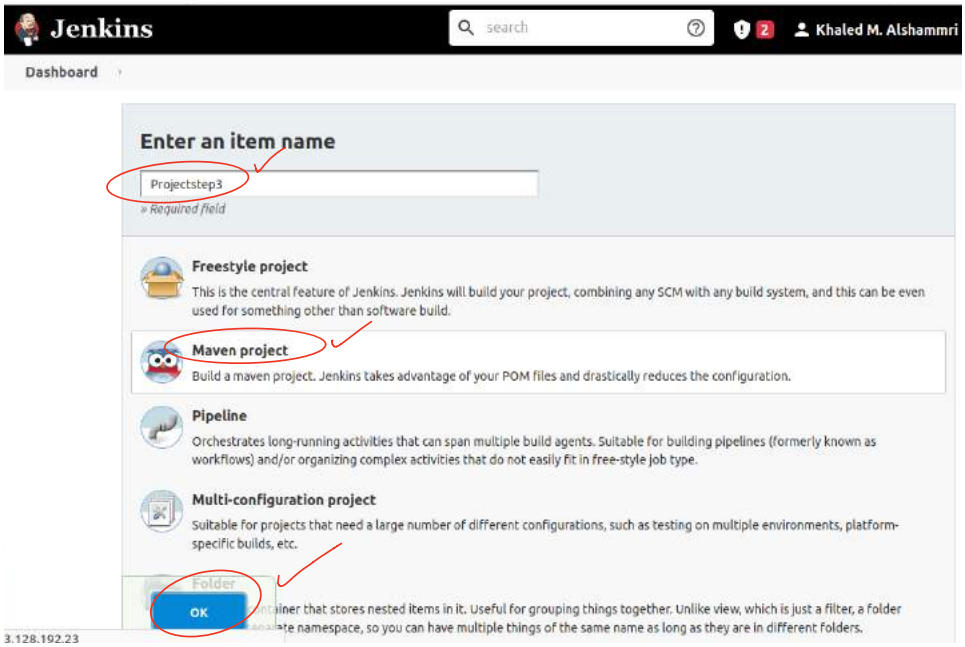

Kind
SSH Username with private key
Scope
Global (Jenkins, nodes, items, all child items, etc)
create node : slave2
ID
Description
Username
ubuntu
Treat username as secret
P key
Private Key
Enter directly
Key
Enter New Secret Below
yKznZqKJbP3PaIMjiSn1Nh3hL9gE0tDuNo9AxPd8uwDQO+7fSFqjbgFBPNLf8Syi
ACNwQGu9ec8GIptqFDQPDDv5iKnu+suGfCTY8UGYn0Ey+5EYZ5HK
-----END RSA PRIVATE KEY-----
Passphrase
Add
Cancel

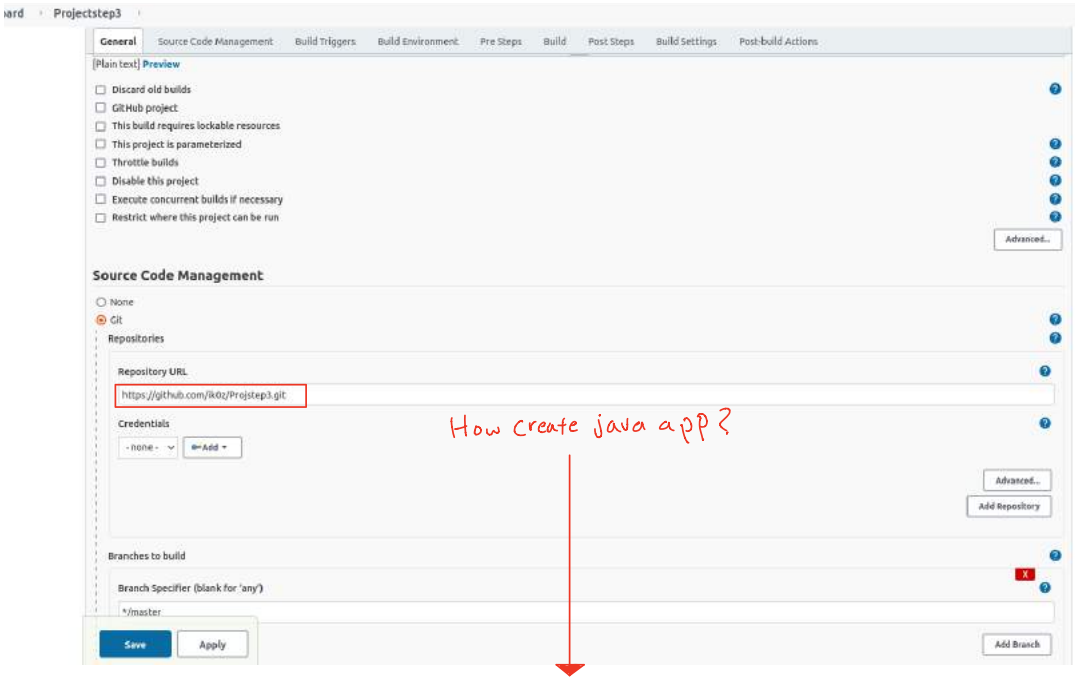
S
Name
Architecture
Clock Difference
Free Disk Space
Free Swap Space
Free Temp Space
Response Time
master
Linux (amd64)
In sync
5.12 GB
0 B
5.12 GB
0ms
Slave1
Linux (amd64)
In sync
5.42 GB
0 B
5.42 GB
24ms
slave2
Linux (amd64)
In sync
5.45 GB
0 B
5.45 GB
78ms
Data obtained
11 sec
11 sec
11 sec
11 sec
11 sec
11 sec
Refresh status

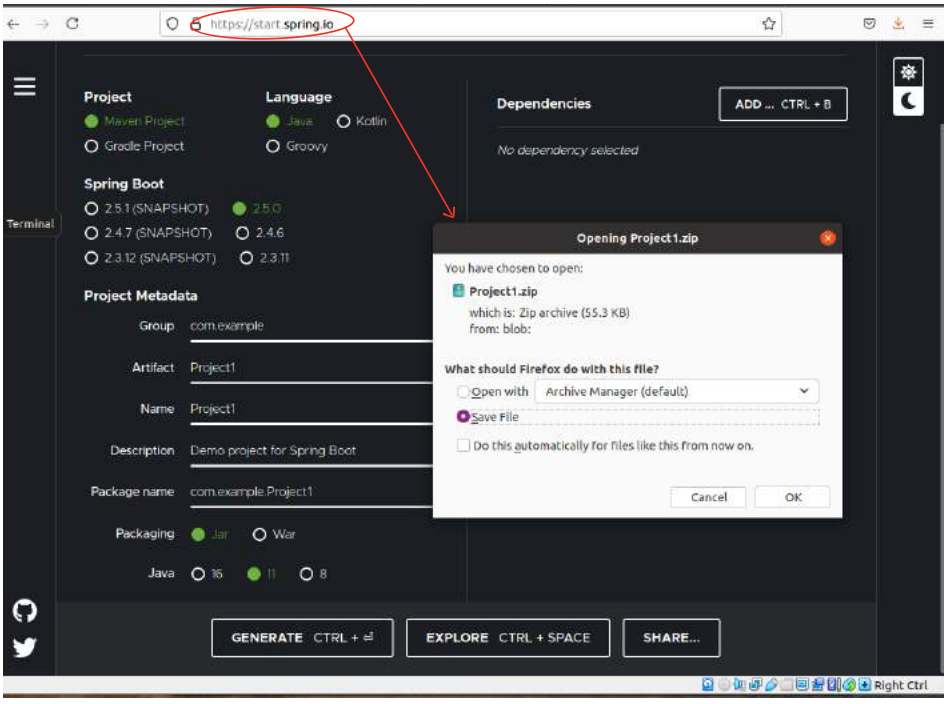

Jenkins
search
Khaled M. Alshammri
log out
Dashboard
Nodes
master
Back to List
Status
Configure
Build History
Load Statistics
Script Console
Build Executor Status
1 Idle
2 Idle
Number of executors
2
Labels
Usage
Only build jobs with label expressions matching this node
Node Properties
Disable deferred wipeout on this node
Environment variables
Save

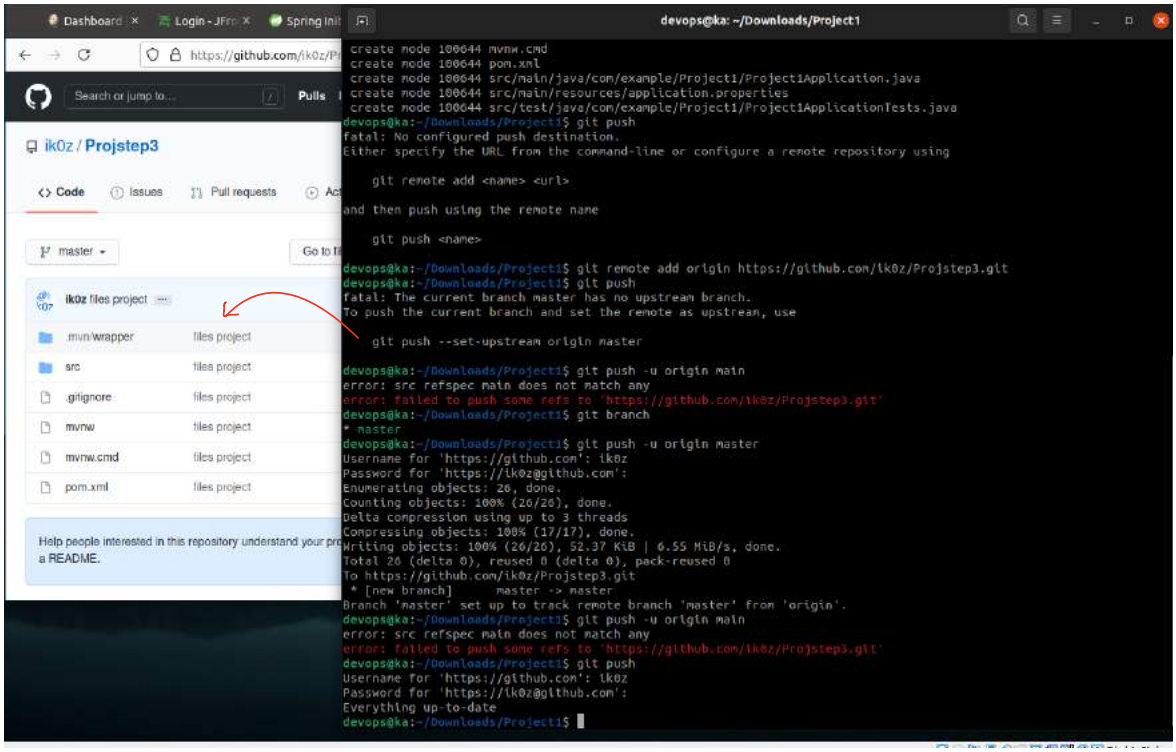
Back to Dashboard
Manage Jenkins
Update Center
maven
to install maven
Updates
Available
Installed
Advanced
Install
Name
Version
Released
Maven Integration
Build Tools
This plug-in provides, for better and for worse, a deep integration of Jenkins and Maven. Automatic triggers between projects depending on SNAPSHOTs, automated configuration of various Jenkins publishers (Junit, ...).
3.11
7 days 13 hr ago
Config File Provider

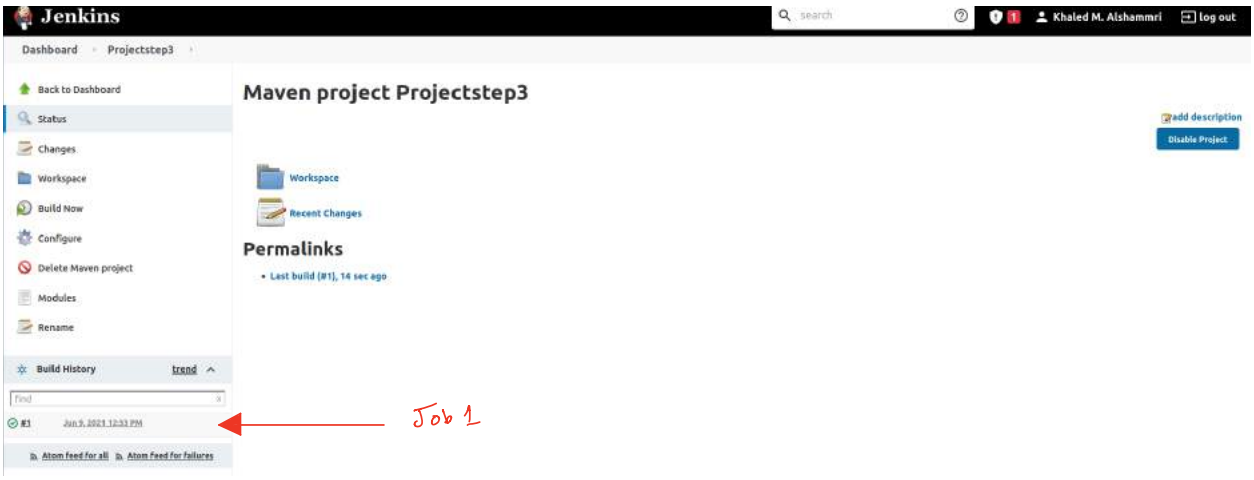
Maven
Maven Installations
Add Maven
Maven
Name
localmaven
Required
Install automatically
Install from Apache
Version
3.8.1
Delete Installer
Add Installer
Save
Apply

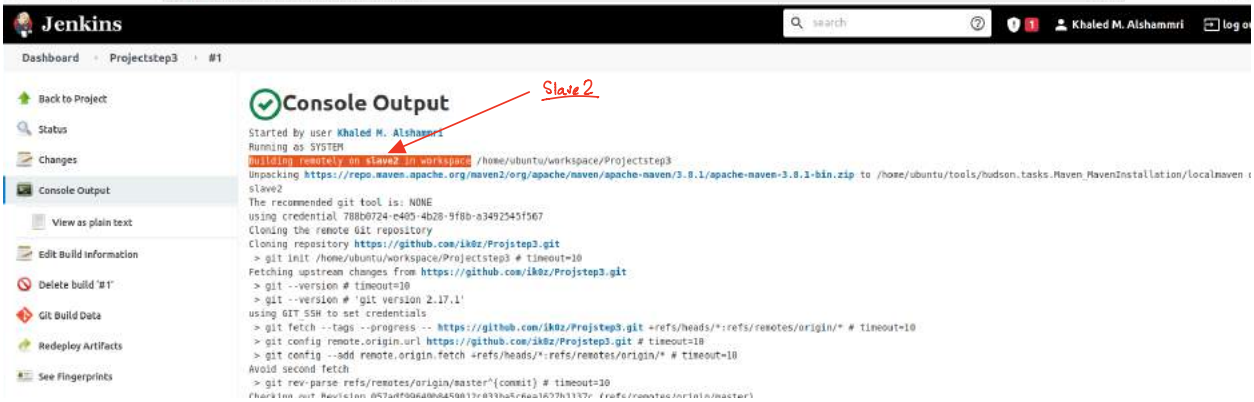

Jenkins
search
Khaled M. Alshammri
Dashboard
Enter an item name
Projectstep3
» Required field
Freestyle project
This is the central feature of Jenkins. Jenkins will build your project, combining any SCM with any build system, and this can be even used for something other than software build.
Maven project
Build a maven project. Jenkins takes advantage of your POM files and drastically reduces the configuration.
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
OK
3.128.192.23

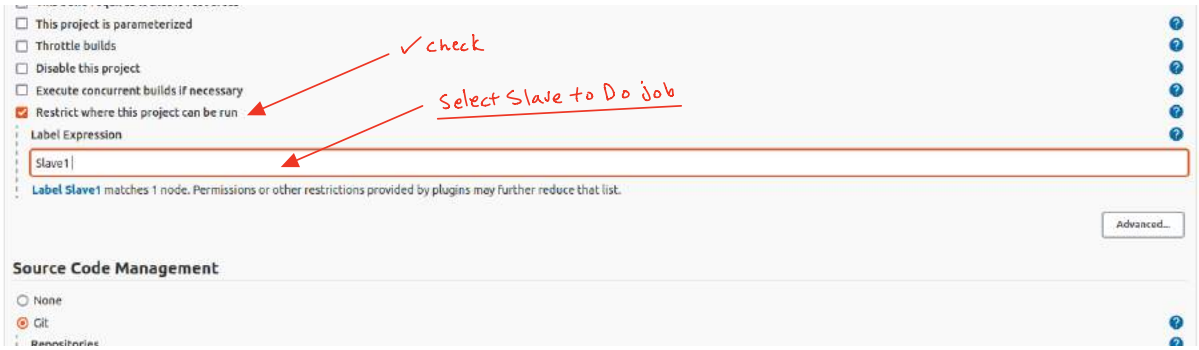

ard › Projectstep3
General
Source Code Management
Build Triggers
Build Environment
Pre Steps
Build
Post Steps
Build Settings
Post-build Actions
Plain text Preview
Discard old builds
GitHub project
This build requires lockable resources
This project is parameterized
Throttle builds
Disable this project
Execute concurrent builds if necessary
Restrict where this project can be run
Advanced...
Source Code Management
None
Git
Repositories
Repository URL
https://github.com/lk0z/Projstep3.git
Credentials
- none -
Add
Advanced...
Add Repository
Branches to build
Branch Specifier (blank for 'any')
*/master
Save
Apply
Add Branch
How create java app?

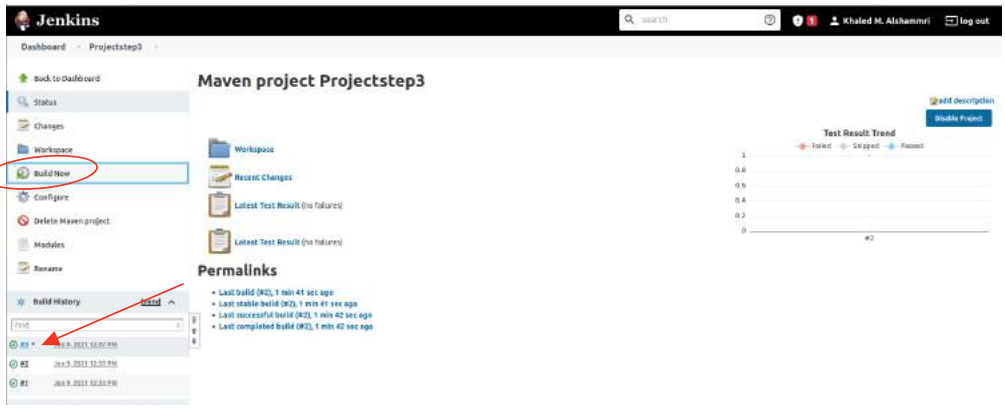

https://start.spring.io
Project
Maven Project
Gradle Project
Language
Java
Kotlin
Groovy
Dependencies
ADD ... CTRL + B
No dependency selected
Spring Boot
2.5.1 (SNAPSHOT)
2.5.0
2.4.7 (SNAPSHOT)
2.4.6
2.3.12 (SNAPSHOT)
2.3.11
Project Metadata
Group
com.example
Artifact
Project1
Name
Project1
Description
Demo project for Spring Boot
Package name
com.example.Project1
Packaging
Jar
War
Java
16
11
8
Terminal
GENERATE CTRL + ⏎
EXPLORE CTRL + SPACE
SHARE...
Opening Project1.zip
You have chosen to open:
Project1.zip
which is: Zip archive (55.3 KB)
from: blob:
What should Firefox do with this file?
Open with
Archive Manager (default)
Save File
Do this automatically for files like this from now on.
Cancel
OK
Right Ctrl

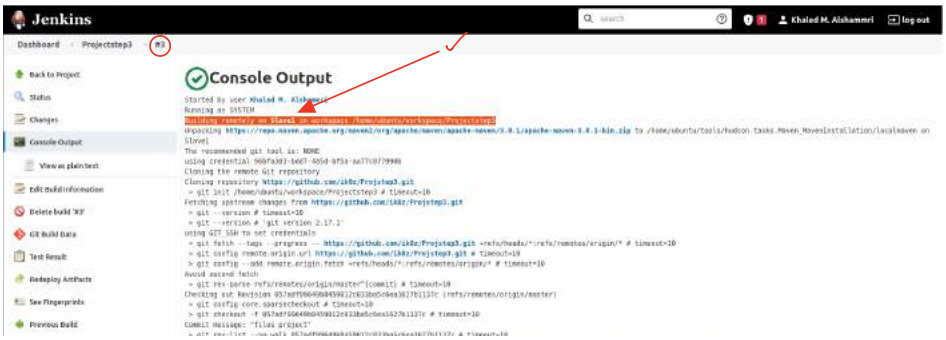

Dashboard
Login - JFro
Spring Init
https://github.com/ik0z/P
Search or jump to...
Pulls
ik0z / Projstep3
Code
Issues
Pull requests
master
Go to f
ik0z files project
.mvn/wrapper
src
.gitignore
mvnw
mvnw.cmd
pom.xml
files project
Help people interested in this repository understand your pr
a README.
devops@ka: ~/Downloads/Project1
create mode 100644 mvnw.cmd
create mode 100644 pom.xml
create mode 100644 src/main/java/com/example/Project1/Project1Application.java
create mode 100644 src/main/resources/application.properties
create mode 100644 src/test/java/com/example/Project1/Project1ApplicationTests.java
devops@ka:~/Downloads/Project1$ git push
fatal: No configured push destination.
Either specify the URL from the command-line or configure a remote repository using
git remote add <name> <url>
and then push using the remote name
git push <name>
devops@ka:~/Downloads/Project1$ git remote add origin https://github.com/ik0z/Projstep3.git
devops@ka:~/Downloads/Project1$ git push
fatal: The current branch master has no upstream branch.
To push the current branch and set the remote as upstream, use
git push --set-upstream origin master
devops@ka:~/Downloads/Project1$ git push -u origin main
error: src refspec main does not match any
error: failed to push some refs to 'https://github.com/ik0z/Projstep3.git'
devops@ka:~/Downloads/Project1$ git branch
* master
devops@ka:~/Downloads/Project1$ git push -u origin master
Username for 'https://github.com': ik0z
Password for 'https://ik0z@github.com':
Enumerating objects: 26, done.
Counting objects: 100% (26/26), done.
Delta compression using up to 3 threads
Compressing objects: 100% (17/17), done.
Writing objects: 100% (26/26), 52.37 KiB | 6.55 MiB/s, done.
Total 26 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/ik0z/Projstep3.git
* [new branch] master -> master
Branch 'master' set up to track remote branch 'master' from 'origin'.
devops@ka:~/Downloads/Project1$ git push -u origin main
error: src refspec main does not match any
error: failed to push some refs to 'https://github.com/ik0z/Projstep3.git'
devops@ka:~/Downloads/Project1$ git push
Username for 'https://github.com': ik0z
Password for 'https://ik0z@github.com':
Everything up-to-date
devops@ka:~/Downloads/Project1$


Jenkins
search
Khaled M. Alshammri
log out
Dashboard
Projectstep3
Back to Dashboard
Status
Changes
Workspace
Build Now
Configure
Delete Maven project
Modules
Rename
Build History
trend
Maven project Projectstep3
add description
Disable Project
Workspace
Recent Changes
Permalinks
Last build (#1), 14 sec ago
Job 1


Jenkins
Dashboard
Projectstep3
#1
Back to Project
Status
Changes
Console Output
View as plain text
Edit Build Information
Delete build '#1'
Git Build Data
Redeploy Artifacts
See Fingerprints
Console Output
Slave2
Started by user Khaled M. Alshammri
Running as SYSTEM
Building remotely on slave2 in workspace /home/ubuntu/workspace/Projectstep3
slave2
The recommended git tool is: NONE
using credential 788b0724-e405-4b28-9f8b-a3492545f567
Cloning the remote Git repository
Cloning repository https://github.com/ik0z/Projstep3.git
Fetching upstream changes from https://github.com/ik0z/Projstep3.git
using GIT SSH to set credentials
Avoid second fetch


This project is parameterized
Throttle builds
Disable this project
Execute concurrent builds if necessary
Restrict where this project can be run
check
Label Expression
Select Slave to Do job
Slave1
Label Slave1 matches 1 node. Permissions or other restrictions provided by plugins may further reduce that list.
Advanced...
Source Code Management
None
Git


Jenkins
Dashboard
Projectstep3
Back to Dashboard
Status
Changes
Workspace
Build Now
Configure
Delete Maven project
Modules
Rename
Build History
Maven project Projectstep3
Workspace
Recent Changes
Latest Test Result (no failures)
Permalinks
Last build (#2), 1 min 41 sec ago
Last stable build (#2), 1 min 41 sec ago
Last successful build (#2), 1 min 42 sec ago
Last completed build (#2), 1 min 42 sec ago
Test Result Trend


Jenkins
Dashboard
Projectstep3
#2
Back to Project
Status
Changes
Console Output
View as plain text
Edit Build Information
Delete build '#2'
Git Build Data
Test Result
Redeploy Artifacts
See Fingerprints
Previous Build
Console Output