Troubleshooting Application failure

My pod is running but not doing what I told it to do

```
kubectl apply --validate -f mypod.yaml
```

Missing endpoints

```
kubectl get pods --selector=name=nginx,type=frontend
```

Pod Phases

Value	Description
Pending	The Pod has been accepted by the Kubernetes system, but one or more of the Container images has not been created. This includes time before being scheduled as well as time spent downloading images over the network, which could take a while.

Running	The Pod has been bound to a node, and all of the Containers have been created. At least one Container is still running, or is in the process of starting or restarting.
Succeeded	All Containers in the Pod have terminated in success, and will not be restarted.
Failed	All Containers in the Pod have terminated, and at least one Container has terminated in failure. That is, the Container either exited with non-zero status or was terminated by the system.
Unknown	For some reason the state of the Pod could not be obtained, typically due to an error in communicating with the host of the Pod.

With the introduction of new Pod conditions, a Pod is evaluated to be ready only when both the following statements are true:

- All containers in the Pod are ready.
- All conditions specified in ReadinessGates are “True

Example states

● Pod is running and has one Container. Container exits with success.
○ Log completion event.
○ If restartPolicy is:
■ Always: Restart Container; Pod phase stays Running.
■ OnFailure: Pod phase becomes Succeeded.
■ Never: Pod phase becomes Succeeded.
● Pod is running and has one Container. Container exits with failure.
○ Log failure event.
○ If restartPolicy is:
■ Always: Restart Container; Pod phase stays Running.
■ OnFailure: Restart Container; Pod phase stays Running.
■ Never: Pod phase becomes Failed.

Troubleshooting Control Plane failure

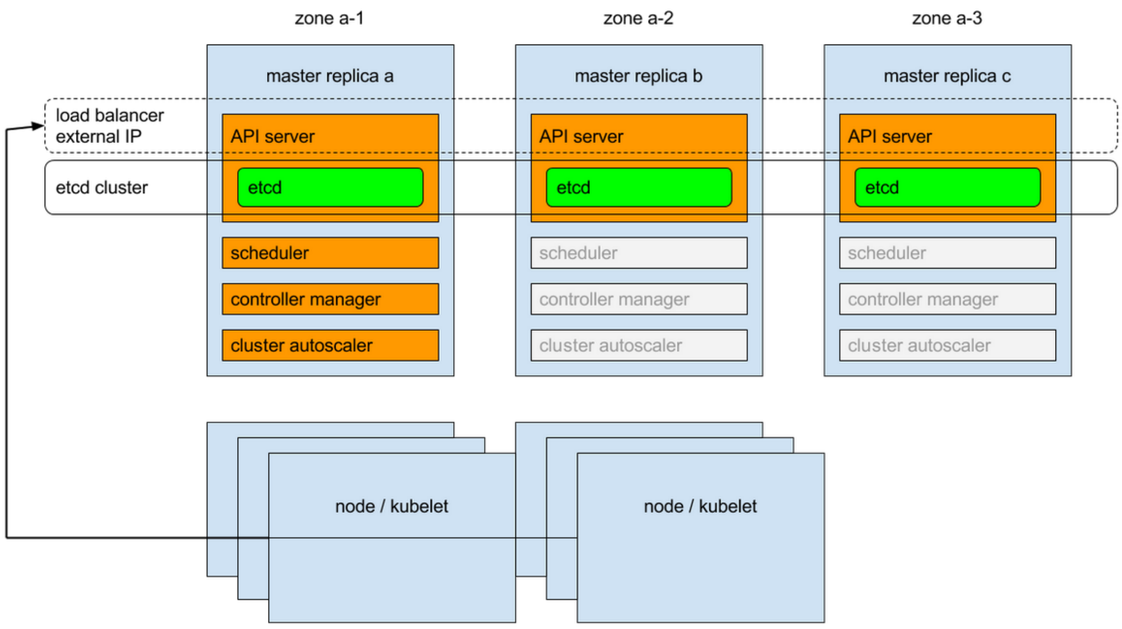
Master

- /var/log/kube-apiserver.log - API Server, responsible for serving the API
- /var/log/kube-scheduler.log - Scheduler, responsible for making scheduling decisions
- /var/log/kube-controller-manager.log - Controller that manages replication controllers

Worker Nodes

- /var/log/kubelet.log - Kubelet, responsible for running containers on the node
- /var/log/kube-proxy.log - Kube Proxy, responsible for service load balancing

HA setup



Troubleshooting worker node failure

Troubleshooting Networking