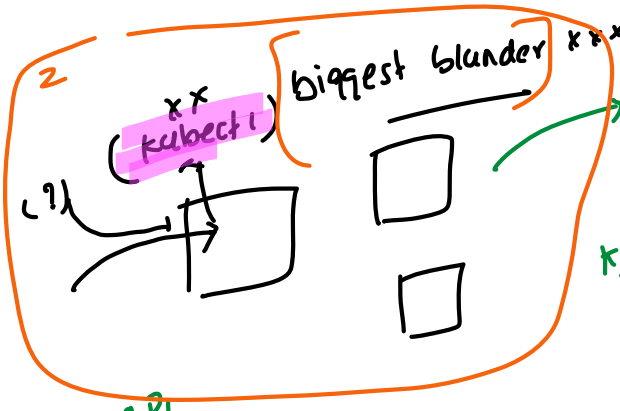
06 April 2024 07:04

06.04.24

Pod — imp dec

kube run

pod-yaml →



(RBAC)

KBS

ns.

pod

api

k1

me

spec →

Pod → conta image: PodName

cart → Application → Single Instance (pod).

Single App

cart → {image} {Pod spec} → Pod ✓ (single instance)

Replica controller

P1.

(P1 P2 P3)

Pod + controller

Re

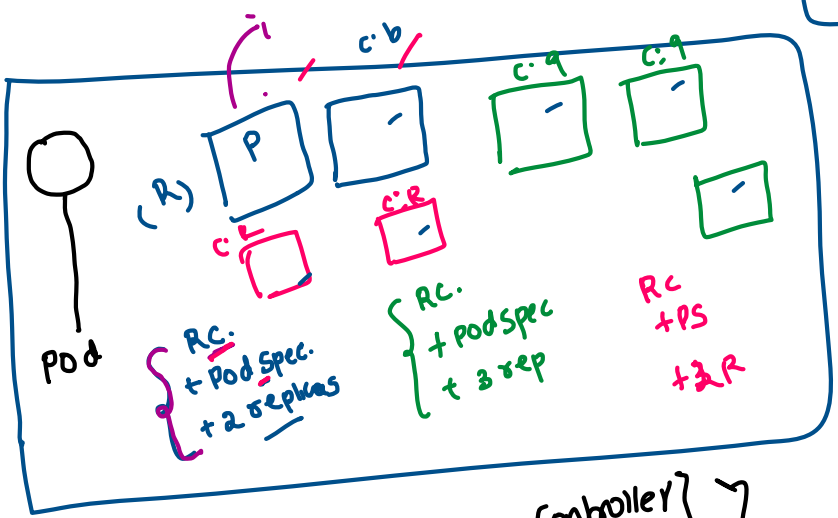
RC. RS. multiple in replicas.

Pod — RC labels

AC = desired

2 = 1

(color = blue)



RC ×

mgn to pod

Primary ← [Replication Controller]

old ← [replica set]

current new

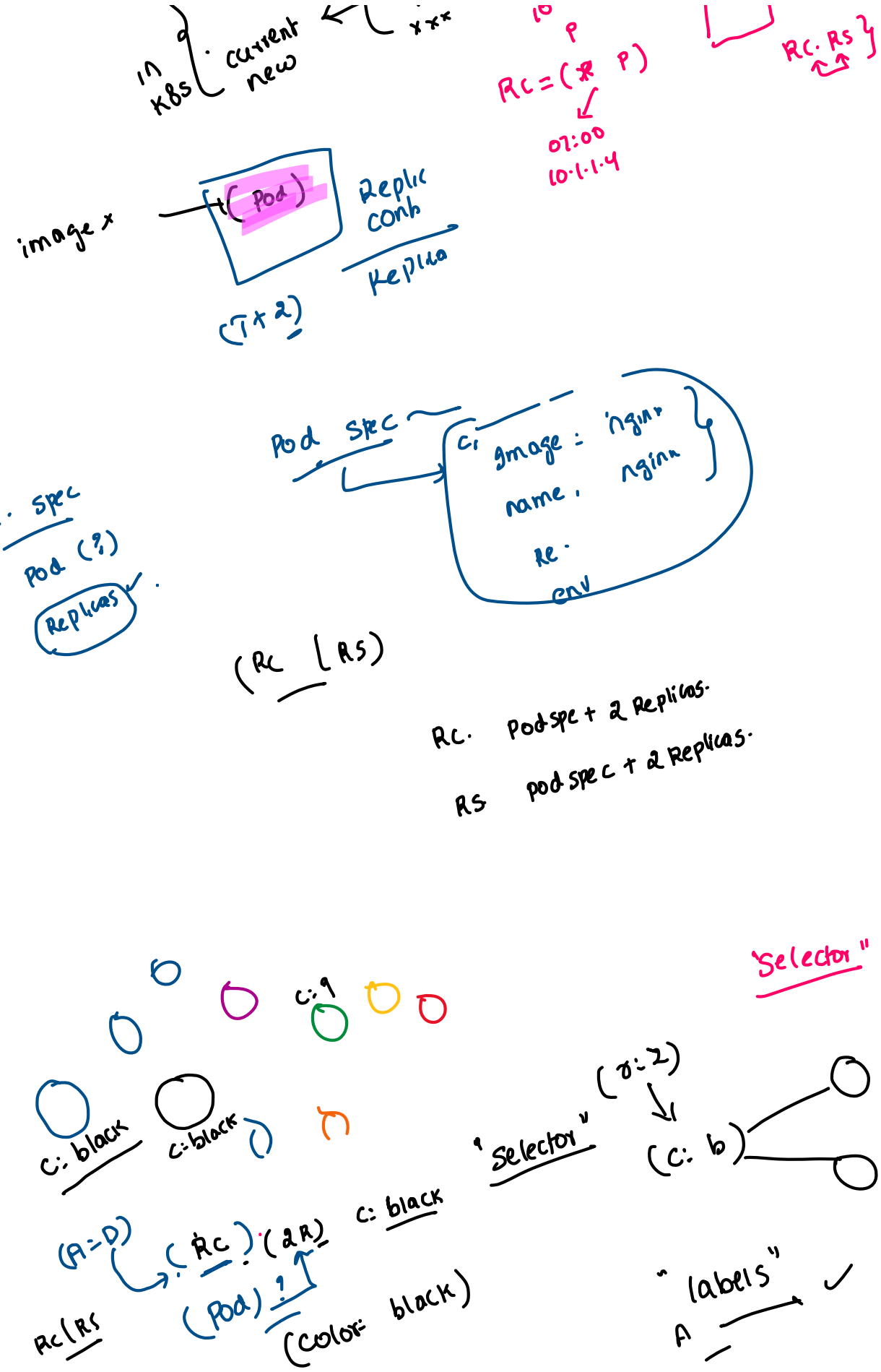
10.1.17

P

(R P)

R = 2

RC. RS }



in K8s { current new ← xxx

10 P

Rc = (* P)

07:00
10.1.1.4

Rc. Rs }

image x → (Pod)

Replic conb

Replica

(T+2)

Pod spec

c: image : nginx
name : nginx
Re.
env

Rc. spec

Pod (?)

Replicas ✓

(Rc | Rs)

Rc. Podspec + 2 Replicas.

Rs podspec + 2 Replicas.

"Selector"

c: 9

c: black

c: black

"Selector"

(r: 2)

(c: b)

(A=D)

(Rc) (2R)

c: black

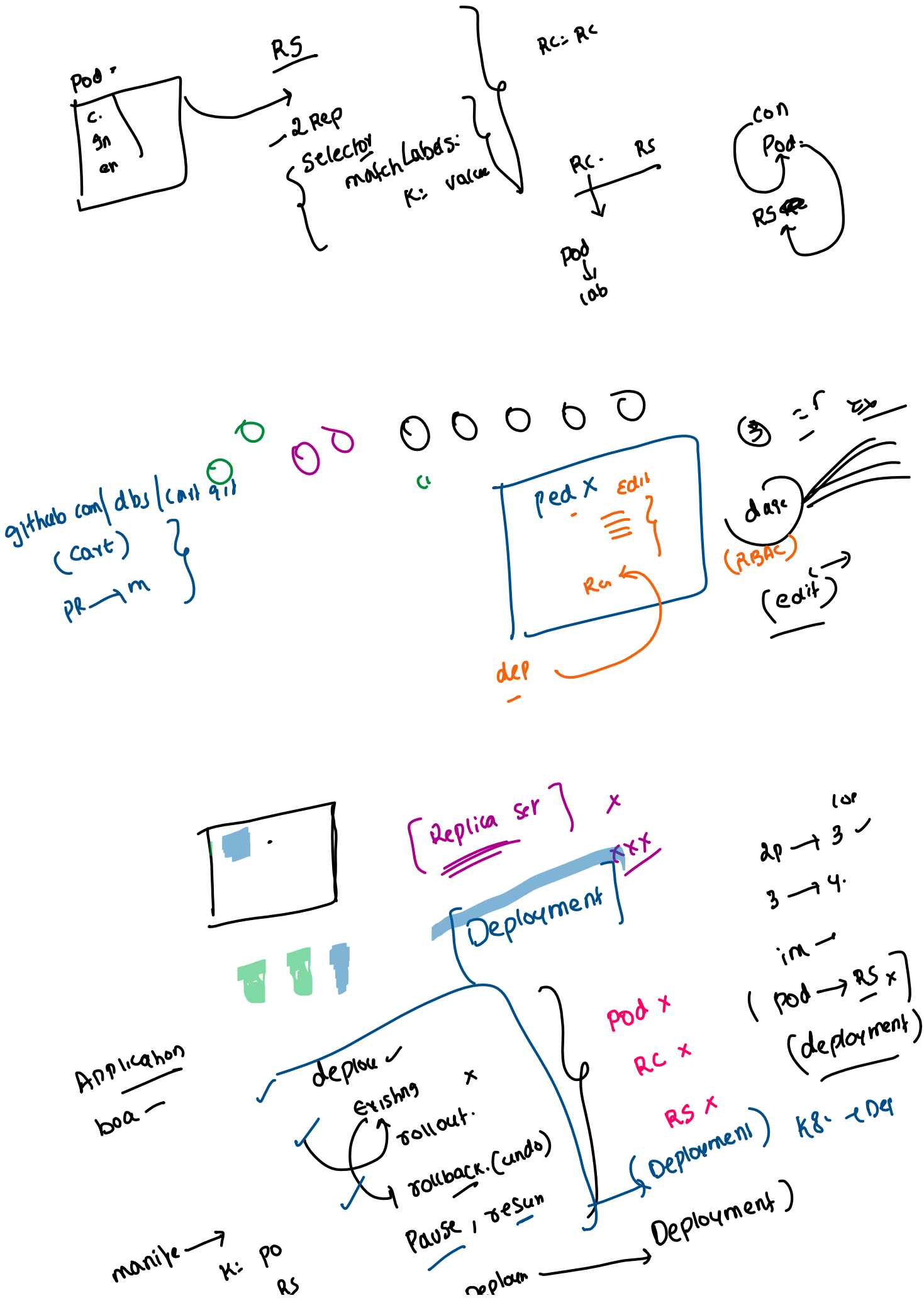
(Pod) ?

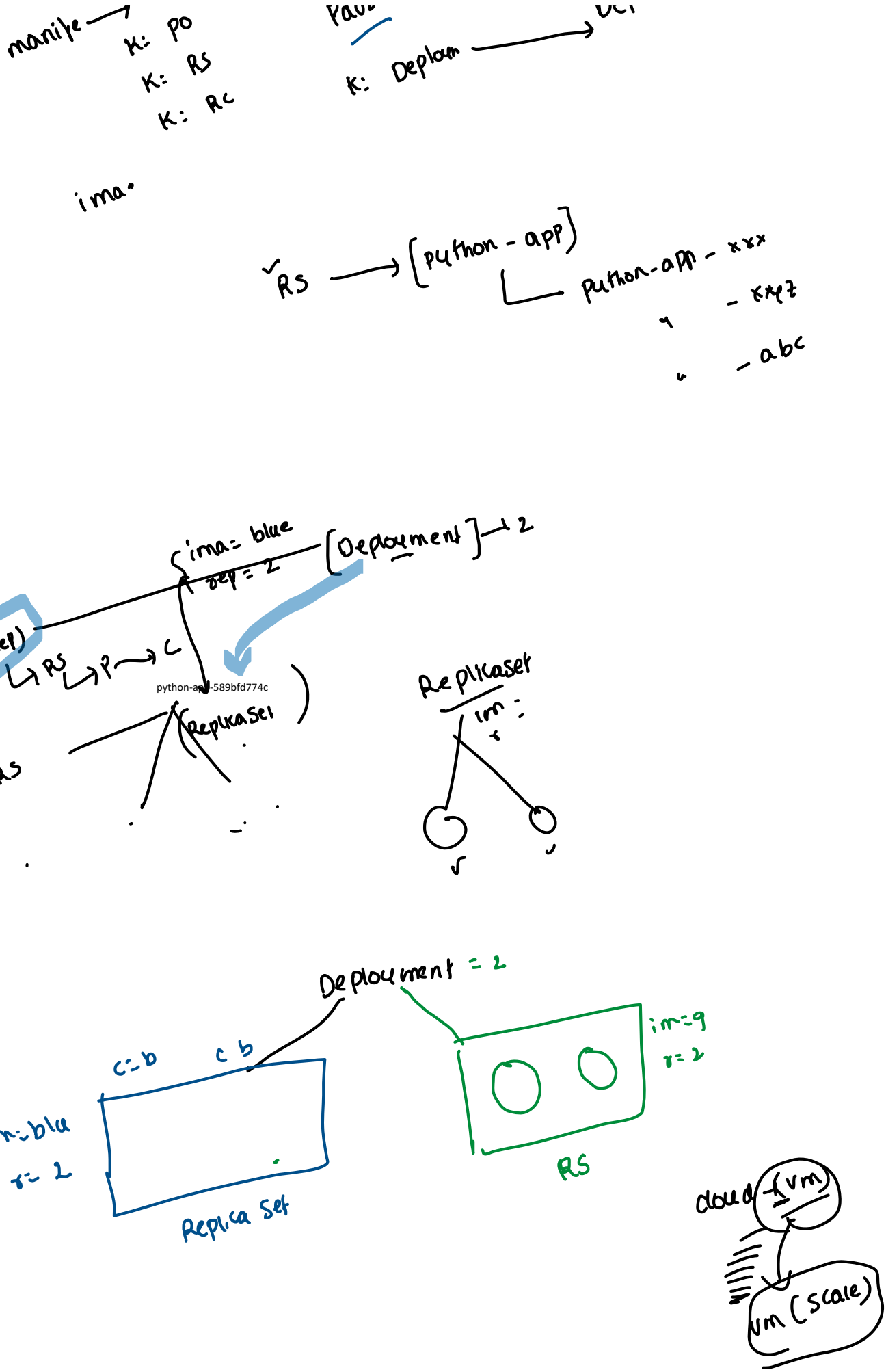
(Color: black)

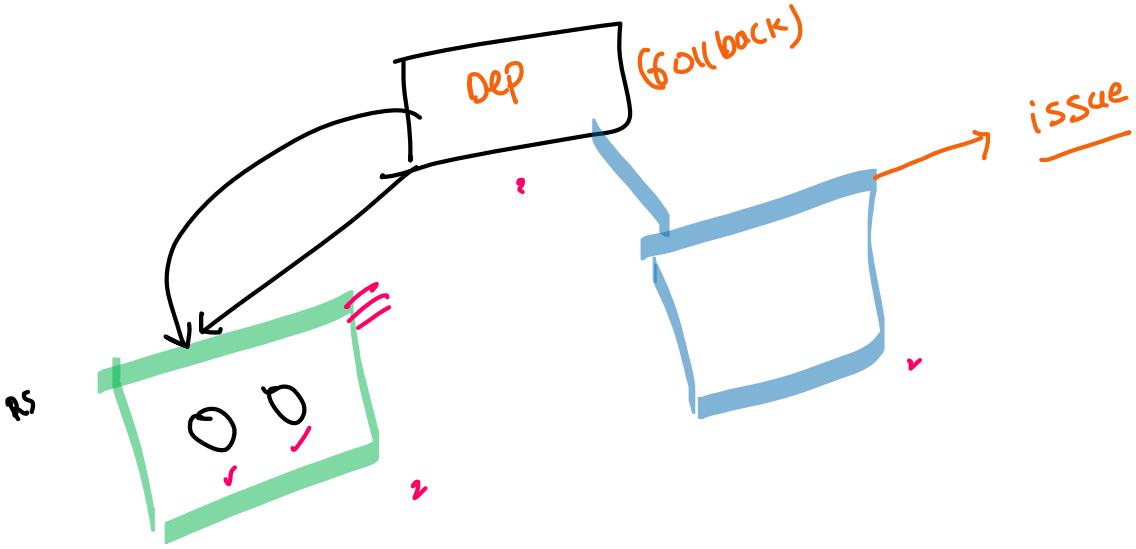
Rc | Rs

"labels"

A ✓


Pod
c.
gn
er
RS
2 Rep
Selector
matchLabels:
K: value
RC: RC
RC. RS
Pod
lab
con
Pod
RS
github com/dbs/cart git
(cart)
PR → m
ped x
Edit
Rc
dep
dage
(RBAC)
(edit)
Replica set
Deployment
Application
boa
deploy
Existing
rollout.
rollback.(undo)
Pause, resum
manife
K: po
RS
Pod x
RC x
RS x
(Deployment)
Deployment)
deploy
2p → 3
3 → 4.
im
(pod → RS x)
(deployment)
K8: Dep


manife
K: po
K: RS
K: Rc
K: Deplom
ima
RS
python - app
python-app - xxx
- xxyz
- abc
ima: blue
dep = 2
Deployment
1 2
(dep)
RS
P
C
python-a
589bfd774c
Replicaset
RS
Replicaset
im :
Deployment = 2
c: b
c b
im: blu
r: 2
Replica Set
im: g
r: 2
RS
cloud
vm
vm (scale)



Deployment

roll rollout rollin

v/r recreat

Dep

(Rs.)o Rs(n) → green

blue.

P1 P2.

Strategies:-

1) rolling update.

2) recreate.

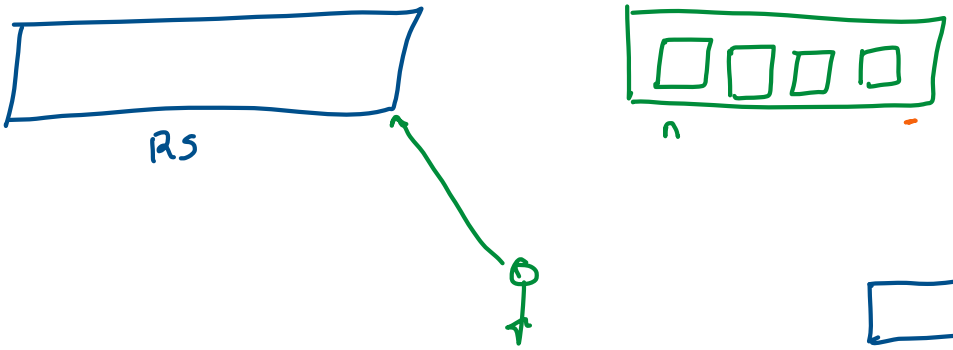
K.

o rolling update }

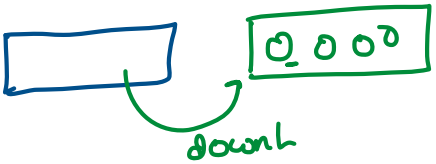
Dep = r=4

4+1=5

Dep (100%)



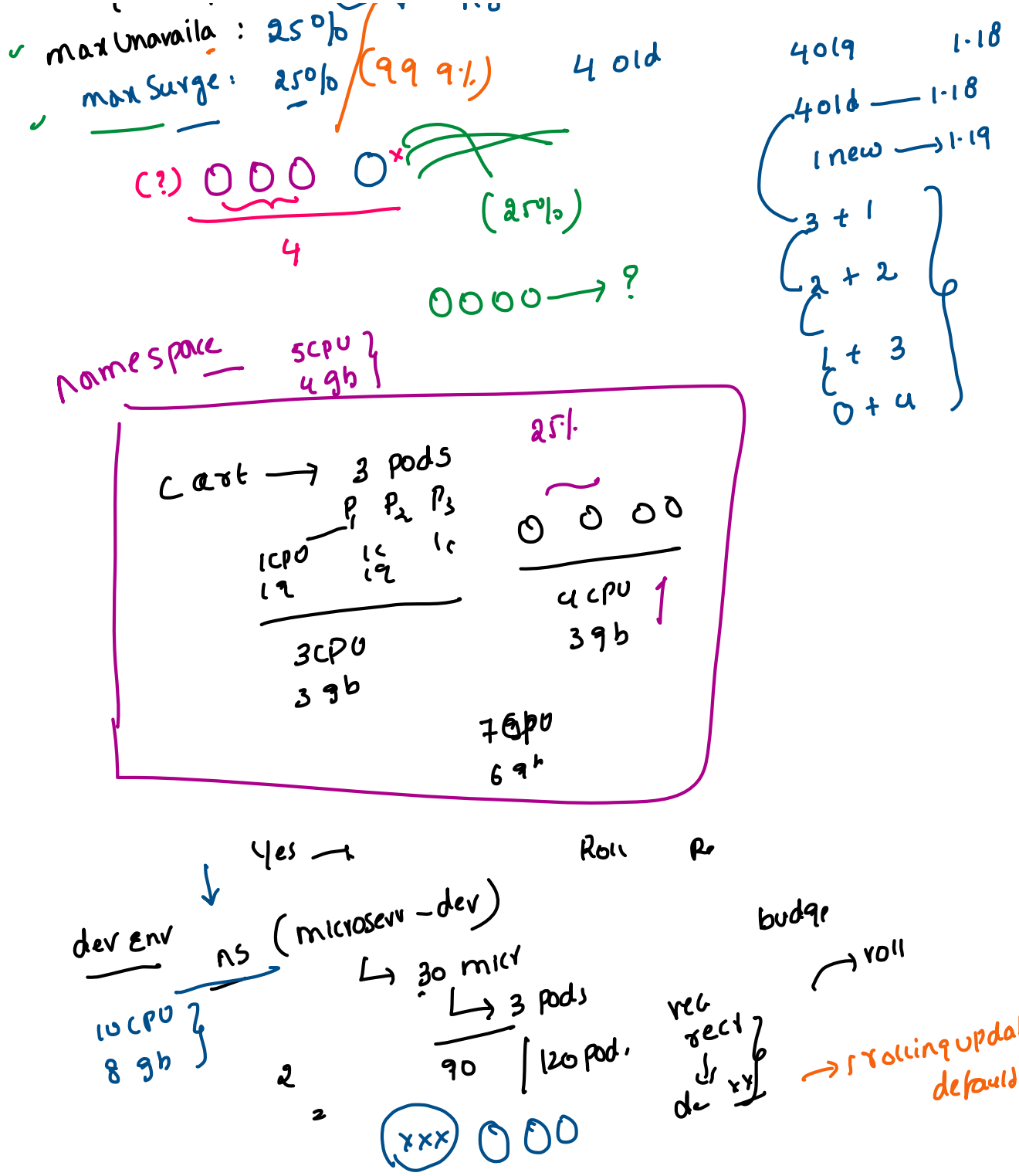
rolling update.

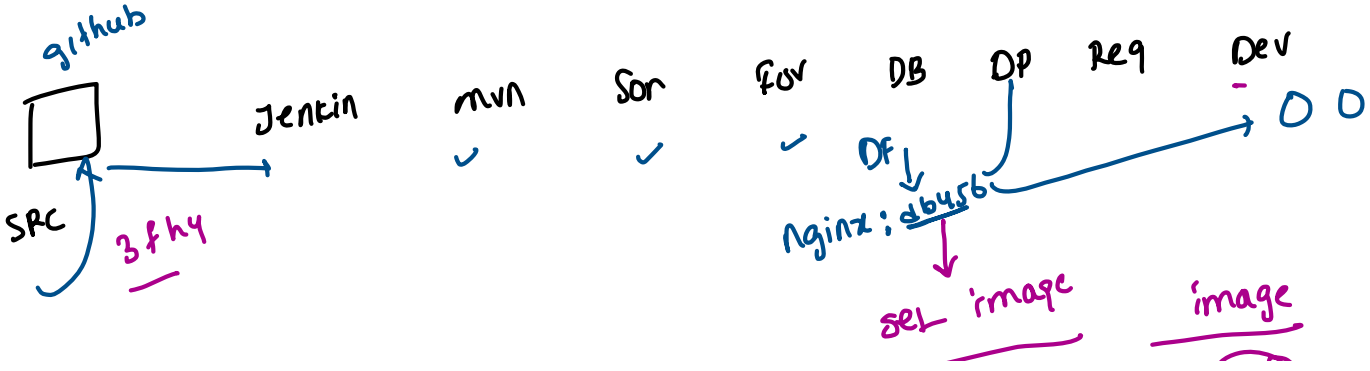


4 old pods. 0 0 0 0 → nginx → (1.18) 1.19

✓ maxUnavaila : 25%

(99.9%) 4 old 4019 1.18





✓ max Unavaila : 25%
✓ max Surge : 25% (99 9%)

4 old

4 old 1.18
4 old — 1.18
1 new → 1.19
3 + 1
2 + 2
1 + 3
0 + 4

(?) O O O O ×
4
(25%)

O O O O → ?

Namespace 5 CPU 4 gb

25%

Cart → 3 pods
P1 P2 P3
1 CPU 1 q
1 c 1 q
1 c
3 CPU 3 gb

O O O O
4 CPU 3 gb

7 CPU 6 gb

Yes → Roll Re

dev env
ns (microserv - dev)
↳ 30 micr
↳ 3 pods
90 | 120 pod.
2
2
xxx O O O

10 CPU 8 gb

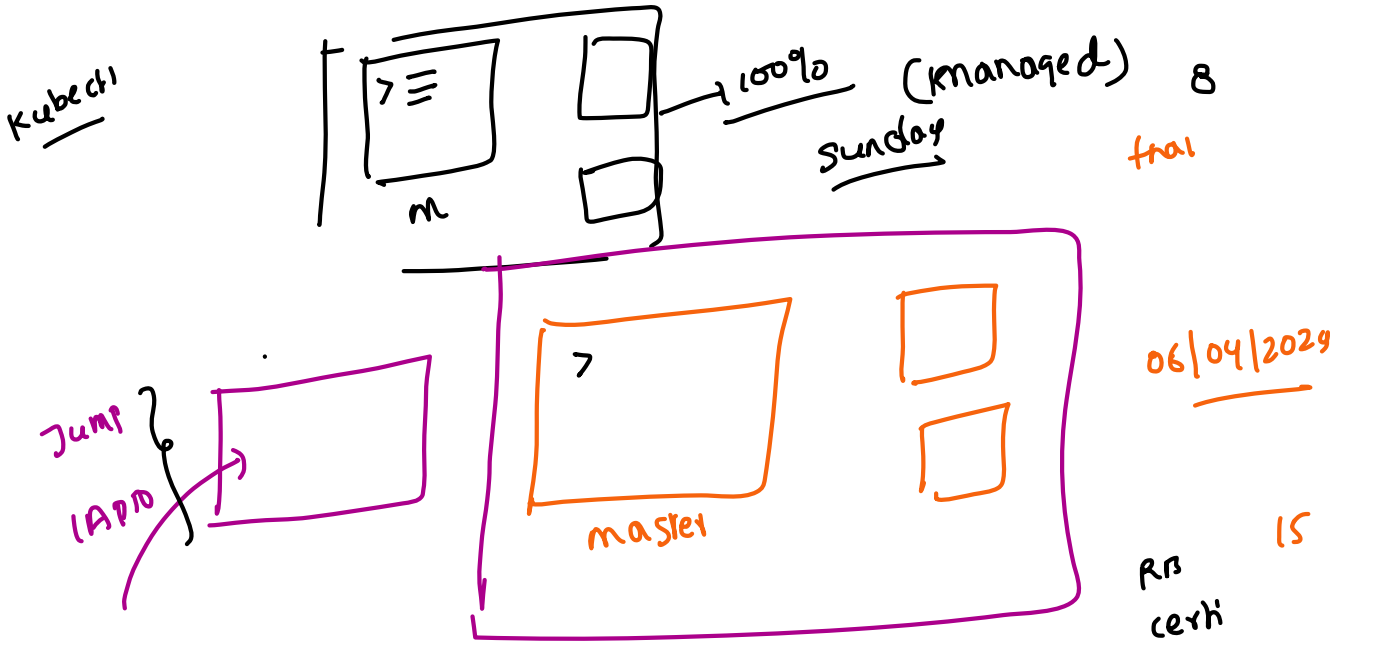
budge
→ roll
rec
rect
de xx
→ rolling update default

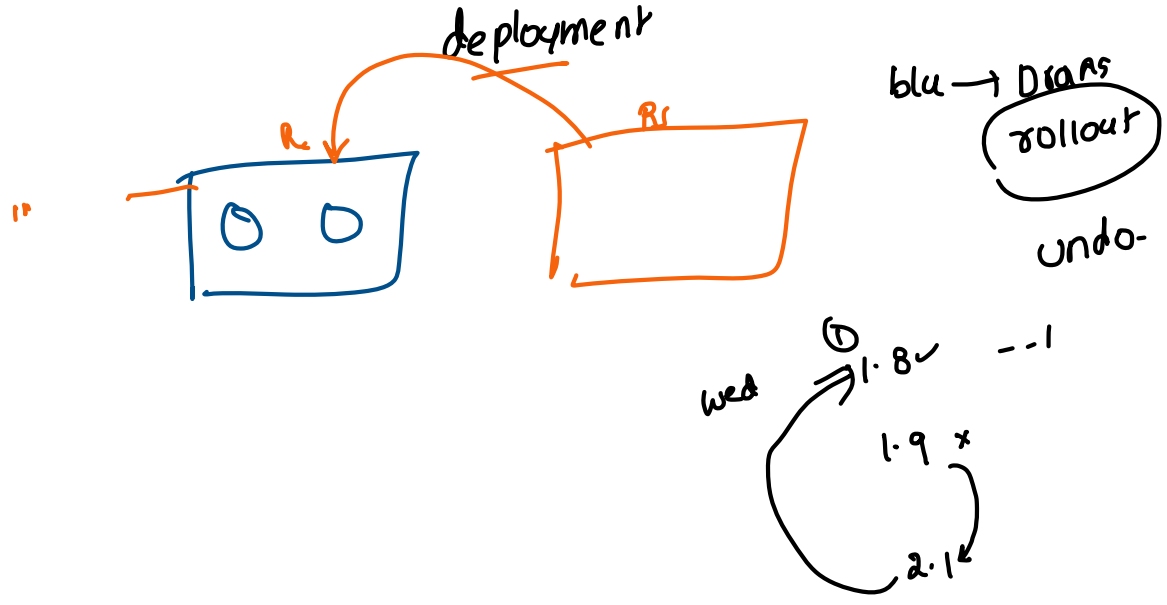
github
SRC
3 fhy
Jenkin mvn Son For DB DP Req Dev
DF
nginx : db456
set image
image
O O

set image

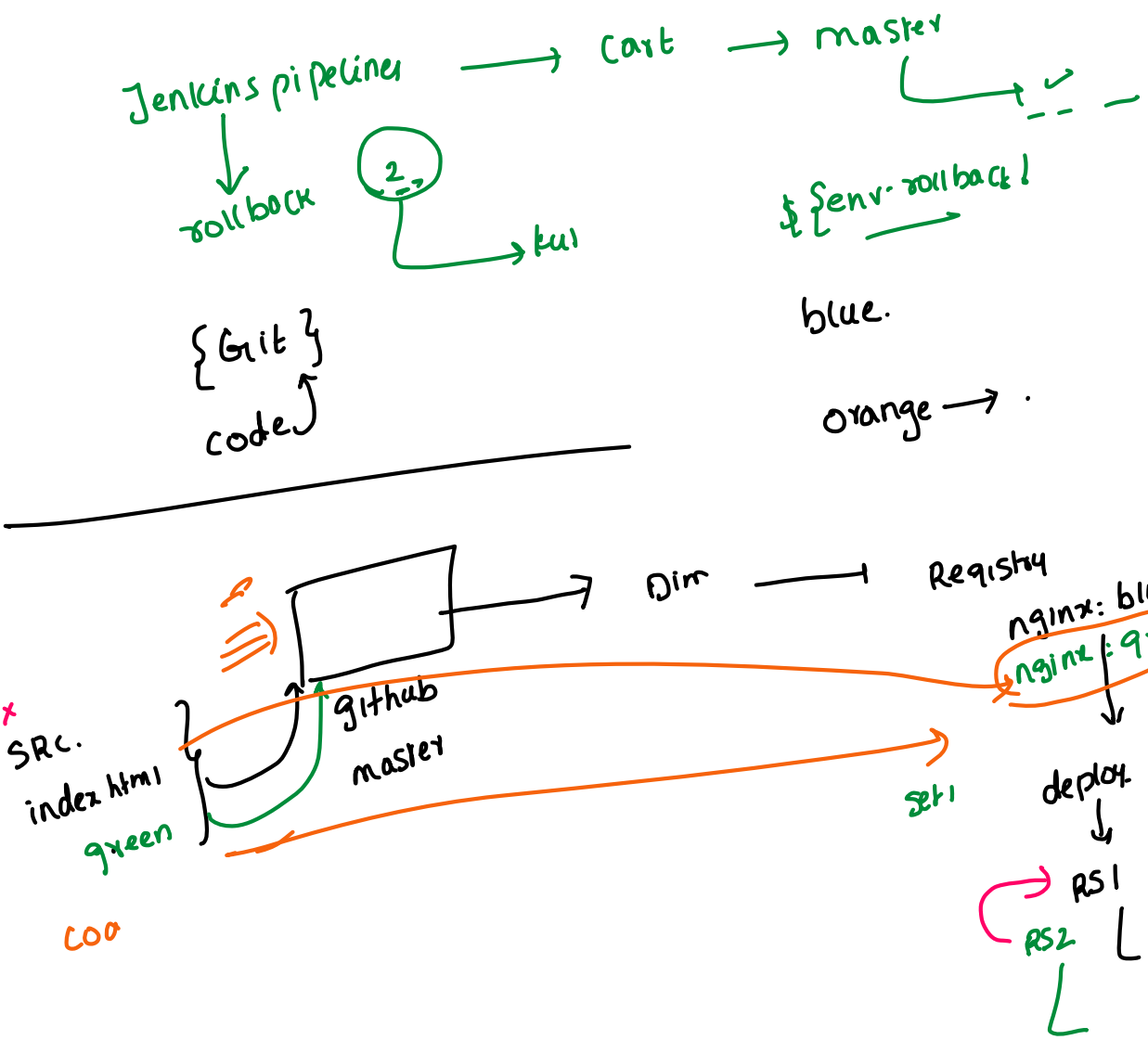
image

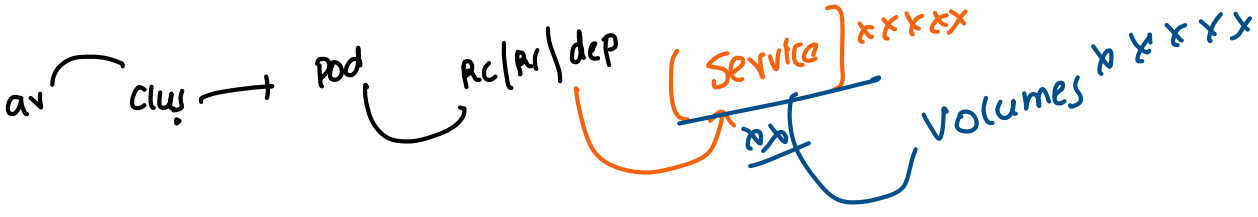
Eagnam





pipeline → Cart → master





Jenkins pipeline → cart → master

rollback

2 → kul

${env.rollback}

{Git}

code

blue.

orange →

Dim → Registry

nginx: blue

nginx: green

SRC.

index html

green

github

master

set1

deploy (fail)

RS1

RS2

RS1-a

coa

tags → 01/04 V1.0

— 05/04 V1.7 → Dep

Jenkins

— 06/04 V1.8

stage (Pr)

07

av clus → pod RC/RS/dep

Service xxxxx

xx

Volumes xxxxx