
DevOps Shack

Top 200 Most Asked Kubernetes Commands for MAANG/FAANG DevOps & SRE Interviews

Basic Kubernetes Commands

1. **kubectl version** – Check the client and server versions of Kubernetes.
2. **kubectl cluster-info** – Display the cluster information.
3. **kubectl get nodes** – List all nodes in the cluster.
4. **kubectl describe node <node-name>** – Get detailed information about a specific node.
5. **kubectl get pods** – List all pods in the current namespace.
6. **kubectl get pods -A** – List all pods across all namespaces.
7. **kubectl describe pod <pod-name>** – Show detailed information about a specific pod.
8. **kubectl get namespaces** – List all available namespaces.

9. `kubectl create namespace <namespace-name>` – Create a new namespace.

10. `kubectl delete namespace <namespace-name>` – Delete a namespace.

Working with Deployments

11. `kubectl create deployment <deployment-name> --image=<image-name>` – Create a new deployment.

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

13. `kubectl describe deployment <deployment-name>` – Get details about a deployment.

14. `kubectl scale deployment <deployment-name> --replicas=<number>` – Scale a deployment.

15. `kubectl rollout status deployment <deployment-name>` – Check the rollout status of a deployment.

16. `kubectl rollout undo deployment <deployment-name>` – Rollback to the previous deployment.

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

Managing Pods



-
18. `kubectl run <pod-name> --image=<image-name>` – Create a pod.
 19. `kubectl delete pod <pod-name>` – Delete a pod.
 20. `kubectl logs <pod-name>` – View logs of a pod.
 21. `kubectl logs -f <pod-name>` – Stream the logs of a running pod.
 22. `kubectl exec -it <pod-name> -- /bin/sh` – Access a running pod interactively.
 23. `kubectl get pod <pod-name> -o yaml` – Get the YAML definition of a pod.
 24. `kubectl get pod <pod-name> -o json` – Get the JSON definition of a pod.
 25. `kubectl port-forward <pod-name> <local-port>:<pod-port>` – Forward a local port to a pod.
 26. `kubectl cp <pod-name>:<path-in-pod> <local-path>` – Copy files from a pod.
 27. `kubectl taint nodes <node-name> <key>=<value>:NoSchedule` – Taint a node to prevent scheduling.

Working with Services

- 28. `kubectl expose deployment <deployment-name> --type=NodePort --port=<port>` – Expose a deployment as a service.
- 29. `kubectl get services` – List all services.
- 30. `kubectl describe service <service-name>` – Get details about a service.
- 31. `kubectl delete service <service-name>` – Delete a service.
- 32. `kubectl get endpoints` – Show endpoints of services.

ConfigMaps & Secrets

- 33. `kubectl create configmap <configmap-name> --from-literal=KEY=VALUE` – Create a ConfigMap.
- 34. `kubectl get configmaps` – List all ConfigMaps.
- 35. `kubectl describe configmap <configmap-name>` – Get details of a ConfigMap.
- 36. `kubectl delete configmap <configmap-name>` – Delete a ConfigMap.



-
37. `kubectl create secret generic <secret-name> --from-literal=KEY=VALUE` - Create a Secret.
 38. `kubectl get secrets` - List all secrets.
 39. `kubectl describe secret <secret-name>` - Get details of a Secret.
 40. `kubectl delete secret <secret-name>` - Delete a Secret.

Working with StatefulSets

41. `kubectl get statefulsets` - List all StatefulSets.
42. `kubectl describe statefulset <statefulset-name>` - Get details of a StatefulSet.
43. `kubectl delete statefulset <statefulset-name>` - Delete a StatefulSet.

DaemonSets

44. `kubectl get daemonsets` - List all DaemonSets.
45. `kubectl describe daemonset <daemonset-name>` - Get details of a DaemonSet.
46. `kubectl delete daemonset <daemonset-name>` - Delete a DaemonSet.



Jobs & CronJobs

- 47. `kubectl create job <job-name>`
`--image=<image-name>` - Create a job.
- 48. `kubectl get jobs` - List all jobs.
- 49. `kubectl describe job <job-name>` - Get details of a job.
- 50. `kubectl delete job <job-name>` - Delete a job.
- 51. `kubectl create cronjob <cronjob-name>`
`--schedule="* * * * *"` `--image=<image-name>` - Create a CronJob.
- 52. `kubectl get cronjobs` - List all CronJobs.
- 53. `kubectl delete cronjob <cronjob-name>` - Delete a CronJob.

Networking & Ingress

- 54. `kubectl get ingress` - List all Ingress resources.
- 55. `kubectl describe ingress <ingress-name>` - Get details of an Ingress.
- 56. `kubectl delete ingress <ingress-name>` - Delete an Ingress.



Roles & RoleBindings

- 57. `kubectl get roles` - List all roles.
- 58. `kubectl get rolebindings` - List all role bindings.
- 59. `kubectl describe role <role-name>` - Get details of a role.
- 60. `kubectl describe rolebinding <rolebinding-name>` - Get details of a role binding.
- 61. `kubectl delete role <role-name>` - Delete a role.
- 62. `kubectl delete rolebinding <rolebinding-name>` - Delete a role binding.

Persistent Storage

- 63. `kubectl get pv` - List PersistentVolumes.
- 64. `kubectl get pvc` - List PersistentVolumeClaims.
- 65. `kubectl describe pv <pv-name>` - Get details of a PersistentVolume.
- 66. `kubectl describe pvc <pvc-name>` - Get details of a PersistentVolumeClaim.
- 67. `kubectl delete pvc <pvc-name>` - Delete a PersistentVolumeClaim.

Debugging & Troubleshooting

- 68. `kubectl get events` – View cluster events.
- 69. `kubectl top nodes` – Show CPU and memory usage of nodes.
- 70. `kubectl top pods` – Show CPU and memory usage of pods.
- 71. `kubectl get pods`
`--field-selector=status.phase!=Running` – List non-running pods.
- 72. `kubectl get pods`
`--field-selector=status.phase=Pending` – List pending pods.
- 73. `kubectl get pods`
`--sort-by=.metadata.creationTimestamp` – Sort pods by age.

Backup & Restore

- 74. `kubectl get all -o yaml > backup.yaml` – Backup all Kubernetes resources.
- 75. `kubectl apply -f backup.yaml` – Restore from a backup.



Custom Resource Definitions (CRDs)

- 76. `kubectl get crds` – List all Custom Resource Definitions.
- 77. `kubectl describe crd <crd-name>` – Get details of a CRD.
- 78. `kubectl delete crd <crd-name>` – Delete a CRD.

Advanced Commands

- 79. `kubectl edit deployment <deployment-name>` – Edit a deployment live.
- 80. `kubectl apply -f <file.yaml>` – Apply changes from a YAML file.
- 81. `kubectl get pod <pod-name> -o wide` – Get pod details including the node it's running on.
- 82. `kubectl get componentstatuses` – Check the status of cluster components.
- 83. `kubectl auth can-i delete pods` – Check if the current user can delete pods.

Cluster Management

- 84. `kubectl drain <node-name>` – Safely evict pods from a node.



-
85. `kubect1 cordon <node-name>` – Mark a node as unschedulable.
 86. `kubect1 uncordon <node-name>` – Mark a node as schedulable again.
 87. `kubect1 delete node <node-name>` – Remove a node from the cluster.
 88. `kubect1 label nodes <node-name> key=value` – Add labels to a node.

Node Management

89. `kubect1 label nodes <node-name> key=value` – Add a label to a node.
90. `kubect1 label nodes <node-name> key-` – Remove a label from a node.
91. `kubect1 annotate node <node-name> description="This is a test node"` – Add an annotation to a node.
92. `kubect1 drain <node-name> --ignore-daemonsets --delete-local-data` – Drain a node while ignoring daemonsets and local storage.
93. `kubect1 get nodes -o wide` – Get detailed node

information including external IPs.

- 94. `kubectl top nodes --sort-by=cpu` – Sort nodes based on CPU usage.
- 95. `kubectl top nodes --sort-by=memory` – Sort nodes based on memory usage.
- 96. `kubectl debug node/<node-name> -it --image=busybox` – Debug a node by running a container on it.

Pod Debugging & Monitoring

- 97. `kubectl logs <pod-name> --previous` – Fetch logs from the previous container instance (if restarted).
- 98. `kubectl logs -l app=<label>` – Get logs for all pods with a specific label.
- 99. `kubectl exec -it <pod-name> -- env` – Print environment variables inside a pod.
- 100. `kubectl attach -it <pod-name>` – Attach to a running pod interactively.
- 101. `kubectl exec -it <pod-name> -- cat /etc/hosts` – View the `/etc/hosts` file inside a pod.



102. `kubectl get pod <pod-name> -o=jsonpath='{.status.phase}'` – Get the current phase of a pod.

103. `kubectl get pods --show-labels` – Display all labels assigned to pods.

104. `kubectl get pod <pod-name> -o jsonpath='{.metadata.name}'` – Get a pod's name using JSONPath.

105. `kubectl get pod <pod-name> -o go-template='{{.status.podIP}}'` – Get a pod's IP using Go templates.

Resource Quotas & Limits

106. `kubectl get resourcequotas` – List all resource quotas in the namespace.

107. `kubectl describe resourcequota <quota-name>` – Get details of a resource quota.

108. `kubectl get limitranges` – Show limits on CPU and memory per namespace.

109. `kubectl describe limitrange <limit-name>` – Describe the limit range in a namespace.

Service Discovery & DNS



-
110. `kubectl get endpoints` – Get details of service endpoints.
 111. `kubectl exec -it <pod-name> -- nslookup <service-name>` – Check DNS resolution inside a pod.
 112. `kubectl exec -it <pod-name> -- dig <service-name>`
– Use `dig` to check service resolution.
 113. `kubectl exec -it <pod-name> -- curl http://<service-name>:<port>` – Test service connectivity.
 114. `kubectl get svc --sort-by=.metadata.creationTimestamp` – Sort services by creation time.
 115. `kubectl apply -f ingress.yaml` – Apply an Ingress resource from a file.
 116. `kubectl logs <ingress-pod-name> -n kube-system` – Check logs of Ingress controller.
 117. `kubectl get ingress -o wide` – Get additional details of Ingress resources.
 118. `kubectl delete ingress <ingress-name>` – Delete an Ingress rule.

119. **kubectl get networkpolicies** - List all NetworkPolicies.

120. **kubectl describe networkpolicy <policy-name>** - Describe a NetworkPolicy.

121. **kubectl delete networkpolicy <policy-name>** - Delete a NetworkPolicy.

Security & RBAC

122. **kubectl create serviceaccount <sa-name>** - Create a service account.

123. **kubectl get serviceaccounts** - List all service accounts.

124. **kubectl get clusterroles** - List all ClusterRoles.

125. **kubectl get clusterrolebindings** - List all ClusterRoleBindings.

126. **kubectl create role <role-name> --verb=get,list --resource=pods** - Create a Role.

127. **kubectl create clusterrole <role-name> --verb=get,list --resource=pods** - Create a ClusterRole.

128. **kubectl delete clusterrole <role-name>** – Delete a ClusterRole.

129. **kubectl get roles -o wide** – Get detailed role information.

Custom Resource Definitions (CRDs)

130. **kubectl get crds -o wide** – Get detailed CRD information.

131. **kubectl get <custom-resource>** – Get all instances of a CRD.

132. **kubectl delete <custom-resource> <resource-name>** – Delete a custom resource.

133. **kubectl edit crd <crd-name>** – Modify a CRD.

134. **kubectl config view** – View the current Kubeconfig settings.

135. **kubectl config use-context <context-name>** – Switch between Kubernetes contexts.

136. **kubectl config get-contexts** – List all available contexts.

137. **kubectl config delete-context <context-name>** – Delete a Kubernetes context.



-
138. `kubectl get job --field-selector=status.successful=0` – Find failed jobs.
 139. `kubectl get cronjob -o jsonpath='{.items[*].metadata.name}'` – Get the names of all CronJobs.
 140. `kubectl patch cronjob <cronjob-name> -p '{"spec": {"suspend": true}}'` – Suspend a CronJob.
 141. `kubectl events -A --sort-by='.lastTimestamp'` – View the latest cluster events.
 142. `kubectl debug pod/<pod-name> -it --image=busybox` – Debug a pod by running a temporary container.
 143. `kubectl get pods --all-namespaces -o jsonpath='{.items[*].status.containerStatuses[*].restartCount}'` – Check restart counts.
 144. `kubectl get horizontalpodautoscalers` – List all HorizontalPodAutoscalers.
 145. `kubectl describe hpa <hpa-name>` – Get details of a HorizontalPodAutoscaler.
 146. `kubectl delete hpa <hpa-name>` – Delete a HorizontalPodAutoscaler.

147. **kubectl top pods --containers** - Show resource usage for containers.

148. **helm list** - List all Helm releases.

149. **helm install <release-name> <chart-name>** - Install a Helm chart.

150. **helm upgrade <release-name> <chart-name>** - Upgrade a Helm release.

151. **helm rollback <release-name> <revision>** - Roll back to a previous Helm revision.

152. **helm delete <release-name>** - Delete a Helm release.

Scaling & Load Balancing

153. **kubectl get horizontalpodautoscalers** - List HPA resources.

154. **kubectl autoscale deployment <deployment-name> --cpu-percent=50 --min=1 --max=10** - Set up auto-scaling.

155. **kubectl get all --all-namespaces -o yaml > backup.yaml** - Backup all cluster resources.

156. **kubectl apply -f backup.yaml** - Restore Kubernetes resources.

157. `kubectl get componentstatuses` – Check the health of cluster components.

158. `kubectl get csr` – List all certificate signing requests.

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

160. `kubectl api-resources` – List all available API resources.

161. `kubectl api-versions` – List all available API versions.

Kube Proxy & Debugging

162. `kubectl proxy --port=8001` – Start a proxy to access the Kubernetes API server.

163. `kubectl get --raw /apis` – Fetch raw API server data.

164. `kubectl wait --for=condition=available deployment/<deployment-name>` – Wait until a deployment is available.

165. `kubectl wait --for=condition=complete job/<job-name>` – Wait until a job completes.



-
166. `kubectl rollout pause deployment`
`<deployment-name>` - Pause the rollout of a deployment.
167. `kubectl rollout resume deployment`
`<deployment-name>` - Resume a paused deployment.
168. `kubectl rollout history deployment`
`<deployment-name>` - View the rollout history of a deployment.
169. `kubectl set env deployment <deployment-name>`
`VAR_NAME=value` - Update an environment variable in a deployment.
170. `kubectl scale statefulset <statefulset-name>`
`--replicas=<number>` - Scale a StatefulSet.

Patch & Modify Resources

171. `kubectl patch deployment <deployment-name> -p`
`'{"spec": {"replicas": 5}}'` - Patch a deployment to update the replica count.
172. `kubectl patch service <service-name> -p '{"spec": {"type": "LoadBalancer"}}'` - Patch a service to change its type.
173. `kubectl label pod <pod-name>`
`environment=production` - Add a label to a pod.

174. `kubectl annotate pod <pod-name> description="Test Pod"` – Add an annotation to a pod.

175. `kubectl label pod <pod-name> environment-` – Remove a label from a pod.

Cluster Access & Authentication

176. `kubectl auth can-i create pods` – Check if the current user has permission to create pods.

177. `kubectl auth can-i delete deployments --namespace=dev` – Check if the user has permissions in a specific namespace.

178. `kubectl get clusterrolebinding -o wide` – List all ClusterRoleBindings with details.

179. `kubectl get rolebinding -n <namespace>` – List role bindings in a specific namespace.

Namespace Management

180. `kubectl config set-context --current --namespace=<namespace>` – Set the default namespace for the current session.

181. `kubectl get all -n <namespace>` – Get all resources in a specific namespace.

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



namespace and all its resources.

Customizing Output

183. `kubectl get pods -o=jsonpath='{.items[*].metadata.name}'` – Extract pod names using JSONPath.

184. `kubectl get pods -o custom-columns="NAME:.metadata.name,STATUS:.status.phase"` – Customize output columns.

185. `kubectl get pods -o wide --sort-by=.status.startTime` – Sort pods by start time.

Events & Debugging

186. `kubectl get events --sort-by=.metadata.creationTimestamp` – View recent cluster events in order.

187. `kubectl describe pod <pod-name> | grep -i error` – Search for errors in pod descriptions.

188. `kubectl exec -it <pod-name> -- dmesg` – Check kernel logs inside a pod.

189. `kubectl get pv --sort-by=.spec.capacity.storage` – List PersistentVolumes sorted by storage capacity.



-
190. `kubectl get pvc -o=jsonpath='{.items[*].status.phase}'` – Get the status of all PersistentVolumeClaims.
 191. `kubectl get componentstatuses` – Get the status of Kubernetes master components.
 192. `kubectl api-resources --verbs=list -o name` – List all resources that support the `list` verb.
 193. `kubectl api-versions` – Get all supported API versions in the cluster.
 194. `kubectl get endpointslices` – View the endpoint slices for services.
 195. `kubectl port-forward svc/<service-name> 8080:80` – Forward a local port to a service.
 196. `kubectl delete pod --all --namespace=<namespace>` – Delete all pods in a specific namespace.
 197. `kubectl delete all --all` – Delete all resources in the current namespace.
 198. `kubectl replace -f <file.yaml>` – Replace an existing resource with an updated version.
 199. `kubectl apply --dry-run=client -f <file.yaml>` – Validate YAML without applying it.

200. `kubectl convert -f <old.yaml> --output-version=v1`
– Convert Kubernetes resource definitions to a new API version.