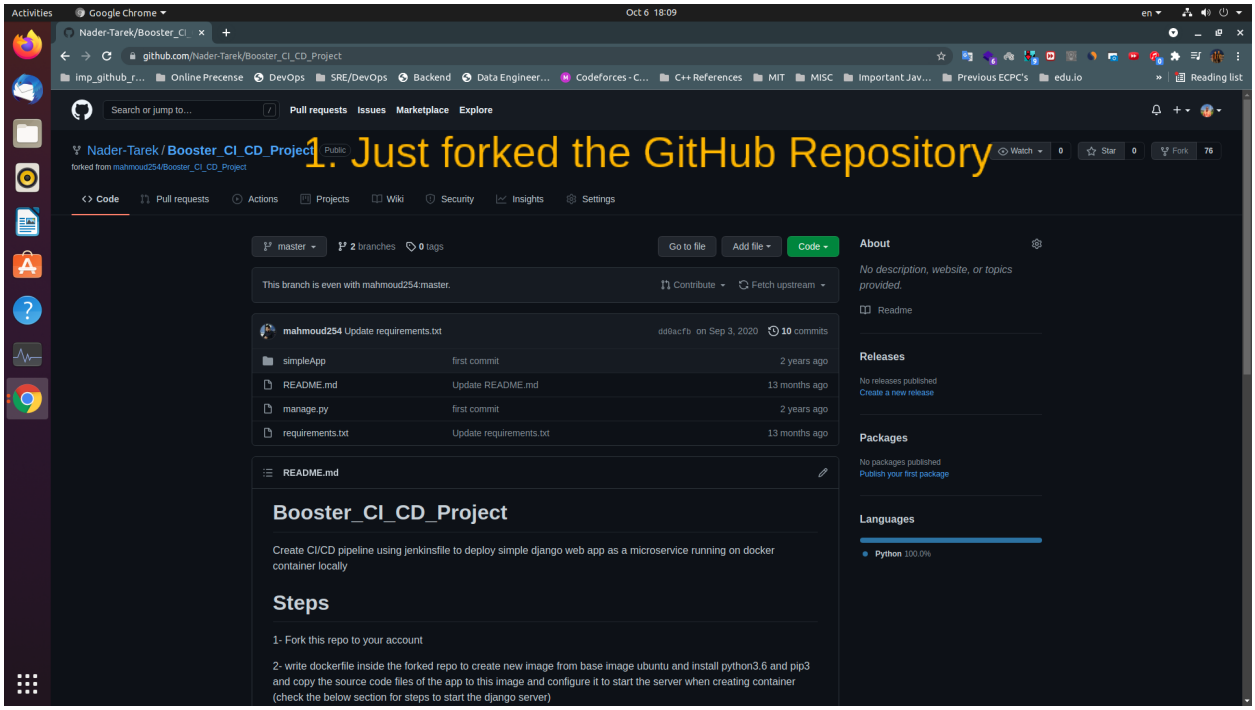
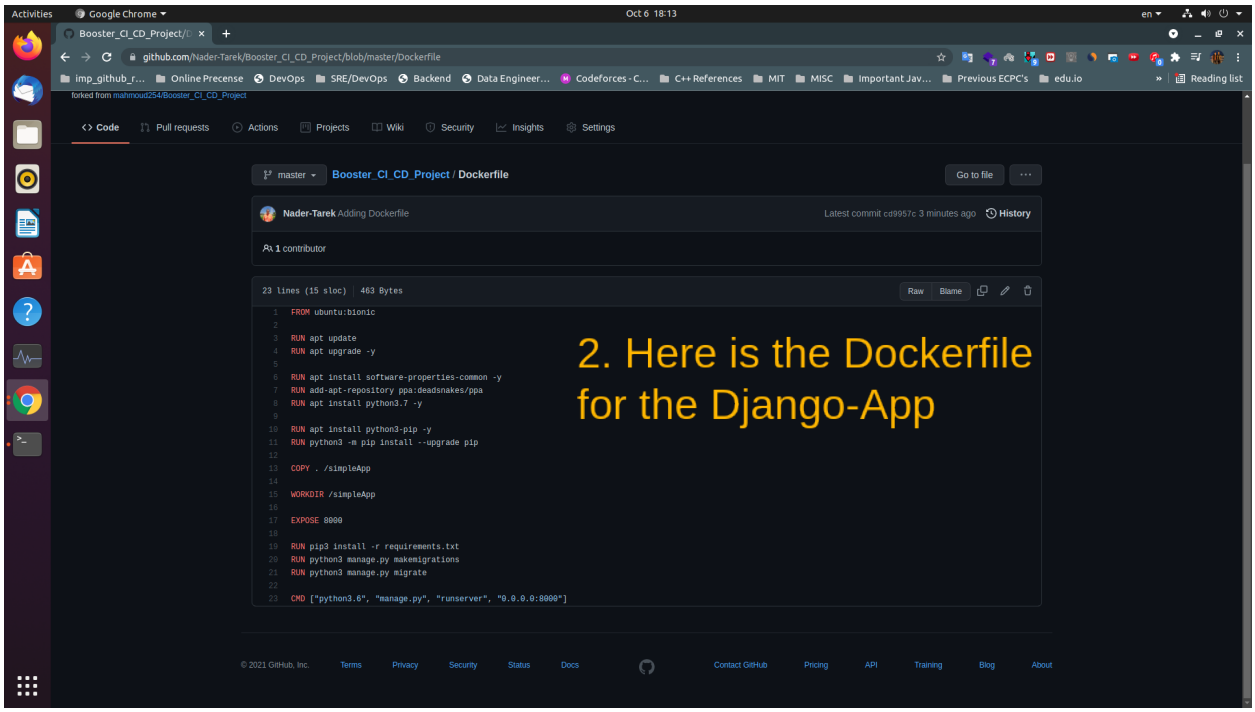
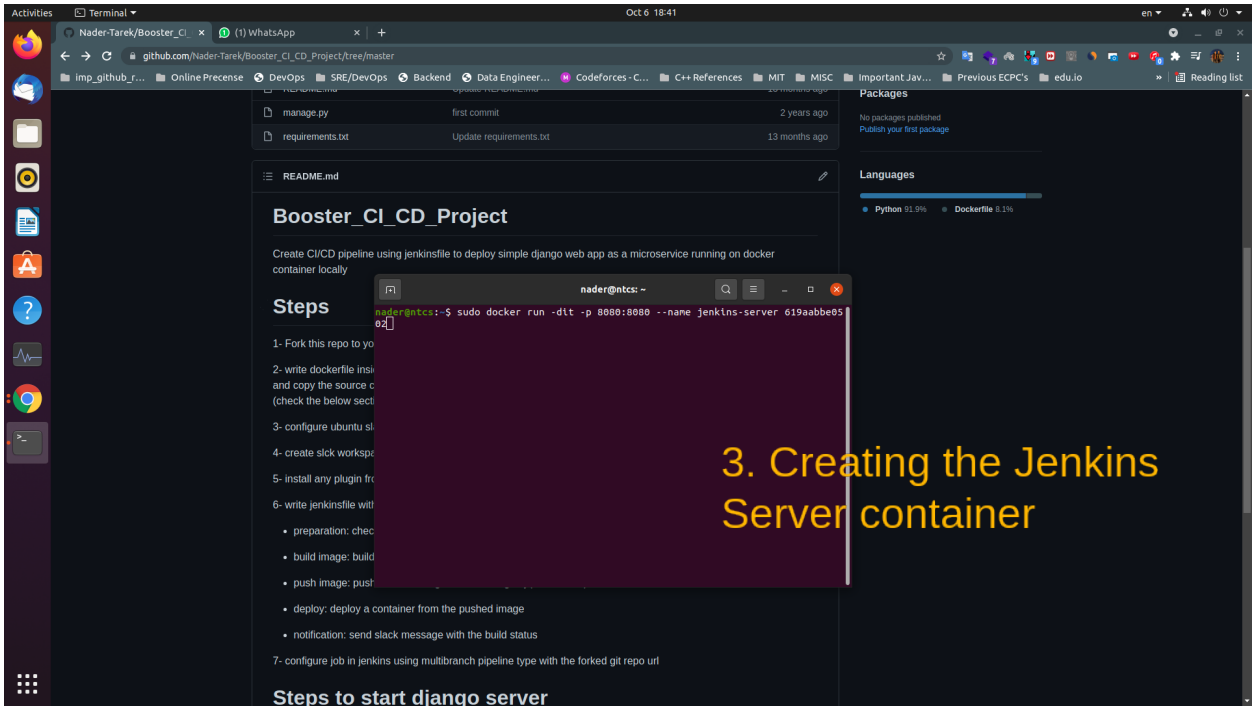
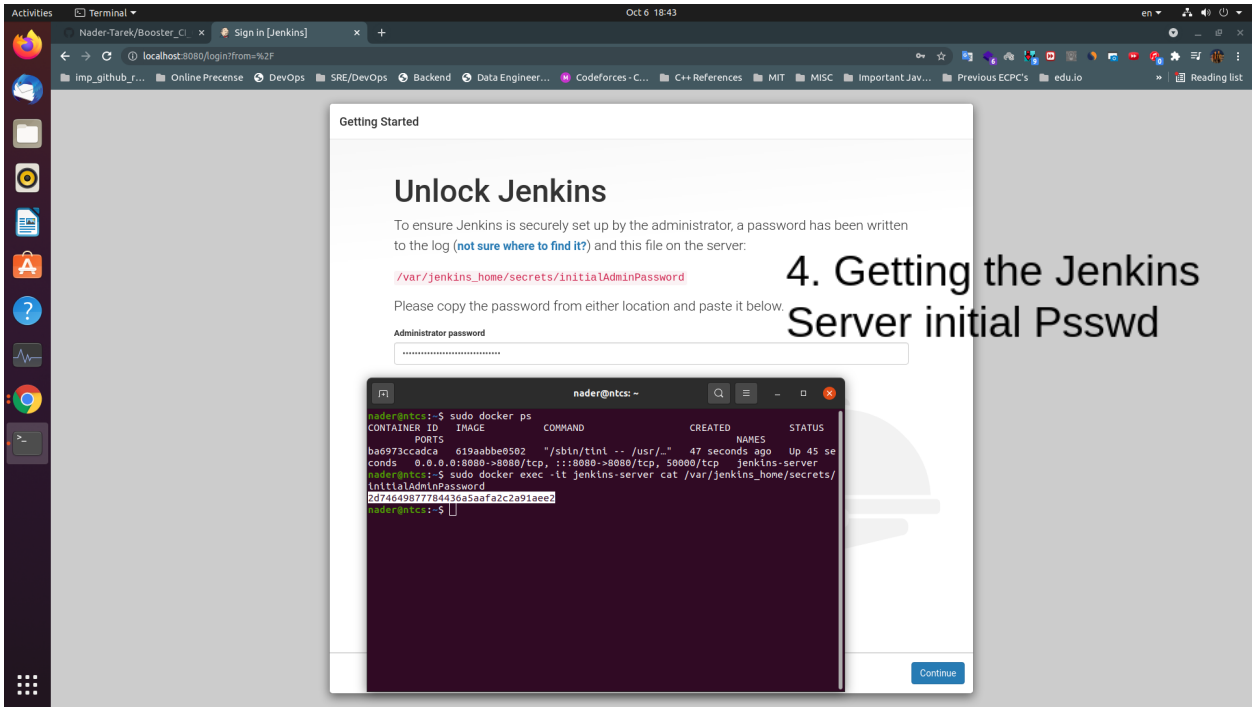
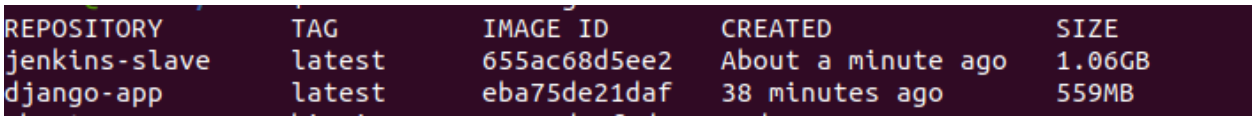

1. Just forked the GitHub Repository
Booster_CI_CD_Project
Create CI/CD pipeline using jenkinsfile to deploy simple django web app as a microservice running on docker container locally
Steps
1- Fork this repo to your account
2- write dockerfile inside the forked repo to create new image from base image ubuntu and install python3.6 and pip3 and copy the source code files of the app to this image and configure it to start the server when creating container (check the below section for steps to start the django server)

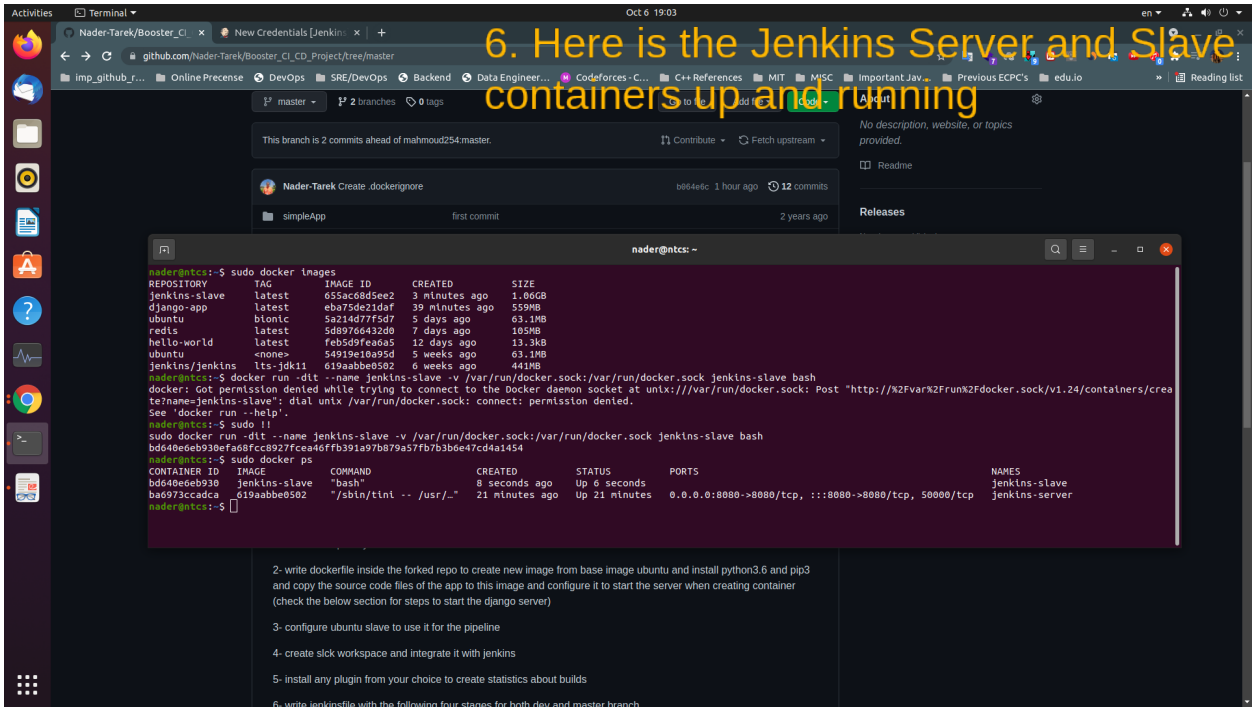

2. Here is the Dockerfile for the Django-App
FROM ubuntu:bionic
RUN apt update
RUN apt upgrade -y
RUN apt install software-properties-common -y
RUN add-apt-repository ppa:deadsnakes/ppa
RUN apt install python3.7 -y
RUN apt install python3-pip -y
RUN python3 -m pip install --upgrade pip
COPY . /simpleApp
WORKDIR /simpleApp
EXPOSE 8000
RUN pip3 install -r requirements.txt
RUN python3 manage.py makemigrations
RUN python3 manage.py migrate
CMD ["python3.6", "manage.py", "runserver", "0.0.0.0:8000"]

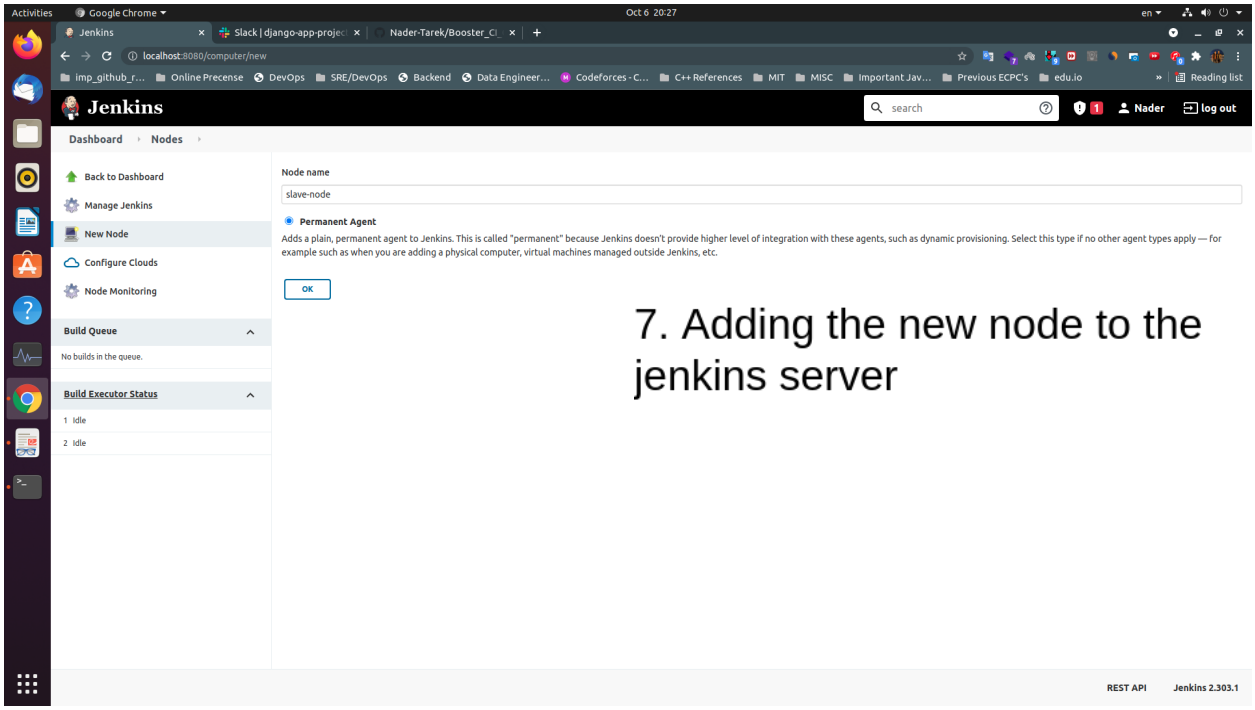

Activities
Terminal
Oct 6 18:41
en
Nader-Tarek/Booster_CI...
(1) WhatsApp
github.com/Nader-Tarek/Booster_CI_CD_Project/tree/master
imp_github_r...
Online Precense
DevOps
SRE/DevOps
Backend
Data Engineer...
Codeforces - C...
C++ References
MIT
MISC
Important Jav...
Previous ECPC's
edu.io
Reading list
manage.py
first commit
2 years ago
requirements.txt
Update requirements.txt
13 months ago
README.md
Booster_CI_CD_Project
Create CI/CD pipeline using jenkinsfile to deploy simple django web app as a microservice running on docker container locally
Steps
1- Fork this repo to yo
2- write dockerfile insi
and copy the source c
(check the below sect
3- configure ubuntu sl
4- create slck workspa
5- install any plugin fr
6- write jenkinsfile with
preparation: chec
build image: build
push image: push
deploy: deploy a container from the pushed image
notification: send slack message with the build status
7- configure job in jenkins using multibranch pipeline type with the forked git repo url
Steps to start django server
Packages
No packages published
Publish your first package
Languages
Python 91.9%
Dockerfile 8.1%
nader@ntcs: ~
nader@ntcs:~$ sudo docker run -dit -p 8080:8080 --name jenkins-server 619aabbe0502
3. Creating the Jenkins Server container


Activities
Terminal
Oct 6 18:43
en
Nader-Tarek/Booster_CI...
Sign in [Jenkins]
localhost:8080/login?from=%2F
imp_github_r...
Online Precense
DevOps
SRE/DevOps
Backend
Data Engineer...
Codeforces - C...
C++ References
MIT
MISC
Important Jav...
Previous ECPC's
edu.io
Reading list
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:
/var/jenkins_home/secrets/initialAdminPassword
Please copy the password from either location and paste it below.
Administrator password
nader@ntcs: ~
nader@ntcs:~$ sudo docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
ba6973ccadca 619aabbe0502 "/sbin/tini -- /usr/..." 47 seconds ago Up 45 seconds 0.0.0.0:8080->8080/tcp, :::8080->8080/tcp, 50000/tcp jenkins-server
nader@ntcs:~$ sudo docker exec -it jenkins-server cat /var/jenkins_home/secrets/initialAdminPassword
2d74649877784436a5aafa2c2a91aee2
nader@ntcs:~$
Continue
4. Getting the Jenkins Server initial Psswd

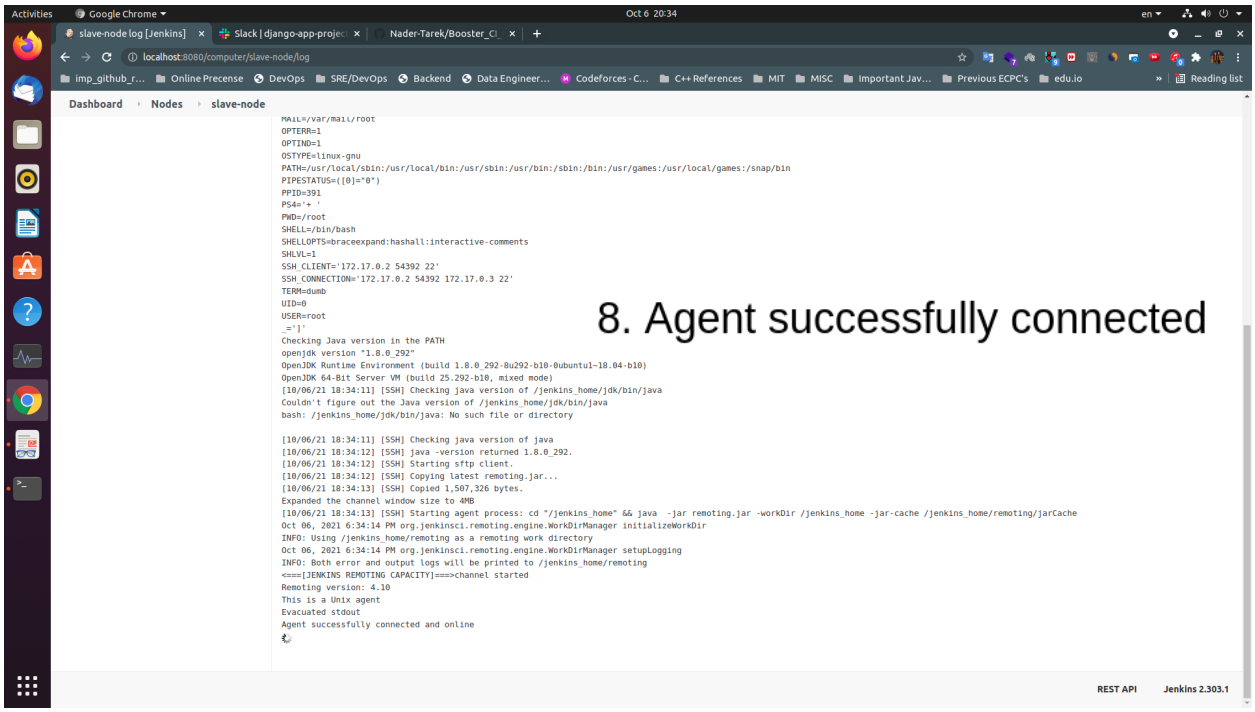


REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
jenkins-slave	latest	655ac68d5ee2	About a minute ago	1.06GB
django-app	latest	eba75de21daf	38 minutes ago	559MB

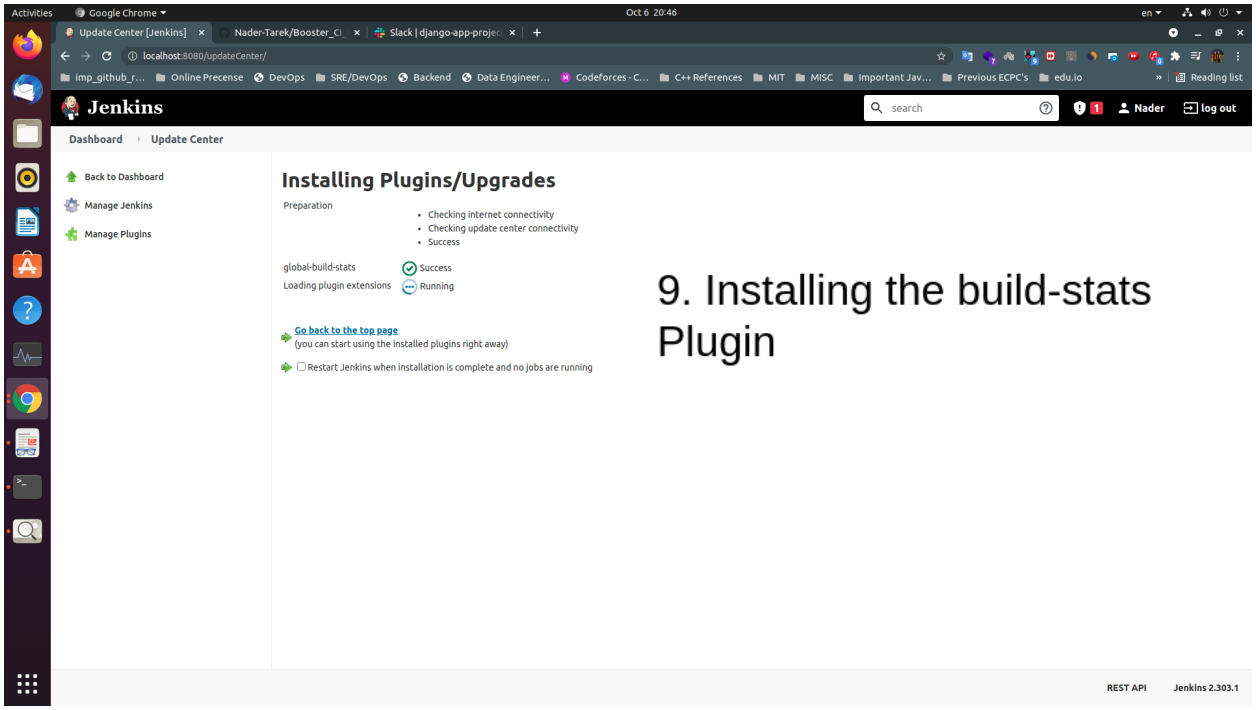




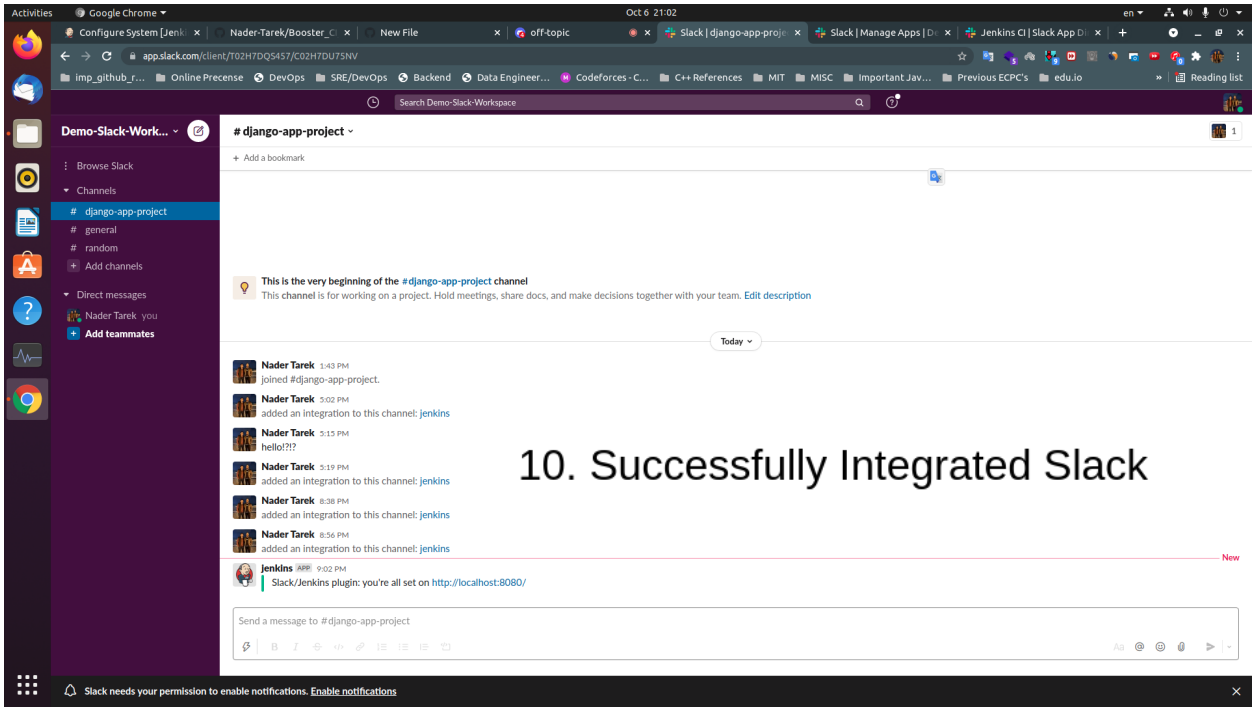
7. Adding the new node to the jenkins server



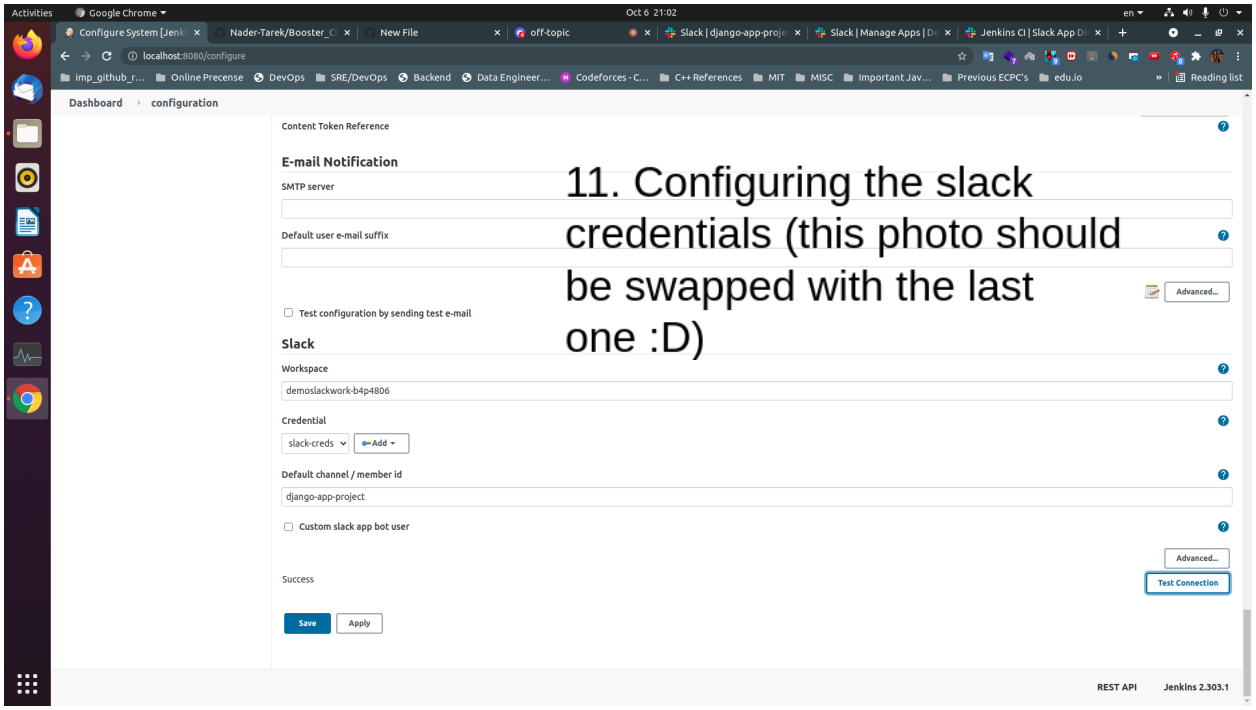
8. Agent successfully connected

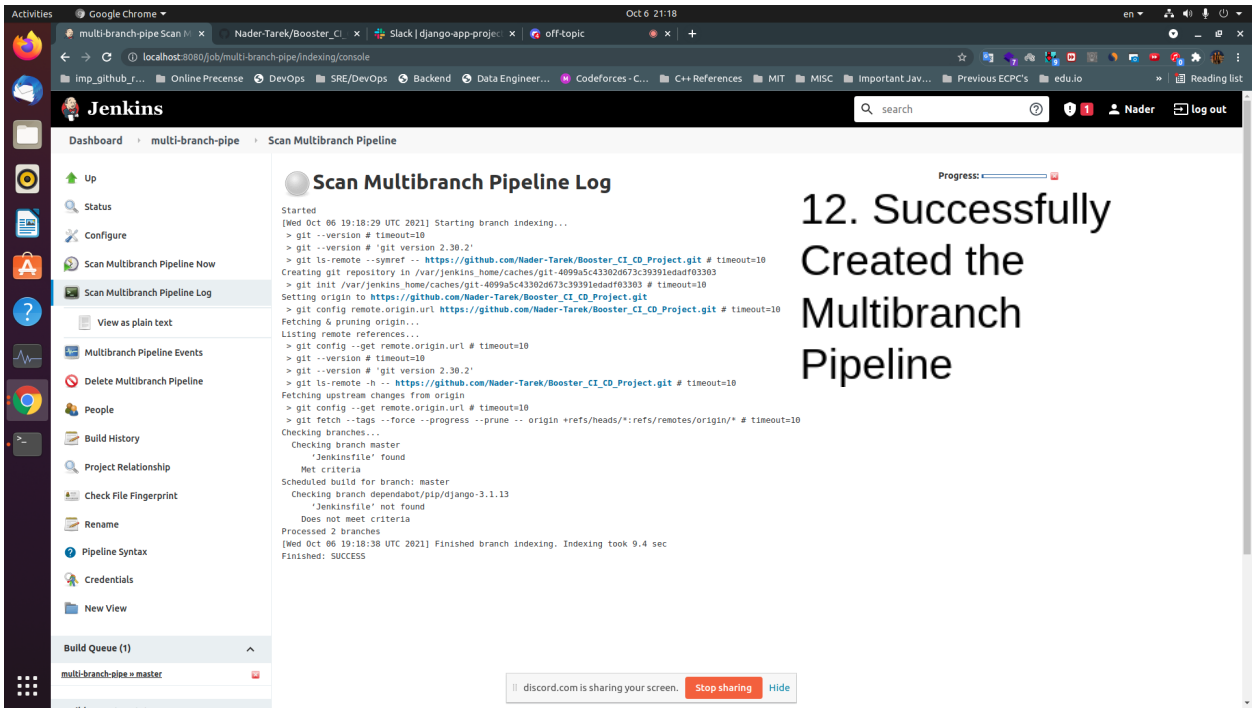


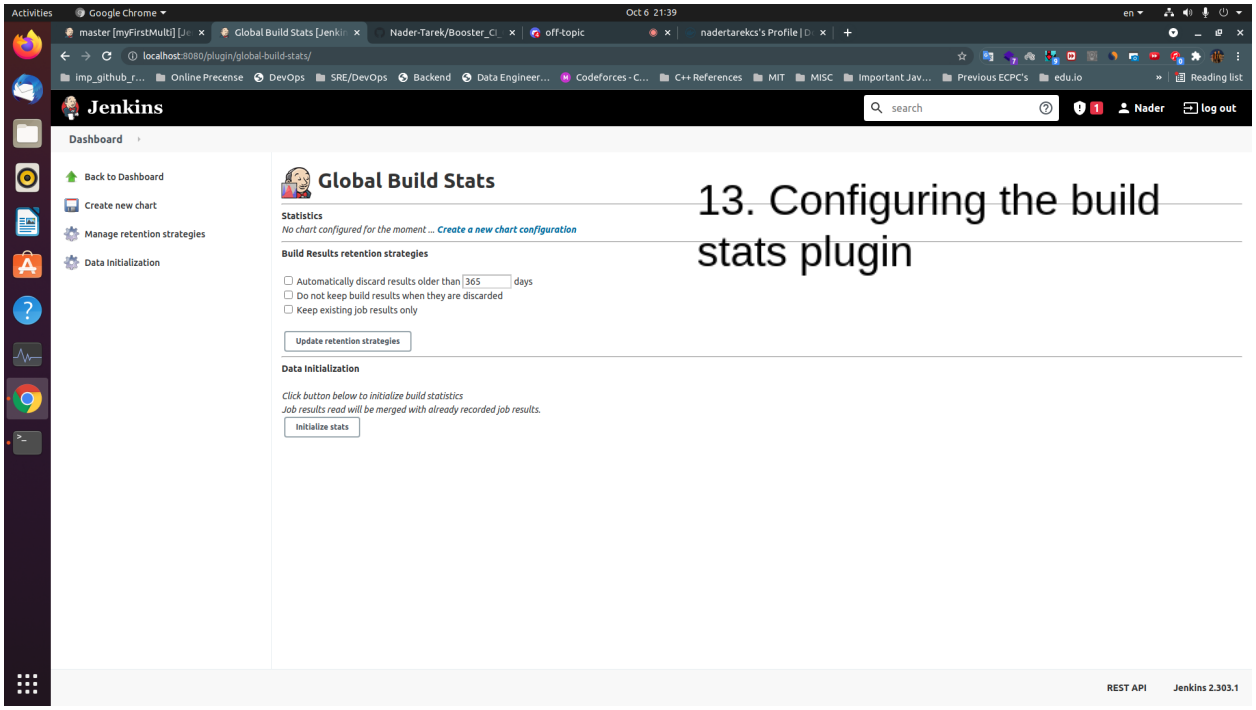
9. Installing the build-stats Plugin

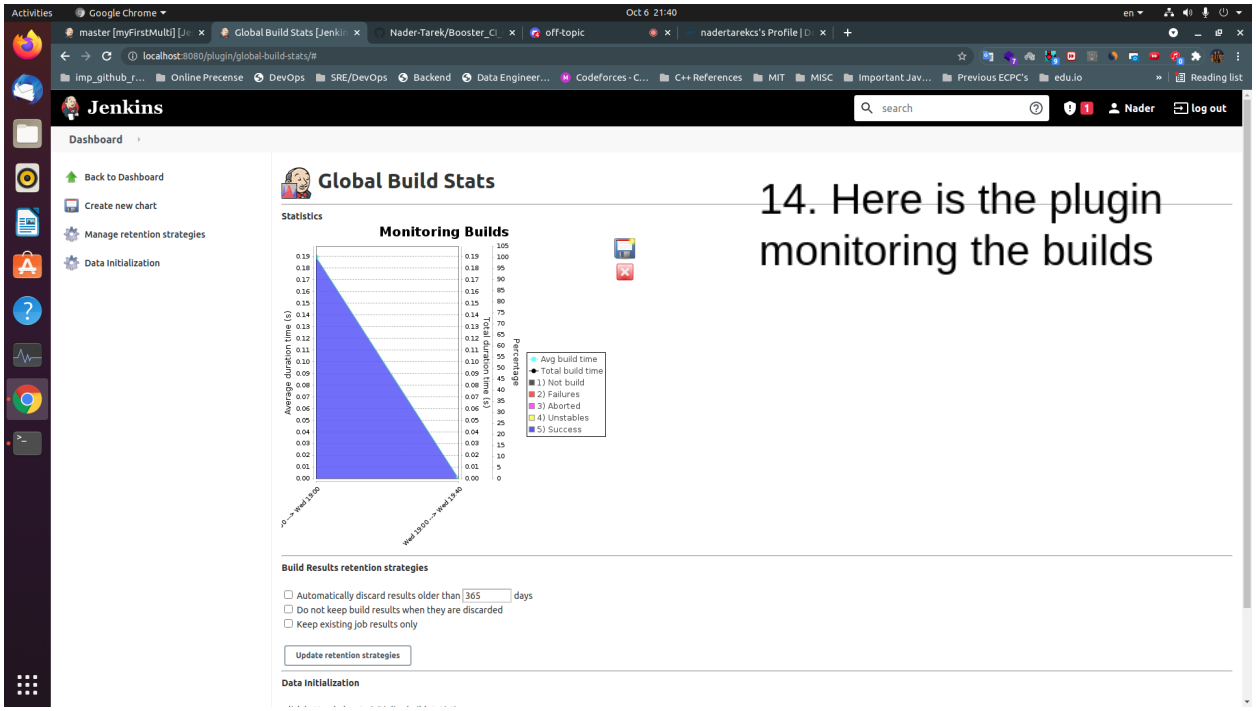


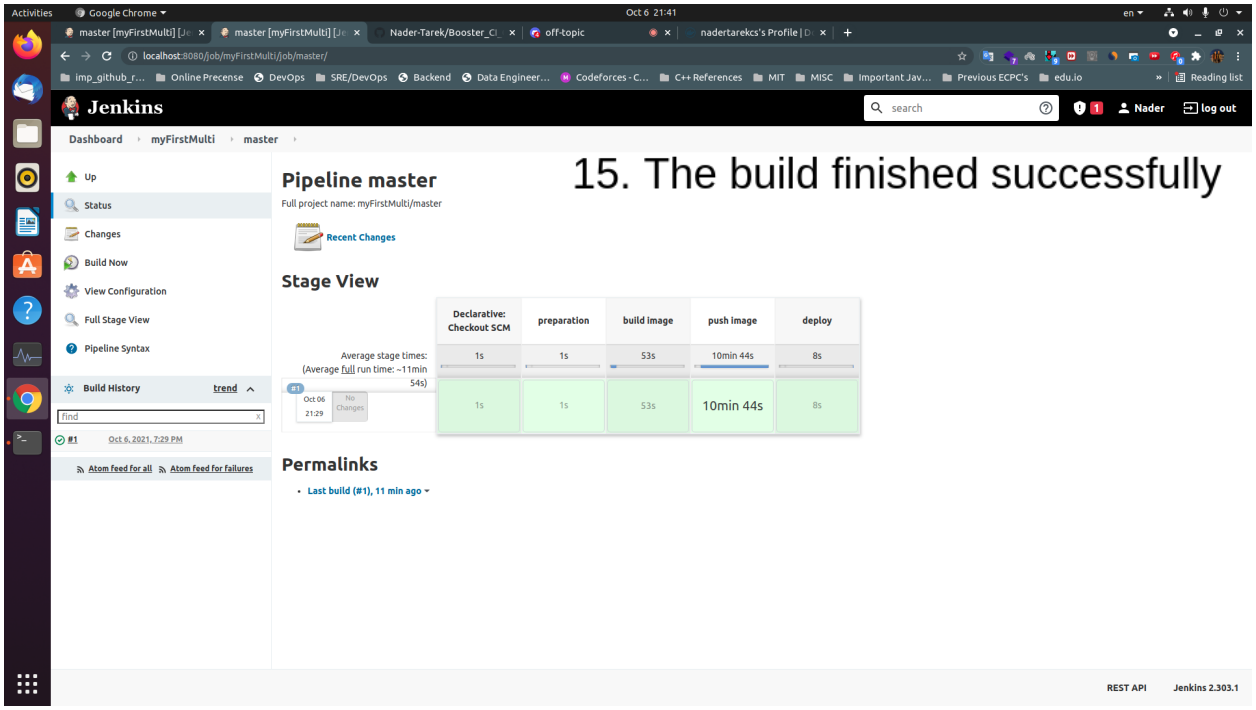
10. Successfully Integrated Slack

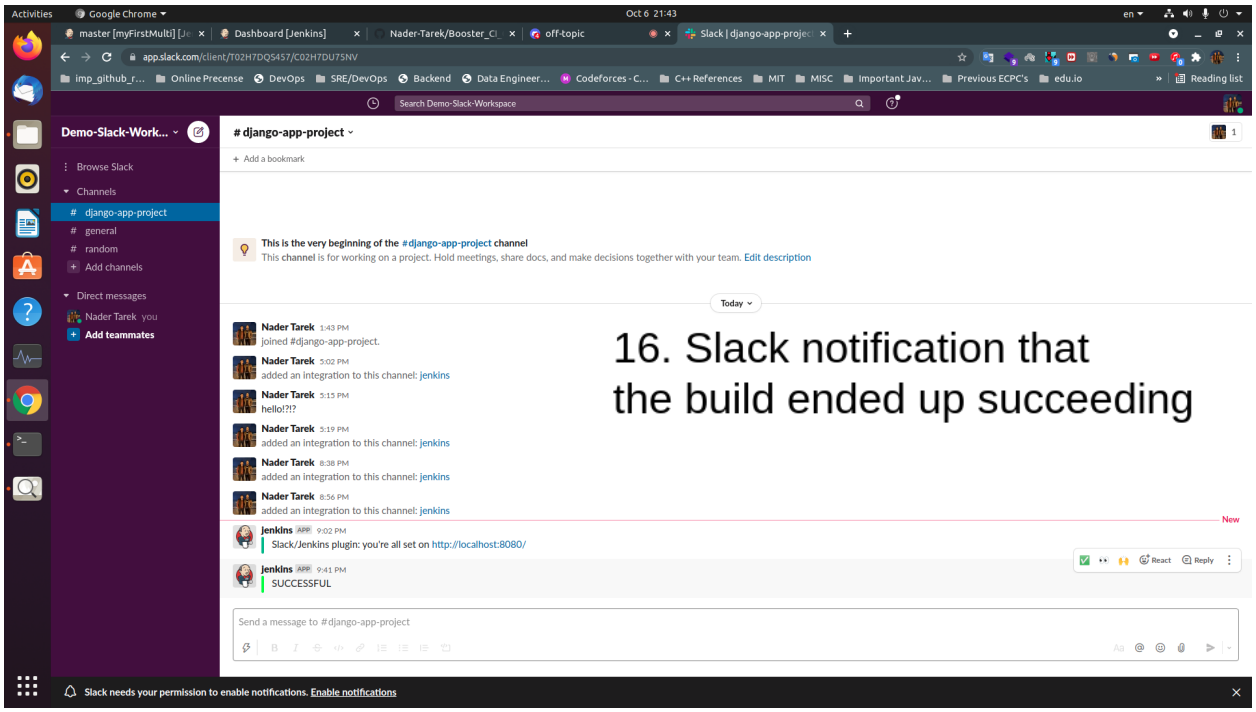

11. Configuring the slack credentials (this photo should be swapped with the last one :D)
Dashboard
configuration
Content Token Reference
E-mail Notification
SMTP server
Default user e-mail suffix
Advanced...
Test configuration by sending test e-mail
Slack
Workspace
demoslackwork-b4p4806
Credential
slack-creds
Add
Default channel / member id
django-app-project
Custom slack app bot user
Advanced...
Success
Test Connection
Save
Apply
REST API
Jenkins 2.303.1

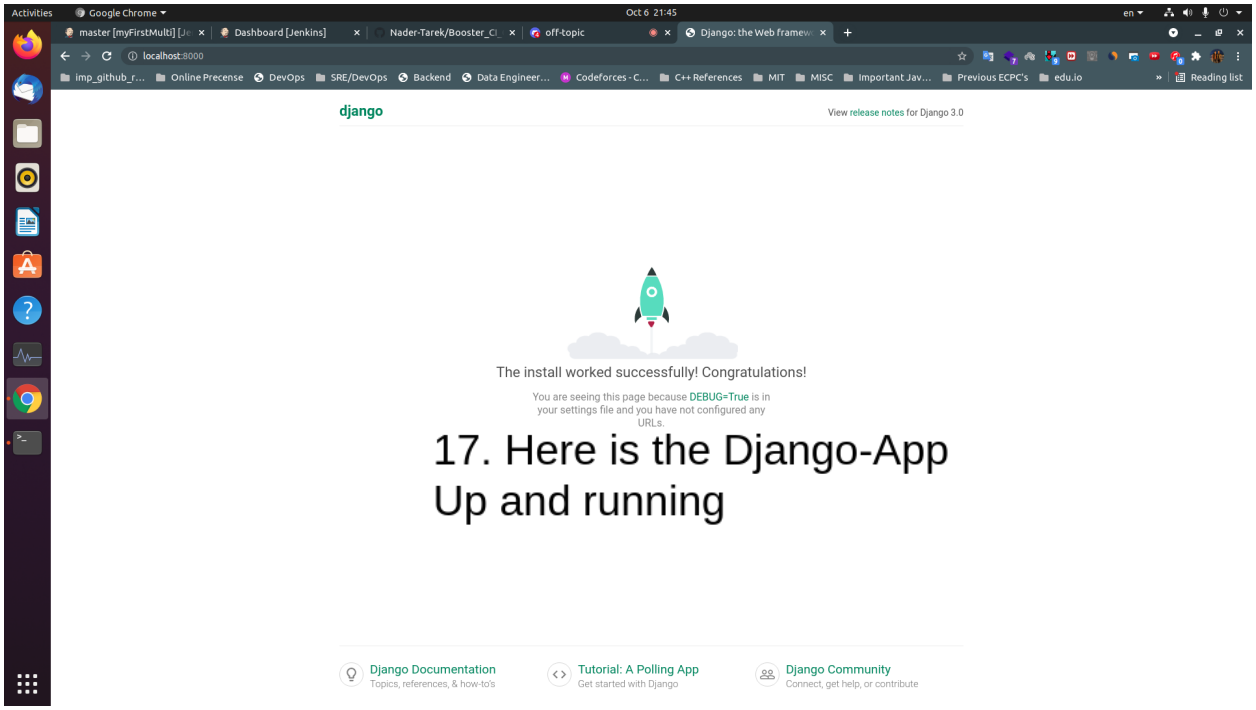

12. Successfully Created the Multibranch Pipeline
Jenkins
search
Nader
log out
Dashboard
multi-branch-pipe
Scan Multibranch Pipeline
Up
Status
Configure
Scan Multibranch Pipeline Now
Scan Multibranch Pipeline Log
View as plain text
Multibranch Pipeline Events
Delete Multibranch Pipeline
People
Build History
Project Relationship
Check File Fingerprint
Rename
Pipeline Syntax
Credentials
New View
Build Queue (1)
multi-branch-pipe » master
Scan Multibranch Pipeline Log
Progress:
Started
[Wed Oct 06 19:18:29 UTC 2021] Starting branch indexing...
> git --version # timeout=10
> git --version # 'git version 2.30.2'
> git ls-remote --symref -- https://github.com/Nader-Tarek/Booster_CI_CD_Project.git # timeout=10
Creating git repository in /var/jenkins_home/caches/git-4099a5c43302d673c39391edadf03303
> git init /var/jenkins_home/caches/git-4099a5c43302d673c39391edadf03303 # timeout=10
Setting origin to https://github.com/Nader-Tarek/Booster_CI_CD_Project.git
> git config remote.origin.url https://github.com/Nader-Tarek/Booster_CI_CD_Project.git # timeout=10
Fetching & pruning origin...
Listing remote references...
> git config --get remote.origin.url # timeout=10
> git --version # timeout=10
> git --version # 'git version 2.30.2'
> git ls-remote -h -- https://github.com/Nader-Tarek/Booster_CI_CD_Project.git # timeout=10
Fetching upstream changes from origin
> git config --get remote.origin.url # timeout=10
> git fetch --tags --force --progress --prune -- origin +refs/heads/*:refs/remotes/origin/* # timeout=10
Checking branches...
Checking branch master
'Jenkinsfile' found
Met criteria
Scheduled build for branch: master
Checking branch dependabot/pip/django-3.1.13
'Jenkinsfile' not found
Does not meet criteria
Processed 2 branches
[Wed Oct 06 19:18:38 UTC 2021] Finished branch indexing. Indexing took 9.4 sec
Finished: SUCCESS
discord.com is sharing your screen.
Stop sharing
Hide

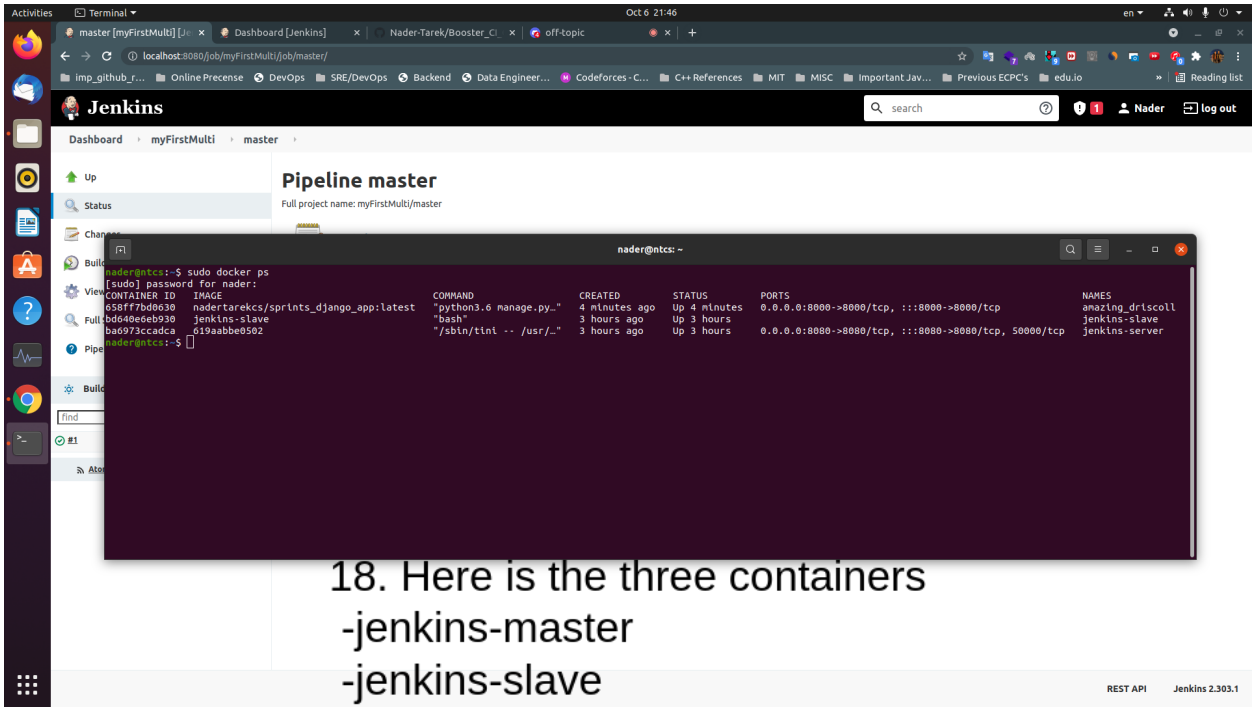

13. Configuring the build stats plugin
Jenkins
Dashboard
Back to Dashboard
Create new chart
Manage retention strategies
Data Initialization
Global Build Stats
Statistics
No chart configured for the moment ... Create a new chart configuration
Build Results retention strategies
Automatically discard results older than 365 days
Do not keep build results when they are discarded
Keep existing job results only
Update retention strategies
Data Initialization
Click button below to initialize build statistics
Job results read will be merged with already recorded job results.
Initialize stats
REST API
Jenkins 2.303.1


14. Here is the plugin monitoring the builds
Jenkins
Dashboard
Back to Dashboard
Create new chart
Manage retention strategies
Data Initialization
Global Build Stats
Statistics
Monitoring Builds
Average duration time (s)
Total duration time (s)
Percentage
Avg build time
Total build time
1) Not build
2) Failures
3) Aborted
4) Unstables
5) Success
Build Results retention strategies
Automatically discard results older than 365 days
Do not keep build results when they are discarded
Keep existing job results only
Update retention strategies
Data Initialization


15. The build finished successfully
Jenkins
Pipeline master
Stage View
Permalinks
Declarative: Checkout SCM
preparation
build image
push image
deploy
10min 44s


16. Slack notification that the build ended up succeeding
Demo-Slack-Work...
django-app-project
SUCCESSFUL


Activities
Google Chrome
Oct 6 21:45
en
master [myFirstMulti] [Je
Dashboard [Jenkins]
Nader-Tarek/Booster_Cl
off-topic
Django: the Web framew
localhost:8000
imp_github_r...
Online Precense
DevOps
SRE/DevOps
Backend
Data Engineer...
Codeforces - C...
C++ References
MIT
MISC
Important Jav...
Previous ECPC's
edu.io
Reading list
django
View release notes for Django 3.0
The install worked successfully! Congratulations!
You are seeing this page because DEBUG=True is in your settings file and you have not configured any URLs.
17. Here is the Django-App
Up and running
Django Documentation
Topics, references, & how-to's
Tutorial: A Polling App
Get started with Django
Django Community
Connect, get help, or contribute


Activities
Terminal
Oct 6 21:46
en
master [myFirstMulti] [Je
Dashboard [Jenkins]
Nader-Tarek/Booster_Cl
off-topic
localhost:8080/job/myFirstMulti/job/master/
imp_github_r...
Online Precense
DevOps
SRE/DevOps
Backend
Data Engineer...
Codeforces - C...
C++ References
MIT
MISC
Important Jav...
Previous ECPC's
edu.io
Reading list
Jenkins
search
Nader
log out
Dashboard
myFirstMulti
master
Up
Status
Pipeline master
Full project name: myFirstMulti/master
nader@ntcs: ~
nader@ntcs:~$ sudo docker ps
[sudo] password for nader:
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
658ff7bd0630 nadertarekcs/sprints_django_app:latest "python3.6 manage.py…" 4 minutes ago Up 4 minutes 0.0.0.0:8000->8000/tcp, :::8000->8000/tcp amazing_driscoll
bd640e6eb930 jenkins-slave "bash" 3 hours ago Up 3 hours jenkins-slave
ba6973ccadca 619aabbe0502 "/sbin/tini -- /usr/…" 3 hours ago Up 3 hours 0.0.0.0:8080->8080/tcp, :::8080->8080/tcp, 50000/tcp jenkins-server
nader@ntcs:~$
18. Here is the three containers
-jenkins-master
-jenkins-slave
-Django-App
REST API
Jenkins 2.303.1