
DevOps Shack

Kubernetes Cheat Sheet

♦ Cluster & Node Management

1. `kubectl cluster-info` – Get cluster info.
2. `kubectl get nodes` – List all nodes.
3. `kubectl describe node <node-name>` – Get node details.
4. `kubectl cordon <node-name>` – Mark a node as unschedulable.
5. `kubectl uncordon <node-name>` – Mark a node as schedulable.
6. `kubectl drain <node-name> --ignore-daemonsets` – Evict all pods from a node.
7. `kubectl taint nodes <node-name> key=value:NoSchedule` – Taint a node.
8. `kubectl label nodes <node-name> key=value` – Add a label to a node.
9. `kubectl get nodes --show-labels` – Display node labels.

10. `kubectl delete node <node-name>` – Delete a node from the cluster.

♦ Pod Management

11. `kubectl get pods` – List all pods in the current namespace.

12. `kubectl get pods -A` – List all pods in all namespaces.

13. `kubectl get pods -o wide` – List pods with node details.

14. `kubectl describe pod <pod-name>` – Get pod details.

15. `kubectl logs <pod-name>` – View logs of a pod.

16. `kubectl logs <pod-name> -c <container-name>` – View logs of a specific container.

17. `kubectl exec -it <pod-name> -- /bin/sh` – Access a running pod's shell.

18. `kubectl delete pod <pod-name>` – Delete a pod.

19. `kubectl delete pod --force --grace-period=0 <pod-name>` – Force delete a pod.



20. `kubectl get pod <pod-name> -o yaml` – Get pod YAML configuration.

♦ Deployment Management

21. `kubectl get deployments` – List all deployments.

22. `kubectl describe deployment <deployment-name>` – Get deployment details.

23. `kubectl apply -f <deployment.yaml>` – Deploy resources from a YAML file.

24. `kubectl create deployment <name> --image=<image>` – Create a simple deployment.

25. `kubectl delete deployment <deployment-name>` – Delete a deployment.

26. `kubectl rollout status deployment <deployment-name>` – Check deployment rollout status.

27. `kubectl rollout history deployment <deployment-name>` – View deployment history.

28. `kubectl rollout undo deployment <deployment-name>` – Rollback to a previous version.

29. `kubectl get rs` – Get all ReplicaSets.

30. `kubectl scale deployment <deployment-name> --replicas=3` - Scale a deployment.

♦ Services & Networking

31. `kubectl get svc` - List all services.

32. `kubectl get svc -A` - List all services in all namespaces.

33. `kubectl describe svc <service-name>` - Get service details.

34. `kubectl delete svc <service-name>` - Delete a service.

35. `kubectl expose deployment <deployment-name> --type=NodePort --port=80` - Expose a deployment as a service.

36. `kubectl get endpoints` - List all service endpoints.

37. `kubectl port-forward pod/<pod-name> 8080:80` - Forward local port to a pod.

38. `kubectl proxy` - Start a proxy to access the API server.

- ◆ Ingress & Load Balancer

39. `kubectl get ingress` - List all ingress resources.

40. `kubectl describe ingress <ingress-name>` - Get ingress details.

41. `kubectl delete ingress <ingress-name>` - Delete an ingress resource.

42. `kubectl apply -f ingress.yaml` - Deploy an ingress rule.

43. `kubectl get ingress -o jsonpath='{.items[*].status.loadBalancer.ingress[*].ip}'` - Get Ingress external IP.

- ◆ ConfigMaps & Secrets

44. `kubectl get configmaps` - List all ConfigMaps.

45. `kubectl describe configmap <configmap-name>` - Get ConfigMap details.

46. `kubectl create configmap <config-name> --from-literal=key=value` - Create a ConfigMap.

47. `kubectl delete configmap <configmap-name>` - Delete a ConfigMap.

48. `kubectl get secrets` – List all secrets.

49. `kubectl describe secret <secret-name>` – Get secret details.

50. `kubectl create secret generic <secret-name> --from-literal=key=value` – Create a secret.

♦ Namespace Management

51. `kubectl get namespaces` – List all namespaces.

52. `kubectl create namespace <namespace>` – Create a new namespace.

53. `kubectl delete namespace <namespace>` – Delete a namespace.

54. `kubectl get pods -n <namespace>` – List pods in a specific namespace.

♦ Persistent Storage

55. `kubectl get pv` – List all Persistent Volumes.

56. `kubectl get pvc` – List all Persistent Volume Claims.

57. `kubectl describe pv <pv-name>` – Get PV details.



58. `kubectl describe pvc <pvc-name>` – Get PVC details.

♦ StatefulSets & DaemonSets

59. `kubectl get statefulsets` – List all StatefulSets.

60. `kubectl describe statefulset <statefulset-name>` – Get StatefulSet details.

61. `kubectl get daemonsets` – List all DaemonSets.

62. `kubectl describe daemonset <daemonset-name>` – Get DaemonSet details.

♦ Events & Debugging

63. `kubectl get events` – List all events.

64. `kubectl get events --sort-by=.metadata.creationTimestamp` – Sort events by time.

65. `kubectl debug pod/<pod-name> --image=busybox` – Debug a running pod.

♦ RBAC & Security

66. `kubectl get roles` – List all roles.

67. `kubectl get rolebindings` – List all role bindings.

68. `kubectl describe role <role-name>` – Get role details.

69. `kubectl get clusterroles` – List all cluster roles.

70. `kubectl get clusterrolebindings` – List all cluster role bindings.

♦ Resource Management

71. `kubectl top nodes` – View CPU & memory usage of nodes.

72. `kubectl top pods` – View CPU & memory usage of pods.

73. `kubectl edit deployment <deployment-name>` – Edit a live deployment.

74. `kubectl config view` – View Kubeconfig settings.

75. `kubectl config get-contexts` – List available Kubernetes contexts.

76. `kubectl config use-context <context-name>` – Switch to a different context.

- ♦ Helm

77. `helm list` - List all Helm releases.

78. `helm install <name> <chart>` - Install a Helm chart.

79. `helm upgrade <name> <chart>` - Upgrade a Helm release.

80. `helm rollback <name> <revision>` - Rollback a Helm release.

- ♦ Jobs & CronJobs

81. `kubectl get jobs` - List all jobs.

82. `kubectl describe job <job-name>` - Get job details.

83. `kubectl delete job <job-name>` - Delete a job.

84. `kubectl get cronjobs` - List all cron jobs.

85. `kubectl delete cronjob <cronjob-name>` - Delete a cron job.

- ♦ Miscellaneous

86. `kubectl explain pod` - Get documentation for pod resources.

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87. `kubectl run --rm -it busybox -- /bin/sh` – Run a temporary pod.
 88. `kubectl apply --dry-run=client -f <file>.yaml` – Test YAML before applying.
 89. `kubectl delete all --all` – Delete all resources in the namespace.
 90. `kubectl delete pod,svc --all` – Delete all pods and services.
 91. `kubectl delete jobs --all` – Delete all jobs.
 92. `kubectl get componentstatus` – Check component health.
 93. `kubectl get csr` – View certificate signing requests.
 94. `kubectl drain <node> --delete-emptydir-data` – Drain a node with emptyDir cleanup.
 95. `kubectl label pod <pod-name> env=prod` – Add a label to a pod.
 96. `kubectl get pod --selector=env=prod` – Get pods by label.

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97. `kubectl annotate pod <pod-name> description="Test pod"` – Add an annotation.
 98. `kubectl patch deployment <deployment-name> -p '{"spec":{"replicas":5}}'` – Patch a resource.
 99. `kubectl delete pod --field-selector=status.phase=Failed` – Delete failed pods.
 100. `kubectl api-resources` – List all API resources.
 101. `kubectl get nodes --selector=env=prod` – Get nodes with a specific label.
 102. `kubectl label node <node-name> node-role.kubernetes.io/worker=` – Assign a node role.
 103. `kubectl drain <node-name> --delete-local-data --force --ignore-daemonsets` – Forcefully drain a node.
 104. `kubectl get nodes -o custom-columns=NAME:.metadata.name,STATUS:.status.conditions[3].type` – Custom format output.
 105. `kubectl top nodes --use-protocol-buffers` – Display node resource usage efficiently.

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106. `kubectl config set-context --current --namespace=<namespace>` – Set default namespace for the current context.
 107. `kubectl get pods --field-selector=status.phase=Running` – Get only running pods.
 108. `kubectl get pods -l app=myapp` – List pods with a specific label.
 109. `kubectl delete pods -l app=myapp` – Delete pods using a label selector.
 110. `kubectl logs --previous <pod-name>` – View logs from a previous container instance.
 111. `kubectl exec <pod-name> -c <container-name> -- ls /app` – Execute a command in a specific container.
 112. `kubectl run debug --image=busybox --restart=Never --rm -it -- /bin/sh` – Run a debug container.
 113. `kubectl cp <pod-name>:<file-path> <destination>` – Copy a file from a pod.
 114. `kubectl cp <source-file> <pod-name>:<destination-path>` – Copy a file to a pod.

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115. **kubectl get pods**
--sort-by=.metadata.creationTimestamp – Sort pods by creation time.
 116. **kubectl delete pod <pod-name> --grace-period=0**
--force – Force delete a pod immediately.
 117. **kubectl get pod <pod-name> -o**
jsonpath='{.status.podIP}' – Get the IP address of a pod.
 118. **kubectl get pods -o jsonpath='{range**
.items[*]}{.metadata.name}{"\n"}{end}' – List only pod names.
 119. **kubectl set image deployment/<deployment-name>**
<container-name>=nginx:latest – Update deployment image.
 120. **kubectl rollout restart deployment**
<deployment-name> – Restart all pods in a deployment.
 121. **kubectl get deployments --show-labels** – Show labels of deployments.
 122. **kubectl delete deployment --all** – Delete all deployments.

123. `kubectl patch deployment <deployment-name> -p '{"spec":{"template":{"spec":{"containers":[{"name":"<container-name>","image":"nginx:latest"}]}}}}'` - Update container image in a deployment.

124. `kubectl scale --replicas=0 deployment/<deployment-name>` - Scale a deployment to zero.

125. `kubectl get deployment -o=jsonpath='{.items[*].metadata.name}'` - Get deployment names only.

126. `kubectl get services -o=jsonpath='{range .items[*]}{.metadata.name}{"\n"}{end}'` - List service names.

127. `kubectl delete service --all` - Delete all services.

128. `kubectl patch svc <service-name> -p '{"spec":{"type": "LoadBalancer"}}'` - Change a service type.

129. `kubectl get svc <service-name> -o jsonpath='{.status.loadBalancer.ingress[0].ip}'` - Get LoadBalancer IP.

130. `kubectl get svc <service-name> -o yaml | grep nodePort` - Get the NodePort of a service.



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131. `kubectl get configmap <configmap-name> -o yaml` - View ConfigMap in YAML format.
 132. `kubectl get secret <secret-name> -o jsonpath='{.data.<key>}' | base64 --decode` - Decode secret value.
 133. `kubectl edit configmap <configmap-name>` - Edit an existing ConfigMap.
 134. `kubectl delete namespace <namespace> --grace-period=0 --force` - Force delete a namespace.
 135. `kubectl get namespace -o=jsonpath='{.items[*].metadata.name}'` - Get namespace names only.
 136. `kubectl get pv -o wide` - View PV details.
 137. `kubectl get pvc -o jsonpath='{.items[*].metadata.name}'` - List PVC names only.
 138. `kubectl create job <job-name> --image=busybox -- /bin/sh -c "echo Hello"` - Create a simple job.
 139. `kubectl delete job --all` - Delete all jobs.

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140. `kubectl create cronjob <cronjob-name>`
`--schedule="*/5 * * * *` `--image=busybox -- /bin/sh`
`-c "date"` - Create a CronJob.
141. `kubectl get ingress`
`-o=jsonpath='{.items[*].metadata.name}'` - Get
ingress names only.
142. `kubectl get events --sort-by='.lastTimestamp'` -
Get events sorted by timestamp.
143. `kubectl debug node/<node-name> --image=busybox` -
Debug a node with a new pod.
144. `kubectl debug pod/<pod-name> --image=busybox` -
Debug a pod interactively.
145. `kubectl auth can-i create deployments` - Check if
you can create deployments.
146. `kubectl auth can-i delete pods --as=<user>` -
Check permission for a specific user.
147. `kubectl create rolebinding <binding-name>`
`--role=<role-name> --user=<username>` - Bind a user
to a role.
148. `helm uninstall <release-name>` - Uninstall a Helm
release.

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149. `helm repo update` – Update Helm repositories.
 150. `kubectl explain pod.spec` – Explain pod spec structure.
 151. `kubectl run nginx --image=nginx --restart=Never --dry-run=client -o yaml` – Generate pod YAML.
 152. `kubectl get apiservices` – List all API services.
 153. `kubectl describe apiservices` – Get details of API services.
 154. `kubectl delete csr <csr-name>` – Delete a CertificateSigningRequest.
 155. `kubectl get nodes -o jsonpath='{range .items[*]}{.metadata.name}{"\n"}{end}'` – List only node names.
 156. `kubectl rollout restart daemonset <daemonset-name>` – Restart a DaemonSet.
 157. `kubectl get cronjobs --no-headers | awk '{print $1}' | xargs kubectl delete cronjob` – Delete all CronJobs.
 158. `kubectl get nodes -o jsonpath='{.items[*].status.nodeInfo.kubeletVersion`

} ' - Get Kubelet version of nodes.

159. `kubectl get nodes -o yaml | grep capacity` - Check node capacity.

160. `kubectl describe node <node-name> | grep Taint` - Get node taints.

161. `kubectl label node <node-name> disktype=ssd` - Label a node.

162. `kubectl get nodes -l disktype=ssd` - Get nodes with a specific label.

163. `kubectl drain <node-name> --ignore-daemonsets --delete-emptydir-data` - Drain a node and delete emptyDir volumes.

164. `kubectl get nodes --no-headers | awk '{print $1}' | xargs kubectl delete node` - Delete all nodes.

165. `kubectl get pods --no-headers | awk '{print $1}' | xargs kubectl delete pod` - Delete all pods.

166. `kubectl delete pod -n <namespace> --field-selector=status.phase=Failed` - Delete all failed pods.

167. `kubectl get pod <pod-name> -o`



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jsonpath='{.status.conditions}' - Get pod  
conditions.
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168. kubectl get pod <pod-name> -o  
    jsonpath='{.spec.containers[*].image}' - Get  
    container images inside a pod.
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169. kubectl patch pod <pod-name> -p  
    '{"spec":{"containers":[{"name":"<container-name>",  
    "image":"nginx:latest"}]}}' - Patch container  
    image.
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170. kubectl set resources deployment  
    <deployment-name> --limits=cpu=200m,memory=512Mi  
    --requests=cpu=100m,memory=256Mi - Set resource  
    requests/limits for a deployment.
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171. kubectl patch deployment <deployment-name> -p  
    '{"spec":{"template":{"metadata":{"labels":{"versio  
n":"v2"}}}}}}' - Patch deployment label.
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172. kubectl rollout pause deployment  
    <deployment-name> - Pause a deployment rollout.
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173. kubectl rollout resume deployment  
    <deployment-name> - Resume a paused deployment  
    rollout.
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174. kubectl annotate deployment <deployment-name>  
    kubernetes.io/change-cause="Updated image to v2" -  
    Annotate a deployment.
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175. `kubectl patch service <service-name> -p`
`'{"spec":{"ports":[{"port":8080,"targetPort":80}]}}'`
- Change service port mapping.
176. `kubectl port-forward deployment/<deployment-name>`
`8080:80` - Forward a port to a deployment.
177. `kubectl get svc`
`--sort-by=.metadata.creationTimestamp` - Get services sorted by creation date.
178. `kubectl get ingress -o jsonpath='{range .items[*]}{.spec.rules[*].host}'` - List all ingress hosts.
179. `kubectl edit ingress <ingress-name>` - Edit an existing ingress rule.
180. `kubectl delete ingress --all` - Delete all ingress rules.
181. `kubectl get secret <secret-name> -o`
`go-template='{{index .data "password"}}' | base64`
`--decode` - Decode a secret value.
182. `kubectl set env deployment/<deployment-name>`
`CONFIG_VAR=value` - Update an environment variable in a deployment.

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183. `kubectl create configmap my-config --from-env-file=config.env` – Create a ConfigMap from a file.
184. `kubectl get configmaps -o=jsonpath='{.items[*].metadata.name}'` – Get ConfigMap names only.
185. `kubectl patch namespace <namespace> -p '{"metadata":{"finalizers":null}}'` – Force delete a stuck namespace.
186. `kubectl get namespace -o jsonpath='{.items[*].status.phase}'` – Get the status of namespaces.
187. `kubectl patch pvc <pvc-name> -p '{"spec":{"resources":{"requests":{"storage":"10Gi"}}}}'` – Resize a PVC.
188. `kubectl get pvc -o jsonpath='{.items[*].spec.resources.requests.storage}'` – Get PVC storage size.
189. `kubectl delete cronjob --all` – Delete all CronJobs.
190. `kubectl get jobs --field-selector=status.successful=1` – List

successful jobs.

191. **kubectl create serviceaccount my-sa** – Create a service account.

192. **kubectl get serviceaccount my-sa -o yaml** – Get service account details.

193. **kubectl create rolebinding my-rolebinding --role=my-role --serviceaccount=default:my-sa --namespace=default** – Bind a service account to a role.

194. **kubectl get rolebindings -o jsonpath='{.items[*].subjects}'** – Get subjects of all role bindings.

195. **helm search repo nginx** – Search for an nginx Helm chart.

196. **helm show values stable/nginx-ingress** – Show values of an nginx Helm chart.

197. **helm template <name> <chart>** – Render a Helm template without installing.

198. **helm get manifest <release-name>** – Get Helm release manifest.

199. `kubectl debug node/<node-name> -it`
`--image=busybox -- sh` – Debug a node interactively.

200. `kubectl debug pod/<pod-name> -it --image=busybox`
`-- sh` – Attach a debug container to a running pod.