# 22 Apr

14 docker version

15 sudo docker version

16 sudo service docker status

17 sudo service jenkins status

18 sudo docker

19 sudo docker

20 sudo docker ps

21 docker ps

22 sudo docker ps

23 sudo docker pull ubuntu

24 sudo docker ps

25 sudo docker images

26 sudo docker | grep image

27 sudo docker images

28 sudo docker image

29 sudo docker image ls

30 sudo docker images

31 history

32 sudo docker images

33 sudo docker pull ubuntu:latest

34 sudo docker pull ubuntu:22.04

35 sudo docker images

36 sudo docker pull ubuntu:xxxxxxxxxxxxxxxxxxxx

37 sudo docker pull ubuntu:20.04

38 sudo docker images

39 sudo docker run

40 sudo docker run nginx

41 sudo docker run ubuntu

42 sudo docker run ubuntu darte

43 sudo docker run ubuntu date

44 sudo docker run ubuntu ls

45 sudo docker ps

46 sudo docker ps --help

47 sudo docker ps -a

48 sudo docker ps

49 sudo docker ps -a

50 sudo docker rm 65754e6af2d6

51 sudo docker rm happy\_chebyshev

52 sudo docker ps -a

53 sudo docker ps -aq

54 sudo docker ps --help

55 sudo docker ps -aq

56 sudo docker rm {sudo docker ps -aq}

57 sudo docker rm (sudo docker ps -aq)

58 sudo docker rm $(sudo docker ps -aq)

59 sudo docker ps -aq

60 sudo docker images

61 sudo docker rmi 88bd68917189

62 sudo docker images

63 sudo docker images -qa

64 sudo docker images

65 sudo docker run nginx

66 sudo docker ps

67 sudo docker ps -a

68 sudo docker run --help

69 sudo docker run nginx

70 sudo docker run nginx -dt

71 sudo docker run -dt nginx

72 sudo docker ps

73 sudo docker ps -a

74 sudo docker run -dt --name swami nginx

75 sudo docker ps

76 sudo docker stop swami

77 sudo docker ps

78 sudo docker start swami

79 sudo docker ps

80 sudo docker rm swami

81 sudo docker stop swami

82 sudo docker rm swami

83 sudo docker ps

84 sudo docker ps -a

85 sudo docker run -dt --name swami -p 80:80 nginx

86 curl http://localhost:80

87 sudo docker run -dt --name nathan -p 81:80 nginx

88 sudo docker ps

89 curl http://localhost:80

90 curl http://localhost:81

91 sudo docker ps

92 sudo docker run -dt --name user1 -p 81:80 nginx

93 sudo docker run -dt --name user1 -p 82:80 nginx

94 sudo docker run -dt --name user2 -p 82:80 nginx

95 sudo docker ps

96 sudo docker logs user2

97 sudo docker ps

98 sudo docker exec -it swami ls

99 sudo docker exec -it swami date

100 history

101 sudo docker exec -it swami /bin/sh

102 sudo docker ps

103 history

104 echo $USER

105 sudo usermod -a -G docker $USER

106 docker ps

# 23rd Apr

109 docker ps

110 docker pull node:6

111 docker images

112 docker rmi node

113 docker rmi node:6

114 docker images

115 docker rmi nginx

116 docker ps

117 docker ps -a

118 docker run

119 docker run --help

120 docker ps -a

121 docker ps -aq

122 docker ps -a

123 docker run -dt --name nginx -p 80:80 nginx

124 docker ps

125 curl http://localhost:80

126 docker ps

127 docker ps -qa

128 docker stop $(docker ps -qa)

129 docker rm $(docker ps -qa)

130 docker ps

131 docker ps -a

132 docker run -dt --name ca -p 80:80 nginx

133 docker run -dt --name cb -p 81:80 nginx

134 docker run -dt --name cc -p 82:80 nginx

135 docker run -dt --name cd nginx

136 docker ps

137 curl http://localhost:80

138 curl http://localhost:81

139 curl http://localhost:82

140 docker ps

141 curl http://localhost:82

142 curl http://localhost:81

143 curl http://localhost:80

144 docker ps

145 sudo netstat -nltp

146 dockerimages

147 docker images

148 mkdir docker

149 cd docker/

150 mkdir app01

151 cd app01

152 ls

153 pwd

154 vi app.js

155 cat app.js

156 ls

157 vi Dockerfile

158 cat Dockerfile

159 vi Dockerfile

160 cat Dockerfile

161 docker build -t node-app:0.1 .

162 docker images

163 ls

164 mv Dockerfile df

165 ls

166 docker build -t node-app:0.1 .

167 docker build -t node-app:0.1 -f df .

168 ls

169 cd ..

170 ls

171 docker images

172 docker run -dt --name nodec -p 84:80 node-app:0.1

173 docker ps

174 docker ps | grep nodec

175 curl http://localhost:84

176 docker logs nodec

177 cat app01/app.js

178 curl http://localhost:84

179 cat app01/app.js

180 curl http://localhost:84

181 docker logs nodec

182 vi app01/app.js

183 cd app01/

184 ls

185 docker images | grep node-app

186 docker build -t node-app:0.2 -f df .

187 docker images | grep node-app

188 docker run -dt --name noded -p 85:80 node-app:0.2

189 curl http://localhost:85

190 curl http://localhost:84

191 docker tag node-app:0.1 swamguru/node-app:0.1

192 docker tag node-app:0.1 swamguru/node-app:stable

193 docker images | grep node-app

194 docker login

195 docker push swamguru/node-app:stable

196 docker push swamguru/node-app:0.1

197 docker tag node-app:0.2 swamguru/node-app:0.2

198 docker tag node-app:0.2 swamguru/node-app:latest

199 docker push swamguru/node-app:latest

200 docker push swamguru/node-app:0.2

202 docker build --help

203 docker build -t swsas:0.1 -f df

204 docker build -t swsas:0.1 -f df .

205 docker rmi swsas:0.1

206 docker images

207 cat df

208 ls

209 docker ps

210 docker exec -it noded /bin/sh

211 cat df

212 docker ps

213 cd ..

214 mkdir app02

215 cd app0

216 cd app02

217 ls

218 vi app.py

219 cat app.py

220 vi requirements.txt

221 cat requirements.txt

222 vi Dockerfile

223 docker build -t py-app:0.1 .

224 ls

225 ls | grep requirements.txt

226 ls

227 ls | grep requirements.txt

228 docker build -t py-app:0.1 .

229 vi Dockerfile

230 docker build -t py-app:0.1 .

231 docker images

232 docker rmi ac08db3d83a5

233 docker rmi ac08db3d83a5 -f

234 cat Dockerfile

235 cd ..

236 mkdir app03

237 cd app03

238 vi Dockerfile

239 cd ..

240 mkdir app04

241 cd app04

242 vi Dockerfile

243 echo "Welcome to Dockerlabs !" > index.html

244 ls

245 cat Dockerfile

246 docker build -t web-app:0.1 .

247 cat Dockerfile

248 vi Dockerfile2

249 docker build -t multi-stage:0.1 -f Dockerfile2 .

docker run -dt --name fix python

254 docker exec -it fix /bin/sh

255 docker ps

256 docker commit fix flask:0.1

257 docker images | grep flask

258 history

259 cat ../app02/Dockerfile

# 29 Apr 2023

262 ip a

263 docker ps

264 docker ps -a

265 docker ps

266 ip a

267 docker run -dt --name conta donch/net-tools

268 docker exec -it conta /bin/sh

269 docker run -dt --name contb donch/net-tools

270 docker exec -it contb /bin/sh

271 docker inspect conta

272 ip a

273 docker

274 docker networks

275 docker network

276 docker network ls

277 docker network create my\_bridge

278 docker network ls

279 docker run --help

280 docker run -dt --name db --network my\_bridge donch/net-tools

281 docker exec -it db /bin/sh

282 history

283 docker run -dt --name web donch/net-tools

284 docker ps

285 docker exec -it web /bin/sh

286 docker network

287 docker network connect --help

288 docker network connect my\_brige web

289 docker network connect my\_bridge web

290 docker exec -it web /bin/sh

291 docker network connect --help

292 docker exec -it web /bin/sh

293 docker network

294 docker network disconnect --help

295 docker network disconnect my\_bridge web

296 docker exec -it web /bin/sh

297 history

298 docker network create --help

299 docker network create --subnet 172.16.0.0/24 --gateway 172.16.0.1 custom-net

300 docker network ls

301 docker run -st --name customneta --network custom-net donch/net-tools

302 docker run -dt --name customneta --network custom-net donch/net-tools

303 docker exec -it customneta /bin/sh

304 docker network ls

## Storage

docker run -dt --name test alpine

307 docker images

308 docker exec -it test /bin/sh

309 docker stop test

310 docker start test

311 docker exec -it test /bin/sh

312 docker stop test

313 docker rm test

314 docker ps -a | grep test

315 docker run -dt --name test alpine

316 docker exec -it test /bin/sh

317 docker volume

318 docker volume ls

319 docker volume create my\_vol

320 docker volume ls

321 docker run --help

322 docker run -dt --name vol1 -v my\_vol:/var/www/html alpine

323 docker exec -it vol1 /bin/sh

324 docker stop vol1

325 docker rm vol1

326 docker run -dt --name vol1 -v my\_vol:/var/www/html alpine

327 docker exec -it vol1 /bin/sh

328 docker stop vol1

329 docker rm vol1

330 docker run -dt --name vol2 -v my\_vol:/var/www/html alpine

331 docker exec -it vol2 /bin/sh

332 docker stop vol2

333 docker rm vol2

334 docker run -dt --name vol3 -v my\_vol:/swami alpine

335 docker exec -it vol3 /bin/sh

# 30 Apr 2023

## Docker compose

342 docker-compose

343 sudo curl -L https://github.com/docker/compose/releases/download/1.24.1/docker-compose-`uname -s`-`uname -m` -o /usr/local/bin/docker-compose

344 sudo ls /usr/local/bin/docker-compose

345 sudo ls -lta /usr/local/bin/docker-compose

346 sudo chmod +x /usr/local/bin/docker-compose

347 docker-compose

348 cd docker/

349 mkdir docker-compose

350 cd docker-compose/

351 mkdir app

352 cd app

353 vi Dockerfile

354 vi docker-compose.yml

355 ls

356 cat docker-compose.yml

357 ls

358 cat Dockerfile

359 docker-compose

360 docker-compose build

361 docker images | grep webapp

362 cat docker-compose.yml

363 docker-compose build

364 docker-compose up

365 docker-compose up -d

366 docker-compose ps

367 docker-compose logs app\_webapp\_1

368 docker-compose logs web

369 cat docker-compose.yml

370 docker-compose logs webapp

371 cd ..

372 mkdir app01

373 cd app01/

374 vi docker-compose.yml

375 cat docker-compose.yml

376 vi docker-compose.yml

377 cat docker-compose.yml

378 env

379 echo $USER

380 cat docker-compose.yml

381 docker-compose --version

382 cat docker-compose.yml

383 docker-compose up -d

384 docker-compose ps

385 docker ps

386 cd ..

387 mkdir app02

388 cd app02

389 cp ../app01/docker-compose.yml .

390 ls

391 docker-compose up -d

392 cd ../app01

393 ls

394 docker-compose ps

395 curl localhost:80

396 docker-compose ps

397 docker ps

398 docker exec -it app01\_db\_1 mysql -uroot -prootroot

399 cat docker-compose.yml

400 docker-compose logs

401 docker-compose logs webserver

402 docker-compose logs db

403 docker-compose stop

404 docker-compose ps

405 docker-compose start

406 docker-compose ps

407 docker-compose

408 docker-compose restart

409 docker-compose ps

410 docker-compose stop db

411 docker-compose start db

412 docker-compose restart db

413 cd ..

414 docker-compose restart db

415 cd app01/

416 docker-compose restart db

417 docker-compose

418 cat docker-compose.yml

419 docker-compose scale db 2

420 docker-compose scale --help

421 docker-compose scale db=2

422 docker-compose ps

423 cd ..

424 cd app

425 ls

426 cat Dockerfile

427 cat docker-compose.yml

428 docker-compose up --help

429 docker-compose ps

430 docker-compose stop

431 docker-compose up -d --build

432 docker images | grep webapp

433 vi Dockerfile

434 docker-compose up -d --build

435 docker images | grep webapp

436 docker-compose up -d

437 docker-compose up -d --build

438 docker-compose down --help

439 docker-compose down --rmi all

440 docker images | grep webapp

441 docker-compose up -d --build

442 cat docker-compose.yml

443 docker-compose up -d --build

444 docker network ls

445 ls ..

446 cd ..

447 mkdir app03

448 cd app0

449 cd app03

450 vi docker-compose.yml

451 cd ../app02

452 docker-compose down

453 cd ../app03

454 docker-compose up

455 cd ..

456 cat app02/docker-compose.yml

457 cd app0

458 cd app02/

459 docker-compose down

460 cd ../app03

461 docker-compose up -d

462 netstat -ntlp

463 cd ../app02/

464 cat docker-compose.yml

465 docker-compose down

466 cd ..

467 ls

468 cd app0

469 cd app01/

470 cat docker-compose.yml

471 docker-compose down

472 cd ../app03

473 ls

474 cat docker-compose.yml

475 docker-compose up -d

476 docker-compose ps

477 docker volums ls

478 docker volume ls

479 docker-compose pause

480 docker-compose unpause

481 docker-compose up -d

482 docker-compose ps

483 docker ps

484 docker stop Nginx

485 docker rm Nginx

486 docker-compose ps

# 6th May 2023

525 docker service ps

526 docker service ls

527 docker service ps myweb

528 docker ps

529 docker service ls

530 docker service rm myweb

531 docker service create --name day5 --replicas 7 nginx

532 docekr service ls day5

533 docker service ls day5

534 docker service ps day5

535 docker service create --help

536 docker service ps day5

537 docker service create --help

538 docker service create --name flud --mode global nginx

539 docker node ls

540 docker service ps flud

541 docker service ps day5

542 docker service create --name day4 --replicas 1 nginx

543 docker service ps day4

544 docker service ps day5

545 docker service scale day5=10

546 docker service ps day5

547 docker service update --replicas=11 day5

548 docker service ps day5

549 docker service update --replicas=5 day5

550 docker service ps day5

551 docker service scale day5=3

552 docker service ps day5

553 docker service ps flud

554 docker service update --replicas=5 flud

555 docker service update --help

556 docker node ls

557 docker service update --label-add name=worker1 ip-172-31-12-69

558 docker service update --label-add name=worker2 ip-172-31-0-74

559 docker node ls

560 docker node ls --filter node.label=name=worker1

561 docker node ls --filter node.label name=worker1

562 docker node ls --filter node.label=name=worker2

563 docker node ls

564 docker node update --label-add node=w1 ip-172-31-12-69

565 docker node ls --filter node.label=node=w1

566 docker node ls

567 docker node inspect --pretty ip-172-31-0-74

568 docker node inspect ip-172-31-0-74

569 docker node ls

570 docker service ls

571 docker service scale day5=10

572 docker service scale day4=10

573 docker node ls

574 docker node update --help

575 docker node update --availability drain ip-172-31-12-69

576 docker service ls

577 docker service ps day4

578 docker service ps day5

579 docker service ps flud

580 docker node update --availability active ip-172-31-12-69

581 docker node ls

582 docker service ps flud

583 docker service ps day5

584 docker service scale day5=12

585 docker service ps day5

586 docker node ls

587 docker node update --availability pause ip-172-31-12-69

588 docekr node slas

589 docekr node ls

590 docker node ls

591 docker service scale day5=20

592 docker service ps day5

593 docker node update --availability active ip-172-31-12-69

594 docker service ps day5

595 docker service create --name my\_web --replicas 5 --publish published=5050,target=80 nginx

596 docker service ps my\_web

597 curl http://localhost:5050

598 curl http://172.31.12.69:5050

599 curl http://172.31.0.74:5050

600 history

601 docker service logs my\_web

602 jq

603 docker ps

604 docker inspect 1100fd4f1476

605 docker inspect 1100fd4f1476 | grep IPAd

606 sudo apt install jq

607 docker inspect 1100fd4f1476 | jq '.[].NetworkSettings'

608 docker inspect 1100fd4f1476 | jq '.'

609 docker inspect 1100fd4f1476 | jq '.[].State'

610 docker inspect 1100fd4f1476 | jq '.[].State.Status'

611 docker inspect 1100fd4f1476 | jq '.[].NetworkSettings'

612 docker inspect 1100fd4f1476 | jq '.[].NetworkSettings.Networks.bridge.IPAddress'

613 docker ps

614 docker inspect 330352bd401f | jq '.[].NetworkSettings.Networks.bridge.IPAddress'

615 docker network ls

616 docker network create -d overlay swam-net

617 docker network ls

618 docker service create --name net-service --network swam-net nginx

619 docker service scale net-service=5

620 docker service ps net-service

621 history

622 docker network inspect swam-net

623 docker network inspect ingress

624 docker service create --name nginx-service1 --publish target=8080,published=80 --replicas=5 --network swam-net nginx

625 curl http://localhost:8080

626 docker service rm v

627 docker service rm nginx-service1

628 docker service create --name nginx-service1 --publish target=5051,published=80 --replicas=5 --network swam-net nginx

629 docker network inspect swam-net

630 docker service ps nginx-service1

631 curl http://localhost:5051

632 docker service rm nginx-service1

633 docker network create -d overlay nginx-net1

634 docker service create --name nginx-service1 --publish target=80,published=80 --replicas=5 --network nginx-net1 nginx

635 curl http://localhost:80

636 history

637 docker service rm nginx-service1

638 docker service create --name nginx-service1 --publish target=80,published=5051 --replicas=5 --network nginx-net1 nginx

639 curl http://localhost:5051

640 docker volume create volume1

641 docker volume ls

642 docker service create -d --replicas=4 --name replicated-service --mount source=volume1,target=/app nginx:latest

643 docker service ps replicated-service

644 docker service create --help

645 docker service ps replicated-service

## Worker Node

docker ps | wc -l

18 docker ps

19 ip a

20 docker network ls

21 docker ps | grep swam

22 docker ps | grep net-ser

23 docker volume ls

24 docker ps | grep replicated

25 docker exec -it d703a4c1c383 /bin/sh

26 docker exec -it 1fcd1bd06e93 /bin/sh

# 7th May 2023

## Kubernetes

## Master

655 kubeadm version

656 sudo service kubelet sttaus

657 sudo service kubelet stataus

658 sudo service kubelet status

659 hostname

660 sudo hostnamectl set-hostname master.example.com

661 exec bash

662 sudo kubeadm init --pod-network-cidr=192.168.0.0/16

663 kubectl apply -f https://github.com/weaveworks/weave/releases/download/v2.8.1/weave-daemonset-k8s.yaml

664 kubectl get nodes

665 docker node

666 kubectl get nodes

667 kubectl describe node master.example.com

668 kubectl

669 kubectl get nodes --help

670 kubectl run nginxpod --image=nginx --port 80

671 kubectl get pods

672 kubectl get pods -o wide

673 kubectl get nodes

674 kubectl get nodes -o wide

675 kubectl get pods

676 kubectl describe pod nginxpod

677 kubectl get pdos

678 kubectl get pods

679 kubectl delete pod nginxpod

680 kubectl create deployment

681 kubectl create deployment --help

682 kubectl create deployment my-dep --image=nginx

683 kubectl get deploy

684 kubectl create deployment multi-pod --image=nginx --replicas 5

685 kubectl get deploy

686 kubectl get deployments

687 kubectl get pods

688 kubectl get pods -o wide

689 kubectl exec -it multi-pod-68bff87dc7-4r4hz /bin/sh

690 kubectl get deployments

691 kubectl get pods -o wide

692 kubectl scale deployment multi-pod --replicas 10

693 kubectl get deployments

694 kubectl get pods -o wide | grep -v my-dep

695 kubectl scale deployment multi-pod --replicas 1

696 kubectl get deployments

697 kubectl get pods -o wide | grep -v my-dep

698 kubectl get deploy

699 kubectl delete deploy my-dep

700 kubectl get deploy

701 kubectl scale deployment multi-pod --replicas 5

702 kubectl get deploy

703 kubectl get pods

704 kubectl expose deployment multi-pod

705 kubectl expose deployment multi-pod --port 80

706 kubectl get service

## Worker Node

25 sudo hostnamectl set-hostname worker-node-2.example.com

26 exec bash

27 sudo s node has joined the cluster:

28 sudo kubeadm join 172.31.13.194:6443 --token uln5nz.n9ue090ei1lmqc60 --discovery-token-ca-cert-hash sha256:29ef7902d1fc4b32c9fa8b7461646e7b52b0092a2022a53dc030f61196375eda

29 docker ps

30 docker ps | grep nginxpod