

Setting up a 3-node ETCD cluster:

1. Set environment variable (export ETCD_DATA=/path/where/etcd-data-is-saved)
2. docker-compose up -d (Make sure you are in the same directory as the docker-compose.yml)
3. docker exec -it <container_name> /bin/sh
4. Docker-compose down (Destroys all containers)

Testing ETCD cluster status and health:

1. docker ps -a (Three nodes should be running)
2. etcdctl --write-out=table member list
3. etcdctl --write-out=table
--endpoints=http://etcd1:23791,http://etcd2:23792,http://etcd3:23793 endpoint status
4. etcdctl --endpoints=http://etcd1:23791,http://etcd2:23792,http://etcd3:23793 endpoint health

ETCD cluster configuration flags:

- For more information on the configuration flags used and formatting visit the etcd github: <https://github.com/etcd-io/etcd/blob/master/Documentation/op-guide/configuration.md>
- Flags set in the docker-compose.yml file

Member Flags:

ETCD_NAME:

- Node name within the cluster

ETCD_DATA_DIR:

- Path to the data directory

ETCD_LISTEN_PEER_URLS:

- List of URLs to listen on for peer traffic. This flag tells the etcd to accept incoming requests from its peers on the specified scheme://IP:port combinations.

ETCD_LISTEN_CLIENT_URLS

- List of URLs to listen on for client traffic. This flag tells the etcd to accept incoming requests from the clients on the specified scheme://IP:port combinations. Make sure <http://127.0.0.1:2379> is included to avoid a socket refused error once the node is running

Cluster Flags:

ETCD_INITIAL_ADVERTISE_PEER_URLS:

- List of this member's peer URLs to advertise to the rest of the cluster. These addresses are used for communicating etcd data around the cluster.

ETCD_INITIAL_CLUSTER

- Initial cluster configuration for bootstrapping. List all nodes in the cluster.

ETCD_INITIAL_CLUSTER_STATE

- Initial cluster state ("new" or "existing"). Set to new for all members present during initial static or DNS bootstrapping. If this option is set to existing, etcd will attempt to join the existing cluster.

ETCD_INITIAL_CLUSTER_TOKEN

- Initial cluster token for the etcd cluster during bootstrap.

ETCD_ADVERTISE_CLIENT_URLS

- List of this member's client URLs to advertise to the rest of the cluster. These URLs can contain domain names.

ETCDCTL_API

- etcdctl api version

ETCDCTL COMMANDS:

- https://coreos.com/etcd/docs/latest/dev-guide/interacting_v3.html