MEERA
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## Worker node -

- Can be any physical or virtual machine where containers are deployed
- Every node in a K8S cluster must run a container runtime like Docker
- Has following components:
  - Kubelet
  - Kube-proxy
  - Container-runtime

### ① Kubelet -

- Is an agent running on each node
- Communicates with components from master node
- makes sure that containers are running in a pod
- The kubelet takes a set of podspecs that are provided through various mechanisms & ensures that the containers described in those podspecs are running & healthy
- In case any pod has any issue, kubelet tries to restart the pods on the same node or a diff. nodes.
- The kubelet dosn't manage containers which were not created by K8S.

### ② kube-proxy -

- A network agent which runs on each node responsible for maintaining network configuration and rules.
- Exposes services to the outside world
- Core networking components in K8S.
- All worker nodes run a daemon called kube-proxy, which watches the API Server on the master node

for the addition and removal of services and endpoints.

③ Container runtime (pods and containers)

- The container runtime is the software that is responsible for running containers
- Kubernetes supports several container runtimes:
  Docker
  containerD
  cri-o
  Rktlet
  K8S CRI (Container Runtime Interface)
- K8S does not have the capability to directly handle containers.
- In order to run & manage a container's lifecycle, K8S requires a container runtime on the node where a pod and its containers are to be scheduled.

④ Addones for DNS, Dashboard, monitoring, logging etc

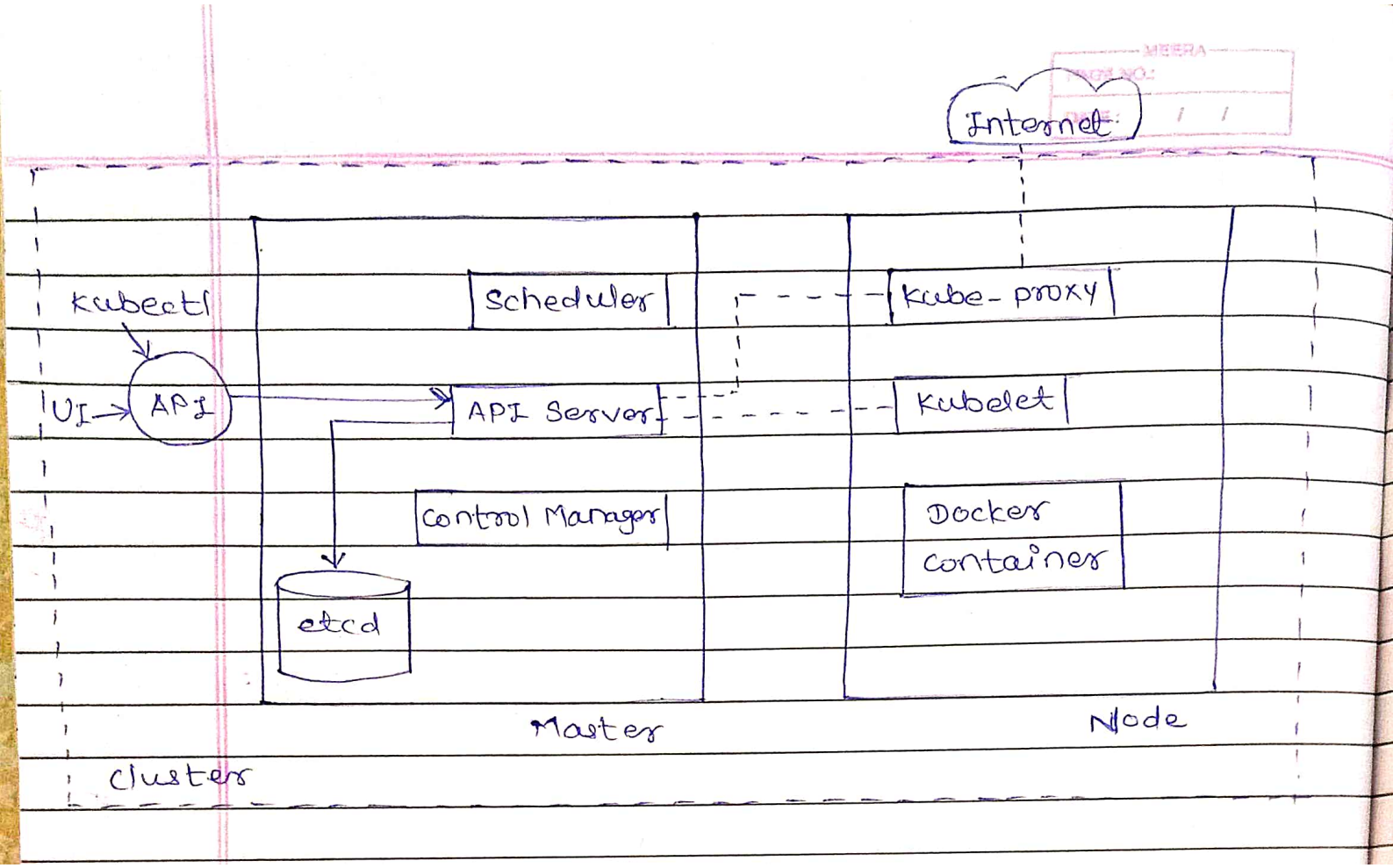
Add-ones extend the functionality of K8S

Dashboard - a general purpose web-based user interface for cluster management

Monitoring - collects cluster-level container metrics & saves them to a central data store

Logging - collects cluster-level container logs and saves them to a central log store for analysis

DNS - cluster DNS is a DNS server required to assign DNS records to K8S objects & resources.


Internet
kubectl
UI
API
Scheduler
API Server
control Manager
etcd
kube-proxy
kubelet
Docker
container
Master
Node
cluster