In pervious document, I have made a cluster already.
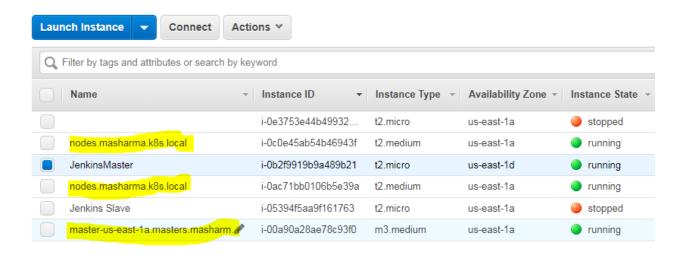
Now to bring up the already setup cluster:

kops update cluster --name=${KOPS_CLUSTER_NAME} –yes

```
[ec2-user@ip-172-31-84-37 ~]$ kops update cluster --name=${KOPS_CLUSTER_NAME} --yes

*************************************************************************

A new kubernetes version is available: 1.10.6
Upgrading is recommended (try kops upgrade cluster)

More information: https://github.com/kubernetes/kops/blob/master/permalinks/upgrade_k8s.md#1.10.6

*************************************************************************

I1124 07:31:38.281021    29233 apply_cluster.go:505] Gossip DNS: skipping DNS validation
I1124 07:31:38.546735    29233 executor.go:103] Tasks: 0 done / 77 total; 30 can run
I1124 07:31:38.897018    29233 executor.go:103] Tasks: 30 done / 77 total; 24 can run
I1124 07:31:39.073711    29233 executor.go:103] Tasks: 54 done / 77 total; 19 can run
I1124 07:31:39.692504    29233 executor.go:103] Tasks: 73 done / 77 total; 3 can run
I1124 07:31:40.258397    29233 executor.go:103] Tasks: 76 done / 77 total; 1 can run
I1124 07:31:40.459641    29233 executor.go:103] Tasks: 77 done / 77 total; 0 can run
I1124 07:31:40.935036    29233 update_cluster.go:290] Exporting kubecfg for cluster
kops has set your kubectl context to masharma.k8s.local

Cluster changes have been applied to the cloud.


Changes may require instances to restart: kops rolling-update cluster
```

Here you see, one master and two slave nodes have come up. Reason being, at the time of creation, I kept the configurations like:

--node-count=2 \
--node-size=t2.medium \
--zones=us-east-1a \

Then I tried validating the cluster and it failed:

kops validate cluster


```
[ec2-user@ip-172-31-84-37 ~]$ kops validate cluster
Validating cluster masharma.k8s.local

unexpected error during validation: error listing nodes: Get https://api-masharma-k8s-local-n8ppc6-710993594.us-east-1.elb.amazonaws.com/api/v1/nodes: EOF
```

Now let me troubleshoot it:

My thought process:

Find Kops and kubectl versions:


```
[ec2-user@ip-172-31-84-37 ~]$ kops version
Version 1.10.0 (git-8b52ea6d1)
[ec2-user@ip-172-31-84-37 ~]$ kubectl version
Client Version: version.Info{Major:"1", Minor:"5", GitVersion:"v1.5.2", GitCommit:"08e099554f3c31f6e6f07b448ab3ed78d0520507", GitTreeState:"clean", BuildDate:"2017-01-12T04:57:25Z", GoVersi
on:"go1.7.4", Compiler:"gc", Platform:"linux/amd64"}
Unable to connect to the server: EOF
```
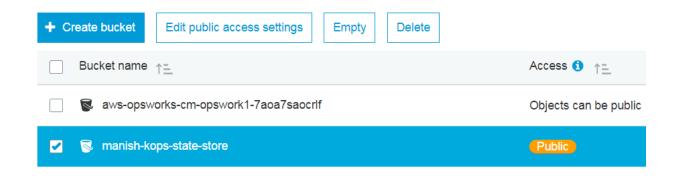
After some debugging I got to know my S3 bucket that saves kops state is not public.
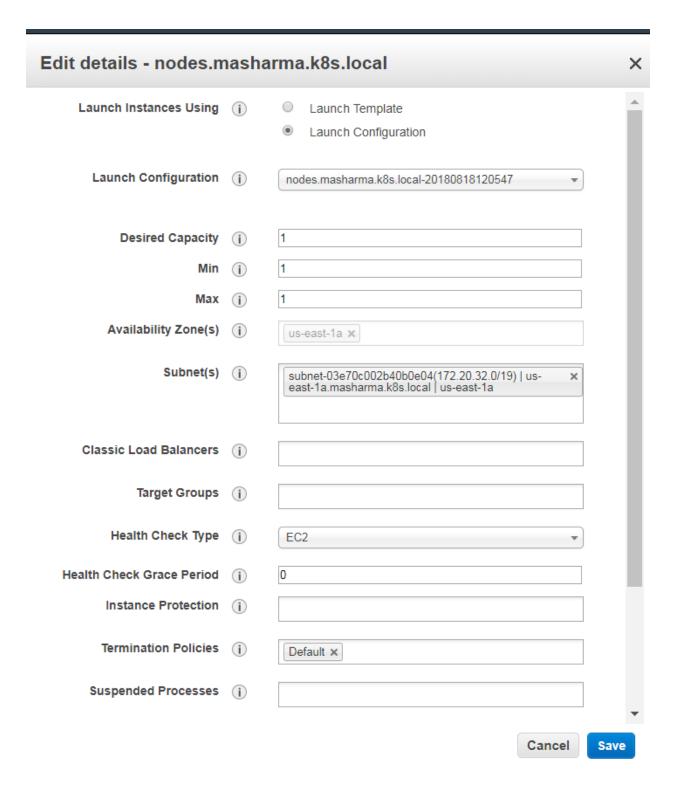
So I made it public:

Again kops validation failed with new error this time:

```
[ec2-user@ip-172-31-84-37 ~]$ kops validate cluster
Validating cluster masharma.k8s.local

INSTANCE GROUPS
NAME                    ROLE      MACHINETYPE    MIN    MAX    SUBNETS
master-us-east-1a       Master    m3.medium      1      1      us-east-1a
nodes                   Node      t2.medium      2      2      us-east-1a

NODE STATUS
NAME                            ROLE      READY
ip-172-20-61-129.ec2.internal   master    True

VALIDATION ERRORS
KIND     NAME                                        MESSAGE
Machine  i-0c23a535890da93d8                         machine "i-0c23a535890da93d8" has not yet joined cluster
Pod      kube-system/dns-controller-6d6b7f78b-g49br  kube-system pod "dns-controller-6d6b7f78b-g49br" is not healthy

Validation Failed
```

This says one of the node is not healty.

I know the reason It is because in AWS autoscaling, I have set node value as 1 (to save money). Whereas while defining the cluster, I set node values as 2.

Edit details - nodes.masharma.k8s.local   ✕

Launch Instances Using ⓘ   ○   Launch Template
                   ⦿   Launch Configuration

Launch Configuration ⓘ   `nodes.masharma.k8s.local-20180818120547` ▾

Desired Capacity ⓘ   `1`

Min ⓘ   `1`

Max ⓘ   `1`

Availability Zone(s) ⓘ   us-east-1a ✕

Subnet(s) ⓘ   subnet-03e70c002b40b0e04(172.20.32.0/19) | us-east-1a.masharma.k8s.local | us-east-1a   ✕

Classic Load Balancers ⓘ

Target Groups ⓘ

Health Check Type ⓘ   EC2 ▾

Health Check Grace Period ⓘ   `0`

Instance Protection ⓘ

Termination Policies ⓘ   Default ✕

Suspended Processes ⓘ

                               Cancel   **Save**

So, I made the configuration of auto-scale group equal to the original config.

And validation passed

```
[ec2-user@ip-172-31-84-37 ~]$ kops validate cluster
Validating cluster masharma.k8s.local

INSTANCE GROUPS
NAME                        ROLE      MACHINETYPE       MIN       MAX       SUBNETS
master-us-east-1a           Master    m3.medium         1         1         us-east-1a
nodes                       Node      t2.medium         2         2         us-east-1a

NODE STATUS
NAME                            ROLE      READY
ip-172-20-40-34.ec2.internal    node      True
ip-172-20-54-5.ec2.internal     master    True

Your cluster masharma.k8s.local is ready
```

Now my cluster is ready.