container1

bins/libs
software
app files

container2

docker engine/daemon/server

Host OS (macOS/Windows/Ubuntu/...) kernel

| CPU | MEMORY | STORAGE | I/O | NETWORK |

HARDWARE

container 1
(busybox)
172.17.0.2

container 2
(alpine)
172.17.0.3

bridge

Host OS
192.168.64.1

container 1

bins/libs
filesystem

container 2

bins/libs
filesystem

sh

zsh

docker engine

Host OS (macOS)

Host

cs1

8080

c2

c3

c4

c5

c1

1234

computer1

computer2

---

existing_backend_network

api

database

custom_frontend

web

end users

---

client

8080

8080

cust-service

8080
api-gateway

8080

cust-service

8080

cust-service

host os

docker
runtime

storage allocated for
docker containers

storage in
host os

MANAGED NODE 1
ansible-target-1
172.20.0.2

HOST

CONTROL NODE
(Ubuntu VM)
docker container (control-
node)
172.20.0.10

python 3.10.2
ansible

MANAGED NODE 2
ansible-target-2
172.20.0.3

MANAGED NODE 3
ansible-target-3
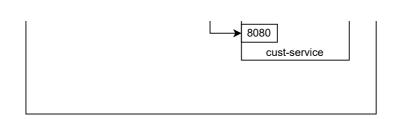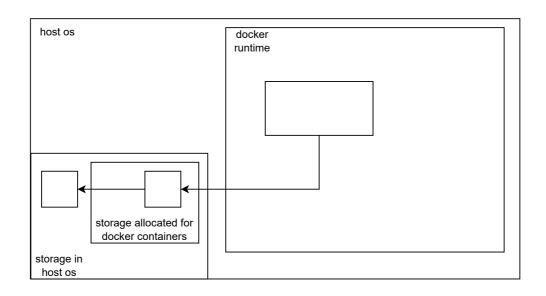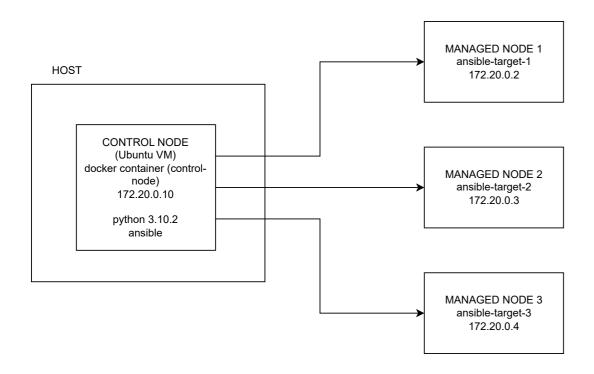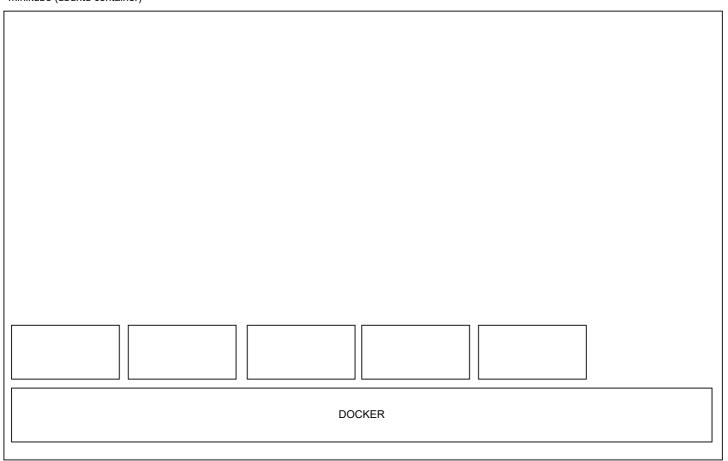172.20.0.4

minikube (ubuntu container)

minikube (ubuntu container)

DOCKER

k8s cluster (ex, created by minikube)

UBUNTU

control-plane

worker node 1

worker node 2

worker node 3

VINCLUSTER
(CONTROL PLANE)
192.168.58.2

SERVICE: nw-categories
8080-->categproes-pod:8080

SERVICE: nw-suppliers
8080-->suppliers-pod:8080

VINCLUSTER-M03
(WORKER NODE)
192.168.58.4

VINCLUSTER-M03
(WORKER NODE)
192.168.58.4

VINCLUSTER-M03
(WORKER NODE)
192.168.58.4

service:
category-service

8080 | 5500

C1

C2
categories

categories-pod
10.244.2.7

POD2

C3

curlpod
10.244.3.15

8080

C2
categories

categories-pod
10.244.0.3

http://192.168.58.2:30000/api/products/5

30000

NODE (cluster member)

8080

SERVICE:
nw-products-service

8080

POD:
nw-products

8080

POD:
nw-categories

8080

POD:
nw-suppliers