

Can't connect to local registry 127.0.0.1:32000

Issue

- Getting a connection refused when trying to upload images to the local registry.

```
"msg": "non-zero return code",
"rc": 1,
"start": "2022-05-26 10:37:08.441849",
"stderr": "Error: Get \"https://localhost:32000/v2/\": dial tcp [::1]:32000: connect:
connection refused; Get \"http://localhost:32000/v2/\": dial tcp [::1]:32000: connect:
connection refused",
"stderr_lines": [
    "Error: Get \"https://localhost:32000/v2/\": dial tcp [::1]:32000: connect: connection
refused; Get \"http://localhost:32000/v2/\": dial tcp [::1]:32000: connect: connection
refused"
],
```

Environment

- Red Hat Enterprise Linux 8.6
- Element On-Premise Installer 2022-05.04

Resolution

First, let's begin by removing any bits of the old image that may be in containerd. We need the name of the image to do this and looking at this error:

```
"cdkbot/registry-amd64:2.6": rpc error: code = Unknown desc = failed to pull and unpack image
"docker.io/cdkbot/registry-amd64:2.6": failed to extract layer
```

the image is named `docker.io/cdkbot/registry-amd64:2.6`. So we will now run:

```
microk8s.ctr rm docker.io/cdkbot/registry-amd64:2.6
```

Unmount the offending volume from the `kubectl describe pod` setup:

```
sudo umount /var/snap/microk8s/common/var/lib/containerd/tmpmounts/containerd-mount490181863
```

If this succeeds, then you can issue:

```
microk8s.ctr pull docker.io/cdkbot/registry-amd64:2.6
```

and if this succeeds, you can then run:

```
kubectl delete pod -n container-registry registry
```

and watch the registry come back up.

If you cannot get the mounted volume to unmount, you may need to reboot to completely clear the issue.

Root Cause

The root cause is that the registry container will not start:

```
$ kubectl get pods -A
```

NAMESPACE	NAME	READY	STATUS
RESTARTS	AGE		
kube-system	hostpath-provisioner-566686b959-jl2b4	1/1	Running
1	69m		
...			
container-registry	registry-9b57d9df8-kmks4	0/1	ImagePullBackOff
0	44m		

To figure out why this won't start, we need to run `kubectl describe pod -n container-registry registry`:

```
$ kubectl describe pod -n container-registry registry
```

Name: registry-9b57d9df8-k7v2r
Namespace: container-registry
Priority: 0
Node: mynode/192.168.122.1
Start Time: Thu, 26 May 2022 11:33:04 -0700
Labels: app=registry
pod-template-hash=9b57dea58
...

Normal	BackOff	5m41s (x4 over 7m36s)	kubelet	Back-off pulling image "cdkbot/registry-amd64:2.6"
Warning	Failed	5m41s (x4 over 7m36s)	kubelet	Error: ImagePullBackOff

```
Warning   Failed                2m58s                kubelet                Failed to pull image
"cdkbot/registry-amd64:2.6": rpc error: code = Unknown desc = failed to pull and unpack image
"docker.io/cdkbot/registry-amd64:2.6": failed to extract layer
sha256: 8aa4fcad5eeb286fe9696898d988dc85503c6392d1a2bd9023911fb0d6d27081: failed to unmount
/var/snap/microk8s/common/var/lib/containerd/tmpmounts/containerd-mount490181863: failed to
unmount target /var/snap/microk8s/common/var/lib/containerd/tmpmounts/containerd-
mount490181863: device or resource busy: unknown
```

Looking at the above, we can see that

`/var/snap/microk8s/common/var/lib/containerd/tmpmounts/containerd-mount490181863` is busy and failing to unmount, thus causing our problem.

We've also noticed in this case that bits of an old image download can be left in containerd and we've updated the resolution to handle this as well.

Revision #2

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