

# 一次k8s未正常启动的排查-etcd文件损坏

kubectl get node 无法输出内容，经排查发现为apiserver为正常启动，查看apiserver日志显示2379端口无法连接，2379为etcd服务端口。

```
c749ff4b0b24 registry.aliyuncs.com/google_containers/pause:3.2 "pause" 2 minutes ago Up 2 minutes k8s_POD_kube-apiserver-ma
ster1_kube-system_afa95fc8de42d1795363f9e98e7156e_20
[root@master1 ~]# docker logs b64eee0ae263
Error: No such container: b64eee0ae263
[root@master1 ~]# docker logs b64eee0ae26
Flag --insecure-port has been deprecated, This flag has no effect now and will be removed in v1.24.
I1011 08:17:07.493892 1 server.go:629] external host was not specified, using 192.168.2.61
I1011 08:17:07.494197 1 server.go:181] Version: v1.21.10
I1011 08:17:07.799020 1 shared informer.go:240] Waiting for caches to sync for node authorizer
I1011 08:17:07.800362 1 plugins.go:158] Loaded 12 mutating admission controller(s) successfully in the following order: NamespaceLifecycle,LimitRanger,ServiceAccount,NodeRest
riktion,TaintNodesByCondition,Priority,DefaultTolerationSeconds,DefaultStorageClass,StorageObjectInUseProtection,RuntimeClass,DefaultIngressClass,MutatingAdmissionWebhook.
I1011 08:17:07.800379 1 plugins.go:161] Loaded 10 validating admission controller(s) successfully in the following order: LimitRanger,ServiceAccount,Priority,PersistentVolume
ClaimResize,RuntimeClass,CertificateApproval,CertificateSigning,CertificateSubjectRestriction,ValidatingAdmissionWebhook,ResourceQuota.
I1011 08:17:07.800925 1 plugins.go:158] Loaded 12 mutating admission controller(s) successfully in the following order: NamespaceLifecycle,LimitRanger,ServiceAccount,NodeRest
riktion,TaintNodesByCondition,Priority,DefaultTolerationSeconds,DefaultStorageClass,StorageObjectInUseProtection,RuntimeClass,DefaultIngressClass,MutatingAdmissionWebhook.
I1011 08:17:07.800942 1 plugins.go:161] Loaded 10 validating admission controller(s) successfully in the following order: LimitRanger,ServiceAccount,Priority,PersistentVolume
ClaimResize,RuntimeClass,CertificateApproval,CertificateSigning,CertificateSubjectRestriction,ValidatingAdmissionWebhook,ResourceQuota.
I1011 08:17:07.802355 1 client.go:360] parsed scheme: "endpoint"
I1011 08:17:07.802402 1 endpoint.go:68] ccResolverWrapper: sending new addresses to cc: [{https://127.0.0.1:2379 <nil> 0 <nil>}]
W1011 08:17:07.802540 1 clientconn.go:1223] grpc: addrConn.createTransport failed to connect to {https://127.0.0.1:2379 <nil> 0 <nil>}. Err :connection error: desc = "transp
ort: Error while dialing dial tcp 127.0.0.1:2379: connect: connection refused". Reconnecting...
I1011 08:17:08.801752 1 client.go:360] parsed scheme: "endpoint"
I1011 08:17:08.801889 1 endpoint.go:68] ccResolverWrapper: sending new addresses to cc: [{https://127.0.0.1:2379 <nil> 0 <nil>}]
W1011 08:17:08.803992 1 clientconn.go:1223] grpc: addrConn.createTransport failed to connect to {https://127.0.0.1:2379 <nil> 0 <nil>}. Err :connection error: desc = "transp
ort: Error while dialing dial tcp 127.0.0.1:2379: connect: connection refused". Reconnecting...
W1011 08:17:08.804117 1 clientconn.go:1223] grpc: addrConn.createTransport failed to connect to {https://127.0.0.1:2379 <nil> 0 <nil>}. Err :connection error: desc = "transp
ort: Error while dialing dial tcp 127.0.0.1:2379: connect: connection refused". Reconnecting...
W1011 08:17:09.805426 1 clientconn.go:1223] grpc: addrConn.createTransport failed to connect to {https://127.0.0.1:2379 <nil> 0 <nil>}. Err :connection error: desc = "transp
ort: Error while dialing dial tcp 127.0.0.1:2379: connect: connection refused". Reconnecting...
W1011 08:17:10.401037 1 clientconn.go:1223] grpc: addrConn.createTransport failed to connect to {https://127.0.0.1:2379 <nil> 0 <nil>}. Err :connection error: desc = "transp
ort: Error while dialing dial tcp 127.0.0.1:2379: connect: connection refused". Reconnecting...
W1011 08:17:11.314085 1 clientconn.go:1223] grpc: addrConn.createTransport failed to connect to {https://127.0.0.1:2379 <nil> 0 <nil>}. Err :connection error: desc = "transp
ort: Error while dialing dial tcp 127.0.0.1:2379: connect: connection refused". Reconnecting...
W1011 08:17:13.353851 1 clientconn.go:1223] grpc: addrConn.createTransport failed to connect to {https://127.0.0.1:2379 <nil> 0 <nil>}. Err :connection error: desc = "transp
ort: Error while dialing dial tcp 127.0.0.1:2379: connect: connection refused". Reconnecting...
W1011 08:17:14.276216 1 clientconn.go:1223] grpc: addrConn.createTransport failed to connect to {https://127.0.0.1:2379 <nil> 0 <nil>}. Err :connection error: desc = "transp
ort: Error while dialing dial tcp 127.0.0.1:2379: connect: connection refused". Reconnecting...
W1011 08:17:16.895971 1 clientconn.go:1223] grpc: addrConn.createTransport failed to connect to {https://127.0.0.1:2379 <nil> 0 <nil>}. Err :connection error: desc = "transp
ort: Error while dialing dial tcp 127.0.0.1:2379: connect: connection refused". Reconnecting...
W1011 08:17:19.173720 1 clientconn.go:1223] grpc: addrConn.createTransport failed to connect to {https://127.0.0.1:2379 <nil> 0 <nil>}. Err :connection error: desc = "transp
ort: Error while dialing dial tcp 127.0.0.1:2379: connect: connection refused". Reconnecting...
W1011 08:17:22.275272 1 clientconn.go:1223] grpc: addrConn.createTransport failed to connect to {https://127.0.0.1:2379 <nil> 0 <nil>}. Err :connection error: desc = "transp
ort: Error while dialing dial tcp 127.0.0.1:2379: connect: connection refused". Reconnecting...
W1011 08:17:26.660113 1 clientconn.go:1223] grpc: addrConn.createTransport failed to connect to {https://127.0.0.1:2379 <nil> 0 <nil>}. Err :connection error: desc = "transp
ort: Error while dialing dial tcp 127.0.0.1:2379: connect: connection refused". Reconnecting...
Error: context deadline exceeded
```

然后查看etcd容器日志，截图如下：

```
c894925680e63f813551e4e2cb3cfff6_20
[root@master1 manifests]# docker logs b6a9f6c82c11
[WARNING] Deprecated '--logger=capnslog' flag is set; use '--logger=zap' flag instead
2022-10-11 08:21:03.450222 I etcdmain: etcd Version: 3.4.13
2022-10-11 08:21:03.450268 I etcdmain: Git SHA: ae9734e2
2022-10-11 08:21:03.450270 I etcdmain: Go Version: go1.12.17
2022-10-11 08:21:03.450273 I etcdmain: Go OS/Arch: linux/amd64
2022-10-11 08:21:03.450275 I etcdmain: setting maximum number of CPUs to 2, total number of available CPUs is 2
2022-10-11 08:21:03.450307 W etcdmain: the server is already initialized as member before, starting as etcd member...
[WARNING] Deprecated '--logger=capnslog' flag is set; use '--logger=zap' flag instead
2022-10-11 08:21:03.450328 I embed: peerTLS: cert = /etc/kubernetes/pki/etcd/peer.crt, key = /etc/kubernetes/pki/etcd/peer.key, trusted-ca = /etc/kubernetes/pki/etcd/ca.crt, clie
nt-cert-auth = true, crl-file =
2022-10-11 08:21:03.450689 I embed: name = master1
2022-10-11 08:21:03.450694 I embed: data dir = /var/lib/etcd
2022-10-11 08:21:03.450696 I embed: member dir = /var/lib/etcd/member
2022-10-11 08:21:03.450697 I embed: heartbeat = 100ms
2022-10-11 08:21:03.450699 I embed: election = 1000ms
2022-10-11 08:21:03.450700 I embed: snapshot count = 10000
2022-10-11 08:21:03.450704 I embed: advertise client URLs = https://192.168.2.61:2379
2022-10-11 08:21:03.450706 I embed: initial advertise peer URLs = https://192.168.2.61:2380
2022-10-11 08:21:03.450709 I embed: initial cluster =
2022-10-11 08:21:03.818824 I etcdserver: recovered store from snapshot at index 1120121
2022-10-11 08:21:03.818824 C etcdserver: recovering backend from snapshot error: failed to find database snapshot file (snap: snapshot file doesn't exist)
panic: recovering backend from snapshot error: failed to find database snapshot file (snap: snapshot file doesn't exist)
panic: runtime error: invalid memory address or nil pointer dereference
[signal SIGSEGV: segmentation violation code=0x1 addr=0x20 pc=0xc0587e]

goroutine 1 [running]:
go.etcd.io/etcd/etcdserver.NewServer.func1(0xc000234e30, 0xc000232d80)
/tmp/etcd-release-3.4.13/etcd/release/etcd/etcdserver/server.go:334 +0x3e
panic(0xc0e5340, 0xc000159310)
/usr/local/go/src/runtime/panic.go:522 +0x1b5
github.com/coreos/pkg/capnslog.(*PackagerLogger).Panicf(0xc0001b2280, 0x10c13b2, 0x2a, 0xc000232e50, 0x1, 0x1)
/home/ANT.AMAZON.COM/leeyuho/go/pkg/mod/github.com/coreos/pkg@v0.0.0-20160727233714-3ac0863d7acf/capnslog/pkg_logger.go:75 +0x135
go.etcd.io/etcd/etcdserver.NewServer(0x7ffdc6f0e4b, 0x7, 0x0, 0x0, 0x0, 0x0, 0xc000113400, 0x1, 0x1, 0xc000113500, ...)
/tmp/etcd-release-3.4.13/etcd/release/etcd/etcdserver/server.go:464 +0x433c
go.etcd.io/etcd/embed.StartEtcd(0xc000200080, 0xc0000ef600, 0x0, 0x0)
/tmp/etcd-release-3.4.13/etcd/release/etcd/embed/etcd.go:214 +0x988
go.etcd.io/etcd/etcdmain.startEtcd(0xc000200000, 0x10963d6, 0x6, 0x1, 0xc0001b9140)
/tmp/etcd-release-3.4.13/etcd/release/etcd/etcdmain/etcd.go:302 +0x40
go.etcd.io/etcd/etcdmain.startEtcdOrProxyV2()
/tmp/etcd-release-3.4.13/etcd/release/etcd/etcdmain/etcd.go:144 +0x2ef9
go.etcd.io/etcd/etcdmain.Main()
/tmp/etcd-release-3.4.13/etcd/release/etcd/etcdmain/main.go:46 +0x38
main.main()
/tmp/etcd-release-3.4.13/etcd/release/etcd/main.go:28 +0x20
```

到这里基本就可以确定是snap文件损坏,或者遗失了;

因此可以用备份文件覆盖目录即可;

如果没有备份文件就删除错误的文件,重新启动kubelet,只是kubelet所有状态就遗失了;

```
root@lax-01:/var/lib/etcd# cp xxx/etcd/** /var/lib/etcd
root@lax-01:/var/lib/etcd# rm -rf /var/lib/etcd/**
```

删除etcd下错误文件后,重启kubelet,所有组件容器启动:

```

[root@master1 manifests]# rm -rf /var/lib/etcd/**
[root@master1 manifests]# cd /var/lib/etcd/
[root@master1 etcd]# ll
total 0
[root@master1 etcd]# systemctl restart kubelet.service
[root@master1 etcd]# docker ps
CONTAINER ID   IMAGE                                COMMAND                  CREATED        STATUS        PORTS          NAMES
8540f9820b49   704b64a9bcd2                       "kube-apiserver --ad..." 2 seconds ago  Up 2 seconds  k8s_kube-apiserver_kube-apiserver-master1_kube-
system_afa95fc8de42d17953636f9e98e7156e_286
644c7c848443   0369c74303ff                       "etcd --advertise-cl..." 2 seconds ago  Up 2 seconds  k8s_etcd_etcd-master1_kube-system_c8949256806e6
3fa13551e4e2cb3cff6_266
94bc21b6f642   eeb3ff937407                       "kube-controller-man..." 6 minutes ago  Up 6 minutes  k8s_kube-controller-manager_kube-controller-man
ager-master1_kube-system_9824b1a30ec87c9e8d4dfadb4981c0eb_46
215a08e48c73   2f7754f73131                       "kube-scheduler --au..." 6 minutes ago  Up 6 minutes  k8s_kube-scheduler_kube-scheduler-master1_kube-
system_f152636d013d4af3242adfe21caffb54_46
77737b08644f5   registry.aliyuncs.com/google_containers/pause:3.2  "/pause"              6 minutes ago  Up 6 minutes  k8s_POD_kube-scheduler-master1_kube-system_f152
636d013d4af3242adfe21caffb54_20
214e9fa3af39   registry.aliyuncs.com/google_containers/pause:3.2  "/pause"              6 minutes ago  Up 6 minutes  k8s_POD_kube-controller-manager-master1_kube-sy
stem_9824b1a30ec87c9e8d4dfadb4981c0eb_21
c7497f74b0b24   registry.aliyuncs.com/google_containers/pause:3.2  "/pause"              6 minutes ago  Up 6 minutes  k8s_POD_kube-apiserver-master1_kube-system_afa9
5fc8de42d17953636f9e98e7156e_20
9494b7e60ff0   registry.aliyuncs.com/google_containers/pause:3.2  "/pause"              6 minutes ago  Up 6 minutes  k8s_POD_etcd-master1_kube-system_c8949256806e63
fa13551e4e2cb3cff6_20

```

再次查看节点状态均已恢复：

```

[root@master1 etcd]# kubectl get node
NAME         STATUS    ROLES    AGE     VERSION
master1      Ready     <none>    7m48s   v1.21.10
master2      Ready     <none>    7m56s   v1.21.10
node1        Ready     <none>    7m57s   v1.21.10
node2        Ready     <none>    7m54s   v1.21.10
[root@master1 etcd]#

```