

TASK DEFINITION (TD)

- TOTAL CPU, MEM
- IMMUTABLE & VERSIONED
- UP TO 10 CONTAINERS
- ALL ON SAME INSTANCE

CLUSTER

- INFRASTRUCTURE BOUNDARY
- IAM PERMISSION BOUNDARY
- CAN INCLUDE BOTH EC2 & FARGATE TASKS IN

SERVICE

- MAINTAIN RUNNING TASKS
- INTEG WITH ELB
- REPLACE UNHEALTHY TASKS

CONTAINER

- IMAGE (ECR OR PUB REPO)
  - CPU, MEM (OPTIONAL)
- WILL SHARE  
EQUALLY IF NOT

PLATFORM VERSION ALLOWS YOU TO 'PIN' YOUR TASK TO A RUNTIME ENV (KERNEL & CONTAINER RUNTIME VER)

FARGATE

- NO INSTANCES
- TASK APIs
- RESOURCE PRICING (CPU, MEM / \$)
- SAME TASK DEFINITION SCHEMA
- USE ECS APIs TO LAUNCH FARGATE TASK
- BOTH EC2 & FARGATE IN SAME CLUSTER

WHEN TO USE EC2 LAUNCH TYPE?

1. IF YOU NEED A SPECIFIC AMI
2. IF OTHER APPS NEED TO RUN ON INSTANCE
3. IF YOU WANT TO USE SPOT INSTANCES

USE CASES

- MICROSERVICES
- BATCH JOBS
- CLOUD MIGRATION

A NEW COMPUTE PRIMITIVE TO BUILD APPS AROUND - THE **TASK**

ECS REMAINS THE CORE, PROVIDING

- VPC NETWORKING
- ADV TASK PLACEMENT
- INTEG W/AWS SERVICES
- CLI
- GLOBAL
- SCHEDULING ENGINES
- TASK AUTO-SCALE (SERVICE?)
- LOAD BALANCING
- METRICS

LOGGING

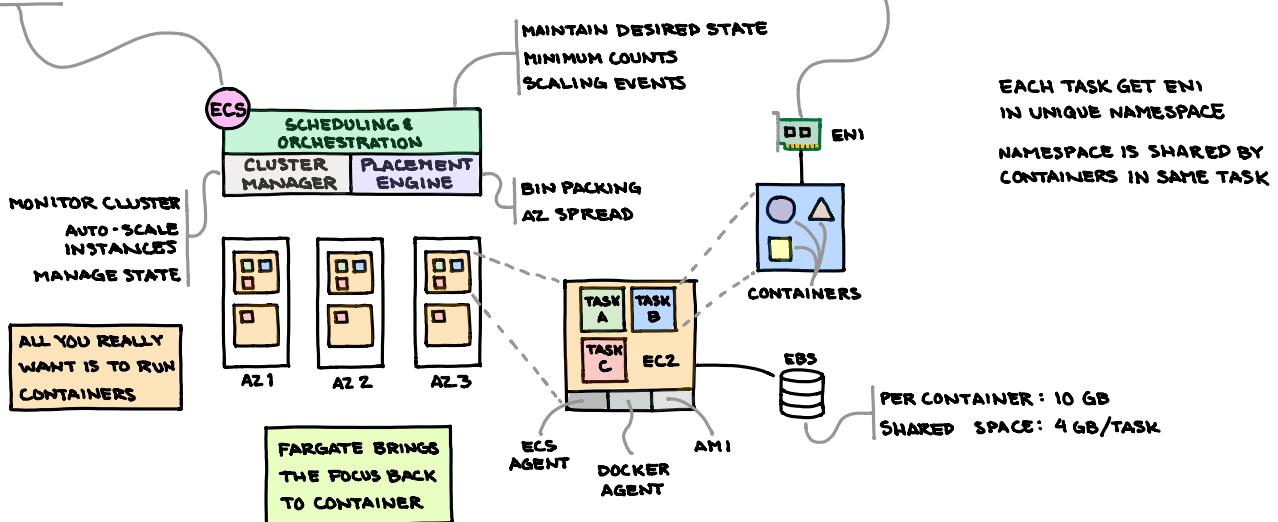
- USE CLOUDWATCH LOGS
- SPECIFY AWSLOGS DRIVER IN TD
- VIEW LOGS

METRICS

- SERVICE LEVEL
- CPU & MEM UTILIZ

NETWORKING

- FARGATE TASKS CREATED IN YOUR VPC SUBNETS
- AN ENI IS CREATED/ATTACHED TO FARGATE TASK
- FARGATE TASK/ENI IS ALLOCATED PRIVATE IP
- CAN ALSO ASSIGN PUBLIC IP
- ALLOWS FINE GRAINED SECURITY GROUPS FOR TASKS
- TASK ENI ALSO NEEDED TO PULL FROM REPO/PUSH LOGS
- STANDARD VPC ROUTING W/NAT GW, ETC
- 'PUBLIC' TASKS LIKE PUBLIC EC2, 'PRIVATE' ALSO

PERMISSIONS

- CLUSTER - LAUNCH, STOP, DESCRIBE TASKS
- APPLICATION - ACCESS AWS RESOURCES FROM TASKS
- HOUSEKEEPING - CREATE ENI, FULL ECR IMAGE, PUSH CLOUDWATCH LOG, DE/REG ELB TARGETS

DEBUGGING

- SERVICE NOT STARTING - SEE 'STOP' CODE
- SERVICE NOT SCALING - SERVICE DETAIL PAGE

CREATE TRUST RELN W/ECS-TASKS  
ADD TASK ROLE ARN TO TD

LOAD BALANCING

- ALB & NLB SUPPORT
- ALB REQUIRES 2 SUBNETS/AZS
- ALB TARGET TYPE: IP
- INCLUDE PORT MAPPING IN TD

PRICING

- CPU & MEM DIMENSIONS
- PER SECOND BILLING
- ONE MINUTE MIN