



6. Install OpenShift Container Platform: NetApp HCI for Red Hat OpenShift on RHV

NetApp Solutions

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May 24, 2021

This PDF was generated from https://docs.netapp.com/us-en/netapp-solutions/containers/rh-os-rhv-6_install_openshift_container_platform.html on October 21, 2021. Always check docs.netapp.com for the latest.

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To install OpenShift Container Platform, complete the following steps:

1. Create a directory for OpenShift installation and transfer the downloaded files to it. Extract the OpenShift installer files from the tar archive.

```
[user@rhel7 ~]$ mkdir openshift-deploy
[user@rhel7 ~]$ cd openshift-deploy
[user@rhel7 openshift-deploy]$ tar xvf openshift-install-linux.tar.gz
README.md
openshift-install
[user@rhel7 openshift-deploy]$ ls -la
total 453260
drwxr-xr-x.  2 user user      146 May 26 16:01 .
dr-xr-x---. 16 user user    4096 May 26 15:58 ..
-rw-r--r--.  1 user user 25249648 May 26 15:59 openshift-client-
linux.tar.gz
-rwxr-xr-x.  1 user user 354664448 Apr 27 01:37 openshift-install
-rw-r--r--.  1 user user  84207215 May 26 16:00 openshift-install-
linux.tar.gz
-rw-r--r--.  1 user user    2736 May 26 15:59 pull-secret.txt
-rw-r--r--.  1 user user    706 Apr 27 01:37 README.md
```



The installation program creates several files in the directory used for installation of the cluster. Both the installation program and the files created by the installation program must be kept even after the cluster is up.



The binary files that you previously downloaded, such as `openshift-install` or `oc`, can be copied to a directory that is in the user's path (for example, `/usr/local/bin`) to make them easier to run.

2. Create the cluster by running the `openshift-install create cluster` command and respond to the installation program prompts. Pass the SSH public key, select `ovirt` from the platform, provide the RHV infrastructure details, provide the three reserved IP addresses and the downloaded pull secret to the installation program prompts. After all the inputs are provided, the installation program creates and configures a bootstrap machine with a temporary Kubernetes control plane which then creates and configures the master VMs with the production Kubernetes control plane. The control plane on the master nodes creates and configures the worker VMs.

It can take approximately 30–45 minutes to get the complete cluster up and running.

```

[user@rhel7 openshift-deploy]$ ./openshift-install create cluster
--dir=/home/user/openshift-deploy --log-level=info
SSH Public Key /home/user/.ssh/id_rsa.pub
? Platform ovirt
? oVirt cluster Default
? oVirt storage domain data_domain
? oVirt network ovirtmgmt
? Internal API virtual IP 10.63. 172.151
? Internal DNS virtual IP 10.63. 172.153
? Ingress virtual IP 10.63. 172.152
? Base Domain cie.netapp.com
? Cluster Name rhv-ocp-cluster
? Pull Secret [? for help]
*****
*****
*****
*****
*****
INFO Obtaining RHCOS image file from 'https://releases-art-
rhcos.svc.ci.openshift.org/art/storage/releases/rhcos-
4.4/44.81.202004250133-0/x86_64/rhcos-44.81.202004250133-0-
openstack.x86_64.qcow2.gz?sha256=f8a44e0ea8cc45882dc22eb632a63afb90b4148
39b8aa92f3836ede001dfe9cf'
INFO The file was found in cache: /home/user/.cache/openshift-
installer/image_cache/e263efbc53c0caf612bcfaad10e3dff0. Reusing...
INFO Creating infrastructure resources...
INFO Waiting up to 20m0s for the Kubernetes API at https://api.rhv-ocp-
cluster.cie.netapp.com:6443...
INFO API v1.17.1 up
INFO Waiting up to 40m0s for bootstrapping to complete...
INFO Destroying the bootstrap resources...
INFO Waiting up to 30m0s for the cluster at https://api.rhv-ocp-
cluster.cie.netapp.com:6443 to initialize...
INFO Waiting up to 10m0s for the openshift-console route to be
created...
INFO Install complete!
INFO To access the cluster as the system:admin user when using 'oc', run
'export KUBECONFIG=/home/user/openshift-deploy/auth/kubeconfig'
INFO Access the OpenShift web-console here: https://console-openshift-
console.apps.rhv-ocp-cluster.cie.netapp.com
INFO Login to the console with user: kubeadmin, password: NtsqU-p3qUb-
8Hscu-JfAq7

```

3. When the cluster deployment is complete, the directions for accessing the OpenShift cluster, including a link to its web console and credentials for the kubeadmin user, are displayed. Make sure to take a note of

these details.

4. Log in to the RHV Manager and observe that the VMs relating to the OCP cluster are up and running.

Red Hat Virtualization

Compute > Virtual Machines

VMs: [Search] [New] [Edit] [Remove] [Run] [Suspend] [Shutdown] [Reboot] [Console] [Migrate] [Create Snapshot]

	Name	Comment	Host	IP Addresses	FQDN	Cluster	Data Center	Memory	CPU	Network	Graphics	Status	Uptime
▲	HostedEngine		rhv-h02.cie.netapp.o	10.63.172.150 fe8...	rhv-m.cie.netapp...	Default	Default	30%	15%	0%	SPIICE + ...	Up	5 day
▲	NetApp-mNode		rhv-h02.cie.netapp.o			Default	Default	24%	2%	0%	SPIICE + ...	Up	25 mi
▲	rhv-ocp-cluster-hdr7k-master-0		rhv-h01.cie.netapp.o			Default	Default	69%	53%	0%	SPIICE + ...	Up	1 h
▲	rhv-ocp-cluster-hdr7k-master-1		rhv-h02.cie.netapp.o			Default	Default	50%	35%	0%	SPIICE + ...	Up	1 h
▲	rhv-ocp-cluster-hdr7k-master-2		rhv-h01.cie.netapp.o			Default	Default	59%	51%	0%	SPIICE + ...	Up	1 h
▲	rhv-ocp-cluster-hdr7k-worker-0-ghskz		rhv-h02.cie.netapp.o			Default	Default	16%	16%	0%	SPIICE + ...	Up	1 h
▲	rhv-ocp-cluster-hdr7k-worker-0-xd99		rhv-h01.cie.netapp.o			Default	Default	14%	12%	0%	SPIICE + ...	Up	1 h
▲	rhv-ocp-cluster-hdr7k-worker-0-zkxmt		rhv-h02.cie.netapp.o			Default	Default	15%	14%	0%	SPIICE + ...	Up	1 h
▼	tmpvm-for-rhv-ocp-cluster-hdr7k-rhcos					Default	Default	--	--	--	None	Down	

Next: 7. Access Console/Web Console

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