

2)nodejs(creating a CI-CD pipeline)

```
Activities Terminal Feb 19 03:10 osboxes@osboxes: ~/Desktop/nodejs/nodejs
osboxes@osboxes:~/Desktop$ git clone https://github.com/sravya-nanduri/nodejs.git
Cloning into 'nodejs'
remote: Enumerating objects: 516, done.
remote: Counting objects: 100k (516/516), done.
remote: Compressing objects: 100k (481/481), done.
remote: Total 516 (delta 91), reused 516 (delta 91), pack-reused 0
Receiving objects: 100k (516/516), 669.09 KiB | 963.00 KiB/s, done.
Resolving deltas: 100k (91/91), done.
osboxes@osboxes:~/Desktop$ sudo apt install nodejs
[sudo] password for osboxes:
Reading package lists... Done
Building dependency tree
Reading state information... Done
nodejs is already the newest version (10.19.0-dfsg-3ubuntu1).
0 upgraded, 0 newly installed, 0 to remove and 354 not upgraded.
osboxes@osboxes:~/Desktop$ nodejs --version
v10.19.0
osboxes@osboxes:~/Desktop$ ls
hello.sh  my  sravya  task.sh  test1.txt
hello.sh  nodejs  task1.sh  task.sh.save  test.txt
osboxes@osboxes:~/Desktop$ cd sravya
osboxes@osboxes:~/Desktop/sravya$ cd nodejs
osboxes@osboxes:~/Desktop/sravya/nodejs$ ls
checkstatuslog.txt  deploy.sh  node_modules  test.sh
checkstatus.sh  Dockerfile  package-lock.json
deploylog.txt  index.js  package-lock.json
osboxes@osboxes:~/Desktop/sravya/nodejs$ cd ..
osboxes@osboxes:~/Desktop/sravya$ cd ..
osboxes@osboxes:~/Desktop$ cd nodejs
osboxes@osboxes:~/Desktop/nodejs$ cd nodejs
osboxes@osboxes:~/Desktop/nodejs/nodejs$ ls
Dockerfile  node_modules  package-lock.json
index.js  package.json
osboxes@osboxes:~/Desktop/nodejs/nodejs$ touch deploy.sh
osboxes@osboxes:~/Desktop/nodejs/nodejs$ touch checkstatus.sh
osboxes@osboxes:~/Desktop/nodejs/nodejs$ touch test.sh
osboxes@osboxes:~/Desktop/nodejs/nodejs$ nano deploy.sh
osboxes@osboxes:~/Desktop/nodejs/nodejs$ nano checkstatus.sh
osboxes@osboxes:~/Desktop/nodejs/nodejs$ ls -l
total 44
-rw-r--r-- 1 osboxes osboxes 141 Feb 19 03:04 checkstatus.sh
-rw-r--r-- 1 osboxes osboxes 0 Feb 19 02:56 checkstatus.sh
-rw-r--r-- 1 osboxes osboxes 176 Feb 19 03:02 deploy.sh
-rw-r--r-- 1 osboxes osboxes 370 Feb 19 02:54 Dockerfile
-rw-r--r-- 1 osboxes osboxes 222 Feb 19 02:54 index.js
drwxr-xr-x 59 osboxes osboxes 4096 Feb 19 02:54 node_modules
-rw-r--r-- 1 osboxes osboxes 270 Feb 19 02:54 package.json
-rw-r--r-- 1 osboxes osboxes 17908 Feb 19 02:54 package-lock.json
-rw-r--r-- 1 osboxes osboxes 0 Feb 19 02:56 test.sh
```

```
Activities Terminal Feb 19 03:11 osboxes@osboxes: ~/Desktop/nodejs/nodejs
-rw-r--r-- 1 osboxes osboxes 141 Feb 19 03:04 checkstatus.sh
-rw-r--r-- 1 osboxes osboxes 0 Feb 19 02:56 checkstatus.sh
-rw-r--r-- 1 osboxes osboxes 176 Feb 19 03:02 deploy.sh
osboxes@osboxes:~/Desktop/nodejs/nodejs$ chmod +x deploy.sh
osboxes@osboxes:~/Desktop/nodejs/nodejs$ chmod +x checkstatus.sh
osboxes@osboxes:~/Desktop/nodejs/nodejs$ ls -l
total 44
-rw-r--r-- 1 osboxes osboxes 141 Feb 19 03:04 checkstatus.sh
-rw-r--r-- 1 osboxes osboxes 0 Feb 19 02:56 checkstatus.sh
-rw-r--r-- 1 osboxes osboxes 176 Feb 19 03:02 deploy.sh
-rw-r--r-- 1 osboxes osboxes 370 Feb 19 02:54 Dockerfile
-rw-r--r-- 1 osboxes osboxes 222 Feb 19 02:54 index.js
drwxr-xr-x 59 osboxes osboxes 4096 Feb 19 02:54 node_modules
-rw-r--r-- 1 osboxes osboxes 270 Feb 19 02:54 package.json
-rw-r--r-- 1 osboxes osboxes 17908 Feb 19 02:54 package-lock.json
-rw-r--r-- 1 osboxes osboxes 0 Feb 19 02:56 test.sh
osboxes@osboxes:~/Desktop/nodejs/nodejs$ crontab -e
crontab: installing new crontab
osboxes@osboxes:~/Desktop/nodejs/nodejs$ ls
checkstatus.sh  checkstatus.sh  deploy.sh  Dockerfile  index.js  node_modules  package.json  package-lock.json  test.sh
osboxes@osboxes:~/Desktop/nodejs/nodejs$ ls -l
total 44
-rw-r--r-- 1 osboxes osboxes 141 Feb 19 03:04 checkstatus.sh
-rw-r--r-- 1 osboxes osboxes 0 Feb 19 02:56 checkstatus.sh
-rw-r--r-- 1 osboxes osboxes 176 Feb 19 03:02 deploy.sh
-rw-r--r-- 1 osboxes osboxes 370 Feb 19 02:54 Dockerfile
-rw-r--r-- 1 osboxes osboxes 222 Feb 19 02:54 index.js
drwxr-xr-x 59 osboxes osboxes 4096 Feb 19 02:54 node_modules
-rw-r--r-- 1 osboxes osboxes 270 Feb 19 02:54 package.json
-rw-r--r-- 1 osboxes osboxes 17908 Feb 19 02:54 package-lock.json
-rw-r--r-- 1 osboxes osboxes 0 Feb 19 02:56 test.sh
osboxes@osboxes:~/Desktop/nodejs/nodejs$ ls -l
total 44
-rw-r--r-- 1 osboxes osboxes 141 Feb 19 03:04 checkstatus.sh
-rw-r--r-- 1 osboxes osboxes 0 Feb 19 02:56 checkstatus.sh
-rw-r--r-- 1 osboxes osboxes 176 Feb 19 03:02 deploy.sh
-rw-r--r-- 1 osboxes osboxes 370 Feb 19 02:54 Dockerfile
-rw-r--r-- 1 osboxes osboxes 222 Feb 19 02:54 index.js
```

```
Activities Terminal Feb 19 03:12
osboxes@osboxes: ~/Desktop/nodejs/nodejs

-rw-rw-r-- 1 osboxes osboxes 17908 Feb 19 02:54 package-lock.json
-rw-rw-r-- 1 osboxes osboxes 0 Feb 19 02:56 test.sh
osboxes@osboxes:~/Desktop/nodejs/nodejs$ ls -l
total 44
-rw-rw-r-- 1 osboxes osboxes 141 Feb 19 03:04 checkstatus.sh
-rw-rw-r-- 1 osboxes osboxes 0 Feb 19 02:56 checkstatus.sh
-rw-rw-r-- 1 osboxes osboxes 176 Feb 19 03:02 deploy.sh
-rw-rw-r-- 1 osboxes osboxes 370 Feb 19 02:54 Dockerfile
-rw-rw-r-- 1 osboxes osboxes 222 Feb 19 02:54 index.js
drwxrwxr-x 59 osboxes osboxes 4096 Feb 19 02:54 node_modules
-rw-rw-r-- 1 osboxes osboxes 270 Feb 19 02:54 package.json
-rw-rw-r-- 1 osboxes osboxes 17908 Feb 19 02:54 package-lock.json
-rw-rw-r-- 1 osboxes osboxes 0 Feb 19 02:56 test.sh
osboxes@osboxes:~/Desktop/nodejs/nodejs$ ls -l
total 44
-rw-rw-r-- 1 osboxes osboxes 141 Feb 19 03:04 checkstatus.sh
-rw-rw-r-- 1 osboxes osboxes 0 Feb 19 02:56 checkstatus.sh
-rw-rw-r-- 1 osboxes osboxes 176 Feb 19 03:02 deploy.sh
-rw-rw-r-- 1 osboxes osboxes 370 Feb 19 02:54 Dockerfile
-rw-rw-r-- 1 osboxes osboxes 222 Feb 19 02:54 index.js
drwxrwxr-x 59 osboxes osboxes 4096 Feb 19 02:54 node_modules
-rw-rw-r-- 1 osboxes osboxes 270 Feb 19 02:54 package.json
-rw-rw-r-- 1 osboxes osboxes 17908 Feb 19 02:54 package-lock.json
-rw-rw-r-- 1 osboxes osboxes 0 Feb 19 02:56 test.sh
osboxes@osboxes:~/Desktop/nodejs/nodejs$ ls -l
total 52
-rw-rw-r-- 1 osboxes osboxes 24 Feb 19 03:09 checkstatuslog.txt
-rw-rw-r-- 1 osboxes osboxes 141 Feb 19 03:04 checkstatus.sh
-rw-rw-r-- 1 osboxes osboxes 0 Feb 19 02:56 checkstatus.sh
-rw-rw-r-- 1 osboxes osboxes 1585 Feb 19 03:09 deploylog.txt
-rw-rw-r-- 1 osboxes osboxes 176 Feb 19 03:02 deploy.sh
-rw-rw-r-- 1 osboxes osboxes 370 Feb 19 02:54 Dockerfile
-rw-rw-r-- 1 osboxes osboxes 222 Feb 19 02:54 index.js
drwxrwxr-x 59 osboxes osboxes 4096 Feb 19 02:54 node_modules
-rw-rw-r-- 1 osboxes osboxes 270 Feb 19 02:54 package.json
-rw-rw-r-- 1 osboxes osboxes 17908 Feb 19 02:54 package-lock.json
-rw-rw-r-- 1 osboxes osboxes 0 Feb 19 02:56 test.sh
```

```
Activities Terminal Feb 19 03:12
osboxes@osboxes: ~/Desktop/nodejs/nodejs

drwxrwxr-x 59 osboxes osboxes 4096 Feb 19 02:54 node_modules
-rw-rw-r-- 1 osboxes osboxes 270 Feb 19 02:54 package.json
-rw-rw-r-- 1 osboxes osboxes 17908 Feb 19 02:54 package-lock.json
-rw-rw-r-- 1 osboxes osboxes 0 Feb 19 02:56 test.sh
osboxes@osboxes:~/Desktop/nodejs/nodejs$ cat deploylog.txt
Already up to date.
Requirement already satisfied: click==8.0.3 in /home/osboxes/.local/lib/python3.8/site-packages (from -r requirements.txt (line 1)) (8.0.3)
Requirement already satisfied: Flask==2.0.2 in /home/osboxes/.local/lib/python3.8/site-packages (from -r requirements.txt (line 2)) (2.0.2)
Requirement already satisfied: itsdangerous==2.0.1 in /home/osboxes/.local/lib/python3.8/site-packages (from -r requirements.txt (line 3)) (2.0.1)
Requirement already satisfied: Jinja2==3.0.2 in /home/osboxes/.local/lib/python3.8/site-packages (from -r requirements.txt (line 4)) (3.0.2)
Requirement already satisfied: MarkupSafe==2.0.1 in /home/osboxes/.local/lib/python3.8/site-packages (from -r requirements.txt (line 5)) (2.0.1)
Requirement already satisfied: Werkzeug==2.0.2 in /home/osboxes/.local/lib/python3.8/site-packages (from -r requirements.txt (line 6)) (2.0.2)
grep: python3 app.py: No such file or directory
* Serving Flask app 'app' (lazy loading)
* Environment: production
WARNING: This is a development server. Do not use it in a production deployment.
Use a production WSGI server instead.
* Debug mode: on
Traceback (most recent call last):
  File "app.py", line 11, in <module>
    app.run(host='0.0.0.0', port=5001, debug=True)
  File "/home/osboxes/.local/lib/python3.8/site-packages/flask/app.py", line 920, in run
    run_simple(t.cast(str, host), port, self, **options)
  File "/home/osboxes/.local/lib/python3.8/site-packages/werkzeug/serving.py", line 984, in run_simple
    s.bind(server_address)
OSError: [Errno 98] Address already in use
osboxes@osboxes:~/Desktop/nodejs/nodejs$ cat checkstatuslog.txt
cat: checkstatuslog.txt: No such file or directory
osboxes@osboxes:~/Desktop/nodejs/nodejs$ cat checkstatuslog.txt
Flask Server is running
osboxes@osboxes:~/Desktop/nodejs/nodejs$ cat deploy.sh
#!/bin/bash
cd /home/osboxes/Desktop/sravya/pythonflask
git pull
pip install -r requirements.txt
if ! pgrep -f "python3 app.py" > /dev/null; then
  nohup python3 app.py &
fi
osboxes@osboxes:~/Desktop/nodejs/nodejs$ cat checkstatus.sh
#!/bin/bash
if pgrep -f "python3 app.py" > /dev/null; then
  echo "Nodejs server is running"
else
  echo "Nodejs server is not running"
fi
osboxes@osboxes:~/Desktop/nodejs/nodejs$
```

1)Creating a docker file and image for reactjs

```
MINGW64/C:/Users/sravya/OneDrive/Desktop/react
$ docker login
Authenticating with existing credentials...
Login Succeeded

Logging in with your password grants your terminal complete access to your account.
For better security, log in with a limited-privilege personal access token. Learn more at https://docs.docker.com/go/access-tokens/

$ docker images
REPOSITORY    TAG       IMAGE ID       CREATED        SIZE
ubuntu        latest    58db3eda72be   3 weeks ago   77.8MB

$ docker build -t reactjs .
[internal] load build definition from Dockerfile
#1 sha256:a1808a275a35c28e5f01b4135acc4bd1adb99c4341bb6981a9559480cc4d90
#1 transferring dockerfile: 139B done
#1 DONE 0.0s

#2 [internal] load dockerignore
#2 sha256:3677950a3bdf9dcd603b54705ee0eb9f37d04f99350123104e74f1aff3c67c1
#2 transferring context: 34B done
#2 DONE 0.0s

#3 [internal] load metadata for docker.io/library/node:latest
#3 sha256:1c0b03b8408c9b7acac32e47f7e374eba112b4adcbb1de68aa72d5a6046f
#3 ...

#4 [auth] library/node:pull token for registry-1.docker.io
#4 sha256:9c6505a7b106cae4aaa369eef3c9302d163e95f3f15f04599e5bed2acd0a5f
#4 DONE 0.0s

#5 [internal] load metadata for docker.io/library/node:latest
#5 sha256:1c0b03b8408c9b7acac32e47f7e374eba112b4adcbb1de68aa72d5a6046f
#5 DONE 3.4s

#10 [1/5] FROM docker.io/library/node:latest@sha256:d82f1c3ab27a01bd49f963ff4d24ef68852dad3780d9d42e3b03f4fa3f62a
#10 sha256:da61a20d66c8d1d8451b93e08a5b4599af3df1f6e75e3278a59271066c0feb
#10 resolve docker.io/library/node:latest@sha256:d82f1c3ab27a01bd49f963ff4d24ef68852dad3780d9d42e3b03f4fa3f62a 0.0s done
#10 ...

#6 [internal] load build context
#6 sha256:e458094d8b5a2825f034c3933ccd385591225761b6e249906a099ed1b872f17
#6 transferring context: 1.30MB 0.1s done
#6 DONE 0.2s

#10 [1/5] FROM docker.io/library/node:latest@sha256:d82f1c3ab27a01bd49f963ff4d24ef68852dad3780d9d42e3b03f4fa3f62a
#10 sha256:da61a20d66c8d1d8451b93e08a5b4599af3df1f6e75e3278a59271066c0feb
#10 sha256:5dd25810c84184b7ca8fd95b9105eb6feee9bc516baf3491375af1dc7e947b9 2.21s / 2.21s done
#10 sha256:c3a11fbc85a2a9660c98c9bd0a2db8cde983ce3c87565c356cdf1ddf2654c 0B /
```

```
MINGW64/C:/Users/sravya/OneDrive/Desktop/react
#9 90.38 npm notice Run npm install -g npm@9.5.0 to update!
#9 90.38 npm notice
#9 DONE 90.8s

#9 [5/5] COPY
#9 sha256:b5ed491ef0aa185ab987556cdf8dbd6be2fc152362c597d407247a37ef6b808
#9 DONE 0.1s

#11 exporting to image
#11 sha256:e8c613e07b0b7ff33893b6947759a10d42e180f2b4dc349fb57dc6b71dcab00
#11 exporting layers
#11 exporting layers 5.8s done
#11 writing image sha256:1728c597805e0c461a8f659f07eff116585762580d3d06fed20879260a1a799c
#11 writing image sha256:1728c597805e0c461a8f659f07eff116585762580d3d06fed20879260a1a799c done
#11 naming to docker.io/library/reactjs done
#11 DONE 5.8s

Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them

$ docker images
REPOSITORY    TAG       IMAGE ID       CREATED        SIZE
reactjs       latest    1728c597805e   2 minutes ago  1.41GB
ubuntu        latest    58db3eda72be   3 weeks ago   77.8MB

$ docker tag reactjs:latest sravyananduri/reactjs

$ docker push sravyananduri/reactjs
Using default tag: latest
The push refers to repository [docker.io/sravyananduri/reactjs]
19589836ca79: Preparing
76e1c267d821: Preparing
4411e8ca7ce1: Preparing
30365d91467: Preparing
d3710631793c: Preparing
9b46c8b64598: Preparing
c61a1dbf0488: Preparing
4c92897e603e: Preparing
b6853be9ff1: Preparing
11829b3be9c0: Preparing
d82e1d85349: Preparing
9d49e0bc68a4: Preparing
8e396a1aad50: Preparing
9b46c8b64598: waiting
c61a1dbf0488: waiting
4c92897e603e: waiting
b6853be9ff1: waiting
11829b3be9c0: waiting
8e396a1aad50: waiting
d82e1d85349: waiting
9d49e0bc68a4: waiting
d3710631793c: Mounted from library/node
345b65d91467: Pushed
4411e8ca7ce1: Pushed
19589836ca79: Pushed
9b46c8b64598: Mounted from library/node
```

```
MINGW64~/Users/sravya/OneDrive/Desktop/react
Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them

sravya@ell MINGW64 ~/OneDrive/Desktop/react (master)
$ docker images
REPOSITORY    TAG       IMAGE ID       CREATED        SIZE
reactjs       latest    1728c597805e   2 minutes ago  1.41GB
ubuntu        latest    58db3eda72be    3 weeks ago    77.0MB

sravya@ell MINGW64 ~/OneDrive/Desktop/react (master)
$ docker tag reactjs:latest sravyananduri/reactjs

sravya@ell MINGW64 ~/OneDrive/Desktop/react (master)
$ docker push sravyananduri/reactjs
The push refers to repository [docker.io/sravyananduri/reactjs]
19589836c379: Preparing
76e1c267d821: Preparing
4411e8ca7ce1: Preparing
345b65d91467: Preparing
d7710631793c: Preparing
8a46c8b64598: Preparing
c81a1dbf0488: Preparing
4c92897e605e: Preparing
0e6839e9fff1: Preparing
11829b3be9c0: Preparing
d49e0bc68a4: Preparing
8c39a1aad50: Preparing
8a46c8b64598: waiting
c81a1dbf0488: waiting
4c92897e605e: waiting
0e6839e9fff1: waiting
11829b3be9c0: waiting
d49e0bc68a4: waiting
8c39a1aad50: waiting
d49e0bc68a4: waiting
d7710631793c: Mounted from library/node
345b65d91467: Pushed
4411e8ca7ce1: Pushed
19589836c379: Pushed
8a46c8b64598: Mounted from library/node
c81a1dbf0488: Mounted from library/node
4c92897e605e: Mounted from library/node
0e6839e9fff1: Mounted from library/node
d49e0bc68a4: Mounted from library/node
11829b3be9c0: Mounted from library/node
8c39a1aad50: Mounted from library/node
76e1c267d821: Pushed
latest: digest: sha256:88448370ee1e44b054d43c4d0462129481332b4e656a9b38ca3539eff194dc8 size: 3051

sravya@ell MINGW64 ~/OneDrive/Desktop/react (master)
$ docker run -d -p 3000:3000 reactjs
d44aa1c1545667186b27ca9b623aa154539b0dd3611beef20ccc99e9174f8b90

sravya@ell MINGW64 ~/OneDrive/Desktop/react (master)
$
```

