

# How to enable IPVS mode on AWS EKS?

First of all, this is a workaround solution because AWS EKS did not allow us to enable IPVS mode by itself. So we will walk through our steps.

Firstly IPVS must be installed in our EKS cluster , so to install that we need to add some commands to the cloud-config of ec2 instance

In my case i created template and putted all the command in user data of ec2 instance

```
#!/bin/bash sudo yum install -y ipvsadm
```

```
sudo ipvsadm -l
```

```
sudo modprobe ip_vs
```

```
sudo modprobe ip_vs_rr
```

```
sudo modprobe ip_vs_wrr
```

```
sudo modprobe ip_vs_sh
```

```
sudo modprobe nf_conntrack_ipv4
```

These updates add the IPVS and various modules module and the Linux kernel [on Amazon Linux 2]. By making these changes, every node that gets deployed will have IPVS installed.

## Apply new kube-proxy parameters by edit daemonset for kube-proxy

- `kubectl -n kube-system edit ds kube-proxy`
- ==> Change from
- `containers:`
- `- command:`
- `- kube-proxy`
- `- --v=2`
- `- --config=/var/lib/kube-proxy-config/config`
- ==> To
- `containers:`
- `- command:`
- `- kube-proxy`

- - --v=2
- - --proxy-mode=ipvs
- - --ipvs-scheduler=rr
- - --config=/var/lib/kube-proxy/config
- env:
- - name: KUBE\_PROXY\_MODE
- value: ipvs

Once that is done will need to edit your kube-proxy-config in kube-system namespace to have mode: ipvs and scheduler: <desired lb algo>

```
kubectl -n kube-system edit cm kube-proxy-config
```

- data:
- config: |-
- apiVersion: kubeproxy.config.k8s.io/v1alpha1
- bindAddress: 0.0.0.0
- clientConnection:
- acceptContentTypes: ""
- burst: 10
- contentType: application/vnd.kubernetes.protobuf
- kubeconfig: /var/lib/kube-proxy/kubeconfig
- qps: 5
- clusterCIDR: ""
- configSyncPeriod: 15m0s
- conntrack:
- max: 0
- maxPerCore: 32768
- min: 131072
- tcpCloseWaitTimeout: 1h0m0s
- tcpEstablishedTimeout: 24h0m0s
- enableProfiling: false
- healthzBindAddress: 0.0.0.0:10256
- hostnameOverride: ""
- iptables:
- masqueradeAll: false
- masqueradeBit: 14

- `minSyncPeriod: 0s`
- `syncPeriod: 30s`
- `ipvs:`
  - `excludeCIDRs: null`
  - `minSyncPeriod: 0s`
  - `scheduler: "rr"`
  - `syncPeriod: 30s`
- `kind: KubeProxyConfiguration`
- `metricsBindAddress: 127.0.0.1:10249`
- `mode: "ipvs"`
- `nodePortAddresses: null`
- `oomScoreAdj: -998`
- `portRange: ""`

Following are the available lb algos for IPVS:

`rr: round-robin`

`lc: least connection`

`dh: destination hashing`

`sh: source hashing`

`sed: shortest expected delay nq: never queue`