

## <Openshift OKD 3.11 Install>

### 1. 환경설정

- Master Node 16G, 4 vCPU \* 1대
- Compute Node 8G, 1vCPU \* 2대
- OS CentOS 7

### 2. User 생성 (on All Node)

```
$ useradd origin
```

```
$ passwd origin
```

```
$ echo -e 'Defaults:origin !requiretty\norigin ALL = (root) NOPASSWD:ALL' | tee  
/etc/sudoers.d/openshift
```

```
$ chmod 440 /etc/sudoers.d/openshift
```

### 3. 필수 Package 설치 (on All Node)

```
$ yum install centos-release-openshift-origin311.
```

```
$ yum install openshift-ansible ansible docker
```

```
$ systemctl enable --now docker
```

### 4. SSH 설정 (Master)

```
$ ssh-keygen -q -N ""
```

```
$ vi ~/.ssh/config
```

```
# create new ( define each node )
Host master
  Hostname master.suejin.com
  User origin
Host node01
  Hostname node01.suejin.com
  User origin
Host node02
  Hostname node02.suejin.com
  User origin
```

```
$ chmod 600 ~/.ssh/config
```

```
$ ssh-copy-id node01, 02, master
```

## 5. All-in-one Inventory 작성

```
# cat /etc/ansible/hosts
```

```
# add follows to the end
[OSEv3:children]
masters
nodes
etcd

[OSEv3:vars]
# admin user created in previous section
ansible_ssh_user=origin
ansible_become=true
openshift_deployment_type=origin

# use HTTPasswd for authentication
openshift_master_identity_providers=[{'name': 'htpasswd_auth', 'login': 'true', 'challenge': 'true', 'kind': 'HTTPasswdPasswordIdentityProvider'}]
# define default sub-domain for Master node
openshift_master_default_subdomain=apps.suejin.com
# allow unencrypted connection within cluster
openshift_docker_insecure_registries=172.30.0.0/16

[masters]
master.suejin.com openshift_schedulable=true containerized=false

[etcd]
master.suejin.com

[nodes]
# defined values for [openshift_node_group_name] in the file below
# [/usr/share/ansible/openshift-ansible/roles/openshift_facts/defaults/main.yml]
master.suejin.com openshift_node_group_name='node-config-master-infra'
node01.suejin.com openshift_node_group_name='node-config-compute'
node02.suejin.com openshift_node_group_name='node-config-compute'
```

## 6. Prerequisites.yaml 배포

```
$ ansible-playbook /usr/share/ansible/openshift-ansible/playbooks/prerequisites.yml
```

```
PLAY RECAP *****
localhost                : ok=83   changed=23   unreachable=0   failed=0

INSTALLER STATUS *****
Initialization           : Complete (0:00:35)
```

## 7. Deploy\_cluster.yml 배포

\$ ansible-playbook /usr/share/ansible/openshift-ansible/playbooks/deploy\_cluster.yml

```
PLAY RECAP *****
localhost                : ok=566   changed=138   unreachable=0   failed=0

INSTALLER STATUS *****
Initialization           : Complete (0:00:23)
Health Check             : Complete (0:00:38)
Node Bootstrap Preparation : Complete (0:01:14)
etcd Install             : Complete (0:00:32)
Master Install           : Complete (0:04:37)
Master Additional Install : Complete (0:00:36)
Node Join                : Complete (0:00:18)
Hosted Install           : Complete (0:00:40)
Cluster Monitoring Operator : Complete (0:00:11)
Web Console Install      : Complete (0:00:40)
Console Install          : Complete (0:00:18)
metrics-server Install   : Complete (0:00:01)
Service Catalog Install  : Complete (0:03:39)
```

## 8. 확인

```
[root@master ~]# oc get all
```

| NAME                         | READY | STATUS  | RESTARTS | AGE |
|------------------------------|-------|---------|----------|-----|
| pod/docker-registry-1-9t2zp  | 1/1   | Running | 0        | 10m |
| pod/registry-console-1-n4v9t | 1/1   | Running | 0        | 10m |
| pod/router-1-58cpz           | 1/1   | Running | 3        | 10m |

| NAME                                     | DESIRED | CURRENT | READY | AGE |
|--|---------|---------|-------|-----|
| replicationcontroller/docker-registry-1  | 1       | 1       | 1     | 10m |
| replicationcontroller/registry-console-1 | 1       | 1       | 1     | 10m |
| replicationcontroller/router-1           | 1       | 1       | 1     | 10m |

| NAME                     | TYPE      | CLUSTER-IP     | EXTERNAL-IP | PORT(S)                 | AGE |
|--------------------------|-----------|----------------|-------------|-------------------------|-----|
| service/docker-registry  | ClusterIP | 172.30.205.4   | <none>      | 5000/TCP                | 10m |
| service/kubernetes       | ClusterIP | 172.30.0.1     | <none>      | 443/TCP,53/UDP,53/TCP   | 10m |
| service/registry-console | ClusterIP | 172.30.204.108 | <none>      | 9000/TCP                | 10m |
| service/router           | ClusterIP | 172.30.237.203 | <none>      | 80/TCP,443/TCP,1936/TCP | 10m |

### <Reference>

1. [https://www.server-world.info/en/note?os=CentOS\\_7&p=openshift311&f=1](https://www.server-world.info/en/note?os=CentOS_7&p=openshift311&f=1)
2. <https://docs.openshift.com/container-platform/3.11/install/prerequisites.html#wildcard-dns-prereq>
3. [https://docs.okd.io/3.11/install/configuring\\_inventory\\_file.html](https://docs.okd.io/3.11/install/configuring_inventory_file.html)