

<https://github.com/etcd-io/etcd/releases>

<https://github.com/etcd-io/etcd/releases/download/v3.5.20/etcd-v3.5.20-linux-amd64.tar.gz>

```
[root@controlplane etcdctl]# ll
total 20436
-rw-r--r--. 1 cloud-user cloud-user 20925405 Mar 24 13:21 etcd-v3.5.20-linux-amd64.tar.gz
[root@controlplane etcdctl]#
[root@controlplane etcdctl]# tar -xvf etcd-v3.5.20-linux-amd64.tar.gz
etcd-v3.5.20-linux-amd64/
etcd-v3.5.20-linux-amd64/Documentation/
etcd-v3.5.20-linux-amd64/Documentation/dev-guide/
etcd-v3.5.20-linux-amd64/Documentation/dev-guide/apispec/
etcd-v3.5.20-linux-amd64/Documentation/dev-guide/apispec/swagger/
etcd-v3.5.20-linux-amd64/Documentation/dev-guide/apispec/swagger/v3lock.swagger.json
etcd-v3.5.20-linux-amd64/Documentation/dev-guide/apispec/swagger/v3selection.swagger.json
etcd-v3.5.20-linux-amd64/Documentation/dev-guide/apispec/swagger/rpc.swagger.json
etcd-v3.5.20-linux-amd64/Documentation/README.md
etcd-v3.5.20-linux-amd64/README-etcctl.md
etcd-v3.5.20-linux-amd64/READMEv2-etcctl.md
etcd-v3.5.20-linux-amd64/README-etcctl
etcd-v3.5.20-linux-amd64/README
etcd-v3.5.20-linux-amd64/etcd
etcd-v3.5.20-linux-amd64/etcd
[root@controlplane etcdctl]# ll
total 20436
drwxr-xr-x. 3 cloud-user cloud-user 163 Mar 21 16:06 etcd-v3.5.20-linux-amd64
-rw-r--r--. 1 cloud-user cloud-user 20925405 Mar 24 13:21 etcd-v3.5.20-linux-amd64.tar.gz
[root@controlplane etcdctl]#
```

export ETCDCTL_API=3

```
ETCDCTL_API=3 etcdctl --endpoints=https://127.0.0.1:2379 \
--cacert=<trusted-ca-file> --cert=<cert-file> --key=<key-file> \
snapshot save <backup-file-location>
```

```
[root@controlplane etcd-v3.5.20-linux-amd64]# cat /etc/kubernetes/manifests/etcd.yaml |grep '\-\-' |grep -e listen-client-urls -e trusted-ca-file -e cert-file -e key-file |grep -v peer
--cert-file=/etc/kubernetes/pki/etcd/server.crt
--key-file=/etc/kubernetes/pki/etcd/server.key
--listen-client-urls=https://127.0.0.1:2379,https://10.159.174.135:2379
--trusted-ca-file=/etc/kubernetes/pki/etcd/ca.crt
[root@controlplane etcd-v3.5.20-linux-amd64]#
[root@controlplane etcd-v3.5.20-linux-amd64]#
```

```
cat /etc/kubernetes/manifests/etcd.yaml |grep '\-\-' |grep -e listen-client-urls -e trusted-ca-file -e cert-file -e key-file |grep -v peer
```

```
./etcdctl --endpoints=https://127.0.0.1:2379 \
--cacert=/etc/kubernetes/pki/etcd/ca.crt --cert=/etc/kubernetes/pki/etcd/
server.crt --key=/etc/kubernetes/pki/etcd/server.key \
snapshot save /root/etcd-backup/etcdbackup.db
```

```
[root@controlplane etcd-v3.5.20-linux-amd64]# ./etcdctl --endpoints=https://127.0.0.1:2379 \
> --cacert=/etc/kubernetes/pki/etcd/ca.crt --cert=/etc/kubernetes/pki/etcd/server.crt --key=/etc/kubernetes/pki/etcd/server.key \
> snapshot save /root/etcd-backup/etcdbackup.db
{"level": "info", "ts": "2025-03-24T13:32:45.864917+0000", "caller": "snapshot/v3_snapshot.go:65", "msg": "created temporary db file", "path": "/root/etcd-backup/etcdbackup.db.part"}
{"level": "info", "ts": "2025-03-24T13:32:45.872529+0000", "logger": "client", "caller": "v3o3.5.20/maintenance.go:212", "msg": "opened snapshot stream; downloading"}
{"level": "info", "ts": "2025-03-24T13:32:45.872569+0000", "caller": "snapshot/v3_snapshot.go:73", "msg": "fetching snapshot", "endpoint": "https://127.0.0.1:2379"}
{"level": "info", "ts": "2025-03-24T13:32:45.909376+0000", "logger": "client", "caller": "v3o3.5.20/maintenance.go:220", "msg": "completed snapshot read; closing"}
{"level": "info", "ts": "2025-03-24T13:32:46.138675+0000", "caller": "snapshot/v3_snapshot.go:88", "msg": "fetched snapshot", "endpoint": "https://127.0.0.1:2379", "size": "4.8 MB", "took": "now"}
{"level": "info", "ts": "2025-03-24T13:32:46.138886+0000", "caller": "snapshot/v3_snapshot.go:97", "msg": "saved", "path": "/root/etcd-backup/etcdbackup.db"}
Snapshot saved at /root/etcd-backup/etcdbackup.db
[root@controlplane etcd-v3.5.20-linux-amd64]#
[root@controlplane etcd-v3.5.20-linux-amd64]# du -sh /root/etcd-backup/etcdbackup.db
4.6M  /root/etcd-backup/etcdbackup.db
[root@controlplane etcd-v3.5.20-linux-amd64]#
```

Verify the snapshot:

```
etcdutil --write-out=table snapshot status /root/etcd-backup/etcdbackup.db
```

```
[root@controlplane etcd-v3.5.20-linux-amd64]# ll
total 56520
drwxr-xr-x. 3 cloud-user cloud-user        40 Mar 21 16:06 Documentation
-rw-r--r--x. 1 cloud-user cloud-user 24064152 Mar 21 16:06 etcd
-rw-r--r--x. 1 cloud-user cloud-user 18415768 Mar 21 16:06 etcdctl
-rw-r--r--x. 1 cloud-user cloud-user 15311000 Mar 21 16:06 etcdutil
-rw-r--r--. 1 cloud-user cloud-user    42666 Mar 21 16:06 README-etcdctl.md
-rw-r--r--. 1 cloud-user cloud-user    7359 Mar 21 16:06 README-etcdutil.md
-rw-r--r--. 1 cloud-user cloud-user   9210 Mar 21 16:06 README.md
-rw-r--r--. 1 cloud-user cloud-user   7896 Mar 21 16:06 READMEv2-etcdctl.md
[root@controlplane etcd-v3.5.20-linux-amd64]# ./etcdutil --write-out=table snapshot status /root/etcd-backup/etcdbackup.db
+-----+-----+-----+
| HASH | REVISION | TOTAL KEYS | TOTAL SIZE |
+-----+-----+-----+
| e06e2a88 | 255326 |     895 |   4.8 MB |
+-----+-----+-----+
[root@controlplane etcd-v3.5.20-linux-amd64]#
```

HASH	REVISION	TOTAL KEYS	TOTAL SIZE
e06e2a88	255326	895	4.8 MB

```
securityContext:
  seccompProfile:
    type: RuntimeDefault
  volumes:
  - hostPath:
      path: /etc/kubernetes/pki/etcd
      type: DirectoryOrCreate
      name: etcd-certs
  - hostPath:
      path: /var/lib/etcd
      type: DirectoryOrCreate
      name: etcd-data
  status: {}
[root@controlplane etcd-v3.5.20-linux-amd64]# ll /var/lib/etcd
total 0
drwx-----. 4 root root 29 Mar 24 10:01 member
[root@controlplane etcd-v3.5.20-linux-amd64]# du -sh /var/lib/etcd
310M  /var/lib/etcd
[root@controlplane etcd-v3.5.20-linux-amd64]# ll /var/lib/etcd/
```

```
./etcdctl --endpoints=https://127.0.0.1:2379 --cacert=/etc/kubernetes/pki/
etcd/ca.crt --cert=/etc/kubernetes/pki/etcd/server.crt --key=/etc/kubernetes/
pki/etcd/server.key snapshot restore /root/etcd-backup/etcdbackup.db --
data-dir /root/restore-from-backup
```

```
[root@controlplane etcd-v3.5.20-linux-amd64]#
[root@controlplane etcd-v3.5.20-linux-amd64]# ./etcdctl --endpoints=https://127.0.0.1:2379 --cacert=/etc/kubernetes/pki/etcd/ca.crt --cert=/etc/kubernetes/pki/etcd/server.crt --key=/etc/kubernetes/pki/etcd/server.key snapshot restore
/root/etcd-backup/etcdbackup.db --data-dir /root/restore-from-backup
Deprecated. Use 'etcdutil snapshot restore' instead.
2025-03-25T05:35:35-04:00    info    snapshot/v3_snapshot.go:245    restoring snapshot    {"path": "/root/etcd-backup/etcdbackup.db", "wal-dir": "/root/restore-from-backup/member/wal", "data-dir": "/root/restore-from-backup", "snapshot-id": "root/restore-from-backup/member/snap", "initial-memory-map-size": 0}
2025-03-25T05:35:35-04:00    info    membership/store.go:138    Trimming membership information from the backend...
2025-03-25T05:35:35-04:00    info    membership/cluster.go:421    added member {"cluster-id": "cfdf8194e3a8c32", "local-member-id": "0", "added-peer-id": "8e9e86c52164694d", "added-peer-peer-urls": ["http://localhost:2388"], "add-peer-peer-urls": ["http://localhost:2388"] }
2025-03-25T05:35:35-04:00    info    snapshot/v3_snapshot.go:293    restored snapshot    {"path": "/root/etcd-backup/etcdbackup.db", "wal-dir": "/root/restore-from-backup/member/wal", "data-dir": "/root/restore-from-backup", "snapshot-id": "root/restore-from-backup/member/snap", "initial-memory-map-size": 0}
[root@controlplane etcd-v3.5.20-linux-amd64]#
```

```
[root@controlplane ~]#
[[root@controlplane ~]#
[[root@controlplane ~]# ll restore-from-backup/
total 0
drwx----- 4 root root 29 Mar 25 05:35 member
[[root@controlplane ~]# du -sh restore-from-backup/
66M    restore-from-backup/
[[root@controlplane ~]# ]]
```

```
[root@controlplane manifests]#
[[root@controlplane manifests]# cp etcd.yaml etcd.yaml_bkp
[[root@controlplane manifests]#
[[root@controlplane manifests]# vi etcd.yaml
[[root@controlplane manifests]#
[[root@controlplane manifests]# cat etcd.yaml |grep \var\lib\etcd
- --data-dir=/var/lib/etcd
- mountPath: /var/lib/etcd
  path: /var/lib/etcd
[[root@controlplane manifests]# cat -n etcd.yaml |grep \var\lib\etcd
 19      --data-dir=/var/lib/etcd
 72      - mountPath: /var/lib/etcd
 88      path: /var/lib/etcd
[[root@controlplane manifests]# ]]
```

```
[root@controlplane manifests]#
[[root@controlplane manifests]#
[[root@controlplane manifests]# sed -i 's/\var\lib\etcd/\root\restore\from\backup/' etcd.yaml
[[root@controlplane manifests]# vi etcd.yaml
[[root@controlplane manifests]# ]]
```

```
[root@controlplane manifests]# cat -n etcd.yaml |grep root\restore\from\backup
[[root@controlplane manifests]#
[[root@controlplane manifests]# cat etcd.yaml |grep root
- --data-dir=/root/restore-from-backup
- mountPath: /root/restore-from-backup
  path: /root/restore-from-backup
[[root@controlplane manifests]#
[[root@controlplane manifests]# ]]
```

```
[root@controlplane manifests]#
[[root@controlplane manifests]# mv *.yaml /tmp
[[root@controlplane manifests]#
[[root@controlplane manifests]# mv /tmp/*.yaml .
[[root@controlplane manifests]# ll
total 24
-rw-----. 1 root      root      2595 Mar 25 05:47 etcd.yaml
-rw-----. 1 root      root      3602 Mar 24 09:48 kube-apiserver.yaml
-rw-----. 1 root      root      2989 Mar 24 09:48 kube-controller-manager.yaml
-rw-----. 1 root      root      1463 Mar 24 09:48 kube-scheduler.yaml
```

```
[root@controlplane manifests]# kubectl get pods --all-namespaces
No resources found in default namespace.
[[root@controlplane manifests]# kubectl get -A
NAMESPACE     NAME          READY   STATUS    RESTARTS   AGE     IP           NODE      NOMINATED NODE   READINESS GATES
kube-system   coredns-56cb5b774-rzdsq   1/1    Running   0          19h    18.48.0.2   controlplane   <none>    <none>
kube-system   coredns-56cb5b774-zt4wg   1/1    Running   0          19h    18.48.0.1   controlplane   <none>    <none>
kube-system   etcd-controlplane        1/1    Running   2 (3m4s ago) 10m   18.159.174.135  controlplane   <none>    <none>
kube-system   kube-apiserver-controlplane 1/1    Running   0          19h    18.159.174.135  controlplane   <none>    <none>
kube-system   kube-controller-manager-controlplane 1/1    Running   4 (3m8s ago) 19h    18.159.174.135  controlplane   <none>    <none>
kube-system   kube-proxy-618n9       1/1    Running   1 (19h ago) 19h    18.159.174.135  controlplane   <none>    <none>
kube-system   kube-proxy-rnxv4       1/1    Running   1 (19h ago) 19h    18.159.175.218  dataplane-1  <none>    <none>
kube-system   kube-proxy-sr2f        1/1    Running   0          19h    18.159.175.130  dataplane-2  <none>    <none>
kube-system   kube-scheduler-controlplane 1/1    Running   4 (3m3s ago) 19h    18.159.174.135  controlplane   <none>    <none>
kube-system   weave-net-58ld9       2/2    Running   2 (19h ago) 2d3h   18.159.175.218  dataplane-1  <none>    <none>
kube-system   weave-net-76cxw       2/2    Running   2 (19h ago) 2d3h   18.159.175.130  dataplane-2  <none>    <none>
kube-system   weave-net-zbgkn      2/2    Running   3 (19h ago) 2d3h   18.159.174.135  controlplane   <none>    <none>
levoai      nginx-logging-deployment-5fdc87977-fv5z2  2/2    Running   0          19h    10.38.0.1    dataplane-1  <none>    <none>
levoai      nginx-logging-deployment-5fdc87977-g7dg2  2/2    Running   0          19h    10.38.0.4    dataplane-1  <none>    <none>
levoai      nginx-logging-deployment-5fdc87977-g9y4j  2/2    Running   0          19h    10.38.0.3    dataplane-1  <none>    <none>
levoai      nginx-logging-deployment-5fdc87977-1kw9m  2/2    Running   0          19h    10.38.0.2    dataplane-1  <none>    <none>
levoai      nginx-logging-deployment-5fdc87977-vl1mq  2/2    Running   0          19h    10.38.0.5    dataplane-1  <none>    <none>
```

```
[root@controlplane manifests]#  
[root@controlplane manifests]#  
[root@controlplane manifests]# systemctl restart kubelet  
[root@controlplane manifests]# systemctl status kubelet  
● kubelet.service - kubelet: The Kubernetes Node Agent  
   Loaded: loaded (/usr/lib/systemd/system/kubelet.service; enabled; vendor preset: disabled)  
   Drop-In: /usr/lib/systemd/system/kubelet.service.d  
     └─10-kubeadm.conf  
     Active: active (running) since Tue 2025-03-25 05:49:51 EDT; 1s ago  
       Docs: https://kubernetes.io/docs/  
     Main PID: 184496 (kubelet)  
        Tasks: 12 (limit: 4096)  
      Memory: 20.0M  
      CGroup: /system.slice/kubelet.service  
             └─184496 /usr/bin/kubelet --bootstrap-kubeconfig=/etc/kubernetes/bootstrap-kubelet.conf --kubeconfig=/etc/kubernetes/kubelet.conf --config=/var/lib/kubelet/config.yaml --container-runtime=unix:///var/run/containerd/con  
Mar 25 05:49:52 controlplane kubelet[184496]: 10325 05:49:52.680883 104406 reconciler_common.go:245 "operationExecutor.VerifyControllerAttachedVolume started for volume \"csi-bin\" (UniqueName: \"/kubernetes.io/host-path/854ae2fe-4bc-47  
Mar 25 05:49:52 controlplane kubelet[184496]: 10325 05:49:52.689221 104406 reconciler_common.go:245 "operationExecutor.VerifyControllerAttachedVolume started for volume \"xtables-lock\" (UniqueName: \"/kubernetes.io/host-path/8132aa4-2-35  
Mar 25 05:49:52 controlplane kubelet[184496]: 10325 05:49:52.502826 104406 reconciler_common.go:245 "operationExecutor.VerifyControllerAttachedVolume started for volume \"cni-machine-id\" (UniqueName: \"/kubernetes.io/host-path/054ae2fe-4a  
Mar 25 05:49:52 controlplane kubelet[184496]: 10325 05:49:52.502111 104406 reconciler_common.go:245 "operationExecutor.VerifyControllerAttachedVolume started for volume \"xtables-lock\" (UniqueName: \"/kubernetes.io/host-path/054ae2fe-4a  
Mar 25 05:49:52 controlplane kubelet[184496]: 10325 05:49:52.502111 104406 reconciler_common.go:245 "operationExecutor.VerifyControllerAttachedVolume started for volume \"cni-machine-id\" (UniqueName: \"/kubernetes.io/host-path/054ae2fe-4a  
Mar 25 05:49:52 controlplane kubelet[184496]: 10325 05:49:52.502248 104406 reconciler_common.go:245 "operationExecutor.VerifyControllerAttachedVolume started for volume \"cni-mac-addr\" (UniqueName: \"/kubernetes.io/host-path/054ae2fe-4a  
Mar 25 05:49:52 controlplane kubelet[184496]: 10325 05:49:52.502346 104406 reconciler_common.go:245 "operationExecutor.VerifyControllerAttachedVolume started for volume \"cni-mac-addr\" (UniqueName: \"/kubernetes.io/host-path/054ae2fe-4a  
Mar 25 05:49:52 controlplane kubelet[184496]: 10325 05:49:52.502346 104406 reconciler_common.go:245 "operationExecutor.VerifyControllerAttachedVolume started for volume \"lib-modules\" (UniqueName: \"/kubernetes.io/host-path/8112ea4-33a  
Mar 25 05:49:52 controlplane kubelet[184496]: 10325 05:49:52.502346 104406 reconciler_common.go:245 "operationExecutor.VerifyControllerAttachedVolume started for volume \"weavedb\" (UniqueName: \"/kubernetes.io/host-path/854ae2fe-4bc-47  
Mar 25 05:49:52 controlplane kubelet[184496]: 10325 05:49:52.502346 104406 reconciler_common.go:245 "operationExecutor.VerifyControllerAttachedVolume started for volume \"lib-modules\" (UniqueName: \"/kubernetes.io/host-path/054ae2fe-4a  
Mar 25 05:49:52 controlplane kubelet[184496]: 10325 05:49:52.502346 104406 reconciler_common.go:245 "operationExecutor.VerifyControllerAttachedVolume started for volume \"weavedb\" (UniqueName: \"/kubernetes.io/host-path/054ae2fe-4a  
[root@controlplane manifests]# Failed creating a mirror pod for csi-pods (csi controlplane) already exists: pod=kube-system csi-controlplane  
[root@controlplane manifests]#
```

```
[root@controlplane manifests]#  
[root@controlplane manifests]# k describe pod etcd-controlplane -n kube-system |grep root  
    --data-dir=/root/restore-from-backup  
      /root/restore-from-backup from etcd-data (rw)  
      Path:          /root/restore-from-backup  
[root@controlplane manifests]#
```