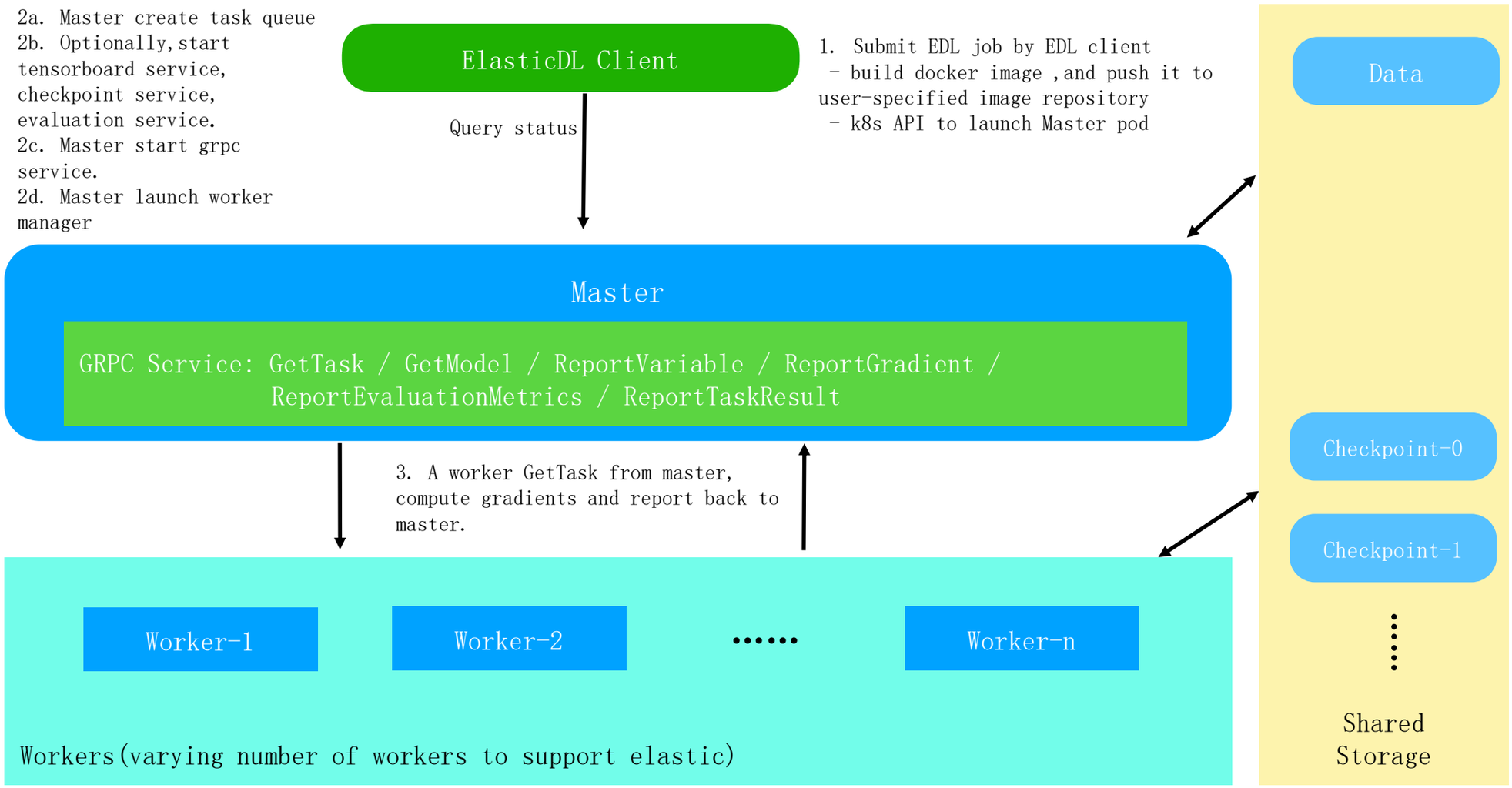
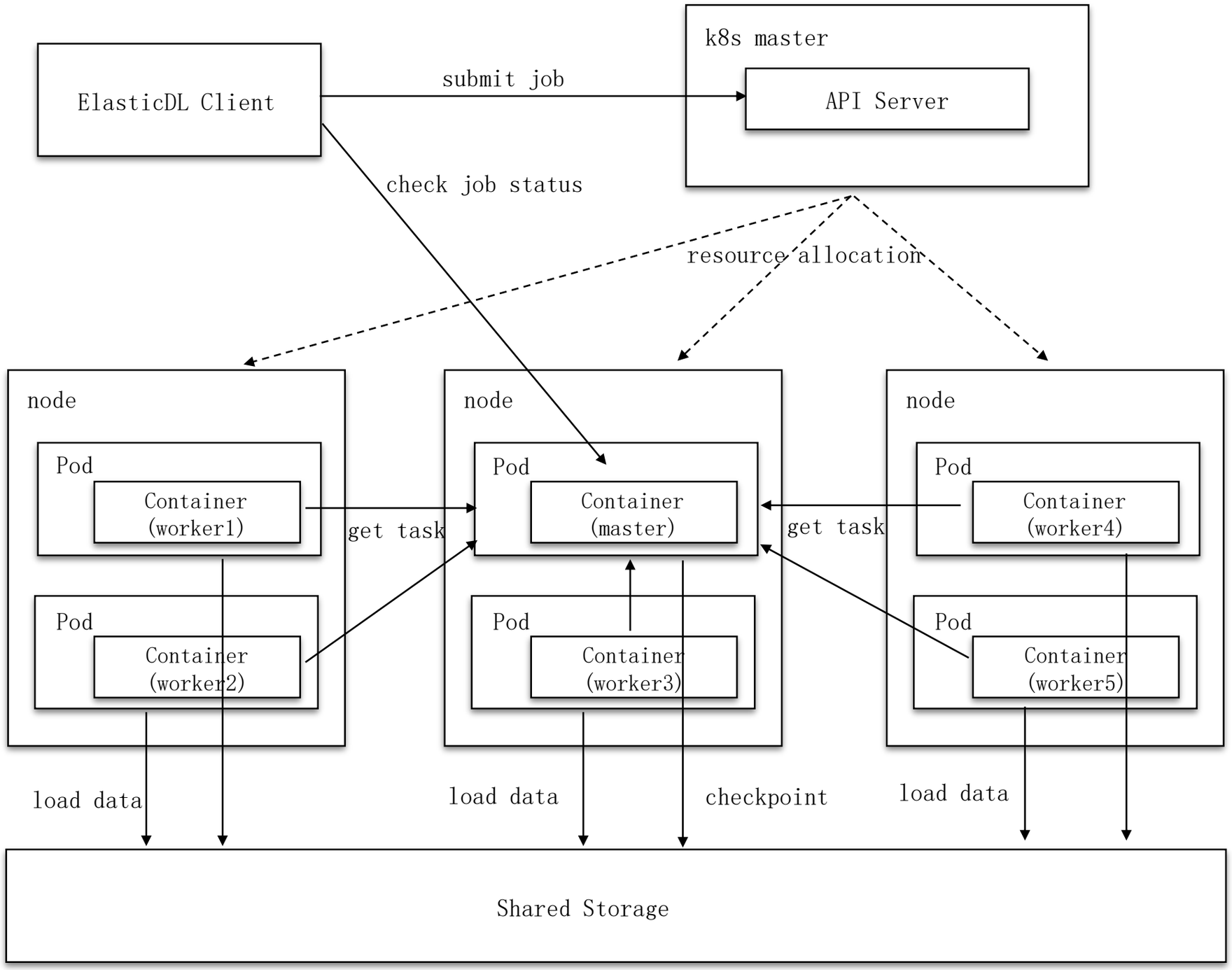

2a. Master create task queue
2b. Optionally, start tensorboard service, checkpoint service, evaluation service.
2c. Master start grpc service.
2d. Master launch worker manager
ElasticDL Client
Query status
1. Submit EDL job by EDL client
- build docker image ,and push it to user-specified image repository
- k8s API to launch Master pod
Data
Master
GRPC Service: GetTask / GetModel / ReportVariable / ReportGradient / ReportEvaluationMetrics / ReportTaskResult
3. A worker GetTask from master, compute gradients and report back to master.
Checkpoint-0
Checkpoint-1
Worker-1
Worker-2
Worker-n
Workers(varying number of workers to support elastic)
Shared Storage


k8s master
ElasticDL Client
submit job
API Server
check job status
resource allocation
node
node
node
Pod
Container
(worker1)
Pod
Container
(worker2)
get task
Pod
Container
(master)
Pod
Container
(worker3)
get task
Pod
Container
(worker4)
Pod
Container
(worker5)
load data
load data
checkpoint
load data
Shared Storage