

# Kubernetes Yaml Templates

CLOUD

- PDF Link: [kubernetes-yaml-templates.pdf](#), Category: Cloud
- Blog URL: <https://cheatsheet.dennyzhang.com/kubernetes-yaml-templates>
- Related posts: [Kubectl CheatSheet](#), [Kubernetes Yaml](#), [#denny-cheatsheets](#)

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## 1.1 Pod

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

## 1.2 Volume

| Yaml                                 | Summary   |
|--------------------------------------|---|
| volume/volume-manual-pv.yaml         | Create pv first, then pvc   |
| volume/volume-mount-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               |
| volume/volume-nfs.yaml               | Create nfs pv   |
| volume/volume-gcePersistentDisk.yaml | Mount GCE disk to pod running in amazon instance with the same AZ                 |
| volume/volume-digitalocean.yaml      | Create DigitalOcean volume for your kubernetes cluster in DigitalOcean            |
| Reference                            | Link: <a href="#">kubectl cheatsheet</a> , Link: <a href="#">volumes examples</a> |

## 1.3 Service

| Yaml                                 | Summary                                  |
|--------------------------------------|--|
| service/service-loadbalancer.yaml    | Service: loadbalancer                    |
| service/service-nodeport.yaml        | Service: nodeport                        |
| service/service-ingress.yaml         | Service: ingress                         |
| service/service-clusterip-nginx.yaml | Service: nginx with clusterip            |
| service/service-cassandra.yaml       | Service: cassandra                       |
| Reference                            | Link: <a href="#">kubectl cheatsheet</a> |

## 1.4 Configmap/Envs

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

## 1.5 Security - RBAC

| Yaml                             | Summary                                  |
|----------------------------------|--|
| rbac/serviceaccount-default.yaml | Serviceaccount: basic usage              |
| rbac/rbac-default.yaml           | Serviceaccount: concret example          |
| Reference                        | Link: <a href="#">kubectl cheatsheet</a> |

## 1.6 Security - PodSecurityPolicy

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

## 1.7 Security - NetworkPolicy

| Yaml  | Summary   |
|---|---|
| <a href="#">networksecurity/networksecurity-denyall-ingress.yaml</a>      | Allow all ingress   |
| <a href="#">networksecurity/networksecurity-allowall-ingress.yaml</a>     | Deny all ingress  |
| <a href="#">networksecurity/networksecurity-denyall.yaml</a>              | Deny all ingress and egress   |
| <a href="#">networksecurity/networksecurity-pod.yaml</a>                  | Whitelist traffic control   |
| <a href="#">networksecurity/networksecurity-complicated.yaml</a>          | A comprehensive network policy example  |
| <a href="#">networksecurity/networksecurity-port.yaml</a>                 | Allow TCP 443 from one namespace  |
| <a href="#">networksecurity/networksecurity-deny-othernamespaces.yaml</a> | Deny all ingress traffic from other namespaces  |
| <a href="#">networksecurity/networksecurity-denyegress-exceptdns.yaml</a> | Deny all egress traffic except DNS  |
| <a href="#">Reference</a>   | Link: <a href="#">kubectrl cheatsheet</a> , GitHub: <a href="#">kubernetes-network-policy-recipes</a> |

## 1.8 Quota & Limits

| Yaml  | Summary   |
|---|---|
| <a href="#">quota/limitrange-pvc-size.yaml</a>            | LimitRange: PVC size                                  |
| <a href="#">quota/limitrange-pvc-cumulative-size.yaml</a> | ResourceQuota: pvc count and storage size             |
| <a href="#">quota/limitrange-mem-size.yaml</a>            | LimitRange: Pod ram usage. Then apply it to namespace |
| <a href="#">Reference</a>                                 | Link: <a href="#">kubectrl cheatsheet</a>             |

## 1.9 Deployment

| Yaml   | Summary                                   |
|--|---|
| <a href="#">deployment/deployment-nginx.yaml</a> | Deploy nginx with 2 replicas              |
| <a href="#">deployment/deployment-mysql.yaml</a> | Deploy mysql                              |
| <a href="#">Reference</a>                        | Link: <a href="#">kubectrl cheatsheet</a> |

## 1.10 Statefulset

| Yaml  | Summary                                   |
|---|---|
| <a href="#">statefulset/statefulset-nginx.yaml</a>                | Statefulset: nginx                        |
| <a href="#">statefulset/statefulset-single-mysql</a>              | Statefulset: mysql                        |
| <a href="#">statefulset/statefulset-replicated-cassandra.yaml</a> | Statefulset: single cassandra             |
| <a href="#">statefulset/statefulset-replicated-mysql</a>          | Statefulset: cassandra with replicas      |
| <a href="#">Reference</a>   | Link: <a href="#">kubectrl cheatsheet</a> |

## 1.11 Jobs & CronJob

| Yaml                                  | Summary                         |
|---------------------------------------|---------------------------------|
| <a href="#">job/job-affinity.yaml</a> | Deploy a job with node affinity |

## 1.12 HorizontalPodAutoscaler

| Yaml                               | Summary   |
|------------------------------------|---|
| <a href="#">hpa/hpa-nginx.yaml</a> | Deploy a horizontal pod autoscaler for nginx deployment |

### 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

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