How to address the EZUA Node Not Ready State

Table of contents

Issue

An EZUA node is in "Not Ready" state and an error in the containerd logs: "Failed to run CRI service" error="failed to recover state: failed to reserve container name"

1. From the EZUA UI, alerts are displayed for Node Not ready

2. The following error from Not ready nodes from EZUA UI alert logs:

```
2025-02-07T11:58:12.391643750-05:00 E0207 16:58:12.391537   1 metrics_handler.go:216] "Failed to write metrics" err="
2025-02-07T11:58:12.391649082-05:00 E0207 16:58:12.391547   1 metrics_handler.go:216] "Failed to write metrics" err="
2025-02-07T11:58:12.391651404-05:00 E0207 16:58:12.391555   1 metrics_handler.go:216] "Failed to write metrics" err="
2025-02-07T11:58:12.391679998-05:00 E0207 16:58:12.391566   1 metrics_handler.go:224] "Failed to write EOF directive"
```

Environment

EZUA 1.X

Cause

1. Check the kubelet logs from the node where kubelet fails to start.

```
Feb 20 04:51:08 euagpuwrk1 kubelet[3277599]: I0220 04:51:08.674000 3277599 flags.go:64] FLAG: --version="false"
Feb 20 04:51:08 euagpuwrk1 kubelet[3277599]: I0220 04:51:08.674006 3277599 flags.go:64] FLAG: --vmodule=""
Feb 20 04:51:08 euagpuwrk1 kubelet[3277599]: I0220 04:51:08.674010 3277599 flags.go:64] FLAG: --volume-plugin-dir="/us
Feb 20 04:51:08 euagpuwrk1 kubelet[3277599]: I0220 04:51:08.674014 3277599 flags.go:64] FLAG: --volume-stats-agg-perio
Feb 20 04:51:08 euagpuwrk1 kubelet[3277599]: I0220 04:51:08.674079 3277599 feature_gate.go:249] feature gates: &{map[(
Feb 20 04:51:08 euagpuwrk1 kubelet[3277599]: I0220 04:51:08.676696 3277599 server.go:469] "Golang settings" GOGC="" GO
Feb 20 04:51:08 euagpuwrk1 kubelet[3277599]: I0220 04:51:08.676779 3277599 feature_gate.go:249] feature gates: &{map[(
Feb 20 04:51:08 euagpuwrk1 kubelet[3277599]: W0220 04:51:08.679878 3277599 logging.go:59] [core] [Channel #1 SubChanne
Feb 20 04:51:08 euagpuwrk1 systemd[1]: kubelet.service: Failed with result 'exit-code'.
Feb 20 04:51:08 euagpuwrk1 systemd[1]: Failed to start Kubernetes Kubelet.
```

2. Check the Kubelet Status

```
# systemctl status kubelet
● kubelet.service - Kubernetes Kubelet
 Loaded: loaded (/usr/lib/systemd/system/kubelet.service; enabled; vendor preset: disabled)
Drop-In: /usr/lib/systemd/system/kubelet.service.d
         └─01-webproxy.conf
 Active: activating (auto-restart) (Result: exit-code) since Thu 2025-02-20 04:51:29 EST; 799ms ago
    Docs: https://github.com/kubernetes/kubernetes
Process: 3277859 ExecStart=/usr/bin/kubelet --config=/var/lib/kubelet/kubelet-config.yaml --container-runtime-endpoint
```

3. From the above kubelet logs, containerd failed to start.

```
# systemctl status containerd
● containerd.service - containerd container runtime
 Loaded: loaded (/usr/lib/systemd/system/containerd.service; enabled; vendor preset: disabled)
Drop-In: /etc/systemd/system/containerd.service.d
         └─http-proxy.conf
 Active: activating (auto-restart) (Result: exit-code) since Thu 2025-02-20 04:59:11 EST; 4s ago
    Docs: https://containerd.io
Process: 3283670 ExecStart=/usr/bin/containerd (code=exited, status=1/FAILURE)
Process: 3283668 ExecStartPre=/sbin/modprobe overlay (code=exited, status=0/SUCCESS)
Main PID: 3283670 (code=exited, status=1/FAILURE)
  Tasks: 0 (limit: 821337)
 Memory: 0B
 CGroup: /system.slice/containerd.service
```

4. Error reported in containerd logs:

```
Feb 20 05:07:40 euagpuwrk1 containerd[3290034]: time="2025-02-20T05:07:40.837590428-05:00" level=info msg="Start subs
Feb 20 05:07:40 euagpuwrk1 containerd[3290034]: time="2025-02-20T05:07:40.837654288-05:00" level=info msg="Start reco
Feb 20 05:07:40 euagpuwrk1 containerd[3290034]: time="2025-02-20T05:07:40.837768326-05:00" level=info msg=serving... a
Feb 20 05:07:40 euagpuwrk1 containerd[3290034]: time="2025-02-20T05:07:40.837818125-05:00" level=info msg=serving... a
Feb 20 05:07:40 euagpuwrk1 containerd[3290034]: time="2025-02-20T05:07:40.863133446-05:00" level=fatal msg="Failed to
Feb 20 05:07:40 euagpuwrk1 systemd[1]: containerd.service: Main process exited, code=exited, status=1/FAILURE
Feb 20 05:07:40 euagpuwrk1 systemd[1]: containerd.service: Failed with result 'exit-code'.
Feb 20 05:07:40 euagpuwrk1 systemd[1]: Failed to start containerd container runtime.
```

Resolution

The customer resolved the containerd issue by following the below steps, which involve cleaning up the stale containerd state and restarting the containerd service.

```
# cd /var/lib/containerd/

# ls
io.containerd.content.v1.content
io.containerd.grpc.v1.introspection
io.containerd.runtime.v1.linux
io.containerd.snapshotter.v1.blockfile
io.containerd.snapshotter.v1.native
kubelet
io.containerd.grpc.v1.cri
io.containerd.metadata.v1.bolt
io.containerd.runtime.v2.task
io.containerd.snapshotter.v1.btrfs
io.containerd.snapshotter.v1.overlayfs
tmpmounts

# cd io.containerd.metadata.v1.bolt/

# ls
meta.db

# mv meta.db meta.db_bkp
-rw-r--r-- 1 root root 16777216 Feb 16 00:00 meta.db_bkp

# mv meta.db_bkp /tmp

# systemctl start containerd

# systemctl status containerd
● containerd.service - containerd container runtime
  Loaded: loaded (/usr/lib/systemd/system/containerd.service; enabled; vendor preset: disabled)
 Drop-In: /etc/systemd/system/containerd.service.d
          └─http-proxy.conf
  Active: active (running) since Thu 2025-02-20 05:13:22 EST; 11s ago
    Docs: https://containerd.io/
 Process: 3293329 ExecStartPre=/sbin/modprobe overlay (code=exited, status=0/SUCCESS)
Main PID: 3293332 (containerd)
```