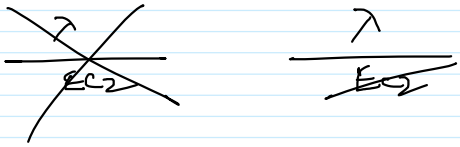
10 November 2020 18:15

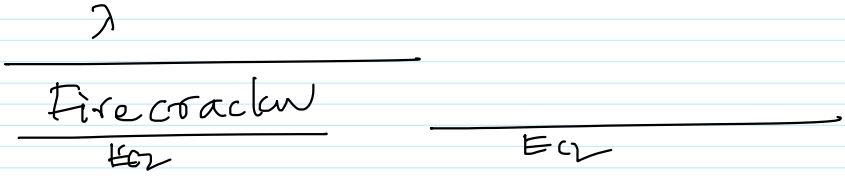
Agenda

- Stepfunctions
- Elasti Cache
- AutoScaling (*)

Dynamo DB

Aurora RDS


λ
EC2
λ
EC2

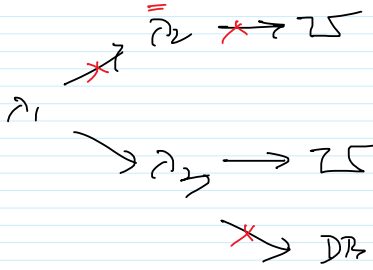

λ
Firecracker
EC2
EC2

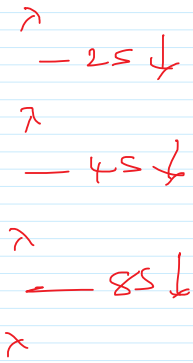
Step Functions

12 November 2020 14:11

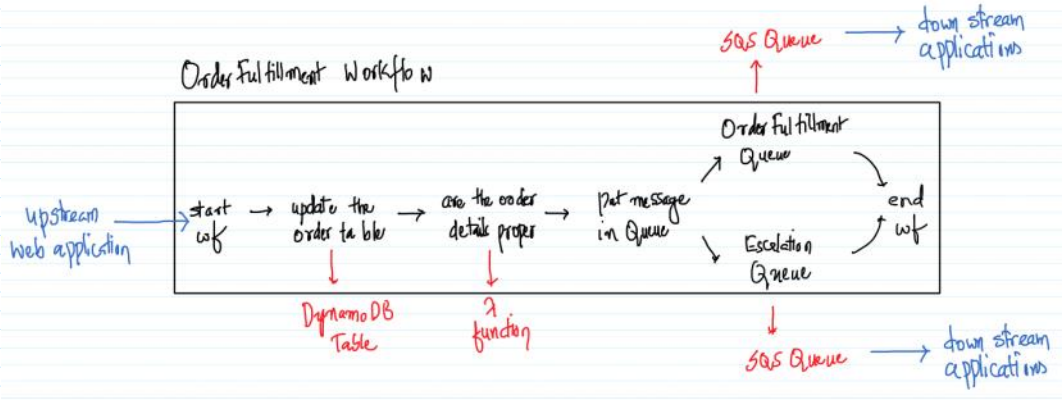
- event driven
- Schedule
- API Gateway
- StepFunctions.

DAG — Directed Acyclic Graph





exponential backoff


Order Fulfillment Workflow
SQS Queue
down stream applications
Order Fulfillment Queue
upstream web application
start wf
update the order table
create the order details proper
put message in Queue
Escalation Queue
end wf
DynamoDB Table
λ function
SQS Queue
down stream applications

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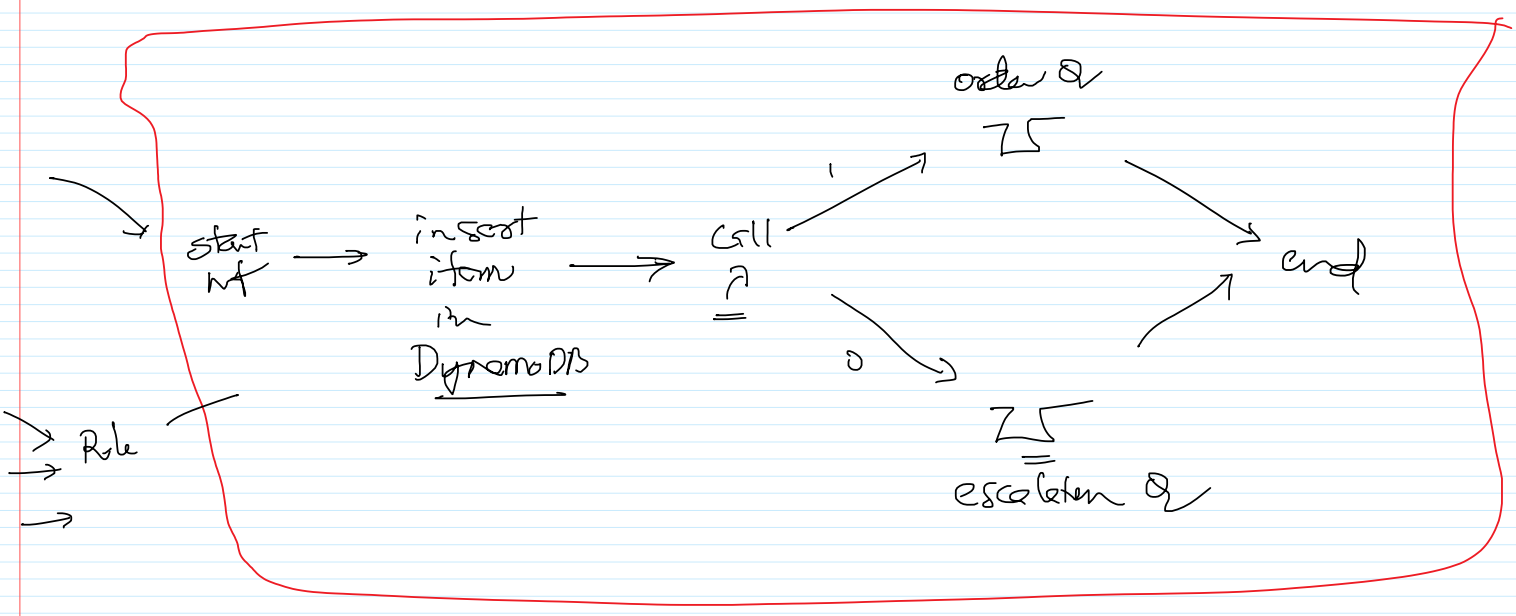
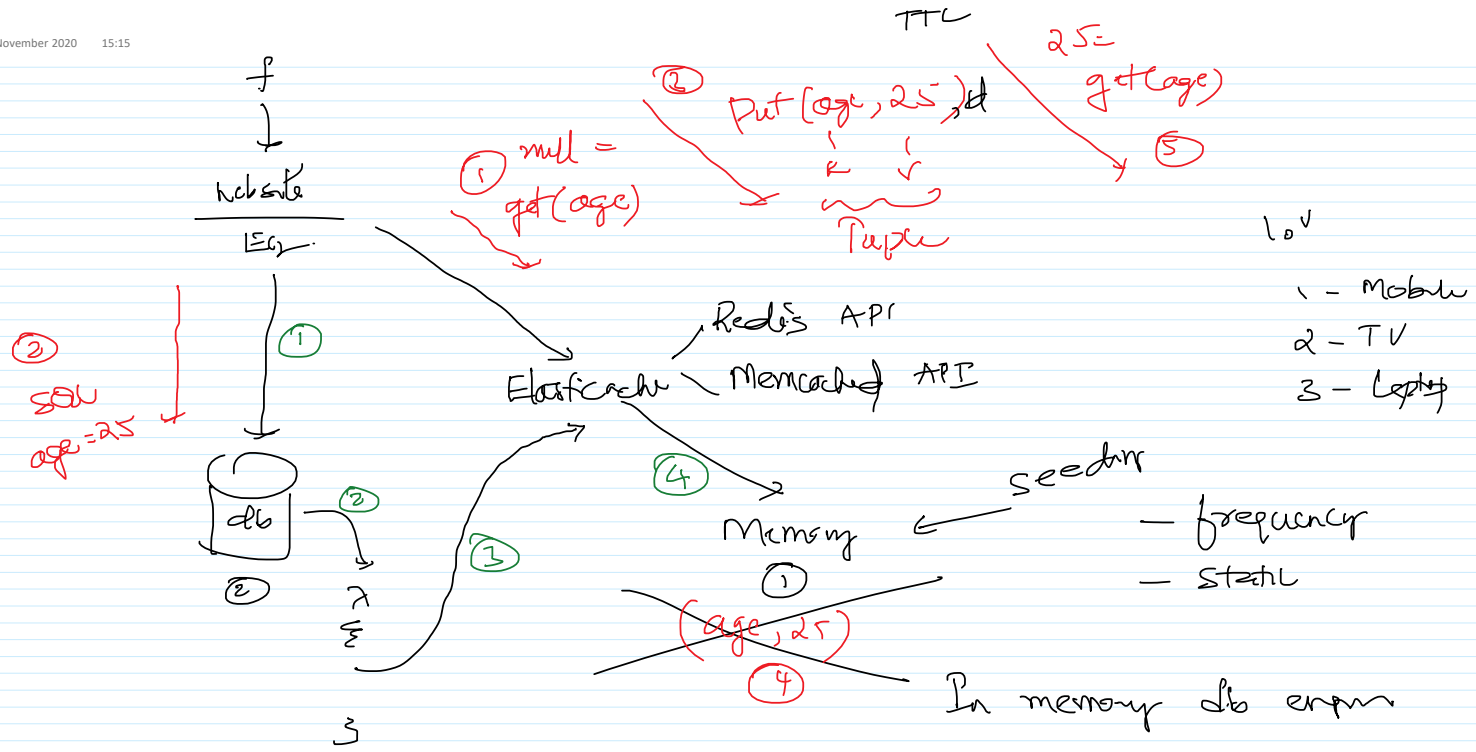


12 November 2020 15:15



Pseudo Code

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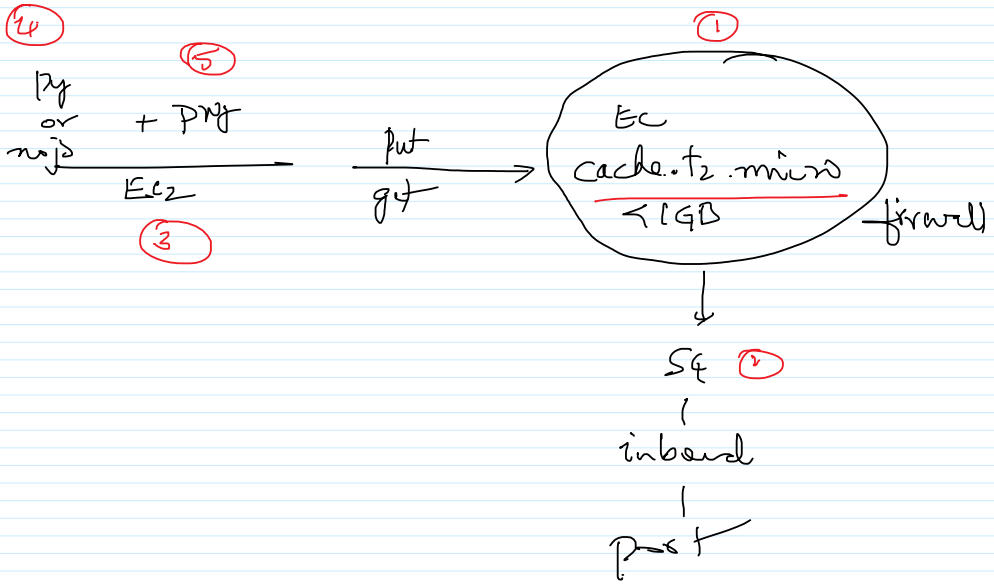
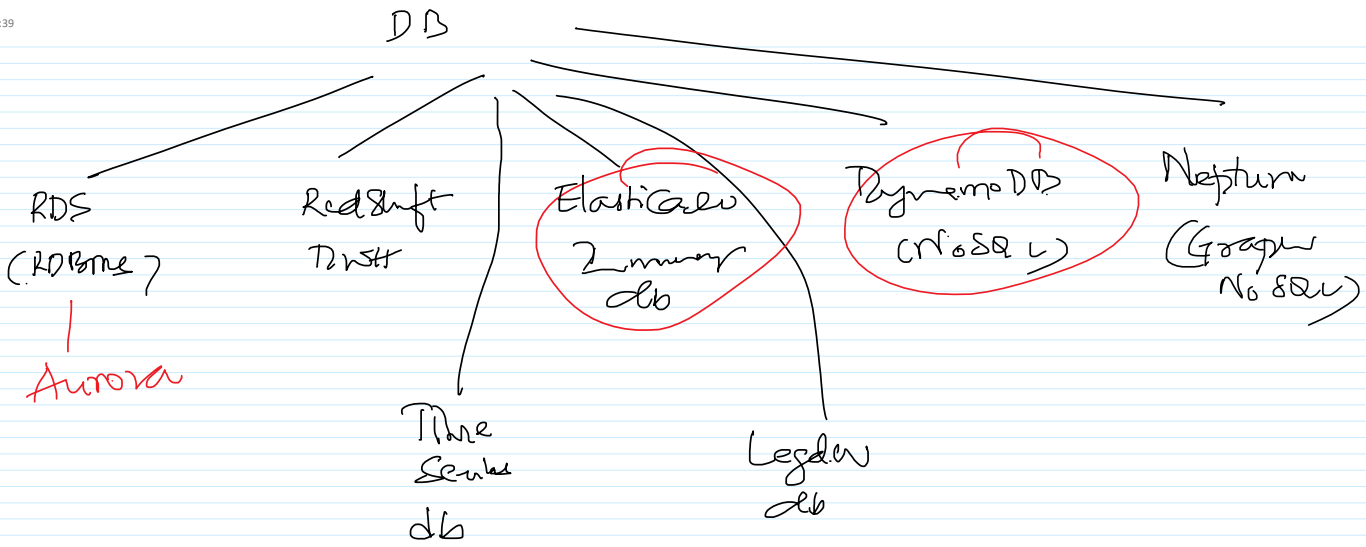
```
age_ec = get_ec(age)          <-- R. from EC

if (age_ec == null)
    age_db = get_db(age)      // SQL   <-- 2. from DB
    if (age_db != null)
        put_ec(age, age_db)   <-- 3. to EC
```

12 November 2020 15:25



12 November 2020 15:39



ElastiCache → Caching app data

CloudFront → web pages (html, js, css)
audio
video
images

CDN

CDN → CloudFront

DC → PoP → Edge Location

** → Aws

Akamai

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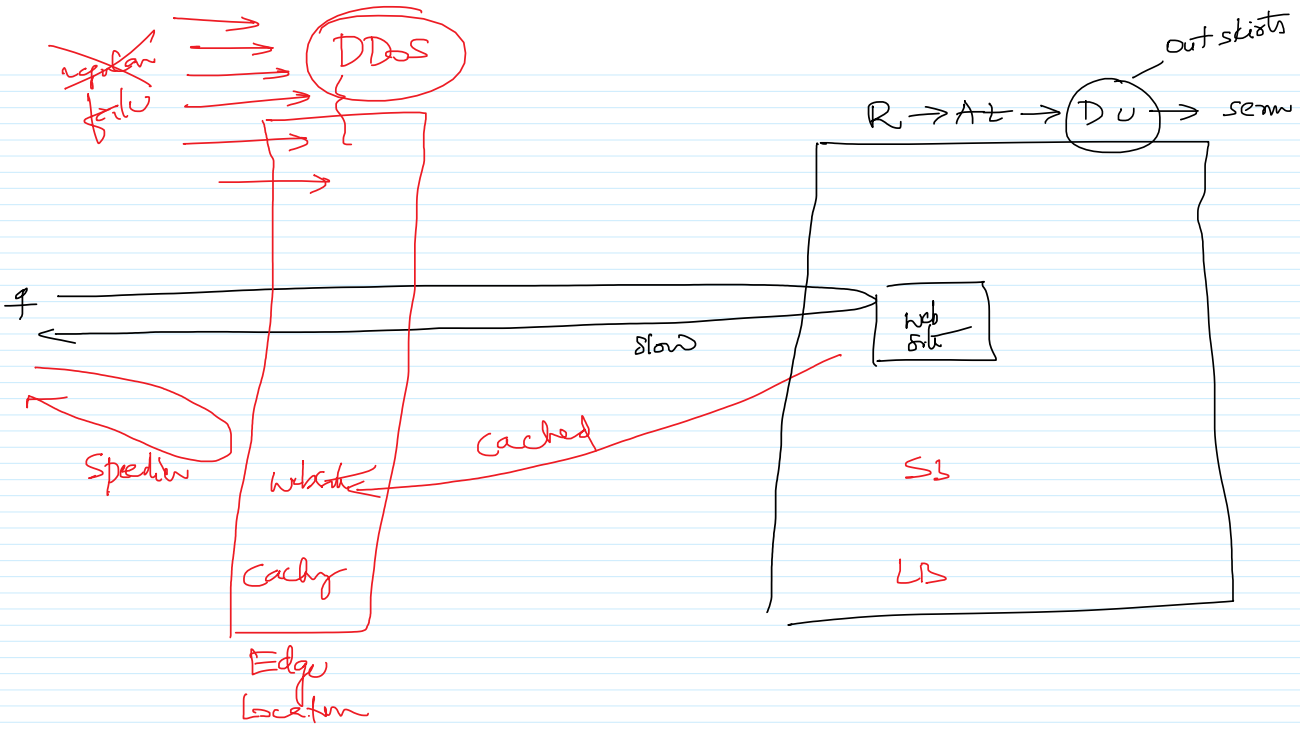
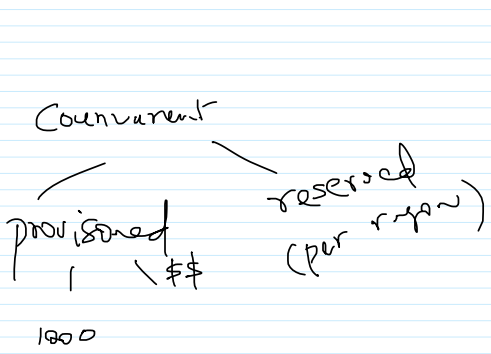
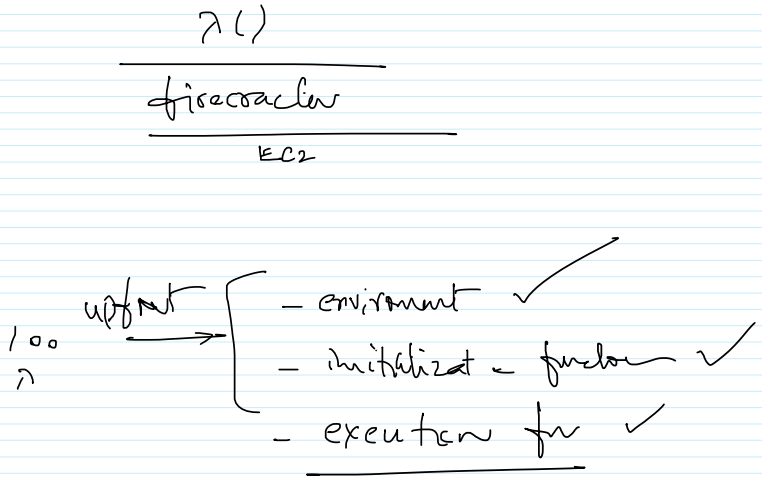
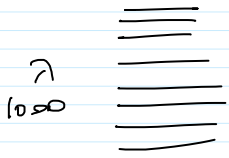



Concurrent
provisioned
$$
1000
reserved
(per region)


λ()
directaction
EC2
100
λ
upfront
- environment
- initialization function
- execution fn

reserved Concurrency — region level

1000 — NV



Concurrent

provisioned (warmup)

reserved (parallel)

Quota Service

Auto Scaling (force)

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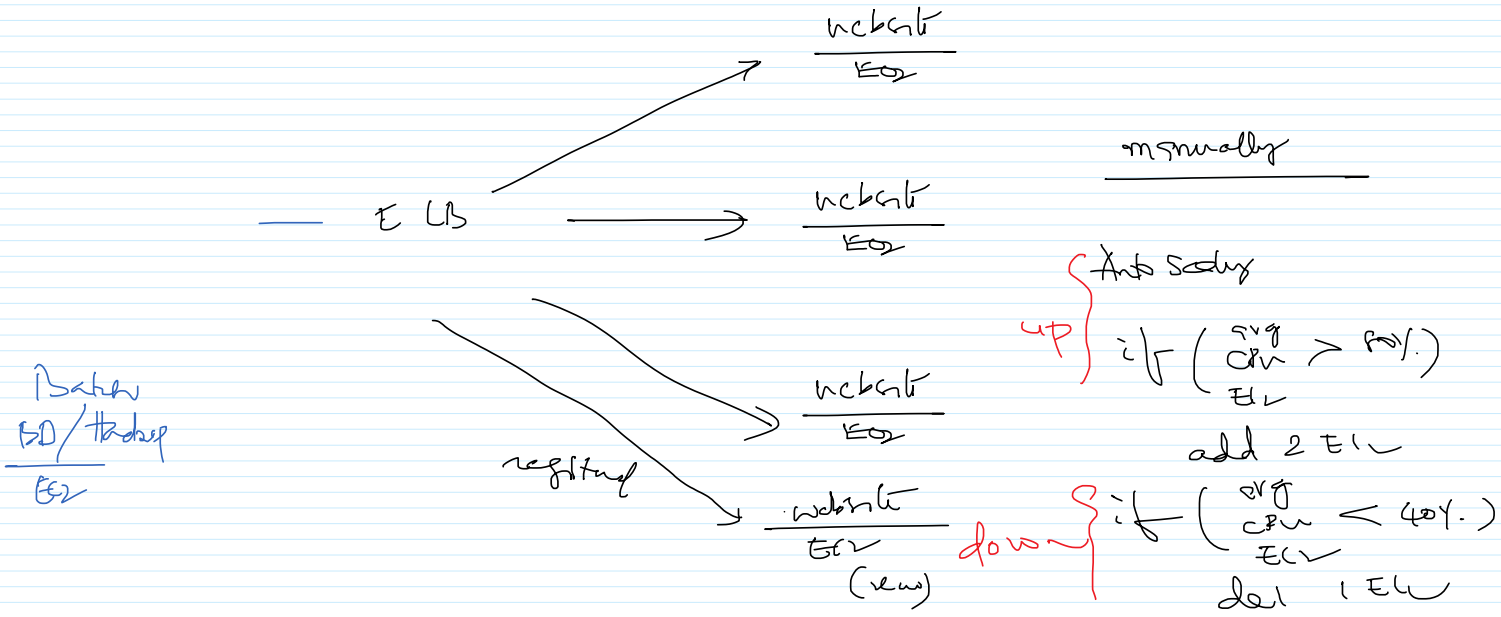
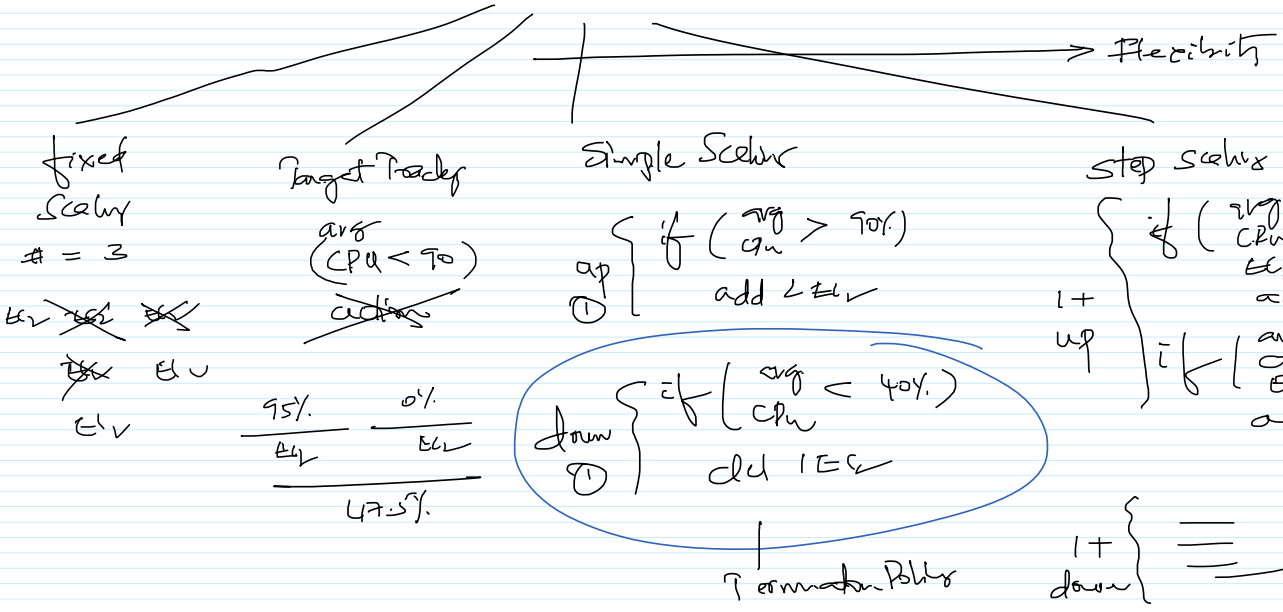
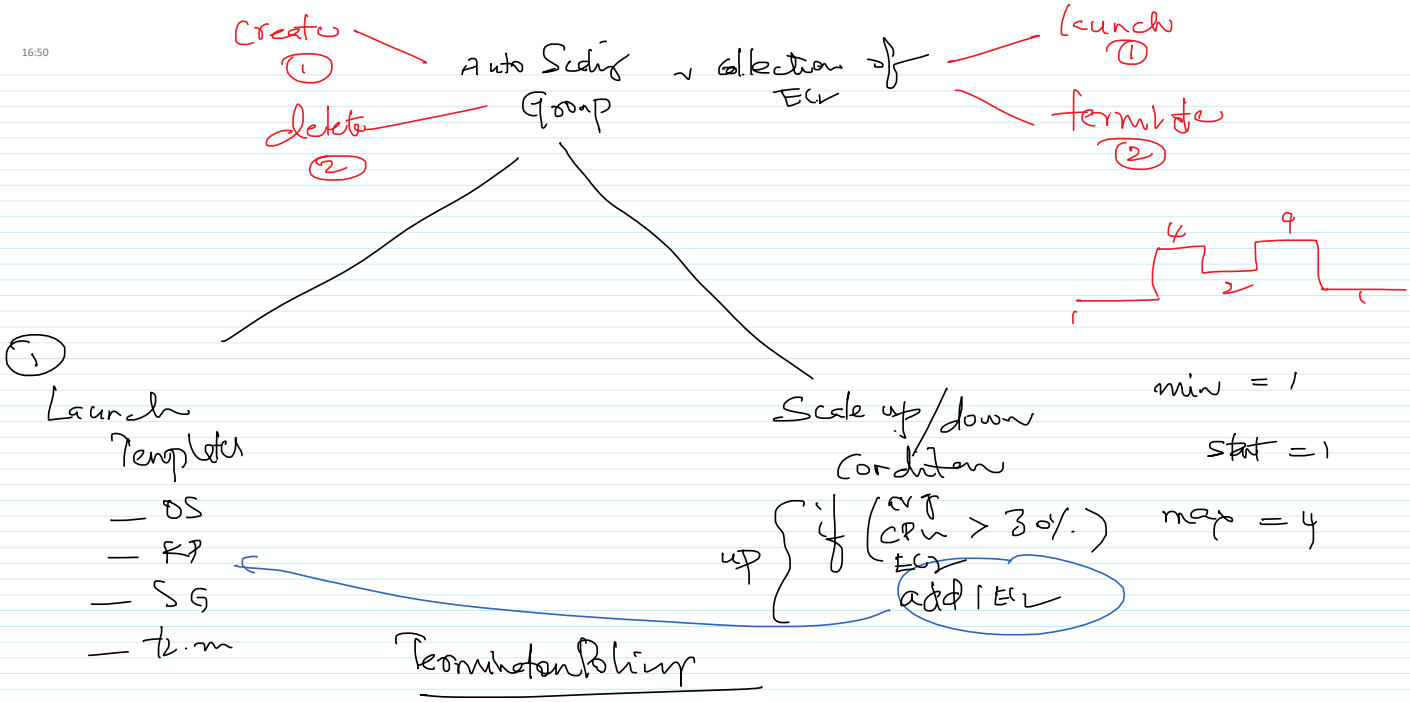


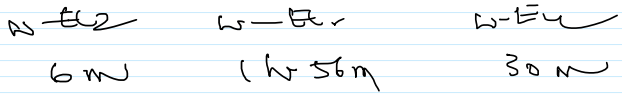
Auto Scaling



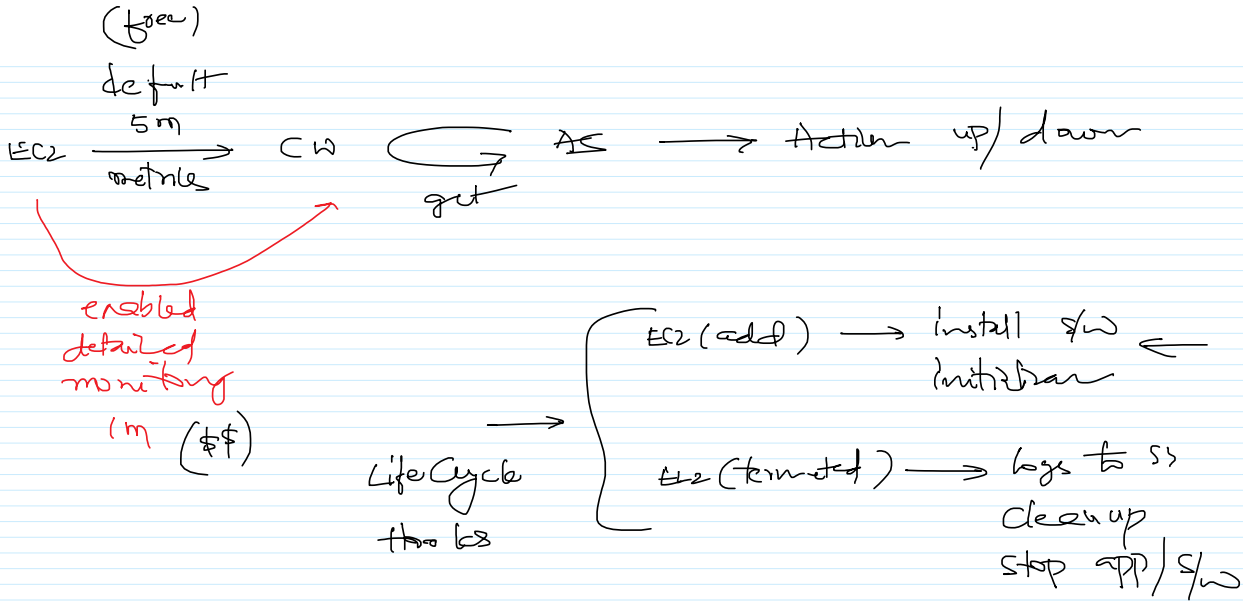
12 November 2020 16:50

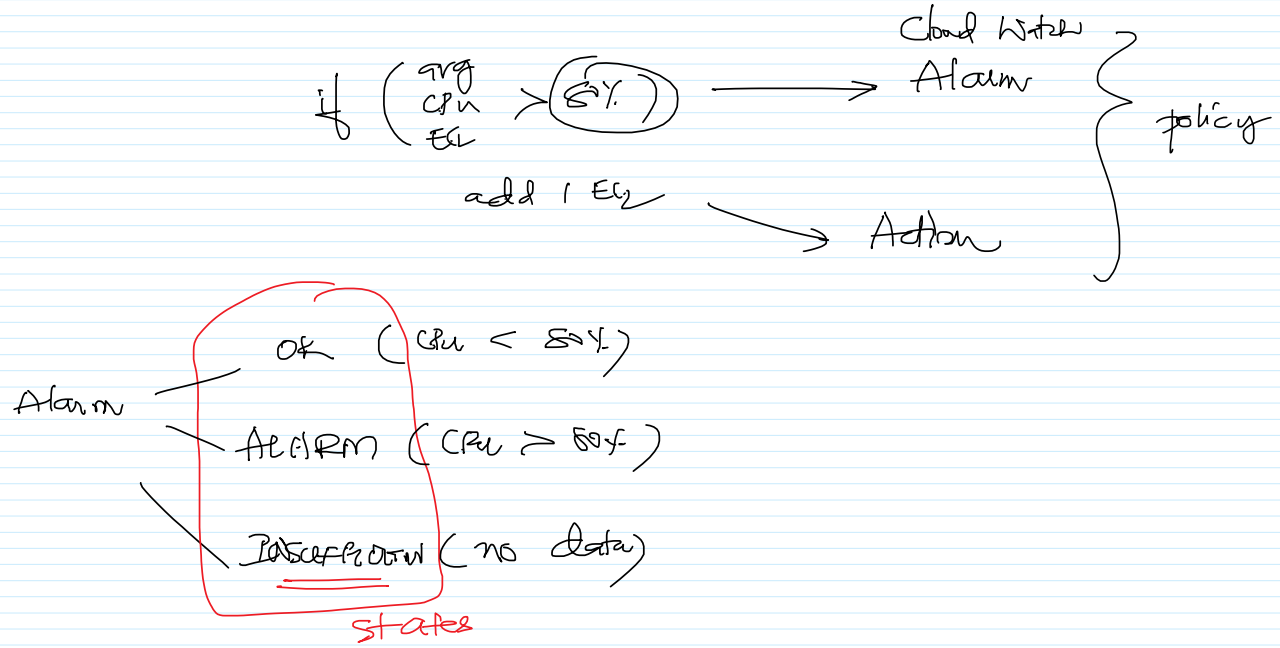


Replacement Policies
- oldest
- newest
- closest to next how



12 November 2020 17:00

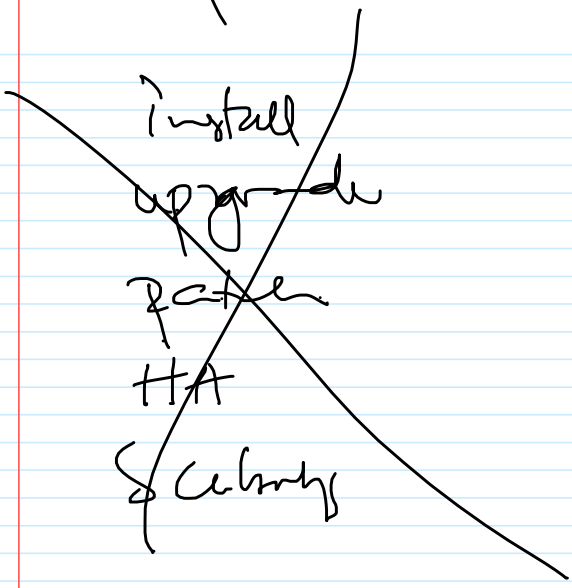



if (avg CPU EC2 > 60%)
Cloud Watch
Alarm
policy
add 1 EC2
Action

Alarm
OK (CPU < 50%)
ALARM (CPU > 50%)
INSUFFICIENT DATA (no data)
states

12 November 2020 17:36

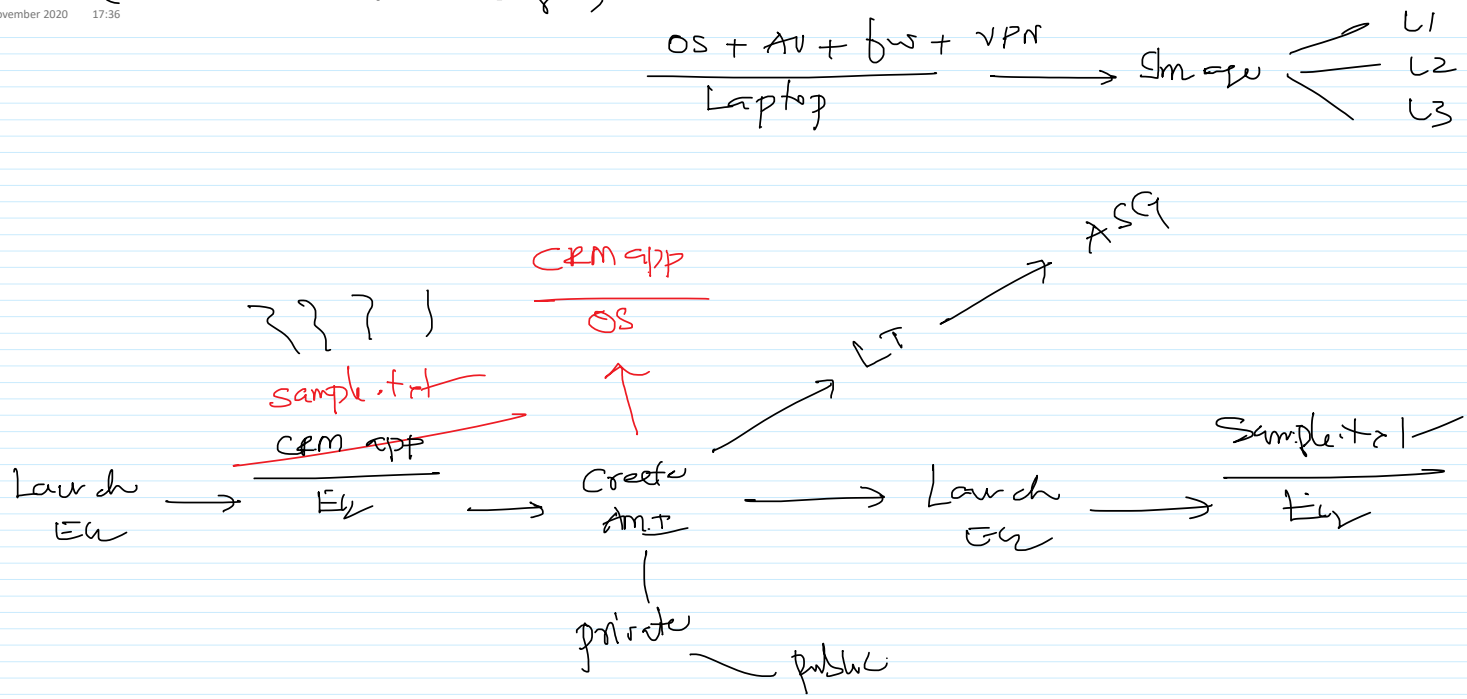
ANS OpsWorks — Puppet, Chef } CM tools

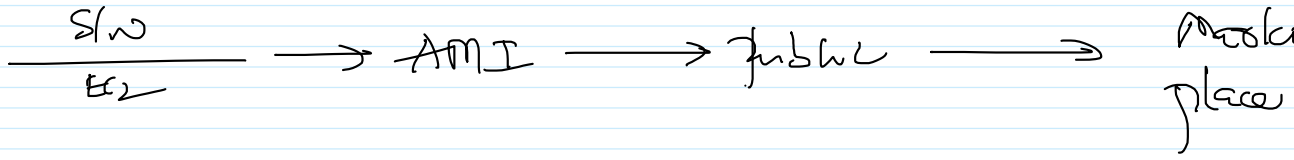


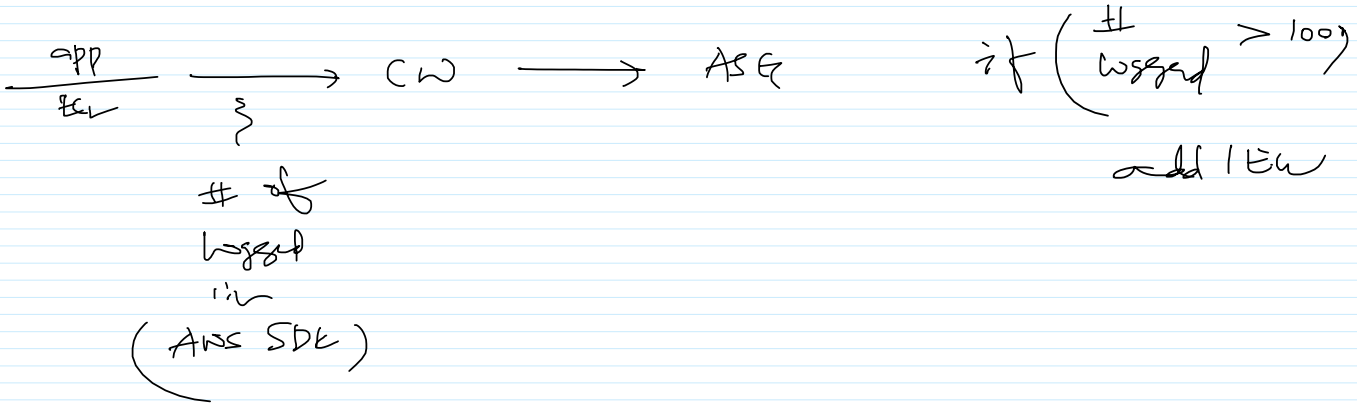
~~install~~
~~upgrade~~
~~patch~~
~~HA~~
~~Scaling~~

AMI (Amazon Machine Images)

12 November 2020 17:36





- Oracle
- MS
- PS

12 November 2020 18:06