1 Kubernetes Yaml Templates

CLOUD

Updated: January 13, 2020

- PDF Link: kubernetes-yaml-templates.pdf, Category: Cloud
- $\bullet \ \operatorname{Blog} \ \operatorname{URL:} \ \mathtt{https://cheatsheet.dennyzhang.com/kubernetes-yaml-templates}$
- \bullet Related posts: Kubectl CheatSheet, Kubernetes Yaml, $\# denny\mbox{-cheatsheets}$

File me Issues or star this repo.

1.1 Pod

Yaml	Summary
pod/pod-dummy.yaml	Start a dummy pod with a dead sleep loop
$\operatorname{pod/pod-nginx.yaml}$	Start a pod of sample app(nginx)
$\operatorname{pod/pod-init}$ container-sysctl. yaml	Use initContainer to run sysctl, when starting a Pod
$\operatorname{pod/pod-healthcheck-nginx.yaml}$	Start pod with tcp and http healthcheck
$\operatorname{pod/pod-secrets.yaml}$	Pod use secrets as either volumes or environment variables
$\operatorname{pod/pod-gitclone.yaml}$	Pod: use initContainer as sidecar to web host a git repo
$\operatorname{pod/pod-hostaliases.yaml}$	Pod: add alias to /etc/hosts
$\operatorname{pod/pod-serviceaccount.yaml}$	Start pod with serviceaccount, instead of default serviceaccount
$\operatorname{pod/pod-handlers.yaml}$	Pod's events whenever it get started or stoppped
Reference	Link: kubectl cheatsheet

1.2 Volume

Yaml	Summary
volume/volume-manual-pv.yaml	Create pv first, then pvc
${\rm volume/volume\text{-}mount\text{-}localpath.yaml}$	Mount a local folder to pods
volume/volume-emptydir.yaml	Create a empty folder, then mount to pods
volume/volume-ebs.yaml	Mount EBS volume to pod running in amazon instance with the same AZ
${ m volume/volume-nfs.yaml}$	Create nfs pv
volume/volume-gcePersistentDisk.yaml	Mount GCE disk to pod running in amazon instance with the same AZ
${ m volume/volume-digital ocean.yaml}$	Create DigitalOcean volume for your kubernetes cluster in DigitalOcean
Reference	Link: kubectl cheatsheet, Link: volumes examples

1.3 Service

Yaml	Summary
service/service-loadbalancer.yaml	Service: loadbalancer
m service/service-nodeport.yaml	Service: nodeport
m service/service-ingress.yaml	Service: ingress
service/service-clusterip-nginx.yaml	Service: nginx with clusterip
service/service-cassandra.yaml	Service: cassandra
Reference	Link: kubectl cheatsheet

1.4 Configmap/Envs

Yaml	Summary
config/pod-configmap.yaml	Create configmap from file, then use it as a pod volume
$\operatorname{config/pod-environment-var.yaml}$	Start a pod passing environment variables
$\operatorname{config/pod-env-metada.yaml}$	Expose metadata to pods
${ m config/configmap-plaintext.yaml}$	Define configmap with plain text

1.5 Security - RBAC

Yaml	Summary
rbac/serviceaccount-default.yaml	Serviceaccount: basic usage
${ m rbac/rbac ext{-}default.yaml}$	Serviceaccount: concret example
Reference	Link: kubectl cheatsheet

1.6 Security - PodSecurityPolicy

Yaml	Summary
podsecurity/securitycontext-user.yaml	Configure userid, at both pod and container levels
podsecurity/podsecurity-privileged.yaml	Create pod security with privileged access
podsecurity/podsecurity-restricted.yaml	Create pod security with restricted access, then apply it later
podsecurity/podsecurity-enforce.yaml	Enforce policy security by defining role and cluster role
podsecurity/podsecurity-advanced.yaml	A more complicated definition of pod security policy
podsecurity/podsecurity-example.yaml	A full example with everything included
Links	Link: kubectl cheatsheet

1.7 Security - NetworkPolicy

Yaml	Summary
networksecurity/networksecurity-denyall-ingress.yaml	Allow all ingress
network security/network security-allowall-ingress.yaml	Deny all ingress
${\rm network security/network security-denyall.yaml}$	Deny all ingress and egress
${\rm network security/network security-pod.yaml}$	Whitelist traffic control
network security/network security-complicated. yaml	A comprehensive network policy example
${\rm network security/network security-port.yaml}$	Allow TCP 443 from one namespace
networksecurity/networksecurity-deny-othernamespaces.yaml	Deny all ingress traffic from other namespaces
networksecurity/networksecurity-denyegress-exceptdns.yaml	Deny all egress traffic except DNS
Reference	Link: kubectl cheatsheet, GitHub: kubernetes-network-policy-rec
	networksecurity/networksecurity-denyall-ingress.yaml networksecurity/networksecurity-allowall-ingress.yaml networksecurity/networksecurity-denyall.yaml networksecurity/networksecurity-pod.yaml networksecurity/networksecurity-complicated.yaml networksecurity/networksecurity-port.yaml networksecurity/networksecurity-deny-othernamespaces.yaml networksecurity/networksecurity-denyegress-exceptdns.yaml

1.8 Quota & Limits

Yaml	Summary
$\overline{ ext{quota/limitrange-pvc-size.yaml}}$	LimitRange: PVC size
${ m quota/limit range-pvc-cumulative-size.yaml}$	ResourceQuota: pvc count and storage size
quota/limitrange-mem-size.yaml	LimitRange: Pod ram usage. Then apply it to namespace
Reference	Link: kubectl cheatsheet

1.9 Deployment

Summary
Deploy nginx with 2 replicas
Deploy mysql
Link: kubectl cheatsheet

1.10 Statefulset

Yaml	Summary
statefulset/statefulset-nginx.yaml	Statefulset: nginx
statefulset/statefulset-single-mysql	Statefulset: mysql
statefulset/statefulset-replicated-cass and ra.yaml	Statefulset: single cassandra
statefulset/statefulset-replicated-mysql	Statefulset: cassandra with replicas
Reference	Link: kubectl cheatsheet

1.11 Jobs & CronJob

Yaml	Summary
job/job-affinity.yaml	Deploy a job with node affinity

1.12 HorizontalPodAutoscaler

Yaml	Summary
hpa/hpa-nginx.vaml	Deploy a horizontal pod autoscaler for nginx deployment

Updated: January 13, 2020

1.13 Adhoc

Yaml	Summary
namespace/ns-dummy.yaml	Create a dummy namespace

1.14 Related Tools

Name	Summary
GitHub: kubernetes-sigs/kustomize	Customization of kubernetes YAML configurations

1.15 More Resources

License: Code is licensed under MIT License.

Updated: January 13, 2020