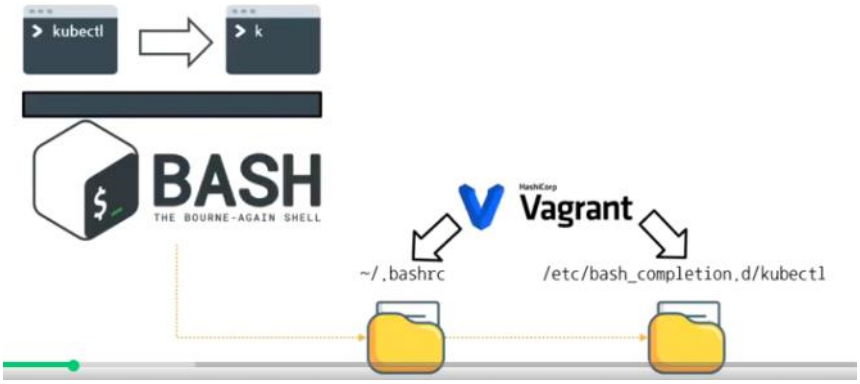
6_쿠버네티스 Tips

2021년 12월 4일 토요일 오후 10:52

6.1 kubectl 쉽게 쓰는 법

- tab통해서 자동완성되도록 구성되어 있음
- bash shell



cat ~/_Lecture_k8s_starter.kit/ch1/1.2/k8s-min-5GiB/master_node.sh

아래 설정으로 자동완성 기능 동작

```
# install bash-completion for kubectl
yum install bash-completion -y

# kubectl completion on bash-completion dir
kubectl completion bash >/etc/bash_completion.d/kubectl

# alias kubectl to k
echo 'alias k=kubectl' >> ~/.bashrc
echo 'complete -F __start_kubectl k' >> ~/.bashrc
```

배시 셸에 별명 지어주기

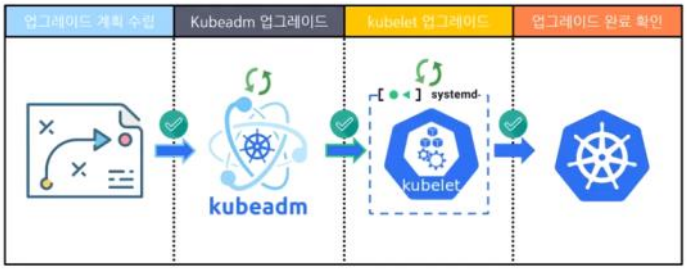

```
[root@m-k8s ~]# ~/_Lecture_k8s_starter.kit/ch6/6.1/k8s_rc.sh
[root@m-k8s ~]# keq

1 dpy-chk-log-658658f78c-5vnhr
2 dpy-chk-log-658658f78c-dgxxf
3 dpy-chk-log-658658f78c-rgzd6

Please select pod in default:
```

alias를 지어주면 편리하다

6.2.쿠버네티스 버전 업그레이드

업그레이드 순서

1. 업그레이드 계획 수립
2. kubeadm 업그레이드
3. kubelet 업그레이드 후 재시작
4. 업그레이드 완료 확인




```
[root@m-k8s ~]# k get nodes
NAME     STATUS   ROLES                  AGE   VERSION
m-k8s    Ready    control-plane,master   18d   v1.20.2
w1-k8s   Ready    <none>                 18d   v1.20.2
w2-k8s   Ready    <none>                 18d   v1.20.2
w3-k8s   Ready    <none>                 18d   v1.20.2
[root@m-k8s ~]#
```

버전확인

kubeadm upgrade plan 명령어 입력

```
[root@m-k8s ~]# kubeadm upgrade plan
[upgrade/config] Making sure the configuration is correct:
[upgrade/config] Reading configuration from the cluster...
[upgrade/config] FYI: You can look at this config file with 'kubectl -n kube-system get cm kubeadm-config -o yaml'
[preflight] Running pre-flight checks.
[upgrade] Running cluster health checks
[upgrade] Fetching available versions to upgrade to
[upgrade/versions] Cluster version: v1.20.12
[upgrade/versions] kubeadm version: v1.20.2
I1204 23:05:59.546464   13227 version.go:251] remote version is much newer: v1.22.4; falling back to: stable-1.20
[upgrade/versions] Latest stable version: v1.20.13
[upgrade/versions] Latest stable version: v1.20.13
[upgrade/versions] Latest version in the v1.20 series: v1.20.13
[upgrade/versions] Latest version in the v1.20 series: v1.20.13

Components that must be upgraded manually after you have upgraded the control plane with 'kubeadm upgrade apply':
COMPONENT   CURRENT       AVAILABLE
kubelet     4 x v1.20.2   v1.20.13

Upgrade to the latest version in the v1.20 series:

COMPONENT                 CURRENT    AVAILABLE
kube-apiserver            v1.20.12   v1.20.13
kube-controller-manager   v1.20.12   v1.20.13
kube-scheduler            v1.20.12   v1.20.13
kube-proxy                v1.20.12   v1.20.13
CoreDNS                   1.7.0      1.7.0
etcd                      3.4.13-0   3.4.13-0

You can now apply the upgrade by executing the following command:

        kubeadm upgrade apply v1.20.13

Note: Before you can perform this upgrade, you have to update kubeadm to v1.20.13.

_____________________________________________________________________


The table below shows the current state of component configs as understood by this version of kubeadm.
Configs that have a "yes" mark in the "MANUAL UPGRADE REQUIRED" column require manual config upgrade or
resetting to kubeadm defaults before a successful upgrade can be performed. The version to manually
upgrade to is denoted in the "PREFERRED VERSION" column.

API GROUP                 CURRENT VERSION   PREFERRED VERSION   MANUAL UPGRADE REQUIRED
kubeproxy.config.k8s.io   v1alpha1          v1alpha1            no
kubelet.config.k8s.io     v1beta1           v1beta1             no
_____________________________________________________________________
```

위의 결과에서 v1.20을 v1.20.13으로 올릴 수 있음

yum list kubeadm --showduplicates

```
kubeadm.x86_64                                                                1.19.16-0
kubeadm.x86_64                                                                1.20.0-0
kubeadm.x86_64                                                                1.20.1-0
kubeadm.x86_64                                                                1.20.2-0
kubeadm.x86_64                                                                1.20.4-0
kubeadm.x86_64                                                                1.20.5-0
kubeadm.x86_64                                                                1.20.6-0
kubeadm.x86_64                                                                1.20.7-0
kubeadm.x86_64                                                                1.20.8-0
```

kubeadm upgrade apply 1.20.4

kubeadm 버전이 낮으면 설치가 안됨

yum upgrade -y kubeadm-1.20.4

```
updates                                                                                                                                                  | 2.9 kB  00:00:00
(1/5): docker-ce-stable/7/x86_64/primary_db                                                                                                              |  69 kB  00:00:00
(2/5): epel/x86_64/updateinfo                                                                                                                            | 1.0 MB  00:00:00
(3/5): kubernetes/primary                                                                                                                                |  99 kB  00:00:01
(4/5): epel/x86_64/primary_db                                                                                                                            | 7.0 MB  00:00:02
(5/5): updates/7/x86_64/primary_db                                                                                                                       |  13 MB  00:00:02
kubernetes                                                                                                                                                        736/736
Resolving Dependencies
--> Running transaction check
---> Package kubeadm.x86_64 0:1.20.2-0 will be updated
---> Package kubeadm.x86_64 0:1.20.4-0 will be an update
--> Finished Dependency Resolution

Dependencies Resolved

==========================================================================================================================================================================
 Package                                  Arch                                    Version                                    Repository                                  Size
==========================================================================================================================================================================
Updating:
 kubeadm                                  x86_64                                  1.20.4-0                                   kubernetes                                 8.3 M

Transaction Summary
==========================================================================================================================================================================
Upgrade  1 Package

Total download size: 8.3 M
Downloading packages:
Delta RPMs disabled because /usr/bin/applydeltarpm not installed.
41b736fab41de415734da929659fe7ed3b53b9c1d345cd8cf9a0570d3038b07b-kubeadm-1.20.4-0.x86_64.rpm                                                             | 8.3 MB  00:00:02
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
  Updating   : kubeadm-1.20.4-0.x86_64                                                                                                                                1/2
  Cleanup    : kubeadm-1.20.2-0.x86_64                                                                                                                                2/2
  Verifying  : kubeadm-1.20.4-0.x86_64                                                                                                                                1/2
  Verifying  : kubeadm-1.20.2-0.x86_64                                                                                                                                2/2

Updated:
  kubeadm.x86_64 0:1.20.4-0

Complete!
```

kubeadm upgrade apply 1.20.4

```
[root@m-k8s ~]# k get nodes
NAME     STATUS   ROLES                  AGE   VERSION
m-k8s    Ready    control-plane,master   18d   v1.20.2
w1-k8s   Ready    <none>                 18d   v1.20.2
w2-k8s   Ready    <none>                 18d   v1.20.2
w3-k8s   Ready    <none>                 18d   v1.20.2
```

- 업그레이드가 이루어진게 없음

kubectl version

kubelet --version

```
[root@m-k8s ~]# kubelet --version
Kubernetes v1.20.2
```

yum upgrade -y kubelet-1.20.4

```
Running transaction
  Updating   : kubelet-1.20.4-0.x86_64
  Cleanup    : kubelet-1.20.2-0.x86_64
  Verifying  : kubelet-1.20.4-0.x86_64
  Verifying  : kubelet-1.20.2-0.x86_64

Updated:
  kubelet.x86_64 0:1.20.4-0

Complete!
[root@m-k8s ~]#
```

설치 완료 후 재시작필요

systemctl restart kubelet

systemctl daemon-reload

```
[root@m-k8s ~]# systemctl daemon-reload
[root@m-k8s ~]# systemctl daemon-reload^C
[root@m-k8s ~]# k get nodes
NAME     STATUS   ROLES                  AGE   VERSION
m-k8s    Ready    control-plane,master   18d   v1.20.4
w1-k8s   Ready    <none>                 18d   v1.20.2
w2-k8s   Ready    <none>                 18d   v1.20.2
w3-k8s   Ready    <none>                 18d   v1.20.2
[root@m-k8s ~]#
```

그리고 각 워커노드에서 kubelet 업그레이드 수행

```
[root@m-k8s ~]# k get nodes
NAME     STATUS   ROLES                  AGE   VERSION
m-k8s    Ready    control-plane,master   18d   v1.20.4
w1-k8s   Ready    <none>                 18d   v1.20.4
w2-k8s   Ready    <none>                 18d   v1.20.4
w3-k8s   Ready    <none>                 18d   v1.20.4
[root@m-k8s ~]#
```

- 완료

6.3.오브젝트 예약 단축어

오브젝트 예약 단축어

명령어 -> 단축어
pod or pods -> po
deployment or deployments -> deploy

	이름	축약어	오브젝트 이름
자주 사용되는 명령어	nodes	**no**	Node
	namespaces	**ns**	Namespace
	deployments	**deploy**	Deployment
	pods	**po**	Pod
	services	**svc**	Service

```
[root@m-k8s ~]# k get deployment
NAME          READY   UP-TO-DATE   AVAILABLE   AGE
dpy-chk-log   3/3     3            3           34m
[root@m-k8s ~]# k get deployments
NAME          READY   UP-TO-DATE   AVAILABLE   AGE
dpy-chk-log   3/3     3            3           35m
[root@m-k8s ~]# k get deploy
NAME          READY   UP-TO-DATE   AVAILABLE   AGE
dpy-chk-log   3/3     3            3           35m
```

```
[root@m-k8s ~]# k get nodes
NAME     STATUS   ROLES                  AGE   VERSION
m-k8s    Ready    control-plane,master   18d   v1.20.4
w1-k8s   Ready    <none>                 18d   v1.20.4
w2-k8s   Ready    <none>                 18d   v1.20.4
w3-k8s   Ready    <none>                 18d   v1.20.4
[root@m-k8s ~]# k get no
NAME     STATUS   ROLES                  AGE   VERSION
m-k8s    Ready    control-plane,master   18d   v1.20.4
w1-k8s   Ready    <none>                 18d   v1.20.4
w2-k8s   Ready    <none>                 18d   v1.20.4
w3-k8s   Ready    <none>                 18d   v1.20.4
[root@m-k8s ~]#
```