

# Top 200 Most Asked Kubernetes Commands

By DevOps Shack

## 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



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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.

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## 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.





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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.



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## 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.



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## 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.





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## 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.



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## 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.



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

## Node Management

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



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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



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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.



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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.
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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.

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