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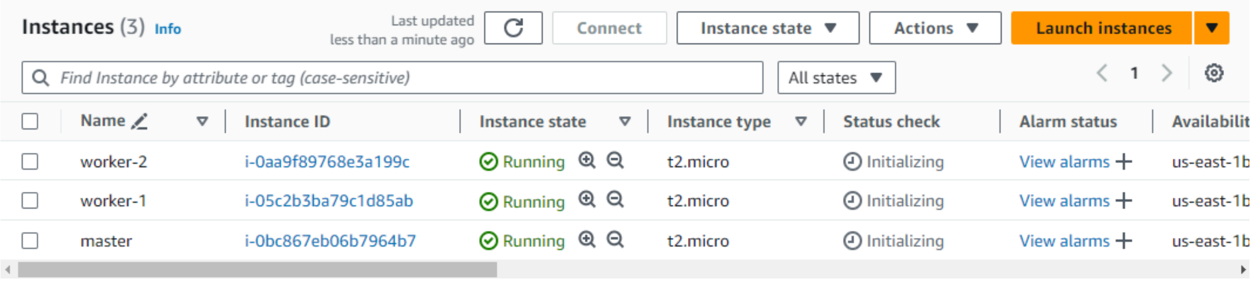
EXPERIMENT 3

1.Create 3 instances and name them.
Master
Worker-1
worker-2
Select a Key pair.Allow SSH

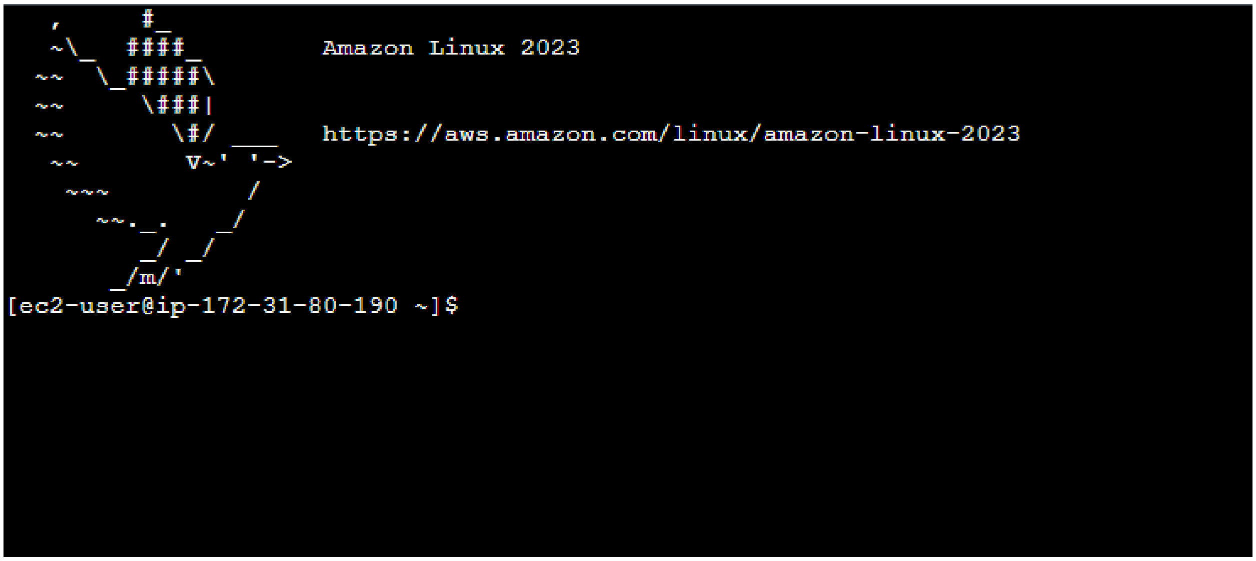


Instances (3) Info

Last updated
less than a minute ago

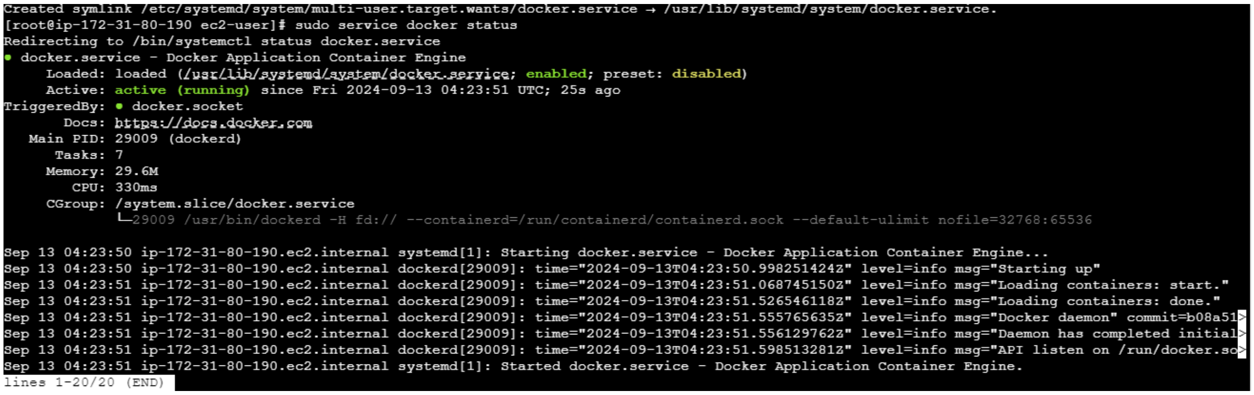
□	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availabilit
□	worker-2	i-0aa9f89768e3a199c	✓ Running	t2.micro	Initializing	View alarms +	us-east-1b
□	worker-1	i-05c2b3ba79c1d85ab	✓ Running	t2.micro	Initializing	View alarms +	us-east-1b
□	master	i-0bc867eb06b7964b7	✓ Running	t2.micro	Initializing	View alarms +	us-east-1b

2.Connect the instances and open the terminal to run commands to install docker and kubernets.



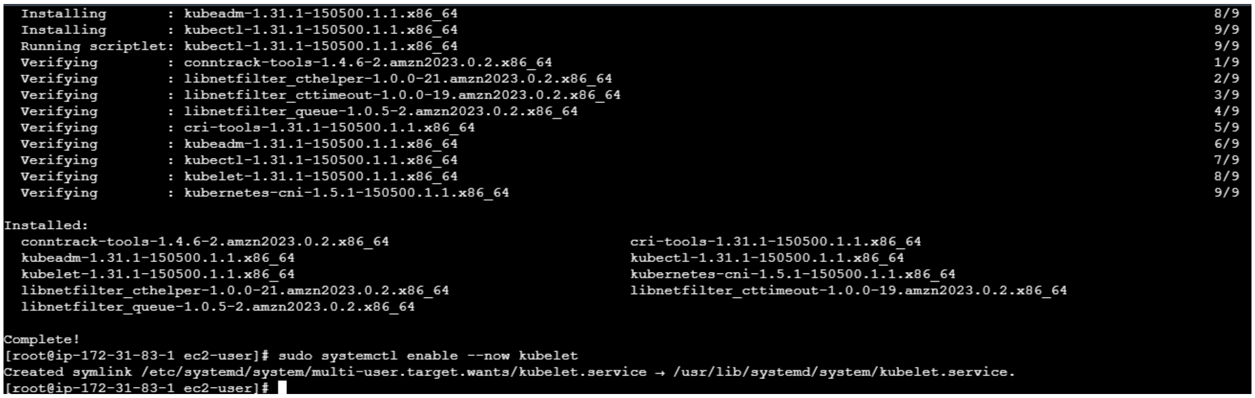
```
   ,     #_
   ~\_  ####_        Amazon Linux 2023
  ~~  \_#####\
  ~~     \###|
  ~~       \#/ ___   https://aws.amazon.com/linux/amazon-linux-2023
   ~~       V~' '->
    ~~~         /
      ~~._.   _/
         _/ _/
       _/m/'
[ec2-user@ip-172-31-80-190 ~]$
```

3.Install Docker for all 3 instances.Repeat all the steps for all three instances.



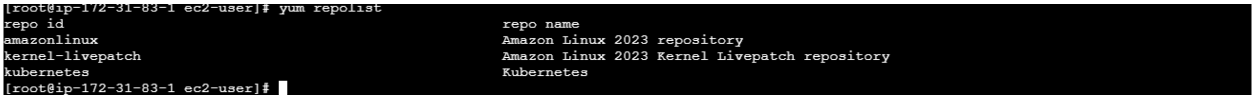
```
Created symlink /etc/systemd/system/multi-user.target.wants/docker.service → /usr/lib/systemd/system/docker.service.
[root@ip-172-31-80-190 ec2-user]# sudo service docker status
Redirecting to /bin/systemctl status docker.service
● docker.service - Docker Application Container Engine
     Loaded: loaded (/usr/lib/systemd/system/docker.service; enabled; preset: disabled)
     Active: active (running) since Fri 2024-09-13 04:23:51 UTC; 25s ago
TriggeredBy: ● docker.socket
       Docs: https://docs.docker.com
   Main PID: 29009 (dockerd)
      Tasks: 7
     Memory: 29.6M
        CPU: 330ms
     CGroup: /system.slice/docker.service
             └─29009 /usr/bin/dockerd -H fd:// --containerd=/run/containerd/containerd.sock --default-ulimit nofile=32768:65536

Sep 13 04:23:50 ip-172-31-80-190.ec2.internal systemd[1]: Starting docker.service - Docker Application Container Engine...
Sep 13 04:23:50 ip-172-31-80-190.ec2.internal dockerd[29009]: time="2024-09-13T04:23:50.998251424Z" level=info msg="Starting up"
Sep 13 04:23:51 ip-172-31-80-190.ec2.internal dockerd[29009]: time="2024-09-13T04:23:51.068745150Z" level=info msg="Loading containers: start."
Sep 13 04:23:51 ip-172-31-80-190.ec2.internal dockerd[29009]: time="2024-09-13T04:23:51.526546118Z" level=info msg="Loading containers: done."
Sep 13 04:23:51 ip-172-31-80-190.ec2.internal dockerd[29009]: time="2024-09-13T04:23:51.555765635Z" level=info msg="Docker daemon" commit=b08a51>
Sep 13 04:23:51 ip-172-31-80-190.ec2.internal dockerd[29009]: time="2024-09-13T04:23:51.556129762Z" level=info msg="Daemon has completed initial>
Sep 13 04:23:51 ip-172-31-80-190.ec2.internal dockerd[29009]: time="2024-09-13T04:23:51.598513281Z" level=info msg="API listen on /run/docker.so>
Sep 13 04:23:51 ip-172-31-80-190.ec2.internal systemd[1]: Started docker.service - Docker Application Container Engine.
lines 1-20/20 (END)
```

4.Install kubernets using intsall kubeadms and get code from there.



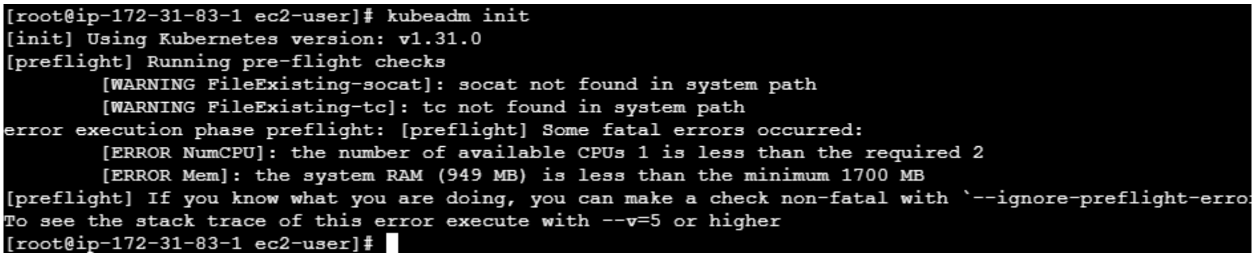
```
  Installing       : kubeadm-1.31.1-150500.1.1.x86_64                                                                      8/9
  Installing       : kubectl-1.31.1-150500.1.1.x86_64                                                                      9/9
  Running scriptlet: kubectl-1.31.1-150500.1.1.x86_64                                                                      9/9
  Verifying        : conntrack-tools-1.4.6-2.amzn2023.0.2.x86_64                                                           1/9
  Verifying        : libnetfilter_cthelper-1.0.0-21.amzn2023.0.2.x86_64                                                    2/9
  Verifying        : libnetfilter_cttimeout-1.0.0-19.amzn2023.0.2.x86_64                                                   3/9
  Verifying        : libnetfilter_queue-1.0.5-2.amzn2023.0.2.x86_64                                                        4/9
  Verifying        : cri-tools-1.31.1-150500.1.1.x86_64                                                                    5/9
  Verifying        : kubeadm-1.31.1-150500.1.1.x86_64                                                                      6/9
  Verifying        : kubectl-1.31.1-150500.1.1.x86_64                                                                      7/9
  Verifying        : kubelet-1.31.1-150500.1.1.x86_64                                                                      8/9
  Verifying        : kubernetes-cni-1.5.1-150500.1.1.x86_64                                                                9/9

Installed:
  conntrack-tools-1.4.6-2.amzn2023.0.2.x86_64                           cri-tools-1.31.1-150500.1.1.x86_64
  kubeadm-1.31.1-150500.1.1.x86_64                                      kubectl-1.31.1-150500.1.1.x86_64
  kubelet-1.31.1-150500.1.1.x86_64                                      kubernetes-cni-1.5.1-150500.1.1.x86_64
  libnetfilter_cthelper-1.0.0-21.amzn2023.0.2.x86_64                    libnetfilter_cttimeout-1.0.0-19.amzn2023.0.2.x86_64
  libnetfilter_queue-1.0.5-2.amzn2023.0.2.x86_64

Complete!
[root@ip-172-31-83-1 ec2-user]# sudo systemctl enable --now kubelet
Created symlink /etc/systemd/system/multi-user.target.wants/kubelet.service → /usr/lib/systemd/system/kubelet.service.
[root@ip-172-31-83-1 ec2-user]#
```

5.check the repositories



```
[root@ip-172-31-83-1 ec2-user]# yum repolist
repo id                                                  repo name
amazonlinux                                              Amazon Linux 2023 repository
kernel-livepatch                                         Amazon Linux 2023 Kernel Livepatch repository
kubernetes                                               Kubernetes
[root@ip-172-31-83-1 ec2-user]#
```

6.run command kubeadm



```
[root@ip-172-31-83-1 ec2-user]# kubeadm init
[init] Using Kubernetes version: v1.31.0
[preflight] Running pre-flight checks
        [WARNING FileExisting-socat]: socat not found in system path
        [WARNING FileExisting-tc]: tc not found in system path
error execution phase preflight: [preflight] Some fatal errors occurred:
        [ERROR NumCPU]: the number of available CPUs 1 is less than the required 2
        [ERROR Mem]: the system RAM (949 MB) is less than the minimum 1700 MB
[preflight] If you know what you are doing, you can make a check non-fatal with `--ignore-preflight-erro
To see the stack trace of this error execute with --v=5 or higher
[root@ip-172-31-83-1 ec2-user]#
```