Difference between imperative and declarative?

How many namespaces we have in kubernetes?

Namespaces====

Default:-

Kube-system:-the resources which are belongs to k8s cluster

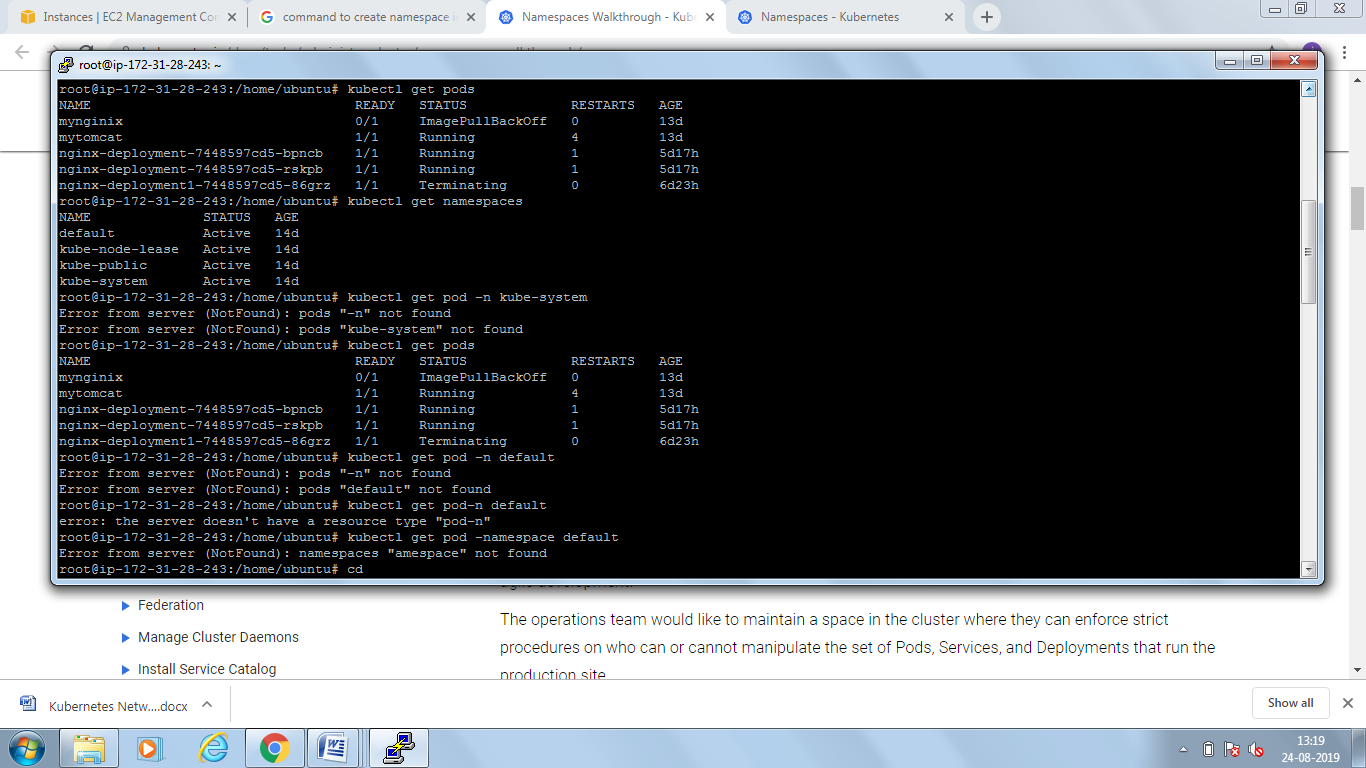
Kube-puplic:-

=============== n namespaces ============

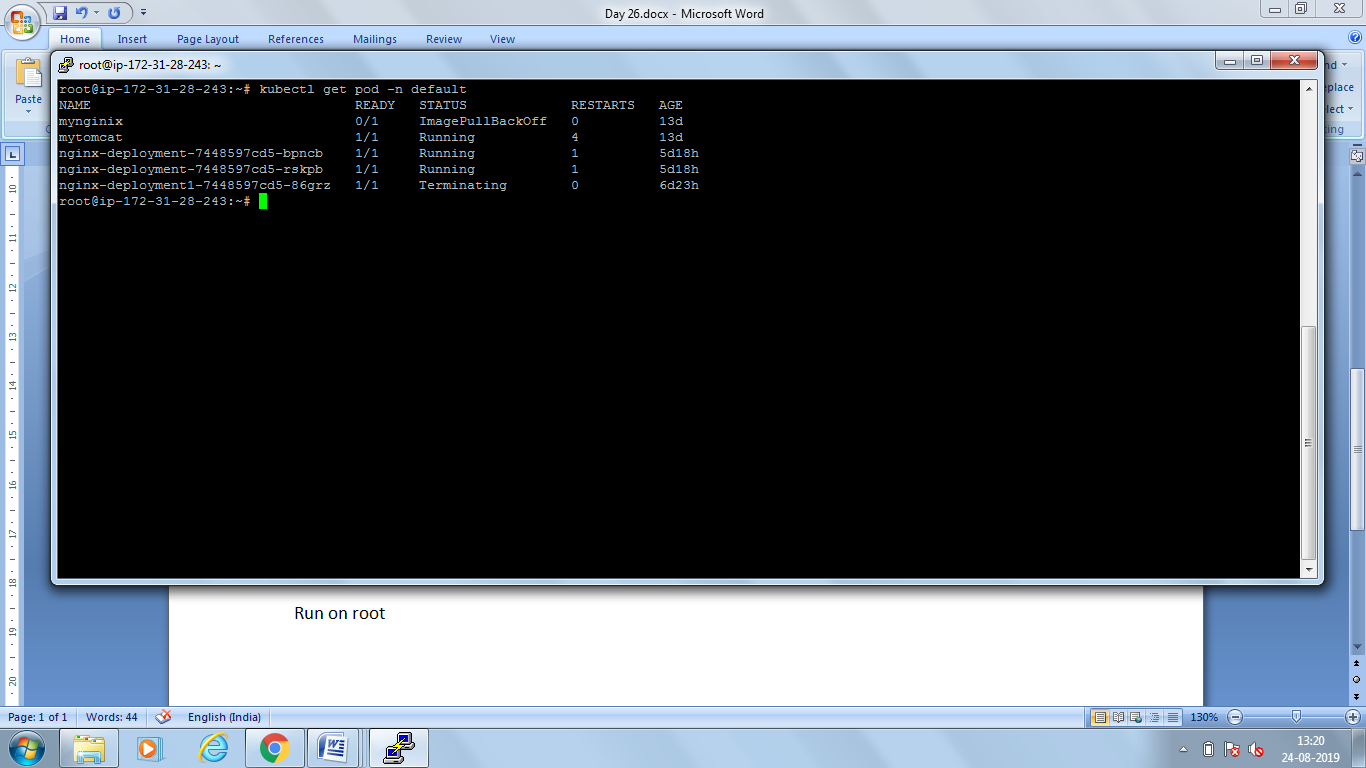
Kubectl get pod –n kube-system

Kubectl get pod –n default

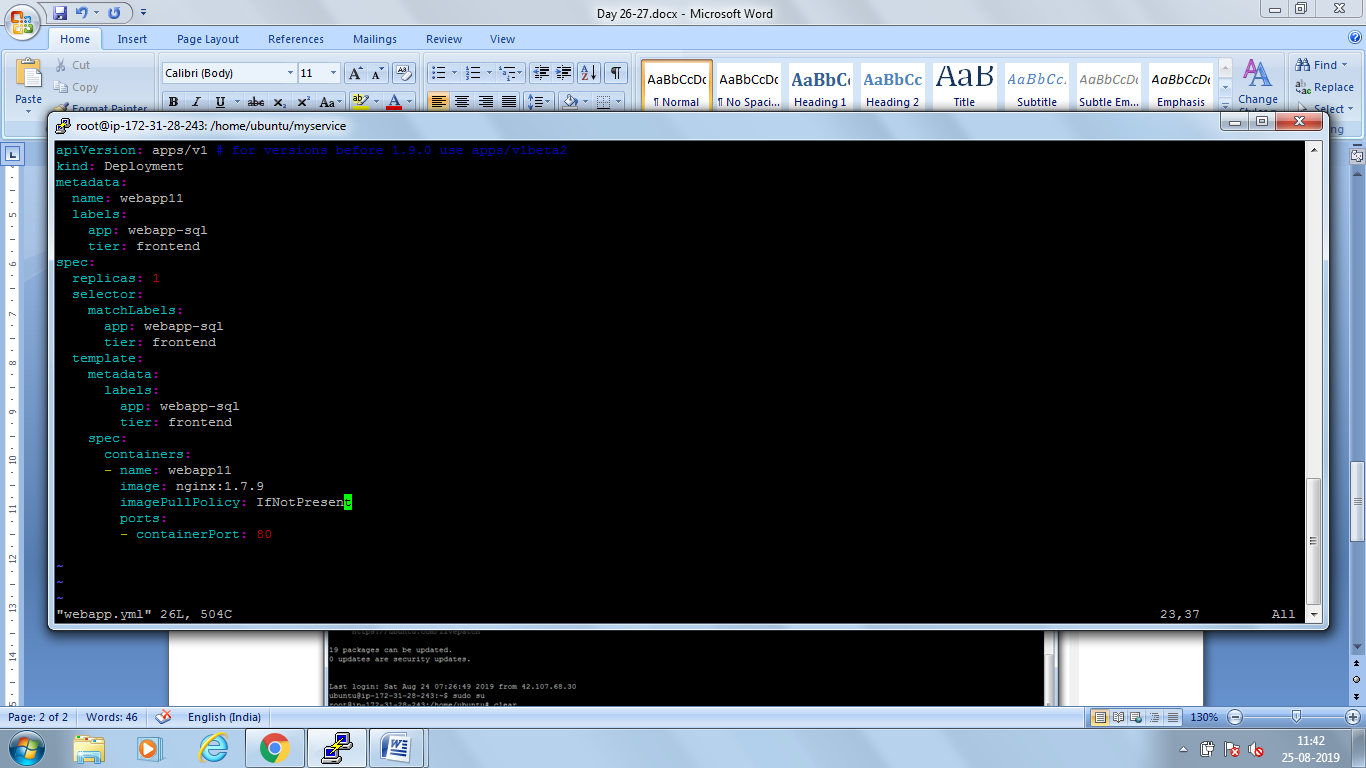
Kubectl create namespace prod

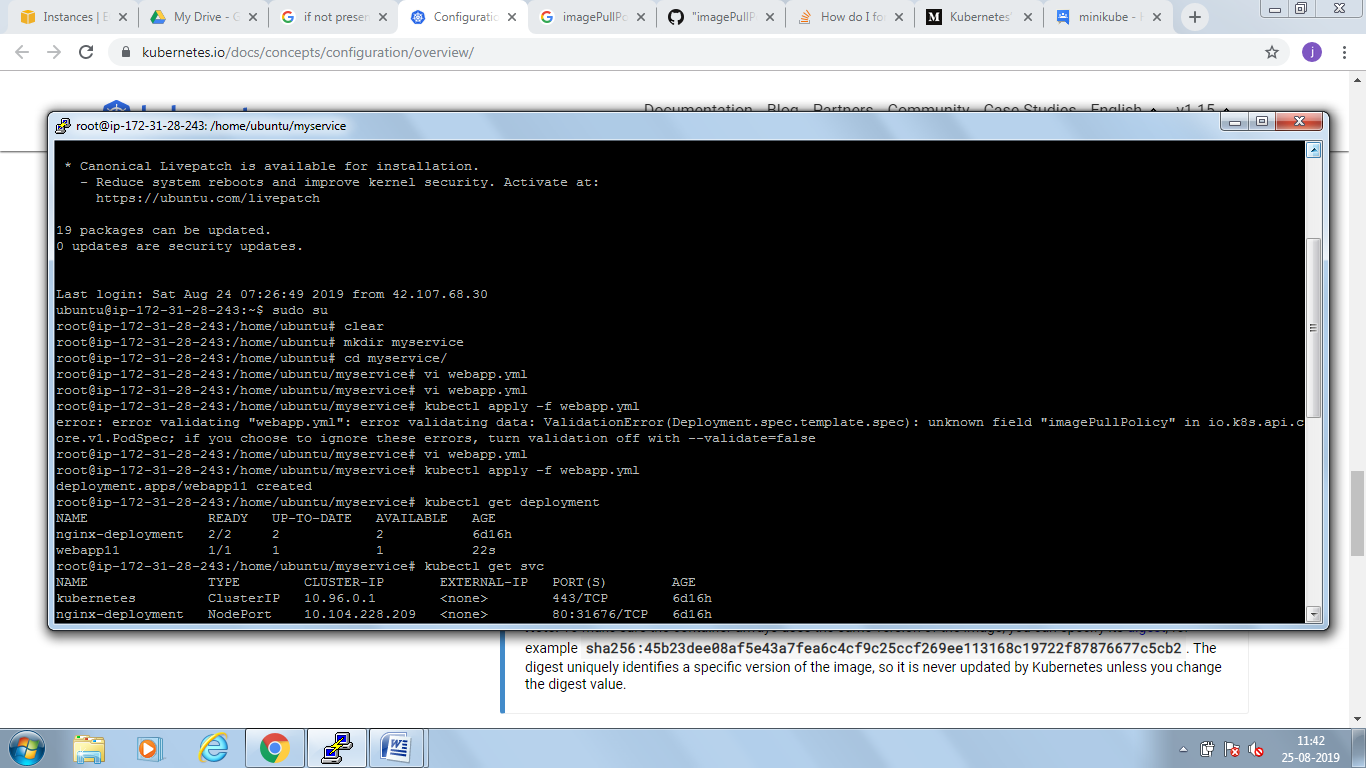


Run on root

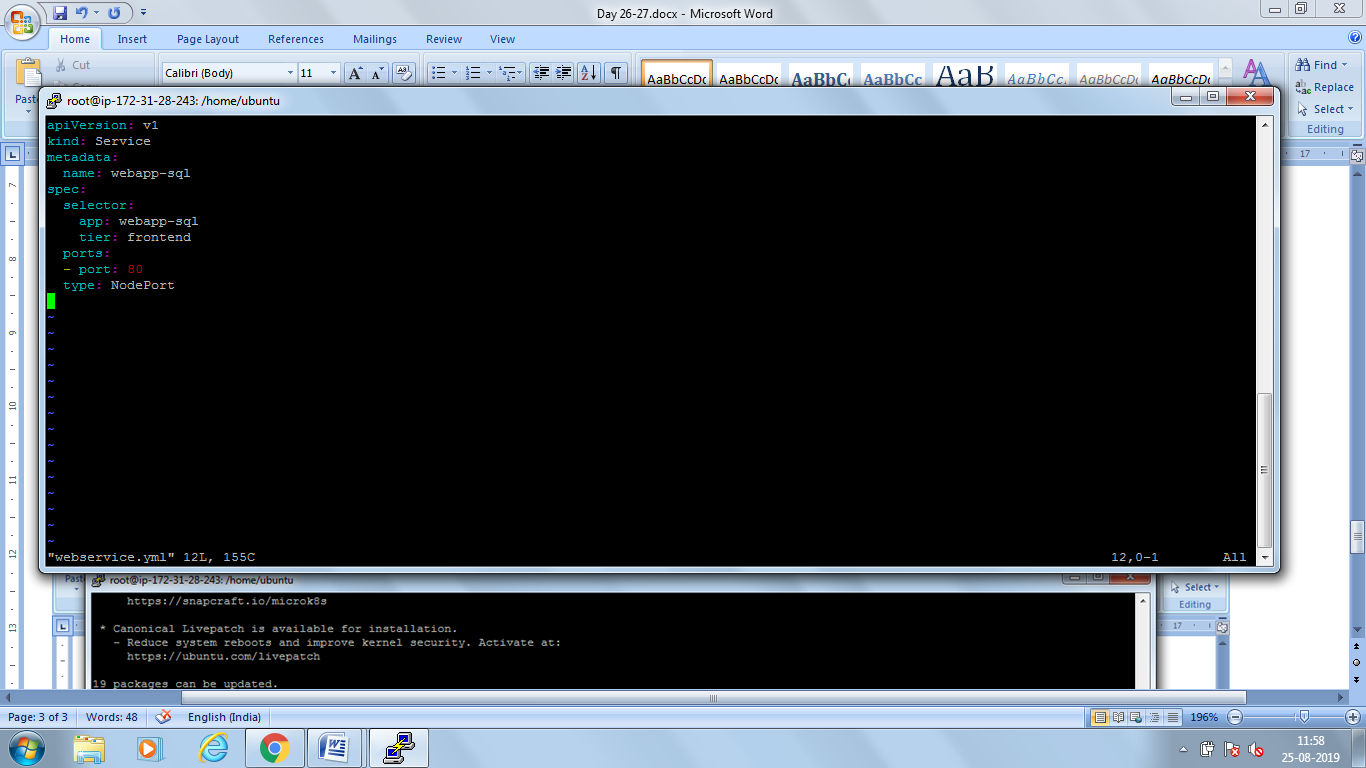


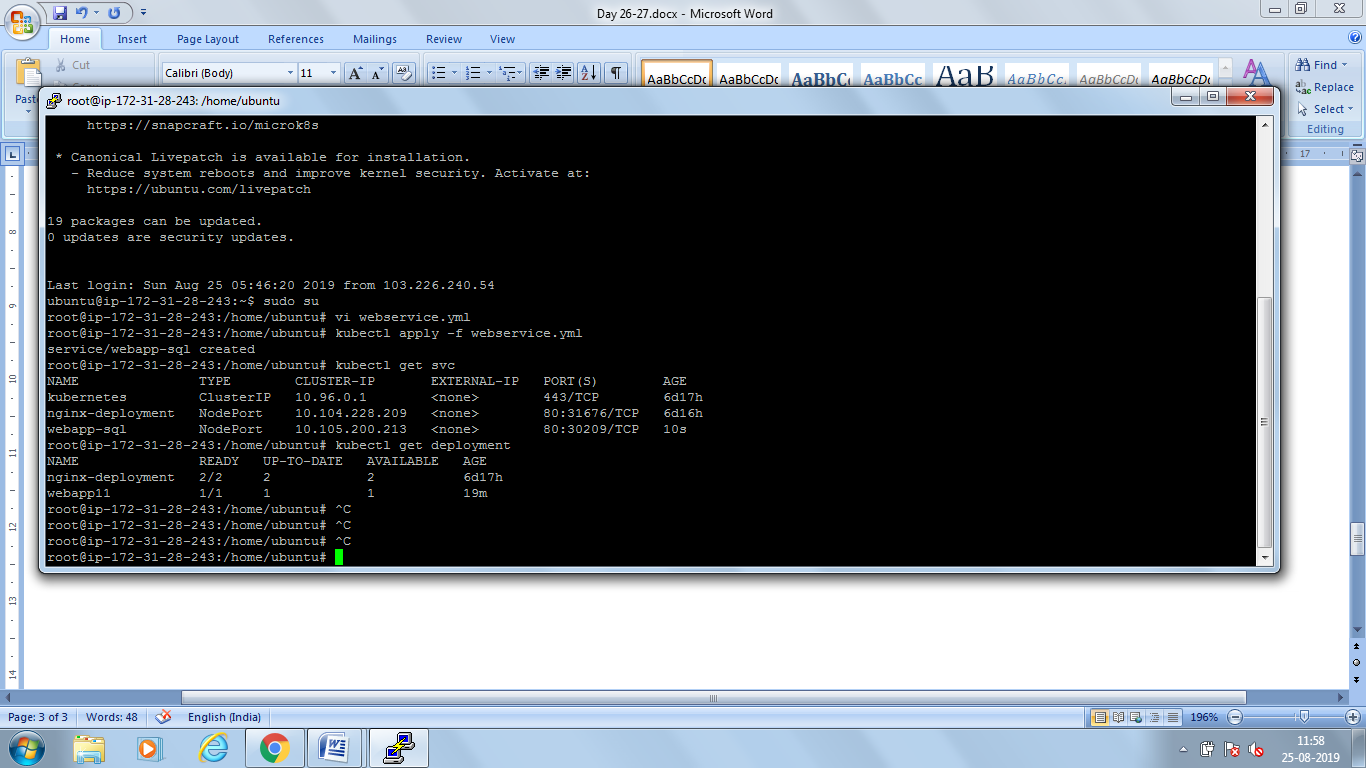
Day 27

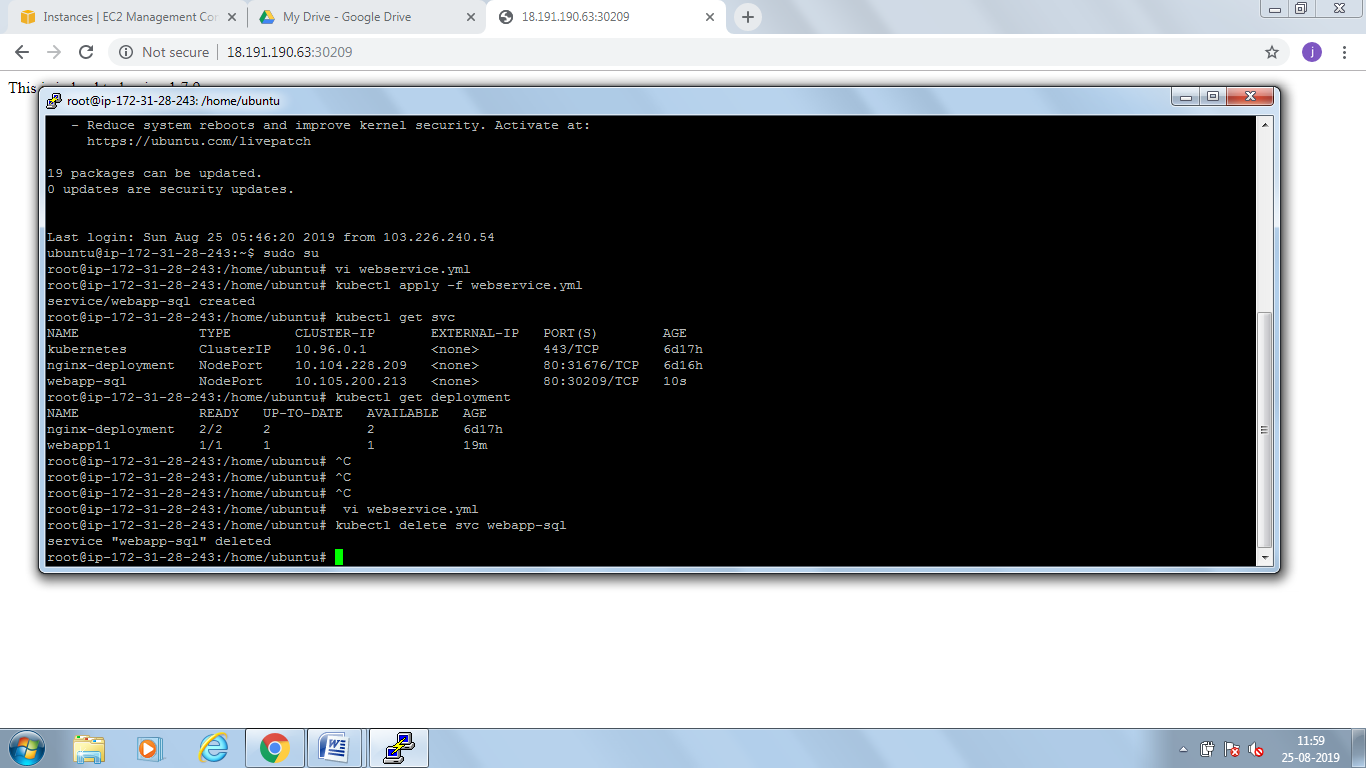


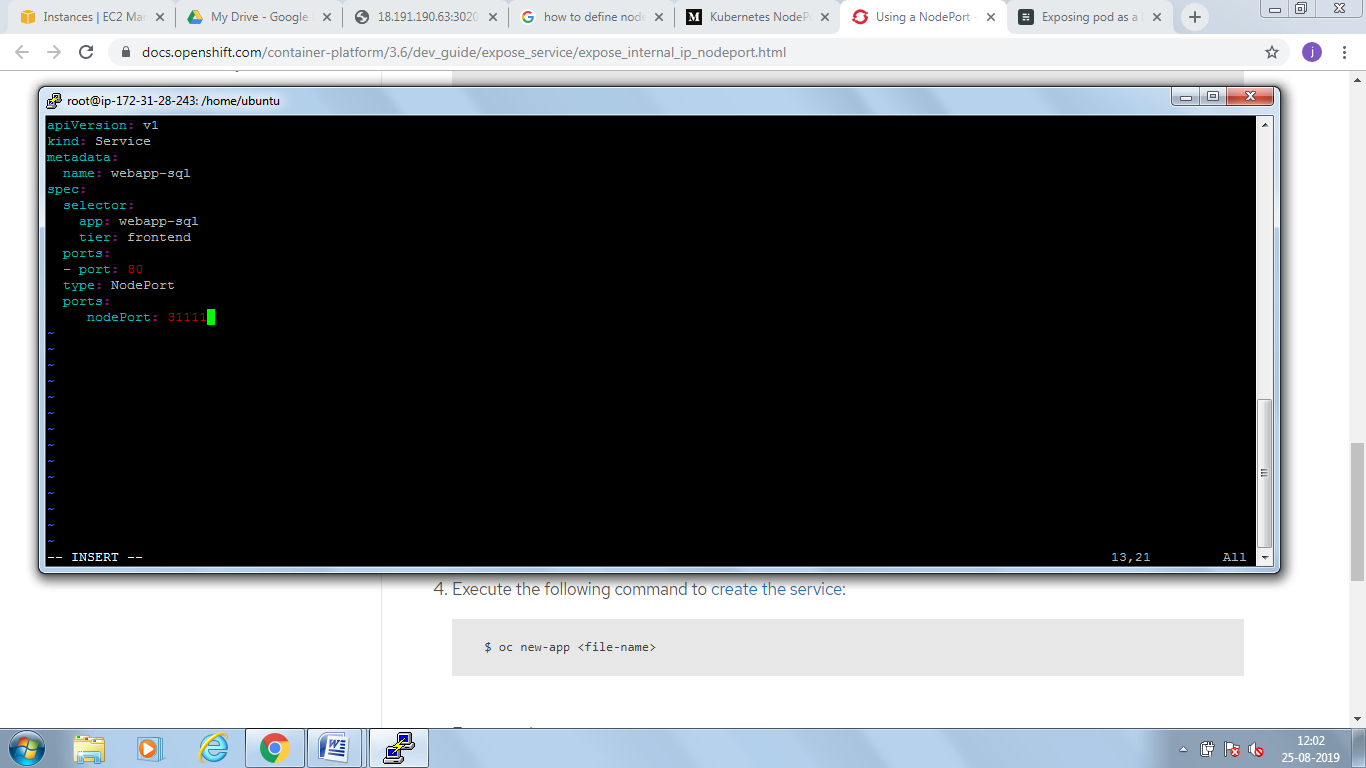


vi webservice.yml

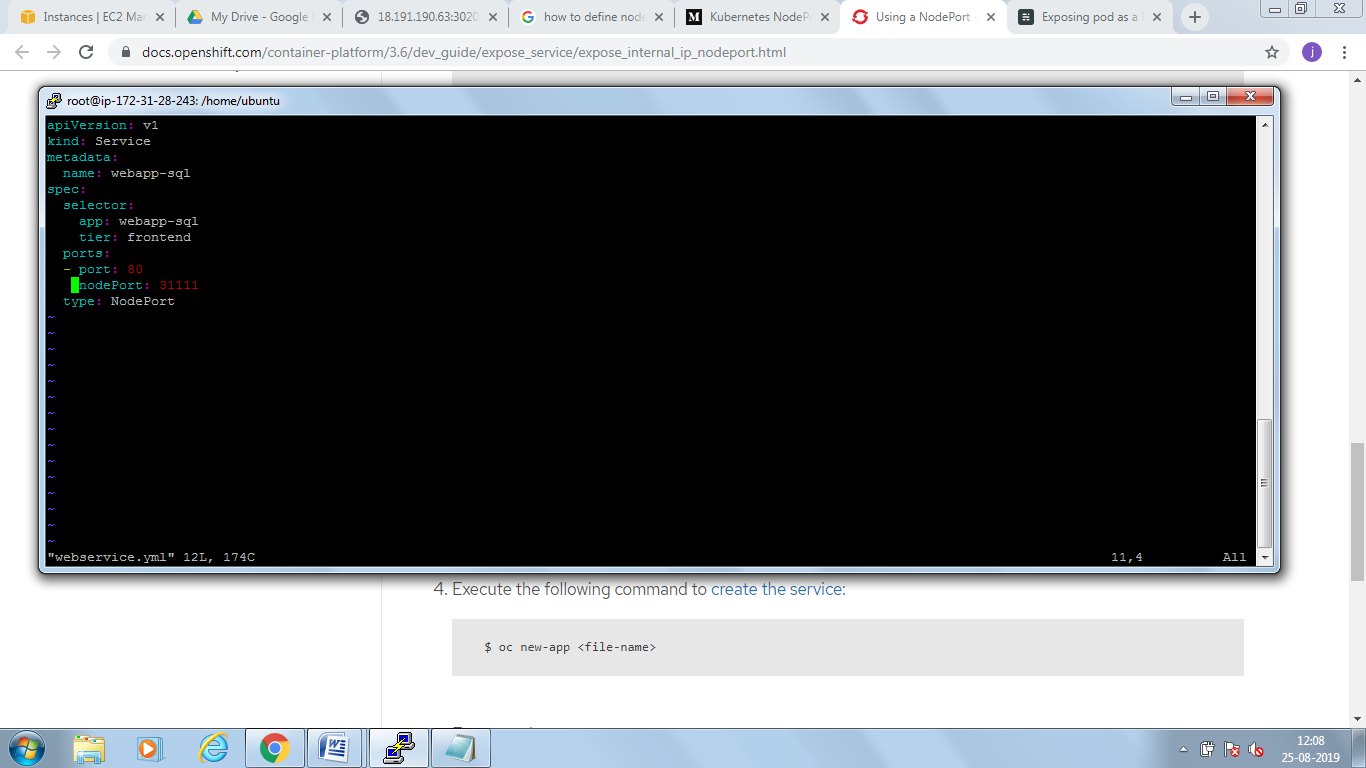


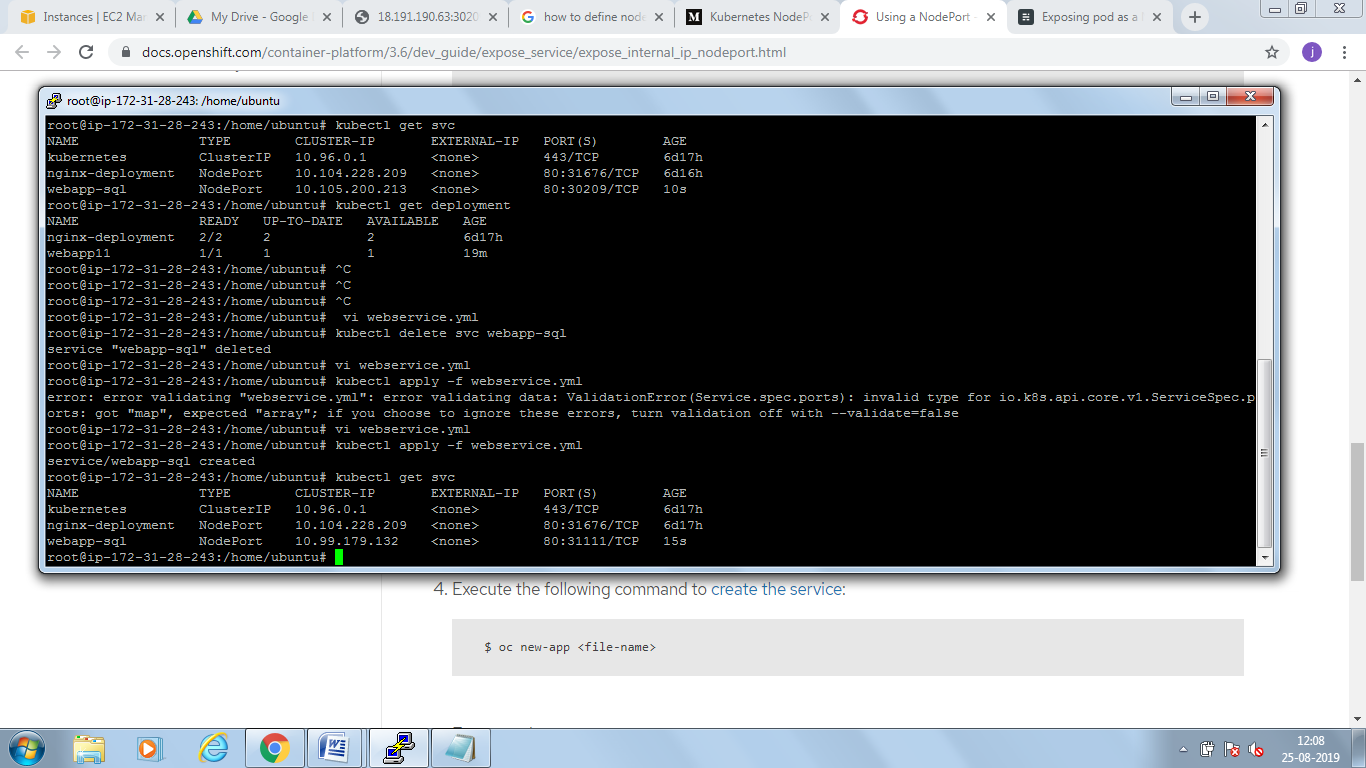


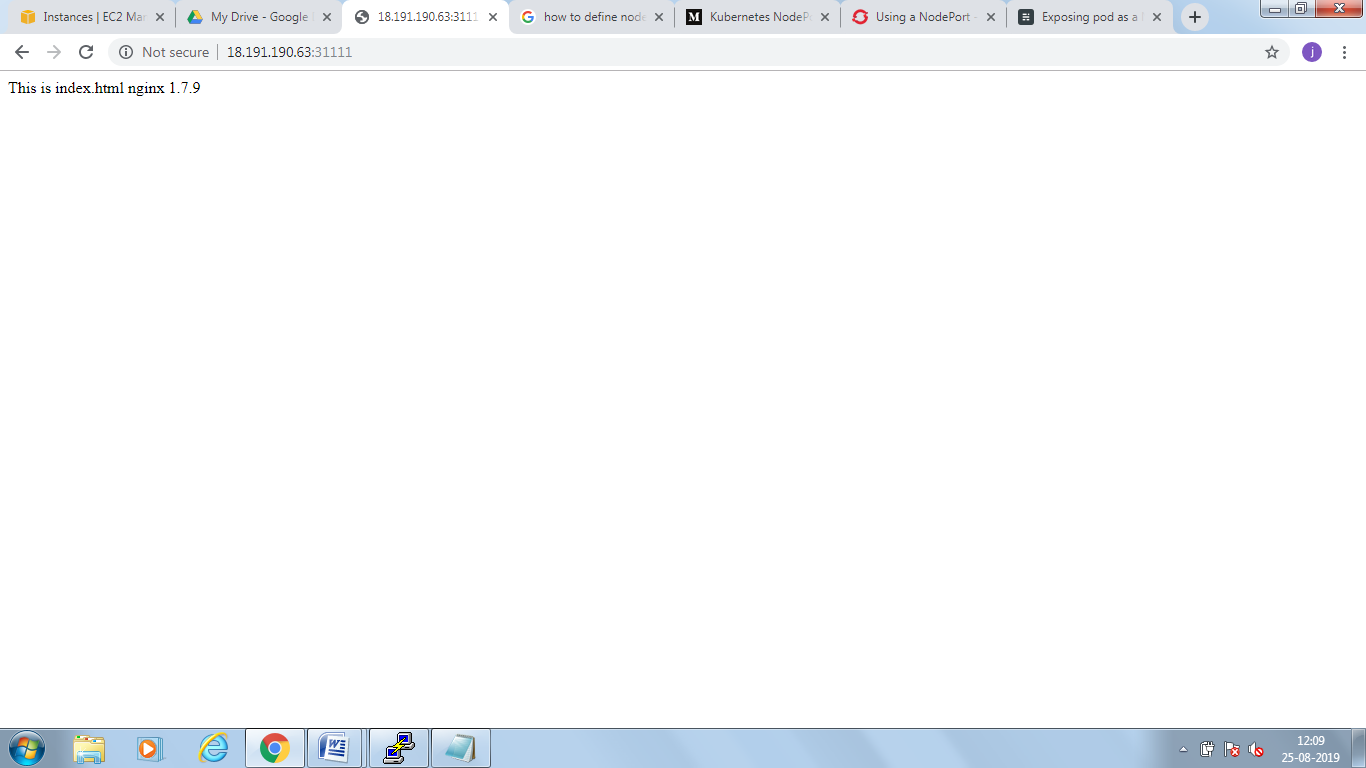


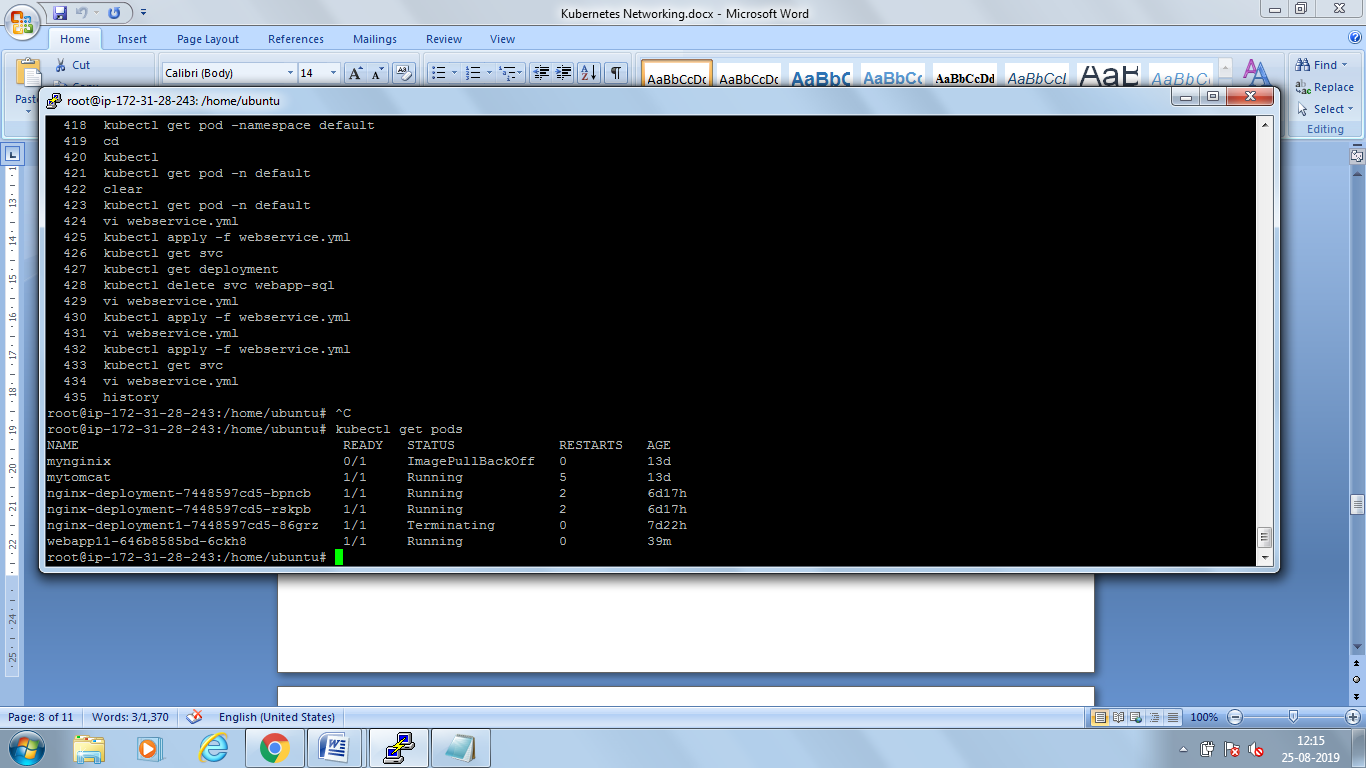


Creating on define noteport for ex 31111









1 apt-get update && apt-get install -y apt-transport-https

2 curl -s https://packages.cloud.google.com/apt/doc/apt-key.gpg | apt-key add -

3 cat <<EOF >/etc/apt/sources.list.d/kubernetes.list

4 deb http://apt.kubernetes.io/ kubernetes-xenial main

5 EOF

6 cat <<EOF >/etc/apt/sources.list.d/kubernetes.list

7 deb http://apt.kubernetes.io/ kubernetes-xenial main

8 EOF

9 cat <<EOF >/etc/apt/sources.list.d/kubernetes.list

10 deb http://apt.kubernetes.io/ kubernetes-xenial main

11 EOF

12 cat <<EOF>/etc/apt/sources.list.d/kubernetes.list

13 deb http://apt.kubernetes.io/ kubernetes-xenial main

14 EOF

15 cd /etc/apt/sources.list.d/kubernetes.list

16 cd /etc/apt/sources.list.d/

17 ls

18 cat kubernetes.list

19 apt-get update

20 apt-get install -y docker.io

21 apt-get install -y kubelet kubeadm kubectl kubernetes-cni

22 kubeadm init

23 sudo cp /etc/kubernetes/admin.conf $HOME/

24 sudo chown $(id -u):$(id -g) $HOME/admin.conf

25 export KUBECONFIG=$HOME/admin.conf

26 kubectl apply -f https://git.io/weave-kube

27 docker info | grep -i cgroup

28 cat /etc/systemd/system/kubelet.service.d/10-kubeadm.conf

29 sed -i "s/cgroup-driver=systemd/cgroup-driver=cgroupfs/g" /etc/systemd/system/kubelet.service.d/10-kubeadm.conf

30 cat /etc/systemd/system/kubelet.service.d/10-kubeadm.conf

31 clear

32 cat /etc/systemd/system/kubelet.service.d/10-kubeadm.conf

33 systemctl daemon-reload

34 systemctl restart kubelet

35 mkdir -p $HOME/.kube

36 sudo cp -i /etc/kubernetes/admin.conf $HOME/.kube/config

37 sudo chown $(id -u):$(id -g) $HOME/.kube/config

38 kubectl taint nodes --all node-role.kubernetes.io/master-

39 kubectl apply -f https://git.io/weave-kube-1.6

40 kubectl get node

41 kubectl label nodes ip-172.31.28.243 node-role.kubernetes.io/node2=ip-172.31.28.243

42 kubectl label nodes ip-172-31-28-243 node-role.kubernetes.io/node2=ip-172-31-28-243

43 kubectl get nodes

44 kubectl get pods

45 kubectl get pods --show-labels

46 kubectl get pods

47 kubectl get nodes

48 kubectl label nodes ip-172-31-40-180 node-role.kubernetes.io/node3=ip-172-31-40-180

49 kubectl get nodes

50 kubectl label node ip-172-31-28-243 node2-

51 kubectl get nodes

52 kubectl label nodes ip-172-31-28-243 node2-

53 kubectl label nodes ip-172-31-28-243 node2

54 kubectl get nodes

55 kubectl label node ip-172-31-28-243 node2-

56 kubectl label node ip-172-31-28-243 master,node2-

57 kubectl label nodes ip-172-31-28-243 node2-

58 kubectl label node ip-172-31-28-243 ,node2-

59 kubectl label node ip-172-31-28-243 node2-

60 kubectl get nodes

61 docker ps

62 clear

63 kubectl run --image=nginx

64 kubectl run --image=nginx deployment

65 kubectl get pods

66 kubectl get pods -o wide

67 kubectl get deployments

68 docker ps

69 docker inspect b130b8d51817

70 clear

71 kubectl get pods -o wide

72 kubectl expose deployment-66f64f9db9-6tw7f 80 --81 service

73 kubectl expose pod deployment-66f64f9db9-6tw7f --port=80 --targetport=81 --type=NodePort

74 kubectl expose pod deployment-66f64f9db9-6tw7f --port=80 --target-port=81 --type=NodePort

75 history

76 kubectl get svc

77 history

78 kubectl get svc

79 kubectl expose pod deployment-66f64f9db9-6tw7f --port=80 --target-port=80 --type=NodePort

80 kubectl get svc

81 kubectl expose pod deployment-66f64f9db9-6tw7f --port=80 --target-port=80 --type=NodePort

82 kubectl get svc

83 kubectl delete svc deployment-66f64f9db9-6tw7f

84 kubectl expose pod deployment-66f64f9db9-6tw7f --port=80 --target-port=80 --type=NodePort

85 kubectl get svc

86 history

87 exit

88 cd /home/ubuntu

89 history

90 cd mydir2

91 history

92 kubectl get pods -o wide

93 cd ..

94 history

95 exit

96 clear

97 kubectl run --image=jenkins myjenkins

98 kubectl get pods -o wide

99 kubectl exec -it myjenkins-6756544b8c-wd9p2> /bin/bash

100 kubectl exec -it myjenkins-6756544b8c-wd9p2 /bin/bash

101 kubectl expose pod myjenkins-6756544b8c-wd9p2 --port=8080 --target-port=8080 --type=NodePort

102 kubectl get svc

103 history

104 clear

105 kubectl run --image=tomcat mytomcat

106 kubectl get pods -o wide

107 kubectl get svc

108 kubectl expose pod mytomcat-7f957487f-mzpfb --port=8080 --target-port=8080 --type=NodePort

109 kubectl get svc

110 history

111 clear

112 kubectl get pods

113 kubectl edit pods myjenkins-6756544b8c-wd9p2

114 mkdir mydir

115 cd mydir/

116 vi mytomcat.yml

117 kubectl create -f mytomcat.yml

118 vi mytomcat.yml

119 kubectl create -f mytomcat.yml

120 vi mytomcat.yml

121 kubectl create -f mytomcat.yml

122 vi mytomcat.yml

123 vi mytomcat.yml

124 kubectl get pods

125 cd ..

126 mkdir mydir1

127 cd mydir1

128 vi mynginix.yml

129 kubectl create -f mynginix.yml

130 cd ..

131 cd mydir

132 vi mytomcat.yml

133 kubectl get pods

134 cd ..

135 mkdir mydir2

136 cd mydir2

137 vi mytomcat.yml

138 kubectl create -f mytomcat.yml

139 vi mytomcat.yml

140 kubectl create -f mytomcat.yml

141 vi mytomcat.yml

142 kubectl create -f mytomcat.yml

143 vi mytomcat.yml

144 kubectl create -f mytomcat.yml

145 kubectl get pods

146 cd..

147 cd

148 sudo su

149 exit

150 clear

151 ls

152 mkdir mydir3

153 cd mydir3

154 vi myjenkins.yml

155 kubectl create -f myjenkins.yml

156 kubectl get pods

157 kubectl get pods -o wide

158 kubectl expose pod jenkins-8564654896-j6x5h --port=8080 --target-port=8080 --type=NodePort

159 kubectl get pods -o wide

160 kubectl get svc

161 cd var/jenkins\_home

162 kubectl exec -it jenkins-8564654896-j6x5h /bin/bash

163 cd ..

164 clear

165 ls

166 mkdir mydir4

167 cd mydir4

168 vi myapache.yml

169 kubectl create -f myapache.yml

170 kubectl get pods -o wide

171 kubectl expose pod webserver-69ff8fbcc9-rtkz7 --port=8080 --target-port=8080 --type=NodePort

172 kubectl get pods -o wide

173 kubectl get svc

174 cd ..

175 kubectl get svc

176 exit

177 kubectl get pods

178 kubectl get deployments

179 kubectl get svc

180 kubectl exec -it webserver-69ff8fbcc9-rtkz7 /bin/bash

181 cd mydir4

182 ls

183 cat myapache.yml

184 exit

185 ls

186 mkdir mydir5

187 ls

188 cd mydir5

189 vi dockerfile.yml

190 vi index.html

191 docker build -t myimage01 .

192 ls

193 mv dockerfile.yml dockerfile

194 docker build -t myimage01 .

195 vi dockerfile

196 docker build -t myimage01 .

197 docker images

198 docker run -itd --name mynginx 3b3bcf6f15da /bin/bash

199 dcoker ps -a

200 docker ps -a

201 docker images

202 cd usr/share/nginx

203 cd usr

204 cd -

205 ls

206 mkdir mydir6

207 cd mydir6

208 vi dockerfile

209 vi index.html

210 docker build -t nginx:1.9.1

211 docker build -t nginx:1.9.1 .

212 docker images

213 cd -

214 cd mydir5

215 docker build -t nginx:1.7.9 .

216 docker images

217 cd -

218 docker images

219 cd mydir5

220 docker exec -itd myimage01 /bin/bash

221 docker run -itd --name mycontainer05 3b3bcf6f15da /bin/bash

222 ls

223 cat index.html

224 docker images

225 docker ps -a

226 cd -

227 ls

228 cd mydir3

229 ls

230 cd -

231 cd mydir4

232 ls

233 cat myapache.yml

234 cd -

235 docker run -itd -p 10001:80 nginx

236 cd mydir5

237 ls

238 docker exec -it mynginx5

239 docker exec -it mynginx5 /bin/bash

240 ls

241 cat index.html

242 vi dockerfile

243 cd

244 docker images

245 docker rmi -f dockerfile nginx

246 docker images

247 docker rmi -f myimage01

248 docker rmi -f nginx

249 docker images

250 cd /home/

251 ls

252 cd ubuntu/

253 ls

254 cd mydir5

255 ls

256 vi dockerfile

257 docker build -t mynginx1 .

258 docker run -itd --name ngin1 -p 80:80 mynginx1

259 docker exec -it ngin1 /bin/bash

260 history

261 cd -

262 cd mydir6

263 ls

264 vi dockerfile

265 vi index.html

266 docker build -t ng2 .

267 docker run -itd --name ng4 -p 1004:80 ng2

268 docker exec -it ng4 /bin/bash

269 cd -

270 vi deployment-rollingupdate.yml

271 cat deployment-rollingupdate.yml

272 Kubectl create -f deployment-rollingupdate.yml

273 kubectl create -f deployment-rollingupdate.yml

274 kubectl get deployment

275 ls

276 cat deployment-rollingupdate.yml

277 mv deployment-rollingupdate.yml deployment-rollingupdate1.yml

278 kubectl create -f deployment-rollingupdate1.yml

279 vi deployment-rollingupdate1.yml

280 kubectl create -f deployment-rollingupdate1.yml

281 kubectl get deployment

282 vi deployment-rollingupdate1.yml

283 docker images

284 kubectl apply –f deployment-rollingupdate1.yml

285 kubectl apply -f deployment-rollingupdate1.yml

286 kubectl get deployment

287 kubectl rollout status deployment/nginx-deployment

288 kubectl rollout status deployment/nginx-deployment1

289 kubectl get svc

290 clear

291 docker ps -a

292 docker rm 34b6d9c8f977

293 docker rm f7949b268eca 3cadef8a9c32 6220ab9e5628 42110ba4a54b a2792a4c855c 290981d73def 93a74eb38c25 758a406b9355

294 docker rm dc00074ceb14 535c41ce3002 ddfe0442dfc9 c8145e8968a5 aa44985e3d23 4a71a175f1c9 f377b43b98e2

295 clear

296 docker ps -a

297 docker rm 40f396f0662f 548e818482a2 bba6c4667577 5b60e0fa7e3b 97dbcb2e63e6 fb80c51521d6 f152e689cc63 a0a1d4b6a26c def4b9b9eb58 96ebdc0b1bdc f4d2f0504b88 d0affc8b57dc 9a7ce2d030f5 cb0de7ca726e b7fa2647b41a c684d5614eea 8c8520ee46e5 8da9ea91c4bc 1e47fab63b35 495fb14d3ab9

298 clear

299 docker ps -a

300 docker rm 4fdbc38468ba 7f3d3ad55190 f7e1aca1bed6

301 docker ps -a

302 docker rm -f a92a9093437a f0b63e36d691 ecbf3a4f62bf 405ac93fb4d6 1f5bbb50cbe7 787aa8f5a414 491d1bba358d 121ee9a1cce4

303 docker ps -a

304 docker images

305 docker rmi 84581e99d807

306 doc

307 docker rmi 94ec7e53edfc

308 docker rmi da86e6ba6ca1

309 docker rmi -f da86e6ba6ca1

310 docker rmi -f cd14cecfdb3a

311 ls

312 rm deployment-rollingupdate1.yml

313 ls

314 rm mydir

315 cd mydir2

316 ls

317 cat mytomcat.yml

318 cd -

319 ls

320 cd mydir

321 ls

322 cat mytomcat.yml

323 cd -

324 cd mydir3

325 ls

326 cat myjenkins.yml

327 cd -

328 ls

329 cd mydir4

330 ls

331 cat myapache.yml

332 cd -

333 cd mydir5

334 ls

335 vi dockerfile

336 cd -

337 cd mydir6

338 ls

339 vi dockerfile

340 clear

341 docker ps

342 docker rmi -f eb516548c180

343 docker rm -f

344 docker rm -f adf3399cb33b

345 docker rmi -f eb516548c180

346 docker ps

347 docker get svc

348 kubectl get svc

349 kubectl delete svc deployment-66f64f9db9-6tw7f

350 kubectl delete svc jenkins-8564654896-j6x5h

351 kubectl delete svc kubernetes

352 kubectl delete svc myjenkins-6756544b8c-wd9p2

353 kubectl delete svc mytomcat-7f957487f-mzpfb

354 kubectl get svc

355 kubectl delete svc kubernetes

356 cd -

357 ls

358 kubectl get svc

359 docker ps

360 cd mydir6

361 ls

362 vi deployment-rollingupdate.yml

363 Kubectl create -f deployment-rollingupdate.yml

364 kubectl create -f deployment-rollingupdate.yml

365 k get deployments

366 kubectl get deployment

367 kubectl delete nginx-deployment

368 kubectl delete deploy/nginx-deployment

369 kubectl get deployment

370 kubectl delete deploy/nginx-deployment1

371 kubectl delete deploy/webserver

372 kubectl delete deploy/mytomcat

373 kubectl delete deploy/myjenkins

374 kubectl delete deploy/jenkins

375 kubectl delete deploy/deployment

376 kubctl get svc

377 kubectl get svc

378 kubectl delete svc webserver-69ff8fbcc9-rtkz7

379 kubectl get svc

380 docker ps

381 clear

382 kubectl create -f deployment-rollingupdate.yml

383 kubectl get deployment

384 kubectl describe deployment nginx-deployment

385 docker ps

386 docker describe 0c6649e91c99

387 docker inspect 0c6649e91c99

388 kubectl get deployment

389 kubectl expose deployment nginx-deployment my-nginx --port=80 --target-port=80 --type=NodePort

390 kubectl expose deployment nginx-deployment --port=80 --target-port=80 --type=NodePort

391 kubectl get svc

392 kubectl get pods -l app=nginx -L deployment

393 kubectl describe pods nginx-deployment-5754944d6c-cs8w7

394 vi deployment-rollingupdate.yml

395 kubectl get deployment

396 kubectl apply –f deployment-rollingupdate.yml

397 kubectl apply -f deployment-rollingupdate.yml

398 kubectl get pods -l app=nginx -L deployment

399 kubectl rollout status deployment/nginx-deployment

400 kubectl get deployment

401 kubectl describe deployment nginx-deployment

402 kubectl get pods -l app=nginx -L deployment

403 kubectl get pods -o wide

404 kubectl get svc

406 kubectl get deployment

407 kubectl edit deployment/nginx-deployment

408 kubectl info

409 kubectl get info

410 kubectl version

412 kubectl get pods

413 kubectl get namespaces

414 kubectl get pod –n kube-system

415 kubectl get pods

416 kubectl get pod –n default

417 kubectl get pod–n default

418 kubectl get pod -namespace default

419 cd

420 kubectl

421 kubectl get pod -n default

422 clear

423 kubectl get pod -n default

424 vi webservice.yml

425 kubectl apply -f webservice.yml

426 kubectl get svc

427 kubectl get deployment

428 kubectl delete svc webapp-sql

429 vi webservice.yml

430 kubectl apply -f webservice.yml

431 vi webservice.yml

432 kubectl apply -f webservice.yml

433 kubectl get svc

434 vi webservice.yml

435 history

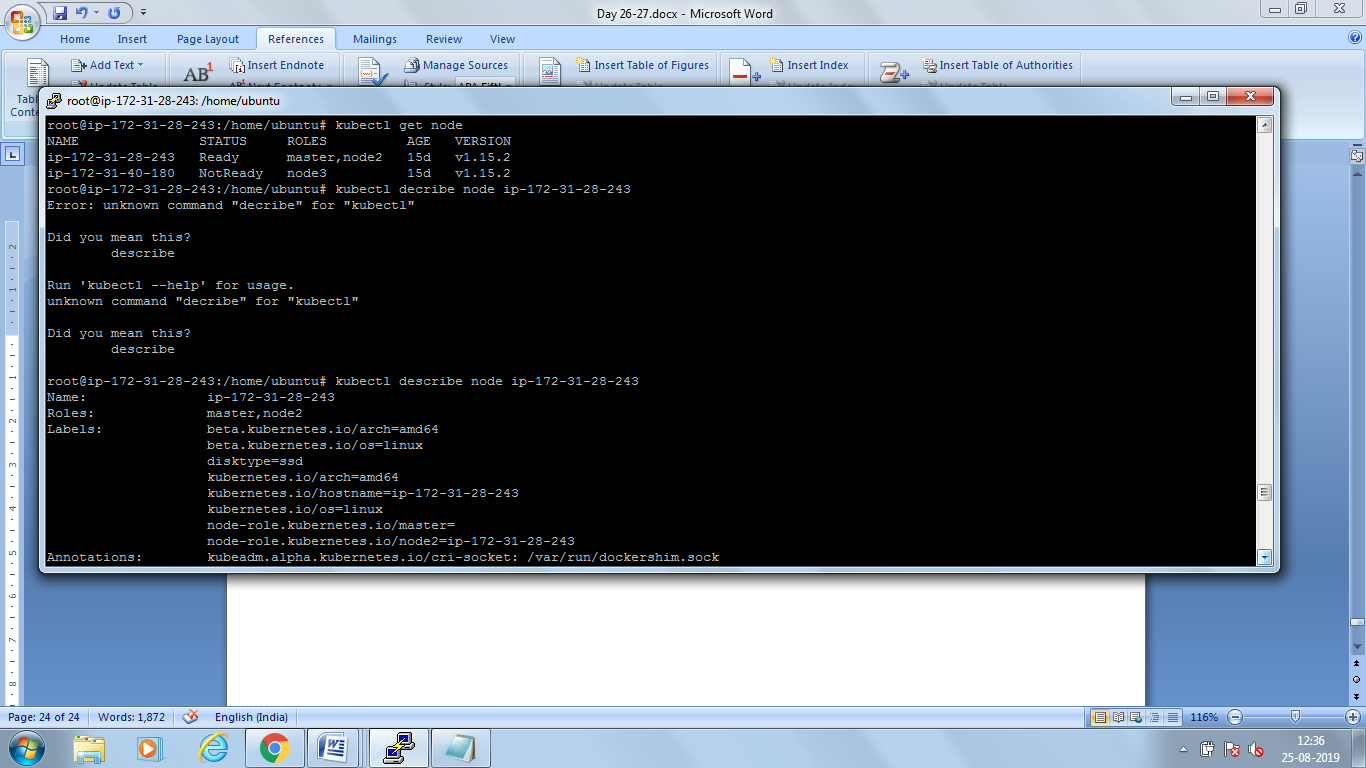


How can we deploy pod on specific node? (refer Kubernetes Basics file shared by Prakash)

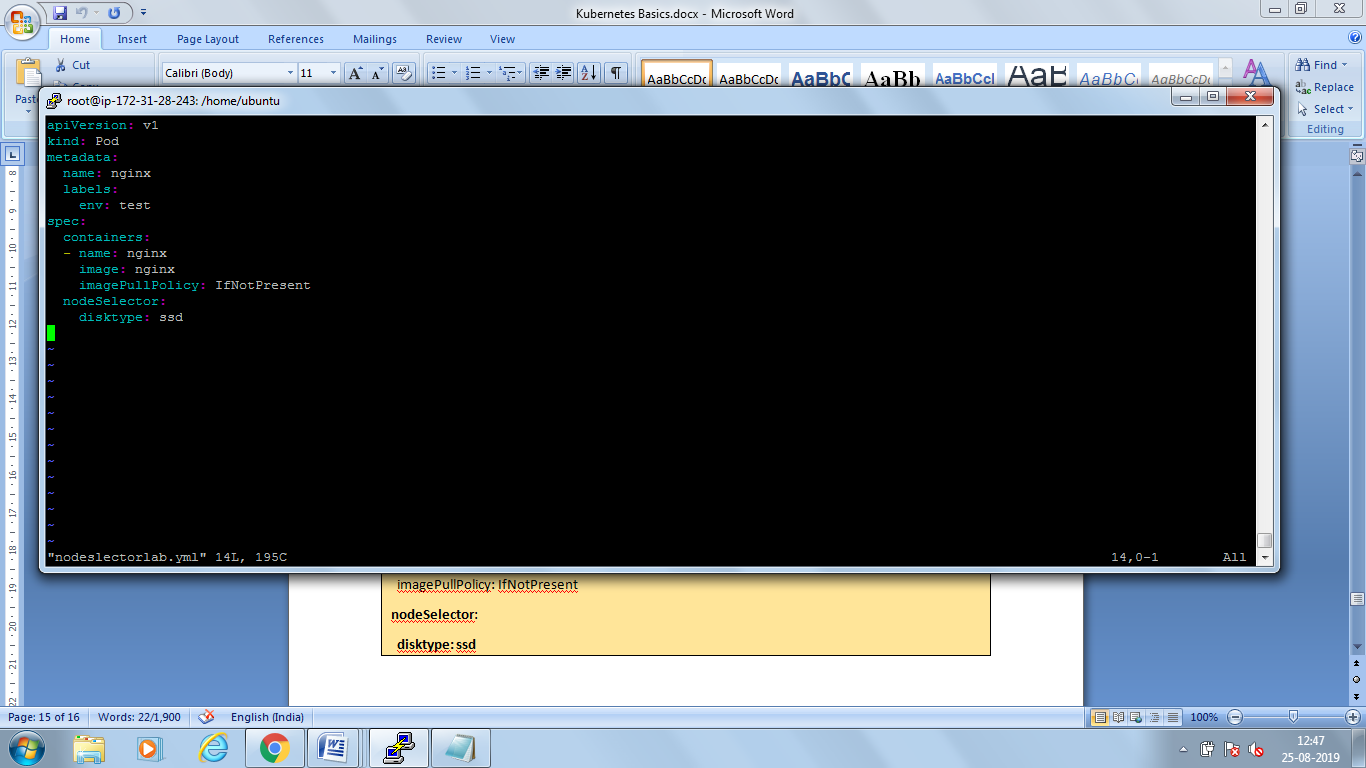
:-Node selector

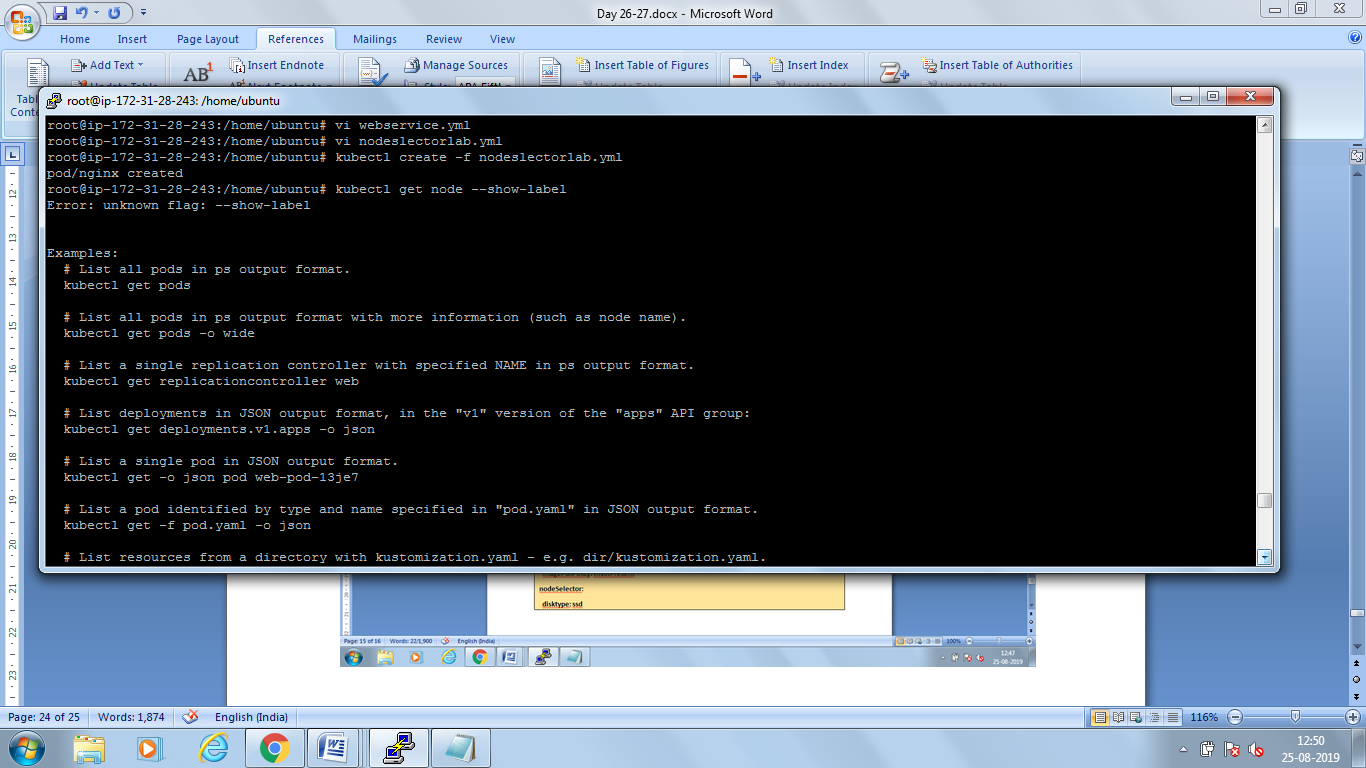
kubectl label nodes ip-172-31-28-243 disktype=ssd

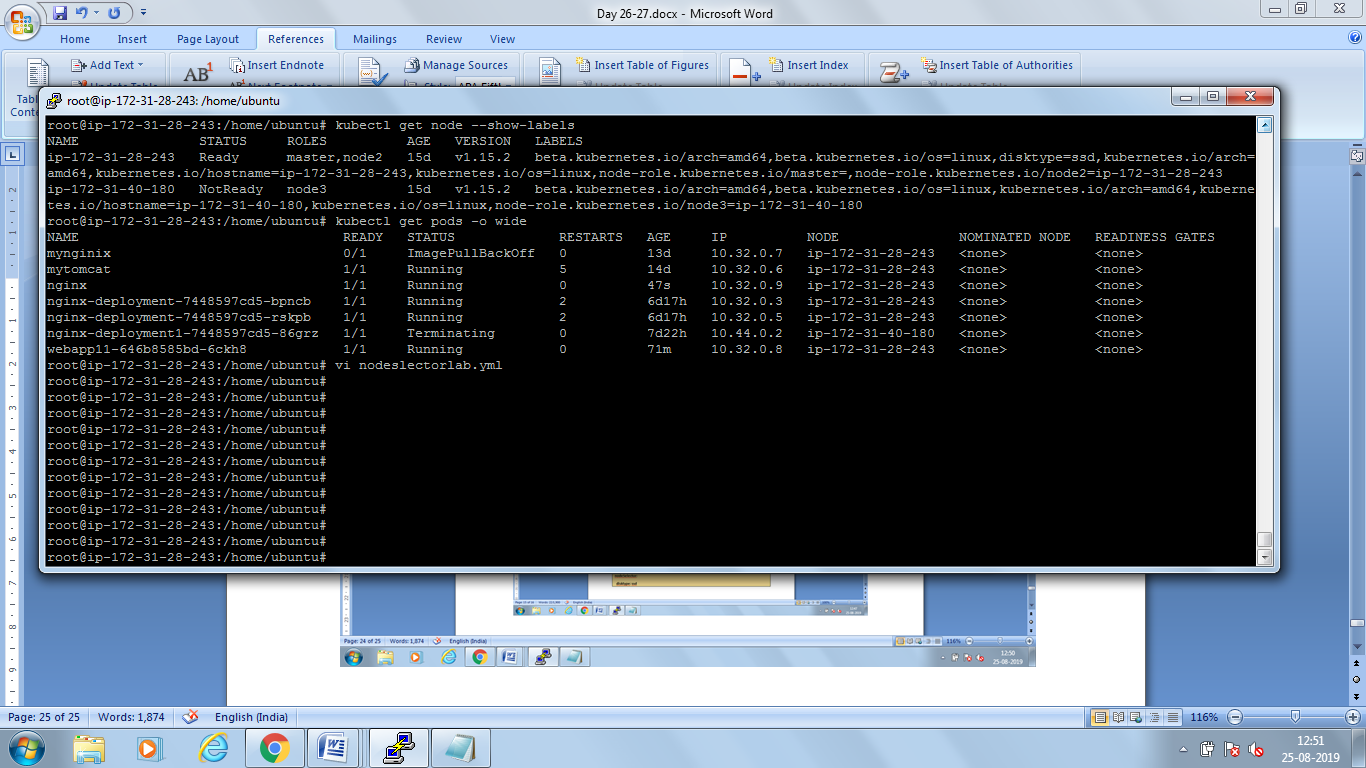
kubectl decribe node ip-172-31-28-243



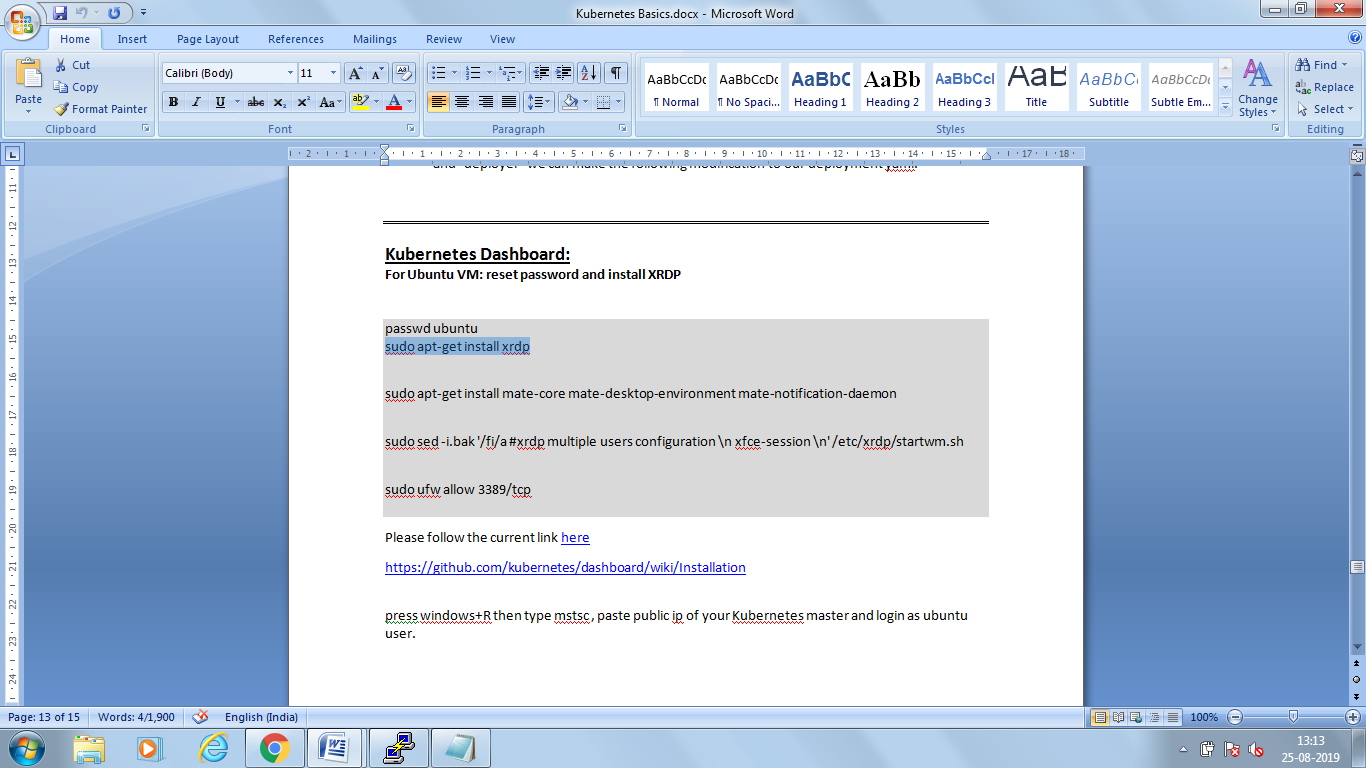
==== nodeselector







Dashboard lab



passwd ubuntu

--Dipti

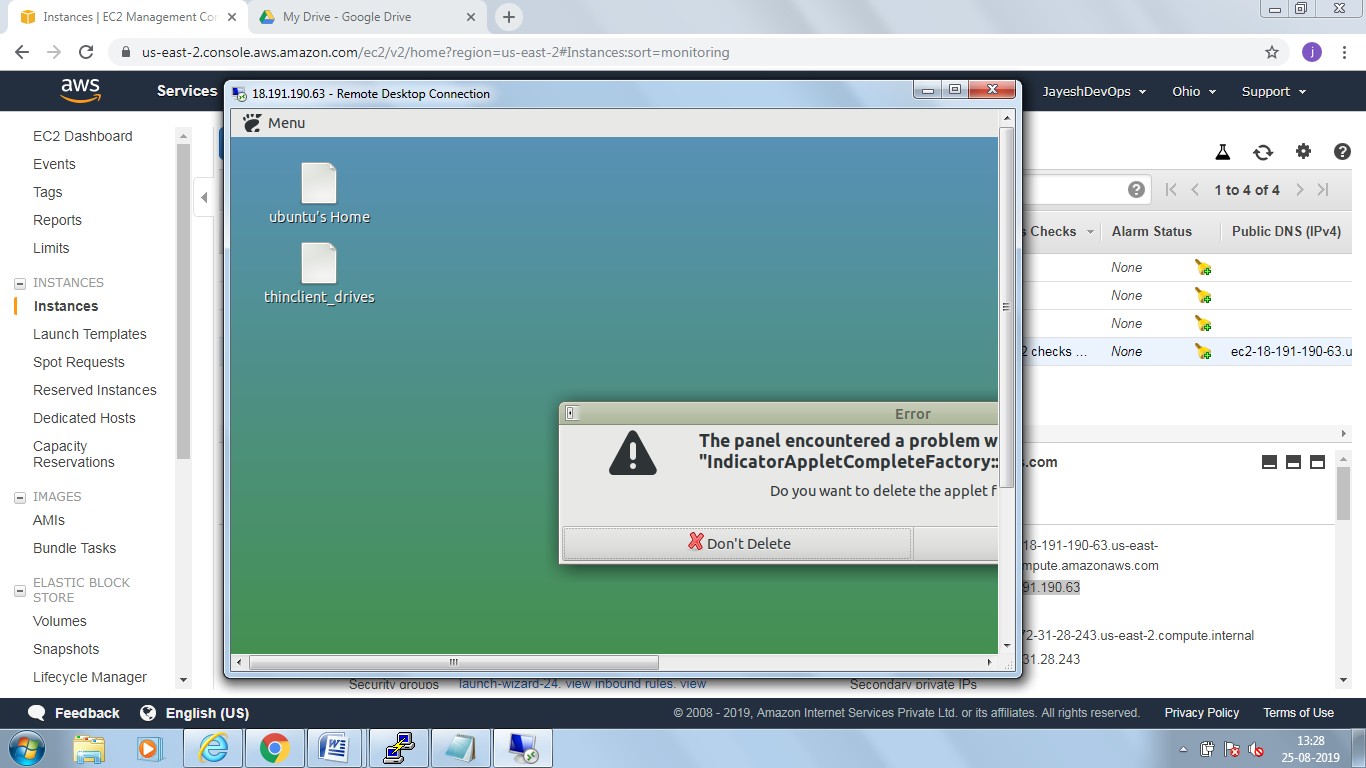
sudo apt-get install xrdp

always run from github

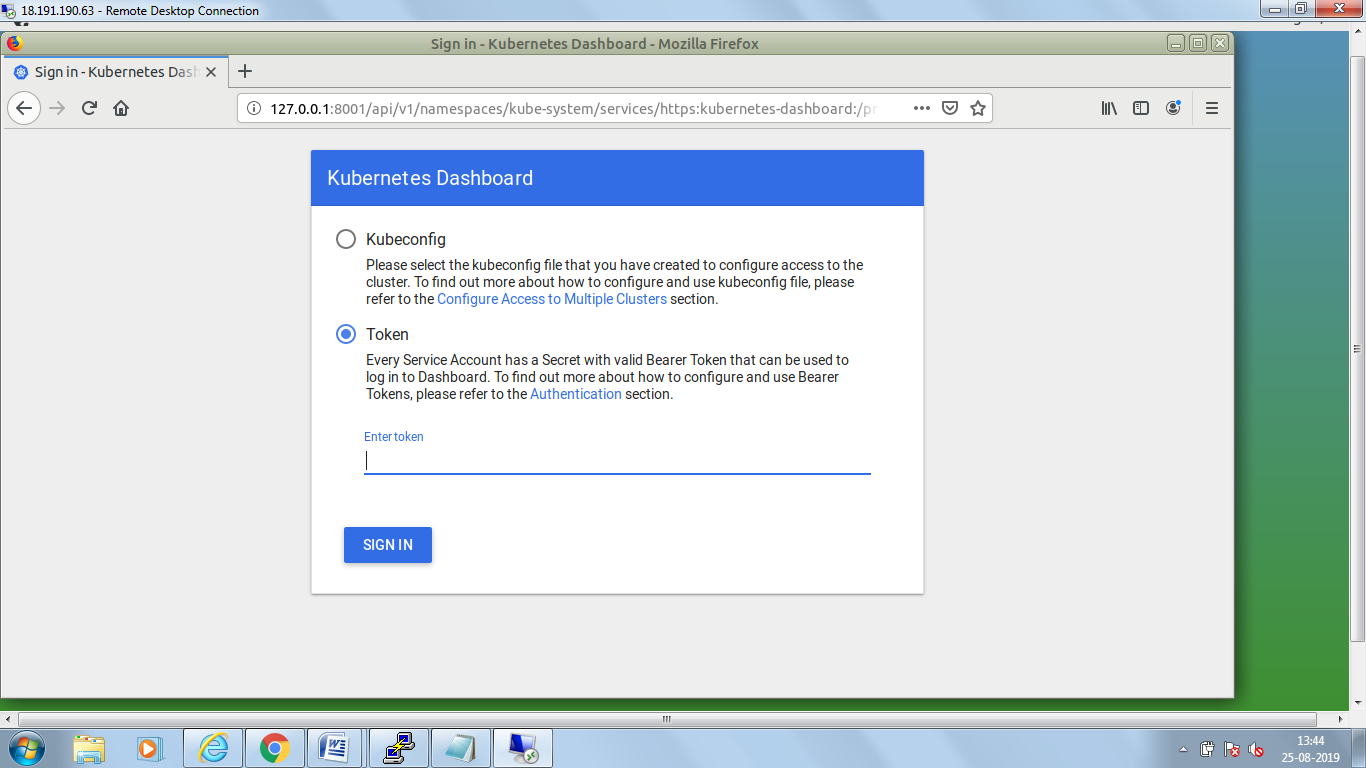
kubectl apply -f <https://raw.githubusercontent.com/kubernetes/dashboard/v1.10.1/src/deploy/recommended/kubernetes-dashboard.yaml>

run > mstsc

apt-get install firefox



Run kubectl proxy



Copy token

eyJhbGciOiJSUzI1NiIsImtpZCI6IiJ9.eyJpc3MiOiJrdWJlcm5ldGVzL3NlcnZpY2VhY2NvdW50Iiwia3ViZXJuZXRlcy5pby9zZXJ2aWNlYWNjb3VudC9uYW1lc3BhY2UiOiJkZWZhdWx0Iiwia3ViZXJuZXRlcy5pby9zZXJ2aWNlYWNjb3VudC9zZWNyZXQubmFtZSI6ImRhc2hib2FyZC10b2tlbi05bmd2ayIsImt1YmVybmV0ZXMuaW8vc2VydmljZWFjY291bnQvc2VydmljZS1hY2NvdW50Lm5hbWUiOiJkYXNoYm9hcmQiLCJrdWJlcm5ldGVzLmlvL3NlcnZpY2VhY2NvdW50L3NlcnZpY2UtYWNjb3VudC51aWQiOiIwZDcyZTdiZS02NDcwLTQ0MmItYTMxNC1jYzkzYWRlMmNkZDAiLCJzdWIiOiJzeXN0ZW06c2VydmljZWFjY291bnQ6ZGVmYXVsdDpkYXNoYm9hcmQifQ.QCUckiLCXLKSK-BcmRXIskyQcbFJw5BGhbBt8rssfxcWA4CZfedgBhNAw10CVmW5dOQWKQbxnvNRMDgInA5Dv9gQu48vwQQ6xY9zNdu6ag28QBEJ-cyBtHSew7VT3iAQ4StXKWKHogSgxdNM5yL--Kkf1Q8C-ohy2N5h4EabNcJUPWHXNYVttCSGic0cHkcpC7yM1wb\_7AtEkAf9AK3CuNrqiDSDc5SKTsLd19r9qO6afhflAOExZg8qNZm6w26k0hpvJlaztFQfUcSwZkJkEGyONq4lIp7npzkgoUmzp0Ofyjn3ggOAyF5UFIgoxR2YQwcbFOintLVJSlMC9XBkXAroot@ip-172-31-28-243:/home/ubuntu#