

## Question: 1

SIMULATION

Monitor the logs of pod foo and:

- Extract log lines corresponding to error

unable-to-access-website

- Write them to

/opt/KULM00201/foo



The image shows a terminal window with a warning message at the top: "Set configuration context:" followed by a warning icon (a triangle with an exclamation mark). Below the warning, the terminal prompt is "[student@node-1] \$ |". The command entered is "kubectl config use-context k8s".

```
Set configuration context:   
[student@node-1] $ | kubectl config use-context k8s
```

Solution

**Answer: Solution**

```
student@node-1:~$  
student@node-1:~$ sudo -i  
root@node-1:~# alias k=kubect1  
root@node-1:~#
```

```
root@node-1:~# k logs foo | grep unable-to-access-website  
Thu Aug 27 05:25:28 UTC 2020 - ERROR - unable-to-access-website  
root@node-1:~# k logs foo | grep unable-to-access-website > /opt/KULM00201/foo  
root@node-1:~#
```

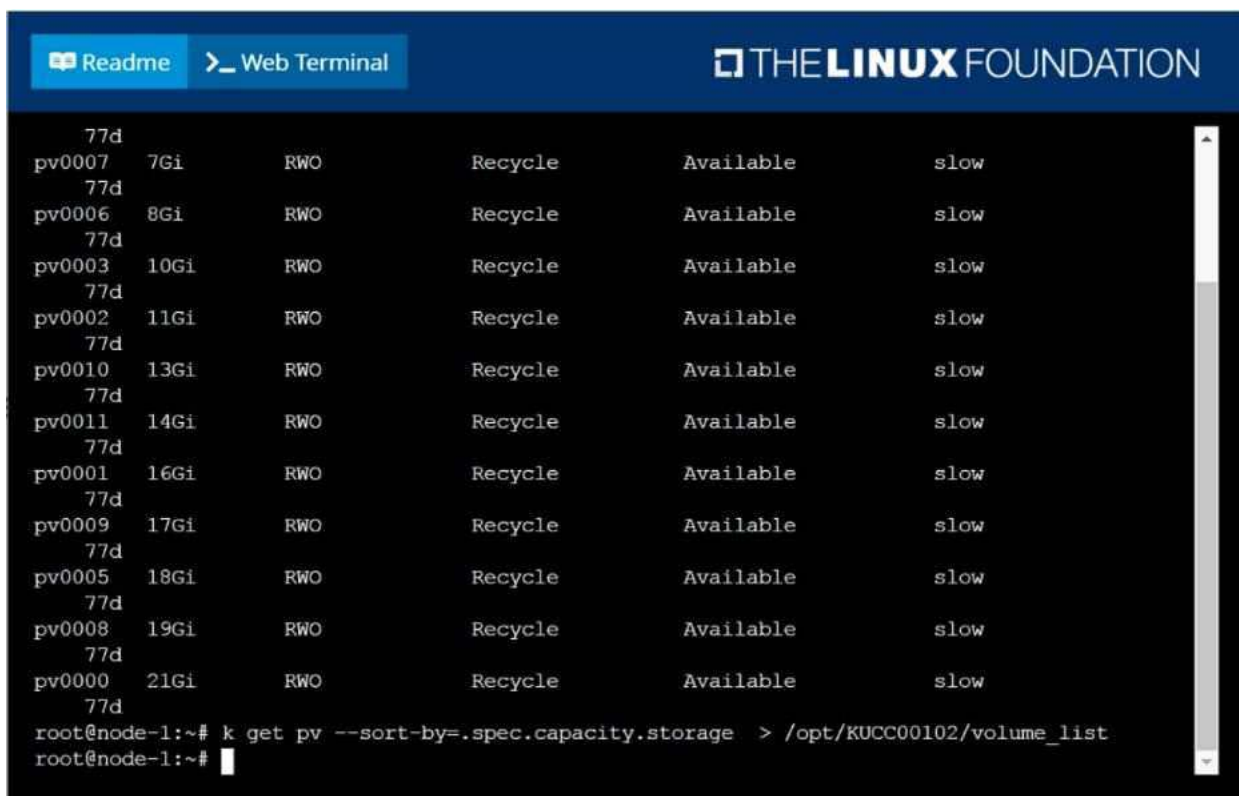
## Question: 2

### SIMULATION

List all persistent volumes sorted by capacity, saving the full kubectl output to /opt/KUCC00102/volume\_list. Use kubectl's own functionality for sorting the output, and do not manipulate it any further.

## Answer: Solution

### Solution



```
77d
pv0007 7Gi      RWO      Recycle   Available  slow
77d
pv0006 8Gi      RWO      Recycle   Available  slow
77d
pv0003 10Gi     RWO      Recycle   Available  slow
77d
pv0002 11Gi     RWO      Recycle   Available  slow
77d
pv0010 13Gi     RWO      Recycle   Available  slow
77d
pv0011 14Gi     RWO      Recycle   Available  slow
77d
pv0001 16Gi     RWO      Recycle   Available  slow
77d
pv0009 17Gi     RWO      Recycle   Available  slow
77d
pv0005 18Gi     RWO      Recycle   Available  slow
77d
pv0008 19Gi     RWO      Recycle   Available  slow
77d
pv0000 21Gi     RWO      Recycle   Available  slow
77d
root@node-1:~# k get pv --sort-by=.spec.capacity.storage > /opt/KUCC00102/volume_list
root@node-1:~#
```

## Question: 3

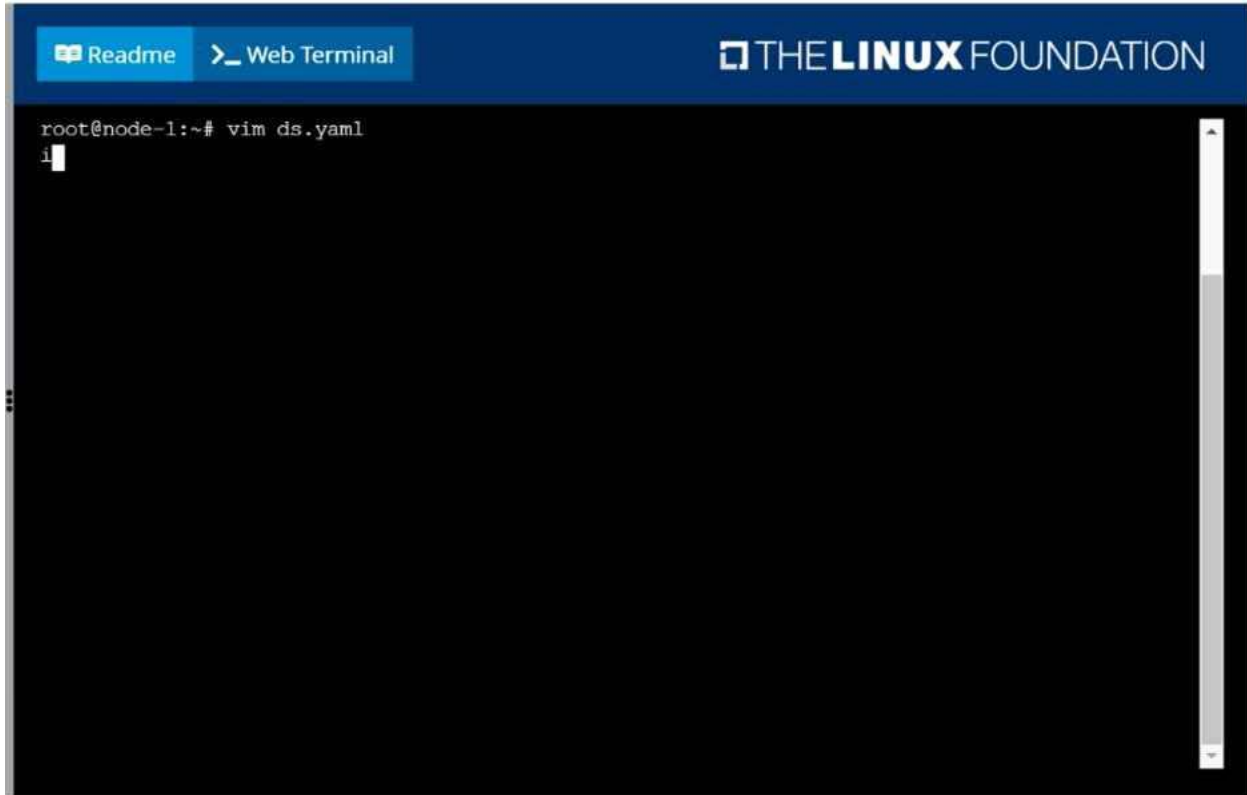
### SIMULATION

Ensure a single instance of pod nginx is running on each node of the Kubernetes cluster where nginx also represents the Image name which has to be used. Do not override any taints currently in place.

Use DaemonSet to complete this task and use ds-kusc00201 as DaemonSet name.

## Answer: Solution

Solution



The screenshot shows a web terminal interface with a dark blue header. On the left, there are two buttons: 'Readme' and 'Web Terminal'. On the right, the logo for 'THE LINUX FOUNDATION' is displayed. The terminal content shows a shell prompt 'root@node-1:~#' followed by the command 'vim ds.yaml'. The vim editor is in insert mode, indicated by the 'i' character and a cursor on the first line of the file.

```
root@node-1:~# vim ds.yaml
i
```

```
apiVersion: apps/v1
kind: DaemonSet
metadata:
  name: fluentd-elasticsearch
  namespace: kube-system
  labels:
    k8s-app: fluentd-logging
spec:
  selector:
    matchLabels:
      name: fluentd-elasticsearch
  template:
    metadata:
      labels:
        name: fluentd-elasticsearch
    spec:
      tolerations:
        # this toleration is to have the daemonset runnable on master nodes
        # remove it if your masters can't run pods
        - key: node-role.kubernetes.io/master
          effect: NoSchedule
      containers:
        - name: nginx
          image: nginx
-- INSERT --
```

17,19

All

```
apiVersion: apps/v1
kind: DaemonSet
metadata:
  name: ds-kusc00201
spec:
  selector:
    matchLabels:
      name: fluentd-elasticsearch
  template:
    metadata:
      labels:
        name: fluentd-elasticsearch
    spec:
      containers:
        - name: nginx
          image: nginx
```

:wq

```
root@node-1:~# vim ds.yaml
iroot@node-1:~# k create -f ds.yaml
daemonset.apps/ds-kusc00201 created
root@node-1:~# k get ds
NAME           DESIRED   CURRENT   READY   UP-TO-DATE   AVAILABLE   NODE SELECTOR   AGE
ds-kusc00201   2         2         2       2            2           <none>          4s
root@node-1:~#
```

### Question: 4

List all the pods sorted by created timestamp

**Answer: Solution**

```
kubect1 get pods--sort-by=.metadata.creationTimestamp
```

### Question: 5

List all the pods showing name and namespace with a json path expression

**Answer: Solution**

```
kubect1 get pods -o=jsonpath="{.items[*]}['metadata.name',
'metadata.namespace']}"
```