

Kubernetes kubectl Command Reference

Basic Resource Operations

`kubectl get` - Lists one or more resources.

`kubectl describe` - Shows detailed information about a resource.

`kubectl create` - Creates a resource from a file or command input.

`kubectl apply` - Applies a configuration to a resource (create or update).

`kubectl replace` - Replaces a resource with a new definition.

`kubectl delete` - Deletes resources.

Imperative Object Creation

`kubectl run` - Creates a Pod running a specified container image.

`kubectl expose` - Creates a Service for a Pod, Deployment, etc.

Viewing and Monitoring

`kubectl get` - Lists resources (e.g., pods, services).

`kubectl get pods -o wide` - Shows extended info like node and IP.

`kubectl logs` - Shows logs from a container in a Pod.

`kubectl top` - Displays resource usage (CPU/memory).

`kubectl get events` - Lists events in the cluster.

Editing and Updating

`kubectl edit` - Opens the default editor to directly edit a live object.

`kubectl patch` - Updates part of a resource using JSON merge/strategic patch.

`kubectl scale` - Manually scales a Deployment, ReplicaSet, or StatefulSet.

`kubectl rollout` - Manages deployment rollout status, pause/resume, and rollback.

Rollouts & Deployments

`kubectl rollout status` - Shows rollout status of a deployment.

`kubectl rollout history` - Shows previous rollout revisions.

`kubectl rollout undo` - Reverts to the previous revision.

Debugging and Troubleshooting

kubectl logs - Shows container logs.

kubectl exec - Runs a command in a container.

kubectl port-forward - Forwards a local port to a Pod.

kubectl attach - Attaches to a running container.

kubectl cp - Copies files between container and local filesystem.

kubectl debug - Starts a debugging session (e.g., ephemeral container).

Access and Configuration

kubectl config - Modifies kubeconfig files.

kubectl config use-context - Switches between clusters/contexts.

kubectl config get-contexts - Lists available contexts.

kubectl auth can-i - Checks user permissions.

Resource Files and Templates

kubectl apply -f - Applies config from a file/directory.

kubectl delete -f - Deletes resources from a file.

kubectl diff -f - Shows differences between live and config file.

kubectl explain - Shows documentation for resource types and fields.

Cluster Management

kubectl drain - Safely evicts all Pods from a node.

kubectl cordon - Marks a node unschedulable.

kubectl uncordon - Marks a node schedulable again.

kubectl taint - Applies a taint to a node.

Testing and Utilities

kubectl proxy - Creates a proxy to the Kubernetes API server.

kubectl version - Shows client and server version.

kubectl api-resources - Lists all resource types available in the API.

kubectl api-versions - Lists supported API versions.

Useful Flags

-n / --namespace - Specifies namespace.

- o yaml/json - Output format.
- watch - Continuously watch for changes.
- selector - Filter by label.
- all-namespaces - Apply across all namespaces.