

How to take the backup of etcd in openshift 4

1: we will check the health of cluster using this command (oc get cluster operator)

```
lab-user@bastion ~]$ oc get co
NAME                                VERSION    AVAILABLE    PROGRESSING    DEGRADED    SINCE    MESSAGE
authentication                      4.11.40    True         False          False       93s
baremetal                          4.11.40    True         False          False       10h
cloud-controller-manager            4.11.40    True         False          False       10h
cloud-credential                    4.11.40    True         False          False       10h
cluster-autoscaler                  4.11.40    True         False          False       10h
config-operator                     4.11.40    True         False          False       10h
```

2: we will check the pod running inside the node (oc get all)

```
lab-user@bastion ~]$ oc get all
NAME                                TYPE          CLUSTER-IP    EXTERNAL-IP    PORT(S)    AGE
service/kubernetes                  ClusterIP      172.30.0.1     <none>          443/TCP    10h
service/openshift                   ExternalName    <none>         kubernetes.default.svc.cluster.local    <none>     10h
lab-user@bastion ~]$
```

3: also we will check the status of node using this cmd

```
[lab-user@bastion ~]$ oc get node
NAME                                STATUS    ROLES    AGE    VERSION
ip-10-0-204-184.us-east-2.compute.internal Ready     master,worker 10h    v1.23.5+8471591
[lab-user@bastion ~]$
```

4: then after we will debug inside the node (oc debug node/name of node)

```
lab-user@bastion ~]$ oc debug node/ip-10-0-204-184.us-east-2.compute.internal
```

5: then we will copy and paste there this command (chroot/host) inside the node

```
chroot /host
```

Then we goes to inside this directory (/usr/local/bin/cluster-backup.sh where i want to keep like (/home/core/ram)

```
To use host binaries, run 'chroot /host'
chroot /host
Pod IP: 10.0.204.184
If you don't see a command prompt, try pressing enter.
sh-4.4# chroot /host
sh-4.4# /usr/local/bin/cluster-backup.sh /home/core/raj
Certificate /etc/kubernetes/static-pod-resources/configmaps/etcd-serving-ca/ca-bundle.crt is missing. Checking in different directory
Certificate /etc/kubernetes/static-pod-resources/etcd-certs/configmaps/etcd-serving-ca/ca-bundle.crt found!
found latest kube-apiserver: /etc/kubernetes/static-pod-resources/kube-apiserver-pod-9
found latest kube-controller-manager: /etc/kubernetes/static-pod-resources/kube-controller-manager-pod-11
found latest kube-scheduler: /etc/kubernetes/static-pod-resources/kube-scheduler-pod-9
found latest etcd: /etc/kubernetes/static-pod-resources/etcd-pod-5
e0ae36b1faa5c33c64352a93aa492cb7fb726f601f820162cb1d6e59a6ba4637
etcdctl version: 3.5.6
API version: 3.5
{"level":"info","ts":"2024-05-10T05:42:58.578Z","caller":"snapshot/v3_snapshot.go:65","msg":"created temporary db file","path":"/home/core/raj/snapshot_2024-05-10_054256.db.part"}
{"level":"info","ts":"2024-05-10T05:42:58.584Z","logger":"client","caller":"v3@v3.5.6/maintenance.go:212","msg":"opened snapshot stream; downloading"}
{"level":"info","ts":"2024-05-10T05:42:58.584Z","caller":"snapshot/v3_snapshot.go:73","msg":"fetching snapshot","endpoint":"https://10.0.204.184:2379"}
{"level":"info","ts":"2024-05-10T05:42:59.130Z","logger":"client","caller":"v3@v3.5.6/maintenance.go:220","msg":"completed snapshot read; closing"}
{"level":"info","ts":"2024-05-10T05:42:59.397Z","caller":"snapshot/v3_snapshot.go:88","msg":"fetched snapshot","endpoint":"https://10.0.204.184:2379","size":"104 MB","took":"now"}
{"level":"info","ts":"2024-05-10T05:42:59.397Z","caller":"snapshot/v3_snapshot.go:97","msg":"saved","path":"/home/core/raj/snapshot_2024-05-10_054256.db"}
Snapshot saved at /home/core/raj/snapshot_2024-05-10_054256.db
Deprecated: Use 'etcdctl snapshot status' instead.
{"hash":"382782214","revision":101763,"totalKey":11402,"totalSize":104259584}
snapshot db and kube resources are successfully saved to /home/core/raj
```

And after that we will go to inside this directory(/home/core/raj) using cd command and you can give the full permission of file both file and also you can change the ownershif of file

```
h-4.4# cd /home/core/raj/
h-4.4# ls
snapshot_2024-05-10_110801.db  static_kubernetes_2024-05-10_110801.tar.gz
h-4.4#
sh-4.4# ls -ltrh
total 122M
-rw-----. 1 root root 66K May 10 11:08 static_kubernetes_2024-05-10_110801.tar.gz
-rw-----. 1 root root 122M May 10 11:08 snapshot_2024-05-10_110801.db
sh-4.4# chown core:core static_kubernetes_2024-05-10_110801.tar.gz snapshot_2024-05-10_110801.db
sh-4.4# ls -ltrh
total 122M
-rw-----. 1 core core 66K May 10 11:08 static_kubernetes_2024-05-10_110801.tar.gz
-rw-----. 1 core core 122M May 10 11:08 snapshot_2024-05-10_110801.db
sh-4.4# chmod 777 static_kubernetes_2024-05-10_110801.tar.gz snapshot_2024-05-10_110801.db
sh-4.4# ls -ltrh
total 122M
-rwxrwxrwx. 1 core core 66K May 10 11:08 static_kubernetes_2024-05-10_110801.tar.gz
-rwxrwxrwx. 1 core core 122M May 10 11:08 snapshot_2024-05-10_110801.db
sh-4.4#
```

And then we open the second terminal and copy this file on bastion-host using that Command (scp (username)@masterIP and we put host-path also we will give the destination path

And also you can check the masterIP here using this command (oc get node -o wide)

```
[lab-user@raj ~]$ oc get node -o wide
```

NAME	KERNEL-VERSION	STATUS	ROLES	CONTAINER-RUNTIME	AGE	VERSION	INTERNAL-IP	EXTERNAL-IP	OS-IMAGE
ip-10-0-215-25.us-east-2.compute.internal	4.18.0-372.96.1.el8_6.x86_64	Ready	master,worker	cri-o://1.24.6-11.1.rhaos4.11.git07f48d1.el8	2d23h	v1.24.16+2e1e137	10.0.215.25	<none>	Red Hat Enterprise Linux CoreOS 411.86

```
[lab-user@raj ~]$ scp core@10.0.215.25:/home/core/raj .
```

(II:--) method for keep file on bastion-host if any case my not we will put on bastion then we will used second method

1:- we will create a simple pod using this command (oc run name of pod --image=name of image)

Then we goes to the shell inside the pod for check the path using this command (oc rsh name of pod)

```
[lab-user@raj ~]$ oc run raj --image=redis
Warning: would violate PodSecurity "restricted:latest": allowPrivilegeEscalation != false (container "raj" must set securityContext.allowPrivilegeEscalation=false), unrestricted capabilities (container "raj" must set securityContext.capabilities.drop=["ALL"]), runAsNonRoot != true (pod or container "raj" must set securityContext.runAsNonRoot=true), seccompProfile (pod or container "raj" must set securityContext.seccompProfile.type to "RuntimeDefault" or "Localhost")
pod/raj created
[lab-user@raj ~]$ oc get pod
```

NAME	READY	STATUS	RESTARTS	AGE
ip-10-0-215-25us-east-2computeinternal-debug	1/1	Running	0	22m
pod2	1/1	Running	4	25h
raj	1/1	Running	0	5s

```
[lab-user@raj ~]$
```

And we will go to the inside the pod (oc rsh name of pod)

```
[lab-user@raj ~]$ oc rsh raj
# cd /tmp
# ls
#
```

And again go to the inside the node and run this command inside the shell for copy file pod to pod (oc cp /home/core/raj (name of pod) pod:/tmp)--

If any case not run oc command inside the shell then you can paste the token into the node then you can used below image fist you will open the console and open the token and paste inside node

The image consists of three screenshots from the Red Hat OpenShift console. The first screenshot shows the 'Cluster Settings' page with a dropdown menu open, highlighting 'Command line tools'. The second screenshot shows the 'Command Line Tools' page with a red circle around the 'Copy login command' link. The third screenshot shows the 'Display Token' page, which displays the API token and provides the command to log in with it.

Cluster Settings

- Quick Starts
- Documentation
- Command line tools**
- Open support case with Red Hat
- About
- Learning Portal
- OpenShift Blog

Command Line Tools

[Copy login command](#)

Display Token

Your API token is

```
sha256~vGBV3--t-s-be1rgpit1a1k09sknbBBMcL32uvxAGls
```

Log in with this token

```
oc login --token=sha256~vGBV3--t-s-be1rgpit1a1k09sknbBBMcL32uvxAGls --server=https://api.cluster-9pt7f.9pt7f.sandbox2430.opentlc.com:6443
```

Use this token directly against the API

```
curl -H "Authorization: Bearer sha256~vGBV3--t-s-be1rgpit1a1k09sknbBBMcL32uvxAGls" "https://api.cluster-9pt7f.9pt7f.sandbox2430.opentlc.com:6443/apis/user.openshift.io/v1/users/~"
```

Copy and paste inside the node

Then you can run this command inside the node for copy file node to pod (oc cp /home/core/raj name of file (pod name): /tmp and destination path) you can follow the below image

```
sh-4.4# oc get node
NAME                                STATUS  ROLES    AGE  VERSION
ip-10-0-215-25.us-east-2.compute.internal Ready  master,worker  3d   v1.24.16+2e1e137
sh-4.4# oc cp /home/core/raj/snapshot_2024-05-10_110801.db raj:/tmp
sh-4.4# oc cp /home/core/raj/static_kuberesources_2024-05-10_110801.tar.gz raj:/tmp
sh-4.4#
```

You can aslo check the inside the pod my file is available there or not

```
[lab-user@raj ~]$ oc rsh raj
# cd /tmp
# ls
# ls
snapshot_2024-05-10_110801.db  static_kubernetes_2024-05-10_110801.tar.gz
#
```

Exit

And then you will run this command for keep the file on bastion-host (oc rsync (name of pod):/tmp destination path)

```
[lab-user@raj ~]$ oc rsync raj:/tmp .
WARNING: cannot use rsync: rsync not available in container
tmp/snapshot_2024-05-10_110801.db
tmp/static_kubernetes_2024-05-10_110801.tar.gz
[lab-user@raj ~]$ ls
dns.com  tmp
[lab-user@raj ~]$ cd tmp
[lab-user@raj tmp]$ ls
snapshot_2024-05-10_110801.db  static_kubernetes_2024-05-10_110801.tar.gz
[lab-user@raj tmp]$
```