GETTING STARTED

This section contains the most basic commands for getting a workload running on your cluster.

- run will start running 1 or more instances of a container image on your cluster.
- expose will load balance traffic across the running instances, and can create a HA proxy for accessing the containers from outside the cluster.

Once your workloads are running, you can use the commands in the WORKING WITH APPS section to inspect them.

create

Create a pod using the data in pod.json.

kubectl create -f ./pod.json

Create a pod based on the JSON passed into stdin.

cat pod.json | kubectl create -f -

Edit the data in docker-registry.yaml in JSON then create the resource using the edited data.

kubectl create -f docker-registry.yaml --edit -o json

Create a resource from a file or from stdin.

JSON and YAML formats are accepted.

Usage

\$ kubectl create -f FILENAME

Name	Shorthand	Default	Usage
allow- missing- template- keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
dry-run		none	Must be "none", "server", or "client". If client strategy, only print the object that would be sent, without sending it. If server strategy, submit server-side request without persisting the resource.
edit		false	Edit the API resource before creating
field- manager		kubectl- create	Name of the manager used to track field ownership.
filename	f	0	Filename, directory, or URL to files to use to create the resource
kustomize	k		Process the kustomization directory. This flag can't be used together with -f or -R.
output	0		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
raw			Raw URI to POST to the server. Uses the transport specified by the kubeconfig file.
record		false	Record current kubectl command in the resource annotation. If set to false, do not record the command. If set to true, record the command. If not set, default to updating the existing annotation value only if one already exists.
recursive	R	false	Process the directory used in -f,filename recursively. Useful when you want to manage related manifests organized within the same directory.
save- config		false	If true, the configuration of current object will be saved in its annotation. Otherwise, the annotation will be unchanged. This flag is useful when you want to perform kubectl apply on this object in the future.
selector	I		Selector (label query) to filter on, supports '=', '==', and '!='.(e.gl key1=value1,key2=value2)

Name	Shorthand	Default	Usage
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].
validate		true	If true, use a schema to validate the input before sending it
windows- line- endings		false	Only relevant ifedit=true. Defaults to the line ending native to your platform.

clusterrole

Create a ClusterRole named "pod-reader" that allows user to perform "get", "watch" and "list" on pods

kubectl create clusterrole pod-reader --verb=get,list,watch --resource=pods

Create a ClusterRole named "pod-reader" with ResourceName specified

kubectl create clusterrole pod-reader --verb=get --resource=pods --resource-name=readablepod --res

Create a ClusterRole named "foo" with API Group specified

kubectl create clusterrole foo --verb=get,list,watch --resource=rs.extensions

Create a ClusterRole named "foo" with SubResource specified

kubectl create clusterrole foo --verb=get,list,watch --resource=pods,pods/status

Create a ClusterRole name "foo" with NonResourceURL specified

kubectl create clusterrole "foo" --verb=get --non-resource-url=/logs/*

Create a ClusterRole name "monitoring" with AggregationRule specified

kubectl **create** clusterrole **monitoring** --aggregation-rule="rbac.example.com/aggregate-to-monitoring

Create a ClusterRole.

Usage

\$ kubectl create clusterrole NAME --verb=verb --resource=resource.group [--resource-name=resourcename] [-dry-run=server|client|none]

Name	Shorthand	Default	Usage
aggregation- rule			An aggregation label selector for combining ClusterRoles.
allow- missing- template- keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
dry-run		none	Must be "none", "server", or "client". If client strategy, only print the object that would be sent, without sending it. If server strategy, submit server-side request without persisting the resource.
field- manager		kubectl- create	Name of the manager used to track field ownership.
non- resource-url			A partial url that user should have access to.
output	0		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
resource		0	Resource that the rule applies to
resource- name			Resource in the white list that the rule applies to, repeat this flag for multiple items

Name	Shorthand	Default	Usage
save-config		false	If true, the configuration of current object will be saved in its annotation. Otherwise, the annotation will be unchanged. This flag is useful when you want to perform kubectl apply on this object in the future.
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].
validate		true	If true, use a schema to validate the input before sending it
verb		0	Verb that applies to the resources contained in the rule

clusterrolebinding

Create a ClusterRoleBinding for user1, user2, and group1 using the cluster-admin ClusterRole

kubectl create clusterrolebinding cluster-admin --clusterrole=cluster-admin --user=user1 --user=us

Create a ClusterRoleBinding for a particular ClusterRole.

Usage

\$ kubectl create clusterrolebinding NAME --clusterrole=NAME [--user=username] [--group=groupname] [-serviceaccount=namespace:serviceaccountname] [--dry-run=server|client|none]

Name	Shorthand	Default	Usage
allow-missing-		true	If true, ignore any errors in templates when a field or map
template-keys			key is missing in the template. Only applies to golang and
			jsonpath output formats.

Name	Shorthand	Default	Usage
clusterrole			ClusterRole this ClusterRoleBinding should reference
dry-run		none	Must be "none", "server", or "client". If client strategy, only print the object that would be sent, without sending it. If server strategy, submit server-side request without persisting the resource.
field-manager		kubectl- create	Name of the manager used to track field ownership.
group		0	Groups to bind to the clusterrole
output	0		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
save-config		false	If true, the configuration of current object will be saved in its annotation. Otherwise, the annotation will be unchanged. This flag is useful when you want to perform kubectl apply on this object in the future.
serviceaccount		0	Service accounts to bind to the clusterrole, in the format <namespace>:<name></name></namespace>
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].
validate		true	If true, use a schema to validate the input before sending it

configmap

Create a new configmap named my-config based on folder bar

kubectl create configmap my-config --from-file=path/to/bar

Create a new configmap named my-config with specified keys instead of file basenames on disk

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kubectl create configmap my-config --**from**-**file**=key1=/path/to/bar/file1.txt --**from**-**file**=key2=/path/

Create a new configmap named my-config with key1=config1 and key2=config2

kubectl create configmap my-config --from-literal=key1=config1 --from-literal=key2=config2

Create a new configmap named my-config from the key=value pairs in the file

kubectl create configmap my-config --from-file=path/to/bar

Create a new configmap named my-config from an env file

kubectl create configmap my-config --from-env-file=path/to/bar.env

Create a configmap based on a file, directory, or specified literal value.

A single configmap may package one or more key/value pairs.

When creating a configmap based on a file, the key will default to the basename of the file, and the value will default to the file content. If the basename is an invalid key, you may specify an alternate key.

When creating a configmap based on a directory, each file whose basename is a valid key in the directory will be packaged into the configmap. Any directory entries except regular files are ignored (e.g. subdirectories, symlinks, devices, pipes, etc).

Usage

\$ kubectl create configmap NAME [--from-file=[key=]source] [--from-literal=key1=value1] [--dryrun=server|client|none]

Name	Shorthand	Default	Usage
allow-		true	If true, ignore any errors in templates when a field or map key is
missing-			missing in the template. Only applies to golang and jsonpath
template-			output formats.
keys			

Name	Shorthand	Default	Usage
append- hash		false	Append a hash of the configmap to its name.
dry-run		none	Must be "none", "server", or "client". If client strategy, only print the object that would be sent, without sending it. If server strategy, submit server-side request without persisting the resource.
field- manager		kubectl- create	Name of the manager used to track field ownership.
from-env- file			Specify the path to a file to read lines of key=val pairs to create a configmap (i.e. a Docker .env file).
from-file			Key file can be specified using its file path, in which case file basename will be used as configmap key, or optionally with a key and file path, in which case the given key will be used. Specifying a directory will iterate each named file in the directory whose basename is a valid configmap key.
from- literal		0	Specify a key and literal value to insert in configmap (i.e. mykey=somevalue)
generator		configmap /v1	The name of the API generator to use.
output	0		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
save- config		false	If true, the configuration of current object will be saved in its annotation. Otherwise, the annotation will be unchanged. This flag is useful when you want to perform kubectl apply on this object in the future.
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].
validate		true	If true, use a schema to validate the input before sending it

cronjob

Create a cronjob

kubectl create cronjob my-job --image=busybox --schedule="*/1 * * * * *"

Create a cronjob with command

kubectl create cronjob my-job --image=busybox --schedule="*/1 * * * * " -- date

Create a cronjob with the specified name.

Usage

\$ kubectl create cronjob NAME --image=image --schedule='0/5 * * * ?' -- [COMMAND] [args...]

Name	Shorthand	Default	Usage
allow- missing- template- keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
dry-run		none	Must be "none", "server", or "client". If client strategy, only print the object that would be sent, without sending it. If server strategy, submit server-side request without persisting the resource.
field- manager		kubectl- create	Name of the manager used to track field ownership.
image			Image name to run.
output	O		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
restart			job's restart policy. supported values: OnFailure, Never

Name	Shorthand	Default	Usage
save- config		false	If true, the configuration of current object will be saved in its annotation. Otherwise, the annotation will be unchanged. This flag is useful when you want to perform kubectl apply on this object in the future.
schedule			A schedule in the Cron format the job should be run with.
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].
validate		true	If true, use a schema to validate the input before sending it

deployment

Create a deployment named my-dep that runs the busybox image.

kubectl create deployment my-dep --image=busybox

Create a deployment with command

kubectl create deployment my-dep --image=busybox -- date

Create a deployment named my-dep that runs the nginx image with 3 replicas.

kubectl create deployment my-dep --image=nginx --replicas=3

Create a deployment named my-dep that runs the busybox image and expose port 5701.

kubectl create deployment my-dep --image=busybox --port=5701

Create a deployment with the specified name.

Usage

\$ kubectl create deployment NAME --image=image -- [COMMAND] [args...]

Name	Shorthand	Default	Usage
allow- missing- template- keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
dry-run		none	Must be "none", "server", or "client". If client strategy, only print the object that would be sent, without sending it. If server strategy, submit server-side request without persisting the resource.
field- manager		kubectl- create	Name of the manager used to track field ownership.
generator			The name of the API generator to use.
image		0	Image names to run.
output	0		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
port		-1	The port that this container exposes.
replicas	r	1	Number of replicas to create. Default is 1.
save- config		false	If true, the configuration of current object will be saved in its annotation. Otherwise, the annotation will be unchanged. This flag is useful when you want to perform kubectl apply on this object in the future.
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].
validate		true	If true, use a schema to validate the input before sending it



Create a job

kubectl create job my-job --image=busybox

Create a job with command

kubectl create job my-job --image=busybox -- date

Create a job from a CronJob named "a-cronjob"

kubectl create job test-job --from=cronjob/a-cronjob

Create a job with the specified name.

Usage

\$ kubectl create job NAME --image=image [--from=cronjob/name] -- [COMMAND] [args...]

Name	Shorthand	Default	Usage
allow- missing- template- keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
dry-run		none	Must be "none", "server", or "client". If client strategy, only print the object that would be sent, without sending it. If server strategy, submit server-side request without persisting the resource.
field- manager		kubectl- create	Name of the manager used to track field ownership.
from			The name of the resource to create a Job from (only cronjob is supported).
image			Image name to run.

	Shorthand	Default	Usage
output	0		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
save- config		false	If true, the configuration of current object will be saved in its annotation. Otherwise, the annotation will be unchanged. This flag is useful when you want to perform kubectl apply on this object in the future.
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].
validate		true	If true, use a schema to validate the input before sending it

namespace

Create a new namespace named my-namespace

kubectl create namespace my-namespace

Create a namespace with the specified name.

Usage

\$ kubectl create namespace NAME [--dry-run=server|client|none]

Name	Shorthand	Default	Usage
allow-		true	If true, ignore any errors in templates when a field or map key is
missing-			missing in the template. Only applies to golang and jsonpath
template-			output formats.
keys			

Name	Shorthand	Default	Usage
dry-run		none	Must be "none", "server", or "client". If client strategy, only print the object that would be sent, without sending it. If server strategy, submit server-side request without persisting the resource.
field- manager		kubectl- create	Name of the manager used to track field ownership.
generator		namespac e/v1	The name of the API generator to use.
output	0		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
save- config		false	If true, the configuration of current object will be saved in its annotation. Otherwise, the annotation will be unchanged. This flag is useful when you want to perform kubectl apply on this object in the future.
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].
validate		true	If true, use a schema to validate the input before sending it

poddisruptionbudget

Create a pod disruption budget named my-pdb that will select all pods with the app=rails label # and require at least one of them being available at any point in time.

kubectl create poddisruptionbudget my-pdb --selector=app=rails --min-available=1

Create a pod disruption budget named my-pdb that will select all pods with the app=nginx label # and require at least half of the pods selected to be available at any point in time.

kubectl create pdb my-pdb --selector=app=nginx --min-available=50%

Create a pod disruption budget with the specified name, selector, and desired minimum available pods

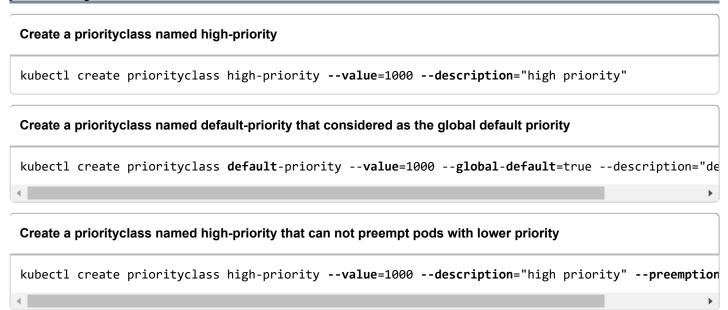
Usage

\$ kubectl create poddisruptionbudget NAME --selector=SELECTOR --min-available=N [--dryrun=server|client|none]

Name	Shorthand	Default	Usage
allow- missing- template- keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
dry-run		none	Must be "none", "server", or "client". If client strategy, only print the object that would be sent, without sending it. If server strategy, submit server-side request without persisting the resource.
field- manager		kubectl- create	Name of the manager used to track field ownership.
generator		poddisrupt ionbudget/ v1beta1/v 2	The name of the API generator to use.
max- unavailable			The maximum number or percentage of unavailable pods this budget requires.
min- available			The minimum number or percentage of available pods this budget requires.
output	0		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
save- config		false	If true, the configuration of current object will be saved in its annotation. Otherwise, the annotation will be unchanged. This flag is useful when you want to perform kubectl apply on this object in the future.

Name	Shorthand	Default	Usage
selector			A label selector to use for this budget. Only equality-based selector requirements are supported.
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].
validate		true	If true, use a schema to validate the input before sending it

priorityclass



Create a priorityclass with the specified name, value, globalDefault and description

Usage

\$ kubectl create priorityclass NAME --value=VALUE --global-default=BOOL [--dry-run=server|client|none]

Flags

Name Shorthand Default Usage

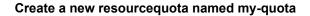
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Name	Shorthand	Default	Usage
allow- missing- template- keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
description			description is an arbitrary string that usually provides guidelines on when this priority class should be used.
dry-run		none	Must be "none", "server", or "client". If client strategy, only print the object that would be sent, without sending it. If server strategy, submit server-side request without persisting the resource.
field- manager		kubectl- create	Name of the manager used to track field ownership.
generator		priorityclas s/v1	The name of the API generator to use.
global- default		false	global-default specifies whether this PriorityClass should be considered as the default priority.
output	0		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
preemption- policy		PreemptL owerPriorit y	preemption-policy is the policy for preempting pods with lower priority.
save-config		false	If true, the configuration of current object will be saved in its annotation. Otherwise, the annotation will be unchanged. This flag is useful when you want to perform kubectl apply on this object in the future.
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].
validate		true	If true, use a schema to validate the input before sending it

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Name	Shorthand	Default	Usage
value		0	the value of this priority class.

quota



kubectl create quota my-quota --hard=cpu=1,memory=1G,pods=2,services=3,replicationcontrollers=2,re

Create a new resourcequota named best-effort

kubectl create quota best-effort --hard=pods=100 --scopes=BestEffort

Create a resourcequota with the specified name, hard limits and optional scopes

Usage

\$ kubectl create quota NAME [--hard=key1=value1,key2=value2] [--scopes=Scope1,Scope2] [--dryrun=server|client|none]

Name	Shorthand	Default	Usage
allow- missing- template- keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
dry-run		none	Must be "none", "server", or "client". If client strategy, only print the object that would be sent, without sending it. If server strategy, submit server-side request without persisting the resource.
field- manager		kubectl- create	Name of the manager used to track field ownership.

Name	Shorthand	Default	Usage
generator		resourceq uotas/v1	The name of the API generator to use.
hard			A comma-delimited set of resource=quantity pairs that define a hard limit.
output	0		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
save- config		false	If true, the configuration of current object will be saved in its annotation. Otherwise, the annotation will be unchanged. This flag is useful when you want to perform kubectl apply on this object in the future.
scopes			A comma-delimited set of quota scopes that must all match each object tracked by the quota.
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].
validate		true	If true, use a schema to validate the input before sending it

role

Create a Role named "pod-reader" that allows user to perform "get", "watch" and "list" on pods

kubectl create role pod-reader --verb=get --verb=list --verb=watch --resource=pods

Create a Role named "pod-reader" with ResourceName specified

kubectl create role pod-reader --verb=get --resource=pods --resource-name=readablepod --resource-n

Create a Role named "foo" with API Group specified

kubectl create role foo --verb=get,list,watch --resource=rs.extensions

Create a Role named "foo" with SubResource specified

kubectl create role foo --verb=get,list,watch --resource=pods,pods/status

Create a role with single rule.

Usage

\$ kubectl create role NAME --verb=verb --resource=resource.group/subresource [--resource-name=resourcename]
[--dry-run=server|client|none]

Name	Shorthand	Default	Usage
allow- missing- template- keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
dry-run		none	Must be "none", "server", or "client". If client strategy, only print the object that would be sent, without sending it. If server strategy, submit server-side request without persisting the resource.
field- manager		kubectl- create	Name of the manager used to track field ownership.
output	0		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
resource		0	Resource that the rule applies to
resource- name		0	Resource in the white list that the rule applies to, repeat this flag for multiple items
save- config		false	If true, the configuration of current object will be saved in its annotation. Otherwise, the annotation will be unchanged. This flag is useful when you want to perform kubectl apply on this object in the future.

Name	Shorthand	Default	Usage
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].
validate		true	If true, use a schema to validate the input before sending it
verb			Verb that applies to the resources contained in the rule

rolebinding

Create a RoleBinding for user1, user2, and group1 using the admin ClusterRole

kubectl create rolebinding admin --clusterrole=admin --user=user1 --user=user2 --group=group1

Create a RoleBinding for a particular Role or ClusterRole.

Usage

\$ kubectl create rolebinding NAME --clusterrole=NAME|--role=NAME [--user=username] [--group=groupname] [-serviceaccount=namespace:serviceaccountname] [--dry-run=server|client|none]

Name	Shorthand	Default	Usage
allow-missing- template-keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
clusterrole			ClusterRole this RoleBinding should reference

Name	Shorthand	Default	Usage
dry-run		none	Must be "none", "server", or "client". If client strategy, only print the object that would be sent, without sending it. If server strategy, submit server-side request without persisting the resource.
field-manager		kubectl- create	Name of the manager used to track field ownership.
generator		rolebindin g.rbac.aut horization. k8s.io/v1al pha1	The name of the API generator to use.
group		0	Groups to bind to the role
output	0		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
role			Role this RoleBinding should reference
save-config		false	If true, the configuration of current object will be saved in its annotation. Otherwise, the annotation will be unchanged. This flag is useful when you want to perform kubectl apply on this object in the future.
serviceaccount		0	Service accounts to bind to the role, in the format <namespace>:<name></name></namespace>
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].
validate		true	If true, use a schema to validate the input before sending it

secret

Create a secret using specified subcommand.

Usage

\$ kubectl create secret

secret docker-registry

If you don't already have a .dockercfg file, you can create a dockercfg secret directly by using:

kubectl create secret docker-registry my-secret --docker-server=DOCKER_REGISTRY_SERVER --docker-us

Create a new secret for use with Docker registries.

Dockercfg secrets are used to authenticate against Docker registries.

When using the Docker command line to push images, you can authenticate to a given registry by running: '\$ docker login DOCKER_REGISTRY_SERVER --username=DOCKER_USER --password=DOCKER_PASSWORD --email=DOCKER_EMAIL'.

That produces a ~/.dockercfg file that is used by subsequent 'docker push' and 'docker pull' commands to authenticate to the registry. The email address is optional.

When creating applications, you may have a Docker registry that requires authentication. In order for the nodes to pull images on your behalf, they have to have the credentials. You can provide this information by creating a dockercfg secret and attaching it to your service account.

Usage

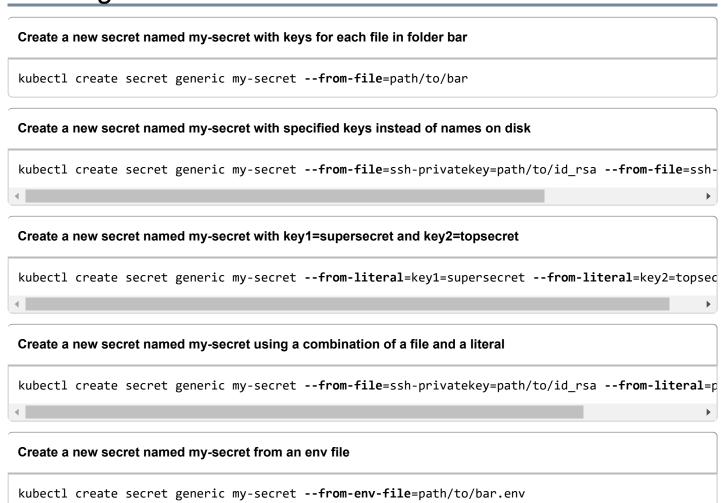
\$ kubectl create docker-registry NAME --docker-username=user --docker-password=password --docker-email=email
[--docker-server=string] [--from-literal=key1=value1] [--dry-run=server|client|none]

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Name	Shorthand	Default	Usage
allow- missing- template- keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
append- hash		false	Append a hash of the secret to its name.
docker- email			Email for Docker registry
docker- password			Password for Docker registry authentication
docker- server		https://ind ex.docker.i o/v1/ (https://ind ex.docker.i o/v1/)	Server location for Docker registry
docker- username			Username for Docker registry authentication
dry-run		none	Must be "none", "server", or "client". If client strategy, only print the object that would be sent, without sending it. If server strategy, submit server-side request without persisting the resource.
field- manager		kubectl- create	Name of the manager used to track field ownership.
from-file			Key files can be specified using their file path, in which case a default name will be given to them, or optionally with a name and file path, in which case the given name will be used. Specifying a directory will iterate each named file in the directory that is a valid secret key.
generator		secret-for- docker- registry/v1	The name of the API generator to use.

Name	Shorthand	Default	Usage
output	O		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
save- config		false	If true, the configuration of current object will be saved in its annotation. Otherwise, the annotation will be unchanged. This flag is useful when you want to perform kubectl apply on this object in the future.
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].
validate		true	If true, use a schema to validate the input before sending it

secret generic



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Create a secret based on a file, directory, or specified literal value.

A single secret may package one or more key/value pairs.

When creating a secret based on a file, the key will default to the basename of the file, and the value will default to the file content. If the basename is an invalid key or you wish to chose your own, you may specify an alternate key.

When creating a secret based on a directory, each file whose basename is a valid key in the directory will be packaged into the secret. Any directory entries except regular files are ignored (e.g. subdirectories, symlinks, devices, pipes, etc).

Usage

\$ kubectl create generic NAME [--type=string] [--from-file=[key=]source] [--from-literal=key1=value1] [--dryrun=server|client|none]

Name	Shorthand	Default	Usage
allow- missing- template- keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
append- hash		false	Append a hash of the secret to its name.
dry-run		none	Must be "none", "server", or "client". If client strategy, only print the object that would be sent, without sending it. If server strategy, submit server-side request without persisting the resource.
field- manager		kubectl- create	Name of the manager used to track field ownership.
from-env- file			Specify the path to a file to read lines of key=val pairs to create a secret (i.e. a Docker .env file).

Name	Shorthand	Default	Usage
from-file		0	Key files can be specified using their file path, in which case a default name will be given to them, or optionally with a name and file path, in which case the given name will be used. Specifying a directory will iterate each named file in the directory that is a valid secret key.
from- literal			Specify a key and literal value to insert in secret (i.e. mykey=somevalue)
generator		secret/v1	The name of the API generator to use.
output	0		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
save- config		false	If true, the configuration of current object will be saved in its annotation. Otherwise, the annotation will be unchanged. This flag is useful when you want to perform kubectl apply on this object in the future.
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].
type			The type of secret to create
validate		true	If true, use a schema to validate the input before sending it

secret tls

Create a new TLS secret named tls-secret with the given key pair:

kubectl create secret tls tls-secret --cert=path/to/tls.cert --key=path/to/tls.key

Create a TLS secret from the given public/private key pair.

The public/private key pair must exist before hand. The public key certificate must be .PEM encoded and match the given private key.

Usage

\$ kubectl create tls NAME --cert=path/to/cert/file --key=path/to/key/file [--dry-run=server|client|none]

Name	Shorthand	Default	Usage
allow- missing- template- keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
append- hash		false	Append a hash of the secret to its name.
cert			Path to PEM encoded public key certificate.
dry-run		none	Must be "none", "server", or "client". If client strategy, only print the object that would be sent, without sending it. If server strategy, submit server-side request without persisting the resource.
field- manager		kubectl- create	Name of the manager used to track field ownership.
generator		secret-for- tls/v1	The name of the API generator to use.
key			Path to private key associated with given certificate.
output	0		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
save- config		false	If true, the configuration of current object will be saved in its annotation. Otherwise, the annotation will be unchanged. This flag is useful when you want to perform kubectl apply on this object in the future.
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].

Name	Shorthand	Default	Usage
validate		true	If true, use a schema to validate the input before sending it

service

Create a service using specified subcommand.

Usage

\$ kubectl create service

service clusterip

Create a new ClusterIP service named my-cs

kubectl create service clusterip my-cs --tcp=5678:8080

Create a new ClusterIP service named my-cs (in headless mode)

kubectl create service clusterip my-cs --clusterip="None"

Create a ClusterIP service with the specified name.

Usage

\$ kubect1 create clusterip NAME [--tcp=<port>:<targetPort>] [--dry-run=server|client|none]

Name	Shorthand	Default	Usage
allow- missing- template- keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
clusterip			Assign your own ClusterIP or set to 'None' for a 'headless' service (no loadbalancing).
dry-run		none	Must be "none", "server", or "client". If client strategy, only print the object that would be sent, without sending it. If server strategy, submit server-side request without persisting the resource.
field- manager		kubectl- create	Name of the manager used to track field ownership.
generator		service- clusterip/v 1	The name of the API generator to use.
output	0		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
save- config		false	If true, the configuration of current object will be saved in its annotation. Otherwise, the annotation will be unchanged. This flag is useful when you want to perform kubectl apply on this object in the future.
tcp		0	Port pairs can be specified as ' <port>:<targetport>'.</targetport></port>
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].
validate		true	If true, use a schema to validate the input before sending it

service externalname

Create a new ExternalName service named my-ns

kubectl create service externalname my-ns --external-name bar.com

Create an ExternalName service with the specified name.

ExternalName service references to an external DNS address instead of only pods, which will allow application authors to reference services that exist off platform, on other clusters, or locally.

Usage

\$ kubect1 create externalname NAME --external-name external.name [--dry-run=server|client|none]

Name	Shorthand	Default	Usage
allow- missing- template- keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
dry-run		none	Must be "none", "server", or "client". If client strategy, only print the object that would be sent, without sending it. If server strategy, submit server-side request without persisting the resource.
external- name			External name of service
field- manager		kubectl- create	Name of the manager used to track field ownership.
generator		service- externalna me/v1	The name of the API generator to use.
output	0		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.

Name	Shorthand	Default	Usage
save- config		false	If true, the configuration of current object will be saved in its annotation. Otherwise, the annotation will be unchanged. This flag is useful when you want to perform kubectl apply on this object in the future.
tcp		0	Port pairs can be specified as ' <port>:<targetport>'.</targetport></port>
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].
validate		true	If true, use a schema to validate the input before sending it

service loadbalancer

Create a new LoadBalancer service named my-lbs

kubectl create service loadbalancer my-lbs --tcp=5678:8080

Create a LoadBalancer service with the specified name.

Usage

\$ kubectl create loadbalancer NAME [--tcp=port:targetPort] [--dry-run=server|client|none]

Name	Shorthand	Default	Usage
allow- missing- template- keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.

Name	Shorthand	Default	Usage
dry-run		none	Must be "none", "server", or "client". If client strategy, only print the object that would be sent, without sending it. If server strategy, submit server-side request without persisting the resource.
field- manager		kubectl- create	Name of the manager used to track field ownership.
generator		service- loadbalanc er/v1	The name of the API generator to use.
output	0		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
save- config		false	If true, the configuration of current object will be saved in its annotation. Otherwise, the annotation will be unchanged. This flag is useful when you want to perform kubectl apply on this object in the future.
tcp		0	Port pairs can be specified as ' <port>:<targetport>'.</targetport></port>
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].
validate		true	If true, use a schema to validate the input before sending it

service nodeport

Create a new NodePort service named my-ns

kubectl create service nodeport my-ns --tcp=5678:8080

Create a NodePort service with the specified name.

Usage

\$ kubectl create nodeport NAME [--tcp=port:targetPort] [--dry-run=server|client|none]

Name	Shorthand	Default	Usage
allow- missing- template- keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
dry-run		none	Must be "none", "server", or "client". If client strategy, only print the object that would be sent, without sending it. If server strategy, submit server-side request without persisting the resource.
field- manager		kubectl- create	Name of the manager used to track field ownership.
generator		service- nodeport/v 1	The name of the API generator to use.
node-port		0	Port used to expose the service on each node in a cluster.
output	0		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
save- config		false	If true, the configuration of current object will be saved in its annotation. Otherwise, the annotation will be unchanged. This flag is useful when you want to perform kubectl apply on this object in the future.
tcp		0	Port pairs can be specified as ' <port>:<targetport>'.</targetport></port>
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].
validate		true	If true, use a schema to validate the input before sending it

serviceaccount

Create a new service account named my-service-account

 $\verb+kubectl+ \textbf{create} + \texttt{serviceaccount} + \texttt{my-service-account}$

Create a service account with the specified name.

Usage

\$ kubectl create serviceaccount NAME [--dry-run=server|client|none]

Name	Shorthand	Default	Usage
allow- missing- template- keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
dry-run		none	Must be "none", "server", or "client". If client strategy, only print the object that would be sent, without sending it. If server strategy, submit server-side request without persisting the resource.
field- manager		kubectl- create	Name of the manager used to track field ownership.
generator		serviceacc ount/v1	The name of the API generator to use.
output	0		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
save- config		false	If true, the configuration of current object will be saved in its annotation. Otherwise, the annotation will be unchanged. This flag is useful when you want to perform kubectl apply on this object in the future.

Name	Shorthand	Default	Usage
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].
validate		true	If true, use a schema to validate the input before sending it

get

List all pods in ps output format.

kubectl get pods

List all pods in ps output format with more information (such as node name).

kubectl get pods -o wide

List a single replication controller with specified NAME in ps output format.

kubectl get replicationcontroller web

List deployments in JSON output format, in the "v1" version of the "apps" API group:

kubectl get deployments.v1.apps -o json

List a single pod in JSON output format.

kubectl get -o json pod web-pod-13je7

List a pod identified by type and name specified in "pod.yaml" in JSON output format.

kubectl get -f pod.yaml -o json

List resources from a directory with kustomization.yaml - e.g. dir/kustomization.yaml.

kubectl get -k dir/

Return only the phase value of the specified pod.

```
kubectl get -o template pod/web-pod-13je7 --template={{.status.phase}}
```

List resource information in custom columns.

```
kubectl get pod test-pod -o custom-columns=CONTAINER:.spec.containers[0].name,IMAGE:.spec.containe
```

List all replication controllers and services together in ps output format.

```
kubectl get rc, services
```

List one or more resources by their type and names.

```
kubectl get rc/web service/frontend pods/web-pod-13je7
```

Display one or many resources

Prints a table of the most important information about the specified resources. You can filter the list using a label selector and the --selector flag. If the desired resource type is namespaced you will only see results in your current namespace unless you pass --all-namespaces.

Uninitialized objects are not shown unless --include-uninitialized is passed.

By specifying the output as 'template' and providing a Go template as the value of the --template flag, you can filter the attributes of the fetched resources.

Use "kubectl api-resources" for a complete list of supported resources.

Usage

```
$ kubectl get [(-o|--output=)json|yaml|wide|custom-columns=...|custom-columns-file=...|go-template=...|go-template-file=...|jsonpath=...|jsonpath-file=...] (TYPE[.VERSION][.GROUP] [NAME | -1 label] | TYPE[.VERSION]
[.GROUP]/NAME ...) [flags]
```

Flags

Name Shorthand Default Usage

Name	Shorthand	Default	Usage
all- namespaces	A	false	If present, list the requested object(s) across all namespaces. Namespace in current context is ignored even if specified with namespace.
allow- missing- template- keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
chunk-size		500	Return large lists in chunks rather than all at once. Pass 0 to disable. This flag is beta and may change in the future.
field-selector			Selector (field query) to filter on, supports '=', '==', and '!='.(e.gfield-selector key1=value1,key2=value2). The server only supports a limited number of field queries per type.
filename	f	0	Filename, directory, or URL to files identifying the resource to get from a server.
ignore-not- found		false	If the requested object does not exist the command will return exit code 0.
kustomize	k		Process the kustomization directory. This flag can't be used together with -f or -R.
label- columns	L	0	Accepts a comma separated list of labels that are going to be presented as columns. Names are case-sensitive. You can also use multiple flag options like -L label1 -L label2
no-headers		false	When using the default or custom-column output format, don't print headers (default print headers).
output	0		Output format. One of: json yaml wide name custom-columns= custom-columns-file= go-template= go-template= go-template-file= jsonpath= jsonpath-file= See custom columns [http://kubernetes.io/docs/user-guide/kubectl-overview/#custom-columns (http://kubernetes.io/docs/user-guide/kubectl-overview/#custom-columns)], golang template [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)] and jsonpath template [http://kubernetes.io/docs/user-guide/jsonpath)].

Name	Shorthand	Default	Usage
output- watch- events		false	Output watch event objects whenwatch orwatch-only is used. Existing objects are output as initial ADDED events.
raw			Raw URI to request from the server. Uses the transport specified by the kubeconfig file.
recursive	R	false	Process the directory used in -f,filename recursively. Useful when you want to manage related manifests organized within the same directory.
selector	I		Selector (label query) to filter on, supports '=', '==', and '!='.(e.gl key1=value1,key2=value2)
server-print		true	If true, have the server return the appropriate table output. Supports extension APIs and CRDs.
show-kind		false	If present, list the resource type for the requested object(s).
show-labels		false	When printing, show all labels as the last column (default hide labels column)
sort-by			If non-empty, sort list types using this field specification. The field specification is expressed as a JSONPath expression (e.g. '{.metadata.name}'). The field in the API resource specified by this JSONPath expression must be an integer or a string.
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].
use- openapi- print- columns		false	If true, use x-kubernetes-print-column metadata (if present) from the OpenAPI schema for displaying a resource.
watch	W	false	After listing/getting the requested object, watch for changes. Uninitialized objects are excluded if no object name is provided.

Name	Shorthand	Default	Usage
watch-only		false	Watch for changes to the requested object(s), without listing/getting first.

run

Start a nginx pod.

kubectl run nginx --image=nginx

Start a hazelcast pod and let the container expose port 5701.

kubectl run hazelcast --image=hazelcast/hazelcast --port=5701

Start a hazelcast pod and set environment variables "DNS_DOMAIN=cluster" and "POD_NAMESPACE=default" in the container.

kubectl run hazelcast --image=hazelcast/hazelcast --env="DNS_DOMAIN=cluster" --env="POD_NAMESPACE=

Start a hazelcast pod and set labels "app=hazelcast" and "env=prod" in the container.

kubectl run hazelcast --image=hazelcast/hazelcast --labels="app=hazelcast,env=prod"

Dry run. Print the corresponding API objects without creating them.

kubectl run nginx --image=nginx --dry-run=client

Start a nginx pod, but overload the spec with a partial set of values parsed from JSON.

kubectl run nginx --image=nginx --overrides='{ "apiVersion": "v1", "spec": { ... } }'

Start a busybox pod and keep it in the foreground, don't restart it if it exits.

kubectl run -i -t busybox --image=busybox --restart=Never

Start the nginx pod using the default command, but use custom arguments (arg1 .. argN) for that command.

```
kubectl run nginx --image=nginx -- <arg1> <arg2> ... <argN>
```

Start the nginx pod using a different command and custom arguments.

```
kubectl run nginx --image=nginx --command -- <cmd> <arg1> ... <argN>
```

Create and run a particular image in a pod.

Usage

```
$ kubectl run NAME --image=image [--env="key=value"] [--port=port] [--dry-run=server|client] [--
overrides=inline-json] [--command] -- [COMMAND] [args...]
```

Name	Shorthand	Default	Usage
allow-missing- template-keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
attach		false	If true, wait for the Pod to start running, and then attach to the Pod as if 'kubectl attach' were called. Default false, unless '-i/stdin' is set, in which case the default is true. With 'restart=Never' the exit code of the container process is returned.
cascade		true	If true, cascade the deletion of the resources managed by this resource (e.g. Pods created by a ReplicationController). Default true.
command		false	If true and extra arguments are present, use them as the 'command' field in the container, rather than the 'args' field which is the default.
dry-run		none	Must be "none", "server", or "client". If client strategy, only print the object that would be sent, without sending it. If server strategy, submit server-side request without persisting the resource.

Name	Shorthand	Default	Usage
env			Environment variables to set in the container.
expose		false	If true, service is created for the container(s) which are run
field-manager		kubectl- run	Name of the manager used to track field ownership.
filename	f	0	to use to replace the resource.
force		false	If true, immediately remove resources from API and bypass graceful deletion. Note that immediate deletion of some resources may result in inconsistency or data loss and requires confirmation.
generator		run-pod/v1	The name of the API generator to use, see http://kubernetes.io/docs/user-guide/kubectl-conventions/#generators (http://kubernetes.io/docs/user-guide/kubectl-conventions/#generators) for a list.
grace-period		-1	Period of time in seconds given to the resource to terminate gracefully. Ignored if negative. Set to 1 for immediate shutdown. Can only be set to 0 whenforce is true (force deletion).
hostport		-1	The host port mapping for the container port. To demonstrate a single-machine container.
image			The image for the container to run.
image-pull- policy			The image pull policy for the container. If left empty, this value will not be specified by the client and defaulted by the server
kustomize	k		Process a kustomization directory. This flag can't be used together with -f or -R.
labels	I		Comma separated labels to apply to the pod(s). Will override previous values.
leave-stdin- open		false	If the pod is started in interactive mode or with stdin, leave stdin open after the first attach completes. By default, stdin will be closed after the first attach completes.

Name	Shorthand	Default	Usage
limits			The resource requirement limits for this container. For example, 'cpu=200m,memory=512Mi'. Note that server side components may assign limits depending on the server configuration, such as limit ranges.
output	0		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
overrides			An inline JSON override for the generated object. If this is non-empty, it is used to override the generated object. Requires that the object supply a valid apiVersion field.
pod-running- timeout		1m0s	The length of time (like 5s, 2m, or 3h, higher than zero) to wait until at least one pod is running
port			The port that this container exposes.
privileged		false	If true, run the container in privileged mode.
quiet		false	If true, suppress prompt messages.
record		false	Record current kubectl command in the resource annotation. If set to false, do not record the command. If set to true, record the command. If not set, default to updating the existing annotation value only if one already exists.
recursive	R	false	Process the directory used in -f,filename recursively. Useful when you want to manage related manifests organized within the same directory.
replicas	r	1	Number of replicas to create for this container. Default is 1.
requests			The resource requirement requests for this container. For example, 'cpu=100m,memory=256Mi'. Note that server side components may assign requests depending on the server configuration, such as limit ranges.
restart		Always	The restart policy for this Pod. Legal values [Always, OnFailure, Never].

Name	Shorthand	Default	Usage
rm		false	If true, delete resources created in this command for attached containers.
save-config		false	If true, the configuration of current object will be saved in its annotation. Otherwise, the annotation will be unchanged. This flag is useful when you want to perform kubectl apply on this object in the future.
schedule			A schedule in the Cron format the job should be run with.
service- generator		service/v2	The name of the generator to use for creating a service. Only used ifexpose is true
service- overrides			An inline JSON override for the generated service object. If this is non-empty, it is used to override the generated object. Requires that the object supply a valid apiVersion field. Only used ifexpose is true.
serviceaccount			Service account to set in the pod spec.
stdin	i	false	Keep stdin open on the container(s) in the pod, even if nothing is attached.
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].
timeout		0s	The length of time to wait before giving up on a delete, zero means determine a timeout from the size of the object
tty	t	false	Allocated a TTY for each container in the pod.
wait		false	If true, wait for resources to be gone before returning. This waits for finalizers.

expose

Create a service for a replicated nginx, which serves on port 80 and connects to the containers on port 8000.

kubectl expose rc nginx --port=80 --target-port=8000

Create a service for a replication controller identified by type and name specified in "nginx-controller.yaml", which serves on port 80 and connects to the containers on port 8000.

kubectl expose -f nginx-controller.yaml --port=80 --target-port=8000

Create a service for a pod valid-pod, which serves on port 444 with the name "frontend"

kubectl expose pod valid-pod --port=444 --name=frontend

Create a second service based on the above service, exposing the container port 8443 as port 443 with the name "nginx-https"

kubectl expose service nginx --port=443 --target-port=8443 --name=nginx-https

Create a service for a replicated streaming application on port 4100 balancing UDP traffic and named 'video-stream'.

kubectl expose rc streamer --port=4100 --protocol=UDP --name=video-stream

Create a service for a replicated nginx using replica set, which serves on port 80 and connects to the containers on port 8000.

kubectl expose rs nginx --port=80 --target-port=8000

Create a service for an nginx deployment, which serves on port 80 and connects to the containers on port 8000.

kubectl expose deployment nginx --port=80 --target-port=8000

Expose a resource as a new Kubernetes service.

Looks up a deployment, service, replica set, replication controller or pod by name and uses the selector for that resource as the selector for a new service on the specified port. A deployment or replica set will be exposed as a service only if its selector is convertible to a selector that service supports, i.e. when the selector contains only the matchLabels component. Note that if no port is specified via --port and the exposed resource has multiple ports, all will be re-used by the new service. Also if no labels are specified, the new service will re-use the labels from the resource it exposes.

Possible resources include (case insensitive):

pod (po), service (svc), replicationcontroller (rc), deployment (deploy), replicaset (rs)

Usage

\$ kubectl expose (-f FILENAME | TYPE NAME) [--port=port] [--protocol=TCP|UDP|SCTP] [--target-port=number-orname] [--name=name] [--external-ip-external-ip-of-service] [--type=type]

Name	Shorthand	Default	Usage
allow- missing- template- keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
cluster-ip			ClusterIP to be assigned to the service. Leave empty to auto- allocate, or set to 'None' to create a headless service.
container- port			Synonym fortarget-port
dry-run		none	Must be "none", "server", or "client". If client strategy, only print the object that would be sent, without sending it. If server strategy, submit server-side request without persisting the resource.
external- ip			Additional external IP address (not managed by Kubernetes) to accept for the service. If this IP is routed to a node, the service can be accessed by this IP in addition to its generated service IP.
field- manager		kubectl- expose	Name of the manager used to track field ownership.
filename	f	0	Filename, directory, or URL to files identifying the resource to expose a service
generator		service/v2	The name of the API generator to use. There are 2 generators: 'service/v1' and 'service/v2'. The only difference between them is that service port in v1 is named 'default', while it is left unnamed in v2. Default is 'service/v2'.

Name	Shorthand	Default	Usage
kustomize	k		Process the kustomization directory. This flag can't be used together with -f or -R.
labels	1		Labels to apply to the service created by this call.
load- balancer- ip			IP to assign to the LoadBalancer. If empty, an ephemeral IP will be created and used (cloud-provider specific).
name			The name for the newly created object.
output	0		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
overrides			An inline JSON override for the generated object. If this is non- empty, it is used to override the generated object. Requires that the object supply a valid apiVersion field.
port			The port that the service should serve on. Copied from the resource being exposed, if unspecified
protocol			The network protocol for the service to be created. Default is 'TCP'.
record		false	Record current kubectl command in the resource annotation. If set to false, do not record the command. If set to true, record the command. If not set, default to updating the existing annotation value only if one already exists.
recursive	R	false	Process the directory used in -f,filename recursively. Useful when you want to manage related manifests organized within the same directory.
save- config		false	If true, the configuration of current object will be saved in its annotation. Otherwise, the annotation will be unchanged. This flag is useful when you want to perform kubectl apply on this object in the future.
selector			A label selector to use for this service. Only equality-based selector requirements are supported. If empty (the default) infer the selector from the replication controller or replica set.)

affinity values: 'None', 'ClientIP' target- port Name or number for the port on the container that the same should direct traffic to. Optional. Template string or path to template file to use when -o= template, -o=go-template-file. The template format is go templates [http://golang.org/pkg/text/template/#pkg-over (http://golang.org/pkg/text/template/#pkg-overview)].	Name	Shorthand	Default	Usage
target- port Name or number for the port on the container that the s should direct traffic to. Optional. Template string or path to template file to use when -o= template, -o=go-template-file. The template format is go templates [http://golang.org/pkg/text/template/#pkg-over (http://golang.org/pkg/text/template/#pkg-overview)].	session-			If non-empty, set the session affinity for the service to this; legal
should direct traffic to. Optional. Template string or path to template file to use when -o= template, -o=go-template-file. The template format is go templates [http://golang.org/pkg/text/template/#pkg-ove (http://golang.org/pkg/text/template/#pkg-overview)].	affinity			values: 'None', 'ClientIP'
Template string or path to template file to use when -o= template, -o=go-template-file. The template format is go templates [http://golang.org/pkg/text/template/#pkg-ove (http://golang.org/pkg/text/template/#pkg-overview)].	target-			Name or number for the port on the container that the service
template, -o=go-template-file. The template format is go templates [http://golang.org/pkg/text/template/#pkg-ove (http://golang.org/pkg/text/template/#pkg-overview)].	port			should direct traffic to. Optional.
templates [http://golang.org/pkg/text/template/#pkg-ove (http://golang.org/pkg/text/template/#pkg-overview)].	template			Template string or path to template file to use when -o=go-
(http://golang.org/pkg/text/template/#pkg-overview)].				template, -o=go-template-file. The template format is golang
				templates [http://golang.org/pkg/text/template/#pkg-overview
type Type for this service: ClusterIP, NodePort, LoadBalance				(http://golang.org/pkg/text/template/#pkg-overview)].
	type			Type for this service: ClusterIP, NodePort, LoadBalancer, or
ExternalName. Default is 'ClusterIP'.				ExternalName. Default is 'ClusterIP'.

delete

Delete a pod using the type and name specified in pod.json.

kubectl delete -f ./pod.json

Delete resources from a directory containing kustomization.yaml - e.g. dir/kustomization.yaml.

kubectl delete -k dir

Delete a pod based on the type and name in the JSON passed into stdin.

cat pod.json | kubectl delete -f -

Delete pods and services with same names "baz" and "foo"

kubectl delete pod, service baz foo

Delete pods and services with label name=myLabel.

kubectl delete pods,services -l name=myLabel

Delete a pod with minimal delay

kubectl delete pod foo --now

Force delete a pod on a dead node

kubectl delete pod foo --force

Delete all pods

kubectl delete pods --all

Delete resources by filenames, stdin, resources and names, or by resources and label selector.

JSON and YAML formats are accepted. Only one type of the arguments may be specified: filenames, resources and names, or resources and label selector.

Some resources, such as pods, support graceful deletion. These resources define a default period before they are forcibly terminated (the grace period) but you may override that value with the --grace-period flag, or pass --now to set a grace-period of 1. Because these resources often represent entities in the cluster, deletion may not be acknowledged immediately. If the node hosting a pod is down or cannot reach the API server, termination may take significantly longer than the grace period. To force delete a resource, you must specify the --force flag. Note: only a subset of resources support graceful deletion. In absence of the support, --grace-period is ignored.

IMPORTANT: Force deleting pods does not wait for confirmation that the pod's processes have been terminated, which can leave those processes running until the node detects the deletion and completes graceful deletion. If your processes use shared storage or talk to a remote API and depend on the name of the pod to identify themselves, force deleting those pods may result in multiple processes running on different machines using the same identification which may lead to data corruption or inconsistency. Only force delete pods when you are sure the pod is terminated, or if your application can tolerate multiple copies of the same pod running at once. Also, if you force delete pods the scheduler may place new pods on those nodes before the node has released those resources and causing those pods to be evicted immediately.

Note that the delete command does NOT do resource version checks, so if someone submits an update to a resource right when you submit a delete, their update will be lost along with the rest of the resource.

Usage

```
$ kubectl delete ([-f FILENAME] | [-k DIRECTORY] | TYPE [(NAME | -1 label | --all)])
```

Name	Shorthand	Default	Usage
all		false	Delete all resources, including uninitialized ones, in the namespace of the specified resource types.
all- namespaces	А	false	If present, list the requested object(s) across all namespaces. Namespace in current context is ignored even if specified with namespace.
cascade		true	If true, cascade the deletion of the resources managed by this resource (e.g. Pods created by a ReplicationController). Default true.
dry-run		none	Must be "none", "server", or "client". If client strategy, only print the object that would be sent, without sending it. If server strategy, submit server-side request without persisting the resource.
field-selector			Selector (field query) to filter on, supports '=', '==', and '!='.(e.gfield-selector key1=value1,key2=value2). The server only supports a limited number of field queries per type.
filename	f	0	containing the resource to delete.
force		false	If true, immediately remove resources from API and bypass graceful deletion. Note that immediate deletion of some resources may result in inconsistency or data loss and requires confirmation.
grace-period		-1	Period of time in seconds given to the resource to terminate gracefully. Ignored if negative. Set to 1 for immediate shutdown. Can only be set to 0 whenforce is true (force deletion).
ignore-not- found		false	Treat "resource not found" as a successful delete. Defaults to "true" whenall is specified.
kustomize	k		Process a kustomization directory. This flag can't be used together with -f or -R.
now		false	If true, resources are signaled for immediate shutdown (same asgrace-period=1).

Name	Shorthand	Default	Usage
output	O		Output mode. Use "-o name" for shorter output (resource/name).
raw			Raw URI to DELETE to the server. Uses the transport specified by the kubeconfig file.
recursive	R	false	Process the directory used in -f,filename recursively. Useful when you want to manage related manifests organized within the same directory.
selector	I		Selector (label query) to filter on, not including uninitialized ones.
timeout		0s	The length of time to wait before giving up on a delete, zero means determine a timeout from the size of the object
wait		true	If true, wait for resources to be gone before returning. This waits for finalizers.

APP MANAGEMENT

This section contains commands for creating, updating, deleting, and viewing your workloads in a Kubernetes cluster.

apply

Apply the configuration in pod.json to a pod.

kubectl apply -f ./pod.json

Apply resources from a directory containing kustomization.yaml - e.g. dir/kustomization.yaml.

kubectl apply -k dir/

Apply the JSON passed into stdin to a pod.

cat pod.json | kubectl apply -f -

Kubectl Reference Docs

Note: --prune is still in Alpha # Apply the configuration in manifest.yaml that matches label app=nginx and delete all the other resources that are not in the file and match label app=nginx.

```
kubectl apply --prune -f manifest.yaml -l app=nginx
```

Apply the configuration in manifest.yaml and delete all the other configmaps that are not in the file.

```
kubectl apply --prune -f manifest.yaml --all --prune-whitelist=core/v1/ConfigMap
```

Apply a configuration to a resource by filename or stdin. The resource name must be specified. This resource will be created if it doesn't exist yet. To use 'apply', always create the resource initially with either 'apply' or 'create -- save-config'.

JSON and YAML formats are accepted.

Alpha Disclaimer: the --prune functionality is not yet complete. Do not use unless you are aware of what the current state is. See https://issues.k8s.io/34274 (https://issues.k8s.io/34274).

Usage

\$ kubectl apply (-f FILENAME | -k DIRECTORY)

Name	Shorthand	Default	Usage
all		false	Select all resources in the namespace of the specified resource types.
allow- missing- template- keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
cascade		true	If true, cascade the deletion of the resources managed by this resource (e.g. Pods created by a ReplicationController). Default true.

Name	Shorthand	Default	Usage
dry-run		none	Must be "none", "server", or "client". If client strategy, only print the object that would be sent, without sending it. If server strategy, submit server-side request without persisting the resource.
field- manager		kubectl- client-side- apply	Name of the manager used to track field ownership.
filename	f	0	that contains the configuration to apply
force		false	If true, immediately remove resources from API and bypass graceful deletion. Note that immediate deletion of some resources may result in inconsistency or data loss and requires confirmation.
force- conflicts		false	If true, server-side apply will force the changes against conflicts.
grace- period		-1	Period of time in seconds given to the resource to terminate gracefully. Ignored if negative. Set to 1 for immediate shutdown. Can only be set to 0 whenforce is true (force deletion).
kustomize	k		Process a kustomization directory. This flag can't be used together with -f or -R.
openapi- patch		true	If true, use openapi to calculate diff when the openapi presents and the resource can be found in the openapi spec. Otherwise, fall back to use baked-in types.
output	0		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
overwrite		true	Automatically resolve conflicts between the modified and live configuration by using values from the modified configuration
prune		false	Automatically delete resource objects, including the uninitialized ones, that do not appear in the configs and are created by either apply or createsave-config. Should be used with either -I or all.

Name	Shorthand	Default	Usage
prune- whitelist		0	Overwrite the default whitelist with <group kind="" version=""> for prune</group>
record		false	Record current kubectl command in the resource annotation. If set to false, do not record the command. If set to true, record the command. If not set, default to updating the existing annotation value only if one already exists.
recursive	R	false	Process the directory used in -f,filename recursively. Useful when you want to manage related manifests organized within the same directory.
selector	I		Selector (label query) to filter on, supports '=', '==', and '!='.(e.gl key1=value1,key2=value2)
server- side		false	If true, apply runs in the server instead of the client.
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].
timeout		0s	The length of time to wait before giving up on a delete, zero means determine a timeout from the size of the object
validate		true	If true, use a schema to validate the input before sending it
wait		false	If true, wait for resources to be gone before returning. This waits for finalizers.

edit-last-applied

Edit the last-applied-configuration annotations by type/name in YAML.

kubectl apply edit-last-applied deployment/nginx

Edit the last-applied-configuration annotations by file in JSON.

kubectl apply edit-last-applied -f deploy.yaml -o json

Edit the latest last-applied-configuration annotations of resources from the default editor.

The edit-last-applied command allows you to directly edit any API resource you can retrieve via the command line tools. It will open the editor defined by your KUBE_EDITOR, or EDITOR environment variables, or fall back to 'vi' for Linux or 'notepad' for Windows. You can edit multiple objects, although changes are applied one at a time. The command accepts filenames as well as command line arguments, although the files you point to must be previously saved versions of resources.

The default format is YAML. To edit in JSON, specify "-o json".

The flag --windows-line-endings can be used to force Windows line endings, otherwise the default for your operating system will be used.

In the event an error occurs while updating, a temporary file will be created on disk that contains your unapplied changes. The most common error when updating a resource is another editor changing the resource on the server. When this occurs, you will have to apply your changes to the newer version of the resource, or update your temporary saved copy to include the latest resource version.

Usage

\$ kubectl apply edit-last-applied (RESOURCE/NAME | -f FILENAME)

Name	Shorthand	Default	Usage
allow- missing- template- keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
field- manager		kubectl- client-side- apply	Name of the manager used to track field ownership.
filename	f	0	Filename, directory, or URL to files to use to edit the resource

Name	Shorthand	Default	Usage
kustomize	k		Process the kustomization directory. This flag can't be used together with -f or -R.
output	0		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
record		false	Record current kubectl command in the resource annotation. If set to false, do not record the command. If set to true, record the command. If not set, default to updating the existing annotation value only if one already exists.
recursive	R	false	Process the directory used in -f,filename recursively. Useful when you want to manage related manifests organized within the same directory.
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].
windows- line- endings		false	Defaults to the line ending native to your platform.

set-last-applied

Set the last-applied-configuration of a resource to match the contents of a file.

kubectl apply set-last-applied -f deploy.yaml

Execute set-last-applied against each configuration file in a directory.

kubectl apply set-last-applied -f path/

Set the last-applied-configuration of a resource to match the contents of a file, will create the annotation if it does not already exist.

kubectl apply set-last-applied -f deploy.yaml --create-annotation=true

Set the latest last-applied-configuration annotations by setting it to match the contents of a file. This results in the last-applied-configuration being updated as though 'kubectl apply -f' was run, without updating any other parts of the object.

Usage

\$ kubectl apply set-last-applied -f FILENAME

Flags

Name	Shorthand	Default	Usage
allow- missing- template- keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
create- annotation		false	Will create 'last-applied-configuration' annotations if current objects doesn't have one
dry-run		none	Must be "none", "server", or "client". If client strategy, only print the object that would be sent, without sending it. If server strategy, submit server-side request without persisting the resource.
filename	f	0	Filename, directory, or URL to files that contains the last-applied-configuration annotations
output	0		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].

view-last-applied

View the last-applied-configuration annotations by type/name in YAML.

kubectl apply view-last-applied deployment/nginx

View the last-applied-configuration annotations by file in JSON

kubectl apply view-last-applied -f deploy.yaml -o json

View the latest last-applied-configuration annotations by type/name or file.

The default output will be printed to stdout in YAML format. One can use -o option to change output format.

Usage

\$ kubectl apply view-last-applied (TYPE [NAME | -1 label] | TYPE/NAME | -f FILENAME)

Name	Shorthand	Default	Usage
all		false	Select all resources in the namespace of the specified resource types
filename	f	0	Filename, directory, or URL to files that contains the last-applied-configuration annotations
kustomize	k		Process the kustomization directory. This flag can't be used together with -f or -R.
output	0	yaml	Output format. Must be one of yaml json
recursive	R	false	Process the directory used in -f,filename recursively. Useful when you want to manage related manifests organized within the same directory.
selector	I		Selector (label query) to filter on, supports '=', '==', and '!='.(e.gl key1=value1,key2=value2)

annotate

Update pod 'foo' with the annotation 'description' and the value 'my frontend'. # If the same annotation is set multiple times, only the last value will be applied

kubectl annotate pods foo description='my frontend'

Update a pod identified by type and name in "pod.json"

kubectl annotate -f pod.json description='my frontend'

Update pod 'foo' with the annotation 'description' and the value 'my frontend running nginx', overwriting any existing value.

kubectl annotate --overwrite pods foo description='my frontend running nginx'

Update all pods in the namespace

kubectl annotate pods --all description='my frontend running nginx'

Update pod 'foo' only if the resource is unchanged from version 1.

kubectl annotate pods foo description='my frontend running nginx' --resource-version=1

Update pod 'foo' by removing an annotation named 'description' if it exists. # Does not require the --overwrite flag.

kubectl annotate pods foo description-

Update the annotations on one or more resources

All Kubernetes objects support the ability to store additional data with the object as annotations. Annotations are key/value pairs that can be larger than labels and include arbitrary string values such as structured JSON. Tools and system extensions may use annotations to store their own data.

Attempting to set an annotation that already exists will fail unless --overwrite is set. If --resource-version is specified and does not match the current resource version on the server the command will fail.

Use "kubectl api-resources" for a complete list of supported resources.

Usage

\$ kubectl annotate [--overwrite] (-f FILENAME | TYPE NAME) KEY_1=VAL_1 ... KEY_N=VAL_N [--resourceversion=version]

Name	Shorthand	Default	Usage
all		false	Select all resources, including uninitialized ones, in the namespace of the specified resource types.
allow- missing- template- keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
dry-run		none	Must be "none", "server", or "client". If client strategy, only print the object that would be sent, without sending it. If server strategy, submit server-side request without persisting the resource.
field- manager		kubectl- annotate	Name of the manager used to track field ownership.
field- selector			Selector (field query) to filter on, supports '=', '==', and '!='.(e.g field-selector key1=value1,key2=value2). The server only supports a limited number of field queries per type.
filename	f	0	Filename, directory, or URL to files identifying the resource to update the annotation
kustomize	k		Process the kustomization directory. This flag can't be used together with -f or -R.
list		false	If true, display the annotations for a given resource.
local		false	If true, annotation will NOT contact api-server but run locally.
output	0		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.

Name	Shorthand	Default	Usage
overwrite		false	If true, allow annotations to be overwritten, otherwise reject annotation updates that overwrite existing annotations.
record		false	Record current kubectl command in the resource annotation. If set to false, do not record the command. If set to true, record the command. If not set, default to updating the existing annotation value only if one already exists.
recursive	R	false	Process the directory used in -f,filename recursively. Useful when you want to manage related manifests organized within the same directory.
resource- version			If non-empty, the annotation update will only succeed if this is the current resource-version for the object. Only valid when specifying a single resource.
selector	1		Selector (label query) to filter on, not including uninitialized ones, supports '=', '==', and '!='.(e.gl key1=value1,key2=value2).
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].

autoscale

Auto scale a deployment "foo", with the number of pods between 2 and 10, no target CPU utilization specified so a default autoscaling policy will be used:

```
kubectl autoscale deployment foo --min=2 --max=10
```

Auto scale a replication controller "foo", with the number of pods between 1 and 5, target CPU utilization at 80%:

```
kubectl autoscale rc foo --max=5 --cpu-percent=80
```

Creates an autoscaler that automatically chooses and sets the number of pods that run in a kubernetes cluster.

Looks up a Deployment, ReplicaSet, StatefulSet, or ReplicationController by name and creates an autoscaler that uses the given resource as a reference. An autoscaler can automatically increase or decrease number of pods deployed within the system as needed.

Usage

\$ kubectl autoscale (-f FILENAME | TYPE NAME | TYPE/NAME) [--min=MINPODS] --max=MAXPODS [--cpu-percent=CPU]

Name	Shorthand	Default	Usage
allow- missing- template- keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
cpu- percent		-1	The target average CPU utilization (represented as a percent of requested CPU) over all the pods. If it's not specified or negative, a default autoscaling policy will be used.
dry-run		none	Must be "none", "server", or "client". If client strategy, only print the object that would be sent, without sending it. If server strategy, submit server-side request without persisting the resource.
field- manager		kubectl- autoscale	Name of the manager used to track field ownership.
filename	f	0	Filename, directory, or URL to files identifying the resource to autoscale.
generator		horizontal podautosc aler/v1	The name of the API generator to use. Currently there is only 1 generator.
kustomize	k		Process the kustomization directory. This flag can't be used together with -f or -R.
max		-1	The upper limit for the number of pods that can be set by the autoscaler. Required.

Name	Shorthand	Default	Usage
min		-1	The lower limit for the number of pods that can be set by the autoscaler. If it's not specified or negative, the server will apply a default value.
name			The name for the newly created object. If not specified, the name of the input resource will be used.
output	0		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
record		false	Record current kubectl command in the resource annotation. If set to false, do not record the command. If set to true, record the command. If not set, default to updating the existing annotation value only if one already exists.
recursive	R	false	Process the directory used in -f,filename recursively. Useful when you want to manage related manifests organized within the same directory.
save- config		false	If true, the configuration of current object will be saved in its annotation. Otherwise, the annotation will be unchanged. This flag is useful when you want to perform kubectl apply on this object in the future.
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].

convert

Convert 'pod.yaml' to latest version and print to stdout.

kubectl convert -f pod.yaml

Convert the live state of the resource specified by 'pod.yaml' to the latest version # and print to stdout in JSON format.

kubectl convert -f pod.yaml --local -o json

Convert all files under current directory to latest version and create them all.

```
kubectl convert -f . | kubectl create -f -
```

Convert config files between different API versions. Both YAML and JSON formats are accepted.

The command takes filename, directory, or URL as input, and convert it into format of version specified by -- output-version flag. If target version is not specified or not supported, convert to latest version.

The default output will be printed to stdout in YAML format. One can use -o option to change to output destination.

Usage

\$ kubectl convert -f FILENAME

Name	Shorthand	Default	Usage
allow- missing- template- keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
filename	f	0	Filename, directory, or URL to files to need to get converted.
kustomize	k		Process the kustomization directory. This flag can't be used together with -f or -R.
local		true	If true, convert will NOT try to contact api-server but run locally.
output	0	yaml	Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
output- version			Output the formatted object with the given group version (for ex: 'extensions/v1beta1').

Name	Shorthand	Default	Usage
recursive	R	false	Process the directory used in -f,filename recursively. Useful when you want to manage related manifests organized within the same directory.
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].
validate		true	If true, use a schema to validate the input before sending it

diff

Diff resources included in pod.json.

kubectl diff -f pod.json

Diff file read from stdin

cat service.yaml | kubectl diff -f -

Diff configurations specified by filename or stdin between the current online configuration, and the configuration as it would be if applied.

Output is always YAML.

KUBECTL_EXTERNAL_DIFF environment variable can be used to select your own diff command. By default, the "diff" command available in your path will be run with "-u" (unified diff) and "-N" (treat absent files as empty) options.

Exit status: 0 No differences were found. 1 Differences were found. >1 Kubectl or diff failed with an error.

Note: KUBECTL EXTERNAL DIFF, if used, is expected to follow that convention.

Usage

\$ kubectl diff -f FILENAME

Flags

Name	Shorthand	Default	Usage
field- manager		kubectl- client-side- apply	Name of the manager used to track field ownership.
filename	f	0	Filename, directory, or URL to files contains the configuration to diff
force- conflicts		false	If true, server-side apply will force the changes against conflicts.
kustomize	k		Process the kustomization directory. This flag can't be used together with -f or -R.
recursive	R	false	Process the directory used in -f,filename recursively. Useful when you want to manage related manifests organized within the same directory.
selector	I		Selector (label query) to filter on, supports '=', '==', and '!='.(e.gl key1=value1,key2=value2)
server- side		false	If true, apply runs in the server instead of the client.

edit

Edit the service named 'docker-registry':

kubectl edit svc/docker-registry

Use an alternative editor

KUBE_EDITOR="nano" kubectl edit svc/docker-registry

Edit the job 'myjob' in JSON using the v1 API format:

kubectl edit job.v1.batch/myjob -o json

Edit the deployment 'mydeployment' in YAML and save the modified config in its annotation:

kubectl edit deployment/mydeployment -o yaml --save-config

Edit a resource from the default editor.

The edit command allows you to directly edit any API resource you can retrieve via the command line tools. It will open the editor defined by your KUBE_EDITOR, or EDITOR environment variables, or fall back to 'vi' for Linux or 'notepad' for Windows. You can edit multiple objects, although changes are applied one at a time. The command accepts filenames as well as command line arguments, although the files you point to must be previously saved versions of resources.

Editing is done with the API version used to fetch the resource. To edit using a specific API version, fully-qualify the resource, version, and group.

The default format is YAML. To edit in JSON, specify "-o json".

The flag --windows-line-endings can be used to force Windows line endings, otherwise the default for your operating system will be used.

In the event an error occurs while updating, a temporary file will be created on disk that contains your unapplied changes. The most common error when updating a resource is another editor changing the resource on the server. When this occurs, you will have to apply your changes to the newer version of the resource, or update your temporary saved copy to include the latest resource version.

Usage

\$ kubectl edit (RESOURCE/NAME | -f FILENAME)

Flags

Name Shorthand Default Usage

Name	Shorthand	Default	Usage
allow- missing- template- keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
field- manager		kubectl- edit	Name of the manager used to track field ownership.
filename	f	0	Filename, directory, or URL to files to use to edit the resource
kustomize	k		Process the kustomization directory. This flag can't be used together with -f or -R.
output	0		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
output- patch		false	Output the patch if the resource is edited.
record		false	Record current kubectl command in the resource annotation. If set to false, do not record the command. If set to true, record the command. If not set, default to updating the existing annotation value only if one already exists.
recursive	R	false	Process the directory used in -f,filename recursively. Useful when you want to manage related manifests organized within the same directory.
save- config		false	If true, the configuration of current object will be saved in its annotation. Otherwise, the annotation will be unchanged. This flag is useful when you want to perform kubectl apply on this object in the future.
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].
validate		true	If true, use a schema to validate the input before sending it

Name	Shorthand	Default	Usage
windows- line- endings		false	Defaults to the line ending native to your platform.

kustomize

Use the current working directory

kubect1%20kustomize%20.

Use some shared configuration directory

kubectl kustomize /home/configuration/production

Use a URL

kubectl kustomize github.com/kubernetes-sigs/kustomize.git/examples/helloWorld?ref=v1.0.6

Print a set of API resources generated from instructions in a kustomization.yaml file.

The argument must be the path to the directory containing the file, or a git repository URL with a path suffix specifying same with respect to the repository root.

kubectl kustomize somedir

Usage

\$ kubectl kustomize <dir>

label

Update pod 'foo' with the label 'unhealthy' and the value 'true'.

kubectl label pods foo unhealthy=true

Update pod 'foo' with the label 'status' and the value 'unhealthy', overwriting any existing value.

kubectl label --overwrite pods foo status=unhealthy

Update all pods in the namespace

kubectl label pods --all status=unhealthy

Update a pod identified by the type and name in "pod.json"

kubectl label -f pod.json status=unhealthy

Update pod 'foo' only if the resource is unchanged from version 1.

kubectl label pods foo status=unhealthy --resource-version=1

Update pod 'foo' by removing a label named 'bar' if it exists. # Does not require the --overwrite flag.

kubectl label pods foo bar-

Update the labels on a resource.

- A label key and value must begin with a letter or number, and may contain letters, numbers, hyphens, dots, and underscores, up to 63 characters each.
- Optionally, the key can begin with a DNS subdomain prefix and a single '/', like example.com/my-app
- If --overwrite is true, then existing labels can be overwritten, otherwise attempting to overwrite a label will
 result in an error.
- If --resource-version is specified, then updates will use this resource version, otherwise the existing resource-version will be used.

Usage

\$ kubectl label [--overwrite] (-f FILENAME | TYPE NAME) KEY_1=VAL_1 ... KEY_N=VAL_N [--resourceversion=version]

Name	Shorthand	Default	Usage
all		false	Select all resources, including uninitialized ones, in the namespace of the specified resource types
allow- missing- template- keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
dry-run		none	Must be "none", "server", or "client". If client strategy, only print the object that would be sent, without sending it. If server strategy, submit server-side request without persisting the resource.
field- manager		kubectl- label	Name of the manager used to track field ownership.
field- selector			Selector (field query) to filter on, supports '=', '==', and '!='.(e.g field-selector key1=value1,key2=value2). The server only supports a limited number of field queries per type.
filename	f	0	Filename, directory, or URL to files identifying the resource to update the labels
kustomize	k		Process the kustomization directory. This flag can't be used together with -f or -R.
list		false	If true, display the labels for a given resource.
local		false	If true, label will NOT contact api-server but run locally.
output	0		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
overwrite		false	If true, allow labels to be overwritten, otherwise reject label updates that overwrite existing labels.

Name	Shorthand	Default	Usage
record		false	Record current kubectl command in the resource annotation. If set to false, do not record the command. If set to true, record the command. If not set, default to updating the existing annotation value only if one already exists.
recursive	R	false	Process the directory used in -f,filename recursively. Useful when you want to manage related manifests organized within the same directory.
resource- version			If non-empty, the labels update will only succeed if this is the current resource-version for the object. Only valid when specifying a single resource.
selector	I		Selector (label query) to filter on, not including uninitialized ones, supports '=', '==', and '!='.(e.gl key1=value1,key2=value2).
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].

patch

Partially update a node using a strategic merge patch. Specify the patch as JSON.

kubectl patch node k8s-node-1 -p '{"spec":{"unschedulable":true}}'

Partially update a node using a strategic merge patch. Specify the patch as YAML.

kubectl patch node k8s-node-1 -p \$'spec:\n unschedulable: true'

Partially update a node identified by the type and name specified in "node.json" using strategic merge patch.

kubectl patch -f node.json -p '{"spec":{"unschedulable":true}}'

Update a container's image; spec.containers[*].name is required because it's a merge key.

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```
kubectl patch pod valid-pod -p '{"spec":{"containers":[{"name":"kubernetes-serve-hostname","image"

Update a container's image using a json patch with positional arrays.

kubectl patch pod valid-pod --type='json' -p='[{"op": "replace", "path": "/spec/containers/0/image
```

Update field(s) of a resource using strategic merge patch, a JSON merge patch, or a JSON patch.

JSON and YAML formats are accepted.

Usage

\$ kubectl patch (-f FILENAME | TYPE NAME) -p PATCH

Name	Shorthand	Default	Usage
allow- missing- template- keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
dry-run		none	Must be "none", "server", or "client". If client strategy, only print the object that would be sent, without sending it. If server strategy, submit server-side request without persisting the resource.
field- manager		kubectl- patch	Name of the manager used to track field ownership.
filename	f	0	Filename, directory, or URL to files identifying the resource to update
kustomize	k		Process the kustomization directory. This flag can't be used together with -f or -R.

Name	Shorthand	Default	Usage
local		false	If true, patch will operate on the content of the file, not the server- side resource.
output	o		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
patch	p		The patch to be applied to the resource JSON file.
record		false	Record current kubectl command in the resource annotation. If set to false, do not record the command. If set to true, record the command. If not set, default to updating the existing annotation value only if one already exists.
recursive	R	false	Process the directory used in -f,filename recursively. Useful when you want to manage related manifests organized within the same directory.
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].
type		strategic	The type of patch being provided; one of [json merge strategic]

replace

Replace a pod using the data in pod.json.

kubectl replace -f ./pod.json

Replace a pod based on the JSON passed into stdin.

cat pod.json | kubectl replace -f -

Update a single-container pod's image version (tag) to v4

kubectl get pod mypod -o yaml | sed 's/\(image: myimage\):.*\$/\1:v4/' | kubectl replace -f -

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Force replace, delete and then re-create the resource

kubectl replace --force -f ./pod.json

Replace a resource by filename or stdin.

JSON and YAML formats are accepted. If replacing an existing resource, the complete resource spec must be provided. This can be obtained by

\$ kubectl get TYPE NAME -o yaml

Usage

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\$ kubectl replace -f FILENAME

Name	Shorthand	Default	Usage
allow- missing- template- keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
cascade		true	If true, cascade the deletion of the resources managed by this resource (e.g. Pods created by a ReplicationController). Default true.
dry-run		none	Must be "none", "server", or "client". If client strategy, only print the object that would be sent, without sending it. If server strategy, submit server-side request without persisting the resource.
field- manager		kubectl- replace	Name of the manager used to track field ownership.
filename	f	0	to use to replace the resource.

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Name	Shorthand	Default	Usage
force		false	If true, immediately remove resources from API and bypass graceful deletion. Note that immediate deletion of some resources may result in inconsistency or data loss and requires confirmation.
grace- period		-1	Period of time in seconds given to the resource to terminate gracefully. Ignored if negative. Set to 1 for immediate shutdown. Can only be set to 0 whenforce is true (force deletion).
kustomize	k		Process a kustomization directory. This flag can't be used together with -f or -R.
output	0		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
raw			Raw URI to PUT to the server. Uses the transport specified by the kubeconfig file.
recursive	R	false	Process the directory used in -f,filename recursively. Useful when you want to manage related manifests organized within the same directory.
save- config		false	If true, the configuration of current object will be saved in its annotation. Otherwise, the annotation will be unchanged. This flag is useful when you want to perform kubectl apply on this object in the future.
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].
timeout		0s	The length of time to wait before giving up on a delete, zero means determine a timeout from the size of the object
validate		true	If true, use a schema to validate the input before sending it
wait		false	If true, wait for resources to be gone before returning. This waits for finalizers.

rollout

Rollback to the previous deployment

kubectl rollout undo deployment/abc

Check the rollout status of a daemonset

kubectl rollout status daemonset/foo

Manage the rollout of a resource.

Valid resource types include:

- · deployments
- daemonsets
- statefulsets

Usage

\$ kubectl rollout SUBCOMMAND

history

View the rollout history of a deployment

kubectl rollout history deployment/abc

View the details of daemonset revision 3

kubectl rollout history daemonset/abc --revision=3

View previous rollout revisions and configurations.

Usage

\$ kubectl rollout history (TYPE NAME | TYPE/NAME) [flags]

Flags

Name	Shorthand	Default	Usage
allow- missing- template- keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
filename	f	0	Filename, directory, or URL to files identifying the resource to get from a server.
kustomize	k		Process the kustomization directory. This flag can't be used together with -f or -R.
output	0		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
recursive	R	false	Process the directory used in -f,filename recursively. Useful when you want to manage related manifests organized within the same directory.
revision		0	See the details, including podTemplate of the revision specified
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].

pause

Mark the nginx deployment as paused. Any current state of # the deployment will continue its function, new updates to the deployment will not # have an effect as long as the deployment is paused.

kubectl rollout pause deployment/nginx

Mark the provided resource as paused

Paused resources will not be reconciled by a controller. Use "kubectl rollout resume" to resume a paused resource. Currently only deployments support being paused.

Usage

\$ kubectl rollout pause RESOURCE

Flags

Name	Shorthand	Default	Usage
allow- missing- template- keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
field- manager		kubectl- rollout	Name of the manager used to track field ownership.
filename	f	0	Filename, directory, or URL to files identifying the resource to get from a server.
kustomize	k		Process the kustomization directory. This flag can't be used together with -f or -R.
output	0		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
recursive	R	false	Process the directory used in -f,filename recursively. Useful when you want to manage related manifests organized within the same directory.
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].

restart

Restart a deployment

kubectl rollout restart deployment/nginx

Restart a daemonset

kubectl rollout restart daemonset/abc

Restart a resource.

Resource will be rollout restarted.

Usage

\$ kubectl rollout restart RESOURCE

Name	Shorthand	Default	Usage
allow- missing- template- keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
field- manager		kubectl- rollout	Name of the manager used to track field ownership.
filename	f	0	Filename, directory, or URL to files identifying the resource to get from a server.
kustomize	k		Process the kustomization directory. This flag can't be used together with -f or -R.
output	0		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
recursive	R	false	Process the directory used in -f,filename recursively. Useful when you want to manage related manifests organized within the same directory.

Name	Shorthand	Default	Usage
template			Template string or path to template file to use when -o=go-
			template, -o=go-template-file. The template format is golang
			templates [http://golang.org/pkg/text/template/#pkg-overview
			(http://golang.org/pkg/text/template/#pkg-overview)].

resume

Resume an already paused deployment

kubectl rollout resume deployment/nginx

Resume a paused resource

Paused resources will not be reconciled by a controller. By resuming a resource, we allow it to be reconciled again. Currently only deployments support being resumed.

Usage

\$ kubectl rollout resume RESOURCE

Name	Shorthand	Default	Usage
allow- missing- template- keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
field- manager		kubectl- rollout	Name of the manager used to track field ownership.
filename	f	0	Filename, directory, or URL to files identifying the resource to get from a server.

Name	Shorthand	Default	Usage
kustomize	k		Process the kustomization directory. This flag can't be used together with -f or -R.
output	0		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
recursive	R	false	Process the directory used in -f,filename recursively. Useful when you want to manage related manifests organized within the same directory.
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].

status

Watch the rollout status of a deployment

kubectl rollout status deployment/nginx

Show the status of the rollout.

By default 'rollout status' will watch the status of the latest rollout until it's done. If you don't want to wait for the rollout to finish then you can use --watch=false. Note that if a new rollout starts in-between, then 'rollout status' will continue watching the latest revision. If you want to pin to a specific revision and abort if it is rolled over by another revision, use --revision=N where N is the revision you need to watch for.

Usage

\$ kubectl rollout status (TYPE NAME | TYPE/NAME) [flags]

Flags

Name Shorthand Default Usage

Name	Shorthand	Default	Usage
filename	f	0	Filename, directory, or URL to files identifying the resource to get from a server.
kustomize	k		Process the kustomization directory. This flag can't be used together with -f or -R.
recursive	R	false	Process the directory used in -f,filename recursively. Useful when you want to manage related manifests organized within the same directory.
revision		0	Pin to a specific revision for showing its status. Defaults to 0 (last revision).
timeout		0s	The length of time to wait before ending watch, zero means never. Any other values should contain a corresponding time unit (e.g. 1s, 2m, 3h).
watch	w	true	Watch the status of the rollout until it's done.

undo

Rollback to the previous deployment

kubectl rollout undo deployment/abc

Rollback to daemonset revision 3

kubectl rollout undo daemonset/abc --to-revision=3

Rollback to the previous deployment with dry-run

kubectl rollout undo --dry-run=server deployment/abc

Rollback to a previous rollout.

Usage

\$ kubectl rollout undo (TYPE NAME | TYPE/NAME) [flags]

Flags

Name	Shorthand	Default	Usage
allow- missing- template- keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
dry-run		none	Must be "none", "server", or "client". If client strategy, only print the object that would be sent, without sending it. If server strategy, submit server-side request without persisting the resource.
filename	f	0	Filename, directory, or URL to files identifying the resource to get from a server.
kustomize	k		Process the kustomization directory. This flag can't be used together with -f or -R.
output	0		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
recursive	R	false	Process the directory used in -f,filename recursively. Useful when you want to manage related manifests organized within the same directory.
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].
to- revision		0	The revision to rollback to. Default to 0 (last revision).

scale

Scale a replicaset named 'foo' to 3.

kubectl scale --replicas=3 rs/foo

Scale a resource identified by type and name specified in "foo.yaml" to 3.

kubectl scale --replicas=3 -f foo.yaml

If the deployment named mysql's current size is 2, scale mysql to 3.

kubectl scale --current-replicas=2 --replicas=3 deployment/mysql

Scale multiple replication controllers.

kubectl scale --replicas=5 rc/foo rc/bar rc/baz

Scale statefulset named 'web' to 3.

kubectl scale --replicas=3 statefulset/web

Set a new size for a Deployment, ReplicaSet, Replication Controller, or StatefulSet.

Scale also allows users to specify one or more preconditions for the scale action.

If --current-replicas or --resource-version is specified, it is validated before the scale is attempted, and it is guaranteed that the precondition holds true when the scale is sent to the server.

Usage

\$ kubectl scale [--resource-version=version] [--current-replicas=count] --replicas=COUNT (-f FILENAME | TYPE
NAME)

Name	Shorthand	Default	Usage
all		false	Select all resources in the namespace of the specified resource
			types

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Name	Shorthand	Default	Usage
allow- missing- template- keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
current- replicas		-1	Precondition for current size. Requires that the current size of the resource match this value in order to scale.
dry-run		none	Must be "none", "server", or "client". If client strategy, only print the object that would be sent, without sending it. If server strategy, submit server-side request without persisting the resource.
filename	f	0	Filename, directory, or URL to files identifying the resource to set a new size
kustomize	k		Process the kustomization directory. This flag can't be used together with -f or -R.
output	0		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
record		false	Record current kubectl command in the resource annotation. If set to false, do not record the command. If set to true, record the command. If not set, default to updating the existing annotation value only if one already exists.
recursive	R	false	Process the directory used in -f,filename recursively. Useful when you want to manage related manifests organized within the same directory.
replicas		0	The new desired number of replicas. Required.
resource- version			Precondition for resource version. Requires that the current resource version match this value in order to scale.
selector	I		Selector (label query) to filter on, supports '=', '==', and '!='.(e.gl key1=value1,key2=value2)

Name	Shorthand	Default	Usage
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang
			templates [http://golang.org/pkg/text/template/#pkg-overview
			(http://golang.org/pkg/text/template/#pkg-overview)].
timeout		0s	The length of time to wait before giving up on a scale operation,
			zero means don't wait. Any other values should contain a
			corresponding time unit (e.g. 1s, 2m, 3h).

set

Configure application resources

These commands help you make changes to existing application resources.

Usage

\$ kubectl set SUBCOMMAND

env

Update deployment 'registry' with a new environment variable

kubectl set env deployment/registry STORAGE_DIR=/local

List the environment variables defined on a deployments 'sample-build'

kubectl set env deployment/sample-build --list

List the environment variables defined on all pods

kubectl **set** env pods --all --list

Output modified deployment in YAML, and does not alter the object on the server

kubectl set env deployment/sample-build STORAGE_DIR=/data -o yaml

Update all containers in all replication controllers in the project to have ENV=prod

kubectl set env rc --all ENV=prod

Import environment from a secret

kubectl set env --from=secret/mysecret deployment/myapp

Import environment from a config map with a prefix

kubectl set env --from=configmap/myconfigmap --prefix=MYSQL_ deployment/myapp

Import specific keys from a config map

kubectl set env --keys=my-example-key --from=configmap/myconfigmap deployment/myapp

Remove the environment variable ENV from container 'c1' in all deployment configs

kubectl set env deployments --all --containers="c1" ENV-

Remove the environment variable ENV from a deployment definition on disk and # update the deployment config on the server

kubectl set env -f deploy.json ENV-

Set some of the local shell environment into a deployment config on the server

env | grep RAILS_ | kubectl set env -e - deployment/registry

Update environment variables on a pod template.

List environment variable definitions in one or more pods, pod templates. Add, update, or remove container environment variable definitions in one or more pod templates (within replication controllers or deployment configurations). View or modify the environment variable definitions on all containers in the specified pods or pod templates, or just those that match a wildcard.

If "--env -" is passed, environment variables can be read from STDIN using the standard env syntax.

Possible resources include (case insensitive):

pod (po), replicationcontroller (rc), deployment (deploy), daemonset (ds), job, replicaset (rs)

Usage

\$ kubectl set env RESOURCE/NAME KEY_1=VAL_1 ... KEY_N=VAL_N

Name	Shorthand	Default	Usage
all		false	If true, select all resources in the namespace of the specified resource types
allow- missing- template- keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
containers	С	*	The names of containers in the selected pod templates to change - may use wildcards
dry-run		none	Must be "none", "server", or "client". If client strategy, only print the object that would be sent, without sending it. If server strategy, submit server-side request without persisting the resource.
env	е	0	Specify a key-value pair for an environment variable to set into each container.
field- manager		kubectl-set	Name of the manager used to track field ownership.
filename	f	0	Filename, directory, or URL to files the resource to update the env
from			The name of a resource from which to inject environment variables

Name	Shorthand	Default	Usage
keys		0	Comma-separated list of keys to import from specified resource
kustomize	k		Process the kustomization directory. This flag can't be used together with -f or -R.
list		false	If true, display the environment and any changes in the standard format. this flag will removed when we have kubectl view env.
local		false	If true, set env will NOT contact api-server but run locally.
output	0		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
overwrite		true	If true, allow environment to be overwritten, otherwise reject updates that overwrite existing environment.
prefix			Prefix to append to variable names
recursive	R	false	Process the directory used in -f,filename recursively. Useful when you want to manage related manifests organized within the same directory.
resolve		false	If true, show secret or configmap references when listing variables
selector	1		Selector (label query) to filter on
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].

image

Set a deployment's nginx container image to 'nginx:1.9.1', and its busybox container image to 'busybox'.

kubectl set image deployment/nginx busybox=busybox nginx=nginx:1.9.1

Update all deployments' and rc's nginx container's image to 'nginx:1.9.1'

kubectl set image deployments,rc nginx=nginx:1.9.1 --all

Update image of all containers of daemonset abc to 'nginx:1.9.1'

kubectl set image daemonset abc *=nginx:1.9.1

Print result (in yaml format) of updating nginx container image from local file, without hitting the server

kubectl set image -f path/to/file.yaml nginx=nginx:1.9.1 --local -o yaml

Update existing container image(s) of resources.

Possible resources include (case insensitive):

pod (po), replicationcontroller (rc), deployment (deploy), daemonset (ds), replicaset (rs)

Usage

\$ kubectl set image (-f FILENAME | TYPE NAME) CONTAINER_NAME_1=CONTAINER_IMAGE_1 ...
CONTAINER_NAME_N=CONTAINER_IMAGE_N

Name	Shorthand	Default	Usage
all		false	Select all resources, including uninitialized ones, in the namespace of the specified resource types
allow- missing- template- keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
dry-run		none	Must be "none", "server", or "client". If client strategy, only print the object that would be sent, without sending it. If server strategy, submit server-side request without persisting the resource.

Name	Shorthand	Default	Usage
field- manager		kubectl-set	Name of the manager used to track field ownership.
filename	f	0	Filename, directory, or URL to files identifying the resource to get from a server.
kustomize	k		Process the kustomization directory. This flag can't be used together with -f or -R.
local		false	If true, set image will NOT contact api-server but run locally.
output	0		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
record		false	Record current kubectl command in the resource annotation. If set to false, do not record the command. If set to true, record the command. If not set, default to updating the existing annotation value only if one already exists.
recursive	R	false	Process the directory used in -f,filename recursively. Useful when you want to manage related manifests organized within the same directory.
selector	I		Selector (label query) to filter on, not including uninitialized ones, supports '=', '==', and '!='.(e.gl key1=value1,key2=value2)
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].

resources

Set a deployments nginx container cpu limits to "200m" and memory to "512Mi"

kubectl set resources deployment nginx -c=nginx --limits=cpu=200m,memory=512Mi

Set the resource request and limits for all containers in nginx

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kubectl set resources deployment nginx --limits=cpu=200m,memory=512Mi --requests=cpu=100m,memory=2

Remove the resource requests for resources on containers in nginx

kubectl set resources deployment nginx --limits=cpu=0, memory=0 --requests=cpu=0, memory=0

Print the result (in yaml format) of updating nginx container limits from a local, without hitting the server

kubectl set resources -f path/to/file.yaml --limits=cpu=200m,memory=512Mi --local -o yaml

Specify compute resource requirements (cpu, memory) for any resource that defines a pod template. If a pod is successfully scheduled, it is guaranteed the amount of resource requested, but may burst up to its specified limits.

for each compute resource, if a limit is specified and a request is omitted, the request will default to the limit.

Possible resources include (case insensitive): Use "kubectl api-resources" for a complete list of supported resources..

Usage

\$ kubectl set resources (-f FILENAME | TYPE NAME) ([--limits=LIMITS & --requests=REQUESTS]

Name	Shorthand	Default	Usage
all		false	Select all resources, including uninitialized ones, in the namespace of the specified resource types
allow- missing- template- keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
containers	С	*	The names of containers in the selected pod templates to change, all containers are selected by default - may use wildcards

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Name	Shorthand	Default	Usage
dry-run		none	Must be "none", "server", or "client". If client strategy, only print the object that would be sent, without sending it. If server strategy, submit server-side request without persisting the resource.
field- manager		kubectl-set	Name of the manager used to track field ownership.
filename	f	0	Filename, directory, or URL to files identifying the resource to get from a server.
kustomize	k		Process the kustomization directory. This flag can't be used together with -f or -R.
limits			The resource requirement requests for this container. For example, 'cpu=100m,memory=256Mi'. Note that server side components may assign requests depending on the server configuration, such as limit ranges.
local		false	If true, set resources will NOT contact api-server but run locally.
output	0		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
record		false	Record current kubectl command in the resource annotation. If set to false, do not record the command. If set to true, record the command. If not set, default to updating the existing annotation value only if one already exists.
recursive	R	false	Process the directory used in -f,filename recursively. Useful when you want to manage related manifests organized within the same directory.
requests			The resource requirement requests for this container. For example, 'cpu=100m,memory=256Mi'. Note that server side components may assign requests depending on the server configuration, such as limit ranges.
selector	I		Selector (label query) to filter on, not including uninitialized ones,supports '=', '==', and '!='.(e.gl key1=value1,key2=value2)

Name	Shorthand	Default	Usage
template			Template string or path to template file to use when -o=go-
			template, -o=go-template-file. The template format is golang
			templates [http://golang.org/pkg/text/template/#pkg-overview
			(http://golang.org/pkg/text/template/#pkg-overview)].

selector

set the labels and selector before creating a deployment/service pair.

```
kubectl create service clusterip my-svc --clusterip="None" -o yaml --dry-run=client | kubectl set
kubectl create deployment my-dep -o yaml --dry-run=client | kubectl label --local -f - environment
```

Set the selector on a resource. Note that the new selector will overwrite the old selector if the resource had one prior to the invocation of 'set selector'.

A selector must begin with a letter or number, and may contain letters, numbers, hyphens, dots, and underscores, up to 63 characters. If --resource-version is specified, then updates will use this resource version, otherwise the existing resource-version will be used. Note: currently selectors can only be set on Service objects.

Usage

\$ kubectl set selector (-f FILENAME | TYPE NAME) EXPRESSIONS [--resource-version=version]

Name	Shorthand	Default	Usage
all		false	Select all resources in the namespace of the specified resource types
allow- missing- template- keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.

Name	Shorthand	Default	Usage
dry-run		none	Must be "none", "server", or "client". If client strategy, only print the object that would be sent, without sending it. If server strategy, submit server-side request without persisting the resource.
field- manager		kubectl-set	Name of the manager used to track field ownership.
filename	f		identifying the resource.
local		false	If true, annotation will NOT contact api-server but run locally.
output	0		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
record		false	Record current kubectl command in the resource annotation. If set to false, do not record the command. If set to true, record the command. If not set, default to updating the existing annotation value only if one already exists.
recursive	R	true	Process the directory used in -f,filename recursively. Useful when you want to manage related manifests organized within the same directory.
resource-			If non-empty, the selectors update will only succeed if this is the
version			current resource-version for the object. Only valid when specifying a single resource.
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].

serviceaccount

Set Deployment nginx-deployment's ServiceAccount to serviceaccount1

kubectl set serviceaccount deployment nginx-deployment serviceaccount1

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Print the result (in yaml format) of updated nginx deployment with serviceaccount from local file, without hitting apiserver

kubectl set sa -f nginx-deployment.yaml serviceaccount1 --local --dry-run=client -o yaml

Update ServiceAccount of pod template resources.

Possible resources (case insensitive) can be:

replicationcontroller (rc), deployment (deploy), daemonset (ds), job, replicaset (rs), statefulset

Usage

\$ kubectl set serviceaccount (-f FILENAME | TYPE NAME) SERVICE_ACCOUNT

Name	Shorthand	Default	Usage
all		false	Select all resources, including uninitialized ones, in the namespace of the specified resource types
allow- missing- template- keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
dry-run		none	Must be "none", "server", or "client". If client strategy, only print the object that would be sent, without sending it. If server strategy, submit server-side request without persisting the resource.
field- manager		kubectl-set	Name of the manager used to track field ownership.
filename	f	0	Filename, directory, or URL to files identifying the resource to get from a server.
kustomize	k		Process the kustomization directory. This flag can't be used together with -f or -R.

Name	Shorthand	Default	Usage
local		false	If true, set serviceaccount will NOT contact api-server but run locally.
output	0		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
record		false	Record current kubectl command in the resource annotation. If set to false, do not record the command. If set to true, record the command. If not set, default to updating the existing annotation value only if one already exists.
recursive	R	false	Process the directory used in -f,filename recursively. Useful when you want to manage related manifests organized within the same directory.
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].

subject

Update a ClusterRoleBinding for serviceaccount1

kubectl set subject clusterrolebinding admin --serviceaccount=namespace:serviceaccount1

Update a RoleBinding for user1, user2, and group1

kubectl set subject rolebinding admin --user=user1 --user=user2 --group=group1

Print the result (in yaml format) of updating rolebinding subjects from a local, without hitting the server

kubectl create rolebinding admin --role=admin --user=admin -o yaml --dry-run=client | kubectl set

Update User, Group or ServiceAccount in a RoleBinding/ClusterRoleBinding.

Usage

\$ kubectl set subject (-f FILENAME | TYPE NAME) [--user=username] [--group=groupname] [-serviceaccount=namespace:serviceaccountname] [--dry-run=server|client|none]

Name	Shorthand	Default	Usage
all		false	Select all resources, including uninitialized ones, in the namespace of the specified resource types
allow-missing- template-keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
dry-run		none	Must be "none", "server", or "client". If client strategy, only print the object that would be sent, without sending it. If server strategy, submit server-side request without persisting the resource.
field-manager		kubectl-set	Name of the manager used to track field ownership.
filename	f	0	Filename, directory, or URL to files the resource to update the subjects
group		0	Groups to bind to the role
kustomize	k		Process the kustomization directory. This flag can't be used together with -f or -R.
local		false	If true, set subject will NOT contact api-server but run locally.
output	0		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
recursive	R	false	Process the directory used in -f,filename recursively. Useful when you want to manage related manifests organized within the same directory.

Name	Shorthand	Default	Usage
selector	I		Selector (label query) to filter on, not including uninitialized ones, supports '=', '==', and '!='.(e.gl key1=value1,key2=value2)
serviceaccount			Service accounts to bind to the role
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].

wait

Wait for the pod "busybox1" to contain the status condition of type "Ready".

kubectl wait --for=condition=Ready pod/busybox1

Wait for the pod "busybox1" to be deleted, with a timeout of 60s, after having issued the "delete" command.

kubectl delete pod/busybox1
kubectl wait --for=delete pod/busybox1 --timeout=60s

Experimental: Wait for a specific condition on one or many resources.

The command takes multiple resources and waits until the specified condition is seen in the Status field of every given resource.

Alternatively, the command can wait for the given set of resources to be deleted by providing the "delete" keyword as the value to the --for flag.

A successful message will be printed to stdout indicating when the specified condition has been met. One can use -o option to change to output destination.

Usage

\$ kubectl wait ([-f FILENAME] | resource.group/resource.name | resource.group [(-l label | --all)]) [-for=delete|--for condition=available]

Name	Shorthand	Default	Usage
all		false	Select all resources in the namespace of the specified resource types
all- namespaces	A	false	If present, list the requested object(s) across all namespaces. Namespace in current context is ignored even if specified with namespace.
allow- missing- template- keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
field-selector			Selector (field query) to filter on, supports '=', '==', and '!='.(e.gfield-selector key1=value1,key2=value2). The server only supports a limited number of field queries per type.
filename	f	0	identifying the resource.
for			The condition to wait on: [delete condition=condition-name].
local		false	If true, annotation will NOT contact api-server but run locally.
output	0		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
recursive	R	true	Process the directory used in -f,filename recursively. Useful when you want to manage related manifests organized within the same directory.
selector	I		Selector (label query) to filter on, supports '=', '==', and '!='.(e.gl key1=value1,key2=value2)

Name	Shorthand	Default	Usage
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].
timeout		30s	The length of time to wait before giving up. Zero means check once and don't wait, negative means wait for a week.

WORKING WITH APPS

This section contains commands for inspecting and debugging your applications.

- logs will print the logs from the specified pod + container.
- exec can be used to get an interactive shell on a pod + container.
- describe will print debug information about the given resource.

attach

Get output from running pod mypod, using the first container by default

kubectl attach mypod

Get output from ruby-container from pod mypod

kubectl attach mypod -c ruby-container

Switch to raw terminal mode, sends stdin to 'bash' in ruby-container from pod mypod # and sends stdout/stderr from 'bash' back to the client

kubectl attach mypod -c ruby-container -i -t

Get output from the first pod of a ReplicaSet named nginx

kubectl attach rs/nginx

Attach to a process that is already running inside an existing container.

Usage

\$ kubectl attach (POD | TYPE/NAME) -c CONTAINER

Flags

Name	Shorthand	Default	Usage
container	С		Container name. If omitted, the first container in the pod will be chosen
pod-running- timeout		1m0s	The length of time (like 5s, 2m, or 3h, higher than zero) to wait until at least one pod is running
stdin	i	false	Pass stdin to the container
tty	t	false	Stdin is a TTY

auth

Inspect authorization

Usage

\$ kubectl auth

can-i

Check to see if I can create pods in any namespace

kubectl auth can-i create pods --all-namespaces

Check to see if I can list deployments in my current namespace

kubectl auth can-i list deployments.apps

Check to see if I can do everything in my current namespace ("*" means all)

kubectl auth can-i '*' '*'

Check to see if I can get the job named "bar" in namespace "foo"

kubectl auth can-i list jobs.batch/bar -n foo

Check to see if I can read pod logs

kubectl auth can-i get pods --subresource=log

Check to see if I can access the URL /logs/

kubectl auth can-i get /logs/

List all allowed actions in namespace "foo"

kubectl auth can-i --list --namespace=foo

Check whether an action is allowed.

VERB is a logical Kubernetes API verb like 'get', 'list', 'watch', 'delete', etc. TYPE is a Kubernetes resource. Shortcuts and groups will be resolved. NONRESOURCEURL is a partial URL starts with "/". NAME is the name of a particular Kubernetes resource.

Usage

\$ kubectl auth can-i VERB [TYPE | TYPE/NAME | NONRESOURCEURL]

Name	Shorthand	Default	Usage
all-namespaces	A	false	If true, check the specified action in all namespaces.

Name	Shorthand	Default	Usage
list		false	If true, prints all allowed actions.
no-headers		false	If true, prints allowed actions without headers
quiet	q	false	If true, suppress output and just return the exit code.
subresource			SubResource such as pod/log or deployment/scale

reconcile

Reconcile rbac resources from a file

kubectl auth reconcile -f my-rbac-rules.yaml

Reconciles rules for RBAC Role, RoleBinding, ClusterRole, and ClusterRole binding objects.

Missing objects are created, and the containing namespace is created for namespaced objects, if required.

Existing roles are updated to include the permissions in the input objects, and remove extra permissions if -- remove-extra-permissions is specified.

Existing bindings are updated to include the subjects in the input objects, and remove extra subjects if --remove-extra-subjects is specified.

This is preferred to 'apply' for RBAC resources so that semantically-aware merging of rules and subjects is done.

Usage

\$ kubectl auth reconcile -f FILENAME

Name	Shorthand	Default	Usage
Name	Shorthand	Default	Usage

Name	Shorthand	Default	Usage
allow- missing- template- keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
dry-run		none	Must be "none", "server", or "client". If client strategy, only print the object that would be sent, without sending it. If server strategy, submit server-side request without persisting the resource.
filename	f	0	Filename, directory, or URL to files identifying the resource to reconcile.
kustomize	k		Process the kustomization directory. This flag can't be used together with -f or -R.
output	0		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
recursive	R	false	Process the directory used in -f,filename recursively. Useful when you want to manage related manifests organized within the same directory.
remove- extra- permissions		false	If true, removes extra permissions added to roles
remove- extra- subjects		false	If true, removes extra subjects added to rolebindings
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].

CD

!!!Important Note!!! # Requires that the 'tar' binary is present in your container # image. If 'tar' is not present, 'kubectl cp' will fail. # # For advanced use cases, such as symlinks, wildcard expansion or # file mode preservation consider using 'kubectl exec'. # Copy /tmp/foo local file to /tmp/bar in a remote pod in namespace

tar cf - /tmp/foo | kubectl exec -i -n <some-namespace> <some-pod> -- tar xf - -C /tmp/bar

Copy /tmp/foo from a remote pod to /tmp/bar locally

kubectl exec -n <some-namespace> <some-pod> -- tar cf - /tmp/foo | tar xf - -C /tmp/bar

Copy /tmp/foo_dir local directory to /tmp/bar_dir in a remote pod in the default namespace

kubectl cp /tmp/foo_dir <some-pod>:/tmp/bar_dir

Copy /tmp/foo local file to /tmp/bar in a remote pod in a specific container

kubectl cp /tmp/foo <some-pod>:/tmp/bar -c <specific-container>

Copy /tmp/foo local file to /tmp/bar in a remote pod in namespace

kubectl cp /tmp/foo <some-namespace>/<some-pod>:/tmp/bar

Copy /tmp/foo from a remote pod to /tmp/bar locally

kubectl cp <some-namespace>/<some-pod>:/tmp/foo /tmp/bar

Copy files and directories to and from containers.

Usage

\$ kubectl cp <file-spec-src> <file-spec-dest>

Name	Shorthand	Default	Usage
container	С		Container name. If omitted, the first container in the pod will be chosen

Name	Shorthand	Default	Usage
no-		false	The copied file/directory's ownership and permissions will not be
preserve			preserved in the container

describe

Describe a node

kubectl describe nodes kubernetes-node-emt8.c.myproject.internal

Describe a pod

kubectl describe pods/nginx

Describe a pod identified by type and name in "pod.json"

kubectl describe -f pod.json

Describe all pods

kubectl describe pods

Describe pods by label name=myLabel

kubectl describe po -l name=myLabel

Describe all pods managed by the 'frontend' replication controller (rc-created pods # get the name of the rc as a prefix in the pod the name).

kubectl describe pods frontend

Show details of a specific resource or group of resources

Print a detailed description of the selected resources, including related resources such as events or controllers. You may select a single object by name, all objects of that type, provide a name prefix, or label selector. For example:

\$ kubectl describe TYPE NAME_PREFIX

will first check for an exact match on TYPE and NAME_PREFIX. If no such resource exists, it will output details for every resource that has a name prefixed with NAME_PREFIX.

Use "kubectl api-resources" for a complete list of supported resources.

Usage

\$ kubectl describe (-f FILENAME | TYPE [NAME_PREFIX | -l label] | TYPE/NAME)

Flags

Name	Shorthand	Default	Usage
all- namespaces	A	false	If present, list the requested object(s) across all namespaces. Namespace in current context is ignored even if specified with namespace.
filename	f	0	Filename, directory, or URL to files containing the resource to describe
kustomize	k		Process the kustomization directory. This flag can't be used together with -f or -R.
recursive	R	false	Process the directory used in -f,filename recursively. Useful when you want to manage related manifests organized within the same directory.
selector	I		Selector (label query) to filter on, supports '=', '==', and '!='.(e.gl key1=value1,key2=value2)
show-events		true	If true, display events related to the described object.

exec

Get output from running 'date' command from pod mypod, using the first container by default

kubectl exec mypod -- date

Get output from running 'date' command in ruby-container from pod mypod

kubectl exec mypod -c ruby-container -- date

Switch to raw terminal mode, sends stdin to 'bash' in ruby-container from pod mypod # and sends stdout/stderr from 'bash' back to the client

kubectl exec mypod -c ruby-container -i -t -- bash -il

List contents of /usr from the first container of pod mypod and sort by modification time. # If the command you want to execute in the pod has any flags in common (e.g. -i), # you must use two dashes (--) to separate your command's flags/arguments. # Also note, do not surround your command and its flags/arguments with quotes # unless that is how you would execute it normally (i.e., do ls -t /usr, not "ls -t /usr").

kubectl exec mypod -i -t -- ls -t /usr

Get output from running 'date' command from the first pod of the deployment mydeployment, using the first container by default

kubectl exec deploy/mydeployment -- date

Get output from running 'date' command from the first pod of the service myservice, using the first container by default

kubectl exec svc/myservice -- date

Execute a command in a container.

Usage

\$ kubectl exec (POD | TYPE/NAME) [-c CONTAINER] [flags] -- COMMAND [args...]

Name	Shorthand	Default	Usage
container	С		Container name. If omitted, the first container in the pod will
			be chosen

Name	Shorthand	Default	Usage
filename	f	0	to use to exec into the resource
pod-running- timeout		1m0s	The length of time (like 5s, 2m, or 3h, higher than zero) to wait until at least one pod is running
stdin	i	false	Pass stdin to the container
tty	t	false	Stdin is a TTY

logs

Return snapshot logs from pod nginx with only one container

kubectl logs nginx

Return snapshot logs from pod nginx with multi containers

kubectl logs nginx --all-containers=true

Return snapshot logs from all containers in pods defined by label app=nginx

kubectl logs -lapp=nginx --all-containers=true

Return snapshot of previous terminated ruby container logs from pod web-1

kubectl logs -p -c ruby web-1

Begin streaming the logs of the ruby container in pod web-1

kubectl logs -f -c ruby web-1

Begin streaming the logs from all containers in pods defined by label app=nginx

kubectl logs -f -lapp=nginx --all-containers=true

Display only the most recent 20 lines of output in pod nginx

kubectl logs --tail=20 nginx

Show all logs from pod nginx written in the last hour

kubectl logs --since=1h nginx

Show logs from a kubelet with an expired serving certificate

kubectl logs --insecure-skip-tls-verify-backend nginx

Return snapshot logs from first container of a job named hello

kubectl logs job/hello

Return snapshot logs from container nginx-1 of a deployment named nginx

kubectl logs deployment/nginx -c nginx-1

Print the logs for a container in a pod or specified resource. If the pod has only one container, the container name is optional.

Usage

\$ kubectl logs [-f] [-p] (POD | TYPE/NAME) [-c CONTAINER]

Name	Shorthand	Default	Usage
all- containers		false	Get all containers' logs in the pod(s).
container	С		Print the logs of this container
follow	f	false	Specify if the logs should be streamed.
ignore- errors		false	If watching / following pod logs, allow for any errors that occur to be non-fatal

Name	Shorthand	Default	Usage
insecure- skip-tls- verify- backend		false	Skip verifying the identity of the kubelet that logs are requested from. In theory, an attacker could provide invalid log content back. You might want to use this if your kubelet serving certificates have expired.
limit-bytes		0	Maximum bytes of logs to return. Defaults to no limit.
max-log- requests		5	Specify maximum number of concurrent logs to follow when using by a selector. Defaults to 5.
pod- running- timeout		20s	The length of time (like 5s, 2m, or 3h, higher than zero) to wait until at least one pod is running
prefix		false	Prefix each log line with the log source (pod name and container name)
previous	p	false	If true, print the logs for the previous instance of the container in a pod if it exists.
selector	1		Selector (label query) to filter on.
since		0s	Only return logs newer than a relative duration like 5s, 2m, or 3h. Defaults to all logs. Only one of since-time / since may be used.
since-time			Only return logs after a specific date (RFC3339). Defaults to all logs. Only one of since-time / since may be used.
tail		-1	Lines of recent log file to display. Defaults to -1 with no selector, showing all log lines otherwise 10, if a selector is provided.
timestamps		false	Include timestamps on each line in the log output

port-forward

Listen on ports 5000 and 6000 locally, forwarding data to/from ports 5000 and 6000 in the pod

kubectl port-forward pod/mypod 5000 6000

Listen on ports 5000 and 6000 locally, forwarding data to/from ports 5000 and 6000 in a pod selected by the deployment

kubectl port-forward deployment/mydeployment 5000 6000

Listen on ports 5000 and 6000 locally, forwarding data to/from ports 5000 and 6000 in a pod selected by the service

kubectl port-forward service/myservice 5000 6000

Listen on port 8888 locally, forwarding to 5000 in the pod

kubectl port-forward pod/mypod 8888:5000

Listen on port 8888 on all addresses, forwarding to 5000 in the pod

kubectl port-forward --address 0.0.0.0 pod/mypod 8888:5000

Listen on port 8888 on localhost and selected IP, forwarding to 5000 in the pod

kubectl port-forward --address localhost, 10.19.21.23 pod/mypod 8888:5000

Listen on a random port locally, forwarding to 5000 in the pod

kubectl port-forward pod/mypod :5000

Forward one or more local ports to a pod. This command requires the node to have 'socat' installed.

Use resource type/name such as deployment/mydeployment to select a pod. Resource type defaults to 'pod' if omitted.

If there are multiple pods matching the criteria, a pod will be selected automatically. The forwarding session ends when the selected pod terminates, and rerun of the command is needed to resume forwarding.

Usage

\$ kubectl port-forward TYPE/NAME [options] [LOCAL_PORT:]REMOTE_PORT [...[LOCAL_PORT_N:]REMOTE_PORT_N]

Name	Shorthand	Default	Usage
address		[localhost]	Addresses to listen on (comma separated). Only accepts IP addresses or localhost as a value. When localhost is supplied, kubectl will try to bind on both 127.0.0.1 and ::1 and will fail if neither of these addresses are available to bind.
pod- running- timeout		1m0s	The length of time (like 5s, 2m, or 3h, higher than zero) to wait until at least one pod is running

proxy

To proxy all of the kubernetes api and nothing else, use:

```
$ kubectl proxy --api-prefix=/
```

To proxy only part of the kubernetes api and also some static files:

```
$ kubectl proxy --www=/my/files --www-prefix=/static/ --api-prefix=/api/
```

The above lets you 'curl localhost:8001/api/v1/pods'. # To proxy the entire kubernetes api at a different root, use:

```
$ kubectl proxy --api-prefix=/custom/
```

The above lets you 'curl localhost:8001/custom/api/v1/pods' # Run a proxy to kubernetes apiserver on port 8011, serving static content from ./local/www/

```
kubectl proxy --port=8011 --www=./local/www/
```

Run a proxy to kubernetes apiserver on an arbitrary local port. # The chosen port for the server will be output to stdout.

```
kubectl proxy --port=0
```

Run a proxy to kubernetes apiserver, changing the api prefix to k8s-api # This makes e.g. the pods api available at localhost:8001/k8s-api/v1/pods/

```
kubectl proxy --api-prefix=/k8s-api
```

Creates a proxy server or application-level gateway between localhost and the Kubernetes API Server. It also allows serving static content over specified HTTP path. All incoming data enters through one port and gets forwarded to the remote kubernetes API Server port, except for the path matching the static content path.

Usage

\$ kubectl proxy [--port=PORT] [--www-static-dir] [--www-prefix=prefix] [--api-prefix=prefix]

Name	Shorthand	Default	Usage
accept- hosts		^localhost\$,^1 27.0.0.1\$,^[::1] \$	Regular expression for hosts that the proxy should accept.
accept- paths		^.*	Regular expression for paths that the proxy should accept.
address		127.0.0.1	The IP address on which to serve on.
api-prefix		1	Prefix to serve the proxied API under.
disable- filter		false	If true, disable request filtering in the proxy. This is dangerous, and can leave you vulnerable to XSRF attacks, when used with an accessible port.
keepalive		0s	keepalive specifies the keep-alive period for an active network connection. Set to 0 to disable keepalive.
port	p	8001	The port on which to run the proxy. Set to 0 to pick a random port.
reject- methods		^\$	Regular expression for HTTP methods that the proxy should reject (examplereject-methods='POST,PUT,PATCH').
reject- paths		^/api/./pods/./e xec,^/api/./pod s/./attach	Regular expression for paths that the proxy should reject. Paths specified here will be rejected even accepted by accept-paths.

Name	Shorthand	Default	Usage
unix- socket	u		Unix socket on which to run the proxy.
www	W		Also serve static files from the given directory under the specified prefix.
www- prefix	Р	/static/	Prefix to serve static files under, if static file directory is specified.

top

Display Resource (CPU/Memory/Storage) usage.

The top command allows you to see the resource consumption for nodes or pods.

This command requires Metrics Server to be correctly configured and working on the server.

Usage

\$ kubectl top

node

Show metrics for all nodes kubectl top node

Show metrics for a given node kubectl top node NODE_NAME

Display Resource (CPU/Memory/Storage) usage of nodes.

The top-node command allows you to see the resource consumption of nodes.

Usage

\$ kubectl top node [NAME | -1 label]

Flags

Name	Shorthand	Default	Usage
heapster- namespace		kube- system	Namespace Heapster service is located in
heapster-port			Port name in service to use
heapster- scheme		http	Scheme (http or https) to connect to Heapster as
heapster- service		heapster	Name of Heapster service
no-headers		false	If present, print output without headers
selector	ſ		Selector (label query) to filter on, supports '=', '==', and '!='. (e.gl key1=value1,key2=value2)
sort-by			If non-empty, sort nodes list using specified field. The field can be either 'cpu' or 'memory'.

pod

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Show metrics	ior aii	DOUS II	n me	ueraun	namesbace

kubectl top pod

Show metrics for all pods in the given namespace

kubectl top pod --namespace=NAMESPACE

Show metrics for a given pod and its containers

kubectl top pod POD_NAME --containers

Show metrics for the pods defined by label name=myLabel

kubectl top pod -l name=myLabel

Display Resource (CPU/Memory/Storage) usage of pods.

The 'top pod' command allows you to see the resource consumption of pods.

Due to the metrics pipeline delay, they may be unavailable for a few minutes since pod creation.

Usage

\$ kubectl top pod [NAME | -1 label]

Flags

Name	Shorthand	Default	Usage
all- namespaces	A	false	If present, list the requested object(s) across all namespaces. Namespace in current context is ignored even if specified with namespace.
containers		false	If present, print usage of containers within a pod.
no-headers		false	If present, print output without headers.
selector	I		Selector (label query) to filter on, supports '=', '==', and '!='.(e.gl key1=value1,key2=value2)
sort-by			If non-empty, sort pods list using specified field. The field can be either 'cpu' or 'memory'.

CLUSTER MANAGEMENT

api-versions

Print t	the	sup	ported	API	versions
---------	-----	-----	--------	------------	----------

kubectl api-versions

Print the supported API versions on the server, in the form of "group/version"

Usage

\$ kubectl api-versions

certificate

Modify certificate resources.

Usage

\$ kubectl certificate SUBCOMMAND

approve

Approve a certificate signing request.

kubectl certificate approve allows a cluster admin to approve a certificate signing request (CSR). This action tells a certificate signing controller to issue a certificate to the requestor with the attributes requested in the CSR.

SECURITY NOTICE: Depending on the requested attributes, the issued certificate can potentially grant a requester access to cluster resources or to authenticate as a requested identity. Before approving a CSR, ensure you understand what the signed certificate can do.

Usage

\$ kubectl certificate approve (-f FILENAME | NAME)

Flags

Name	Shorthand	Default	Usage
allow- missing- template- keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
filename	f	0	Filename, directory, or URL to files identifying the resource to update
force		false	Update the CSR even if it is already approved.
kustomize	k		Process the kustomization directory. This flag can't be used together with -f or -R.
output	0		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
recursive	R	false	Process the directory used in -f,filename recursively. Useful when you want to manage related manifests organized within the same directory.
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].

deny

Deny a certificate signing request.

kubectl certificate deny allows a cluster admin to deny a certificate signing request (CSR). This action tells a certificate signing controller to not to issue a certificate to the requestor.

Usage

\$ kubectl certificate deny (-f FILENAME | NAME)

Flags

Name	Shorthand	Default	Usage
allow- missing- template- keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
filename	f	0	Filename, directory, or URL to files identifying the resource to update
force		false	Update the CSR even if it is already denied.
kustomize	k		Process the kustomization directory. This flag can't be used together with -f or -R.
output	0		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
recursive	R	false	Process the directory used in -f,filename recursively. Useful when you want to manage related manifests organized within the same directory.
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].

cluster-info

Print the address of the master and cluster services

kubectl cluster-info

Display addresses of the master and services with label kubernetes.io/cluster-service=true To further debug and diagnose cluster problems, use 'kubectl cluster-info dump'.

Usage

\$ kubectl cluster-info

dump

Dump current cluster state to stdout

kubectl cluster-info dump

Dump current cluster state to /path/to/cluster-state

kubectl cluster-info dump --output-directory=/path/to/cluster-state

Dump all namespaces to stdout

kubectl cluster-info dump --all-namespaces

Dump a set of namespaces to /path/to/cluster-state

 $kubectl \ \textbf{cluster} - info \ dump \ --namespaces \ \textbf{default}, \\ kube-\textbf{system} \ --output-directory = /path/to/\textbf{cluster} - standard --output-directory = /path/to/\textbf{clust$

Dumps cluster info out suitable for debugging and diagnosing cluster problems. By default, dumps everything to stdout. You can optionally specify a directory with --output-directory. If you specify a directory, kubernetes will build a set of files in that directory. By default only dumps things in the 'kube-system' namespace, but you can switch to a different namespace with the --namespaces flag, or specify --all-namespaces to dump all namespaces.

The command also dumps the logs of all of the pods in the cluster, these logs are dumped into different directories based on namespace and pod name.

Usage

\$ kubectl cluster-info dump

Flags

Name	Shorthand	Default	Usage
all- namespaces	А	false	If true, dump all namespaces. If true,namespaces is ignored.
allow- missing- template- keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
namespaces		0	A comma separated list of namespaces to dump.
output	0	json	Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
output- directory			Where to output the files. If empty or '-' uses stdout, otherwise creates a directory hierarchy in that directory
pod-running- timeout		20s	The length of time (like 5s, 2m, or 3h, higher than zero) to wait until at least one pod is running
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].

cordon

Mark node "foo" as unschedulable.

kubectl cordon foo

Mark node as unschedulable.

Usage

\$ kubectl cordon NODE

Flags

Name	Shorthand	Default	Usage
dry-run		none	Must be "none", "server", or "client". If client strategy, only print the object that would be sent, without sending it. If server strategy, submit server-side request without persisting the resource.
selector	1		Selector (label query) to filter on

drain

Drain node "foo", even if there are pods not managed by a ReplicationController, ReplicaSet, Job, DaemonSet or StatefulSet on it.

\$ kubectl drain foo --force

As above, but abort if there are pods not managed by a ReplicationController, ReplicaSet, Job, DaemonSet or StatefulSet, and use a grace period of 15 minutes.

\$ kubectl drain foo --grace-period=900

Drain node in preparation for maintenance.

The given node will be marked unschedulable to prevent new pods from arriving. 'drain' evicts the pods if the APIServer supports http://kubernetes.io/docs/admin/disruptions/ (http://kubernetes.io/docs/admin/disruptions/). Otherwise, it will use normal DELETE to delete the pods. The 'drain' evicts or deletes all pods except mirror pods (which cannot be deleted through the API server). If there are DaemonSet-managed pods, drain will not proceed without --ignore-daemonsets, and regardless it will not delete any DaemonSet-managed pods, because those pods would be immediately replaced by the DaemonSet controller, which ignores unschedulable markings. If there are any pods that are neither mirror pods nor managed by ReplicationController, ReplicaSet, DaemonSet, StatefulSet or Job, then drain will not delete any pods unless you use --force. --force will also allow deletion to proceed if the managing resource of one or more pods is missing.

'drain' waits for graceful termination. You should not operate on the machine until the command completes.

When you are ready to put the node back into service, use kubectl uncordon, which will make the node schedulable again.

http://kubernetes.io/images/docs/kubectl_drain.svg (http://kubernetes.io/images/docs/kubectl_drain.svg)

Usage

\$ kubectl drain NODE

Name	Shorthand	Default	Usage
delete-local- data		false	Continue even if there are pods using emptyDir (local data that will be deleted when the node is drained).
disable- eviction		false	Force drain to use delete, even if eviction is supported. This will bypass checking PodDisruptionBudgets, use with caution.
dry-run		none	Must be "none", "server", or "client". If client strategy, only print the object that would be sent, without sending it. If server strategy, submit server-side request without persisting the resource.
force		false	Continue even if there are pods not managed by a ReplicationController, ReplicaSet, Job, DaemonSet or StatefulSet.
grace- period		-1	Period of time in seconds given to each pod to terminate gracefully. If negative, the default value specified in the pod will be used.
ignore- daemonsets		false	Ignore DaemonSet-managed pods.
pod- selector			Label selector to filter pods on the node
selector	I		Selector (label query) to filter on

Shorthand	Default	Usage
	0	If pod DeletionTimestamp older than N seconds, skip waiting
		for the pod. Seconds must be greater than 0 to skip.
	0s	The length of time to wait before giving up, zero means infinite
	Shorthand	0

taint

Update node 'foo' with a taint with key 'dedicated' and value 'special-user' and effect 'NoSchedule'. # If a taint with that key and effect already exists, its value is replaced as specified.

kubectl taint nodes foo dedicated=special-user:NoSchedule

Remove from node 'foo' the taint with key 'dedicated' and effect 'NoSchedule' if one exists.

kubectl taint nodes foo dedicated: NoSchedule-

Remove from node 'foo' all the taints with key 'dedicated'

kubectl taint nodes foo dedicated-

Add a taint with key 'dedicated' on nodes having label mylabel=X

kubectl taint node -1 myLabel=X dedicated=foo:PreferNoSchedule

Add to node 'foo' a taint with key 'bar' and no value

kubectl taint nodes foo bar:NoSchedule

Update the taints on one or more nodes.

- · A taint consists of a key, value, and effect. As an argument here, it is expressed as key=value:effect.
- The key must begin with a letter or number, and may contain letters, numbers, hyphens, dots, and underscores, up to 253 characters.
- Optionally, the key can begin with a DNS subdomain prefix and a single '/', like example.com/my-app

- The value is optional. If given, it must begin with a letter or number, and may contain letters, numbers, hyphens, dots, and underscores, up to 63 characters.
- The effect must be NoSchedule, PreferNoSchedule or NoExecute.
- Currently taint can only apply to node.

Usage

\$ kubectl taint NODE NAME KEY_1=VAL_1:TAINT_EFFECT_1 ... KEY_N=VAL_N:TAINT_EFFECT_N

Name	Shorthand	Default	Usage
all		false	Select all nodes in the cluster
allow- missing- template- keys		true	If true, ignore any errors in templates when a field or map key is missing in the template. Only applies to golang and jsonpath output formats.
dry-run		none	Must be "none", "server", or "client". If client strategy, only print the object that would be sent, without sending it. If server strategy, submit server-side request without persisting the resource.
field- manager		kubectl- taint	Name of the manager used to track field ownership.
output	0		Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
overwrite		false	If true, allow taints to be overwritten, otherwise reject taint updates that overwrite existing taints.
selector	I		Selector (label query) to filter on, supports '=', '==', and '!='.(e.gl key1=value1,key2=value2)

Name	Shorthand	Default	Usage
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].
validate		true	If true, use a schema to validate the input before sending it

uncordon

Mark node "foo" as schedulable.

\$ kubectl uncordon foo

Mark node as schedulable.

Usage

\$ kubectl uncordon NODE

Flags

Name	Shorthand	Default	Usage
dry-run		none	Must be "none", "server", or "client". If client strategy, only print the object that would be sent, without sending it. If server strategy, submit server-side request without persisting the resource.
selector	1		Selector (label query) to filter on

KUBECTL SETTINGS AND USAGE

alpha

These commands correspond to alpha features that are not enabled in Kubernetes clusters by default.

Usage

\$ kubectl alpha

debug

Create an interactive debugging session in pod mypod and immediately attach to it. # (requires the EphemeralContainers feature to be enabled in the cluster)

kubectl alpha debug mypod -it --image=busybox

Create a debug container named debugger using a custom automated debugging image. # (requires the EphemeralContainers feature to be enabled in the cluster)

kubectl alpha debug --image=myproj/debug-tools -c debugger mypod

Create a debug container as a copy of the original Pod and attach to it

kubectl alpha debug mypod -it --image=busybox --copy-to=my-debugger

Create a copy of mypod named my-debugger with my-container's image changed to busybox

kubectl alpha debug mypod --image=busybox --container=my-container --copy-to=my-debugger -- sleep

Create an interactive debugging session on a node and immediately attach to it. # The container will run in the host namespaces and the host's filesystem will be mounted at /host

kubectl alpha debug node/mynode -it --image=busybox

Debug cluster resources using interactive debugging containers.

'debug' provides automation for common debugging tasks for cluster objects identified by resource and name. Pods will be used by default if resource is not specified.

The action taken by 'debug' varies depending on what resource is specified. Supported actions include:

- Workload: Create a copy of an existing pod with certain attributes changed, for example changing the image tag to a new version.
- Workload: Add an ephemeral container to an already running pod, for example to add debugging utilities without restarting the pod.
- Node: Create a new pod that runs in the node's host namespaces and can access the node's filesystem.
 Alpha disclaimer: command line flags may change

Usage

\$ kubectl alpha debug NAME --image=image [-- COMMAND [args...]]

Name	Shorthand	Default	Usage
arguments- only		false	If specified, everything after will be passed to the new container as Args instead of Command.
attach		false	If true, wait for the container to start running, and then attach as if 'kubectl attach' were called. Default false, unless '-i/stdin' is set, in which case the default is true.
container	С		Container name to use for debug container.
copy-to			Create a copy of the target Pod with this name.
env		0	Environment variables to set in the container.
image			Container image to use for debug container.
image-pull- policy		IfNotPrese nt	The image pull policy for the container.
quiet		false	If true, suppress informational messages.
replace		false	When used with 'copy-to', delete the original Pod

Name	Shorthand	Default	Usage
same-node		false	When used with 'copy-to', schedule the copy of target Pod on the same node.
share- processes		true	When used with 'copy-to', enable process namespace sharing in the copy.
stdin	i	false	Keep stdin open on the container(s) in the pod, even if nothing is attached.
target			When debugging a pod, target processes in this container name.
tty	t	false	Allocate a TTY for the debugging container.

api-resources

Print the supported API Resources

kubectl api-resources

Print the supported API Resources with more information

kubectl api-resources -o wide

Print the supported API Resources sorted by a column

kubectl api-resources --sort-by=name

Print the supported namespaced resources

kubectl api-resources --namespaced=true

Print the supported non-namespaced resources

kubectl api-resources --namespaced=false

Print the supported API Resources with specific APIGroup

kubectl api-resources --api-group=extensions

Print the supported API resources on the server

Usage

\$ kubectl api-resources

Flags

Name	Shorthand	Default	Usage
api-group			Limit to resources in the specified API group.
cached		false	Use the cached list of resources if available.
namespaced		true	If false, non-namespaced resources will be returned, otherwise returning namespaced resources by default.
no-headers		false	When using the default or custom-column output format, don't print headers (default print headers).
output	0		Output format. One of: wide name.
sort-by			If non-empty, sort list of resources using specified field. The field can be either 'name' or 'kind'.
verbs		0	Limit to resources that support the specified verbs.

completion

Installing bash completion on macOS using homebrew ## If running Bash 3.2 included with macOS

brew install bash-completion

or, if running Bash 4.1+

brew install bash-completion@2

If kubectl is installed via homebrew, this should start working immediately. ## If you've installed via other means, you may need add the completion to your completion directory

```
kubectl completion bash > $(brew --prefix)/etc/bash_completion.d/kubectl
```

Installing bash completion on Linux ## If bash-completion is not installed on Linux, please install the 'bash-completion' package ## via your distribution's package manager. ## Load the kubectl completion code for bash into the current shell

```
source <(kubectl completion bash)</pre>
```

Write bash completion code to a file and source if from .bash profile

```
kubectl completion bash > ~/.kube/completion.bash.inc
printf "
```

Kubectl shell completion

```
source '$HOME/.kube/completion.bash.inc'
" >> $HOME/.bash_profile
source $HOME/.bash_profile
```

Load the kubectl completion code for zsh[1] into the current shell

```
source <(kubectl completion zsh)</pre>
```

Set the kubectl completion code for zsh[1] to autoload on startup

```
kubectl completion zsh > "${fpath[1]}/_kubectl"
```

Output shell completion code for the specified shell (bash or zsh). The shell code must be evaluated to provide interactive completion of kubectl commands. This can be done by sourcing it from the .bash profile.

Detailed instructions on how to do this are available here: https://kubernetes.io/docs/tasks/tools/install-kubectl/#enabling-shell-autocompletion (https://kubernetes.io/docs/tasks/tools/install-kubectl/#enabling-shell-autocompletion)

Note for zsh users: [1] zsh completions are only supported in versions of zsh >= 5.2

Usage

\$ kubectl completion SHELL

config

Modify kubeconfig files using subcommands like "kubectl config set current-context my-context"

The loading order follows these rules:

- 1. If the --kubeconfig flag is set, then only that file is loaded. The flag may only be set once and no merging takes place.
- 2. If \$KUBECONFIG environment variable is set, then it is used as a list of paths (normal path delimiting rules for your system). These paths are merged. When a value is modified, it is modified in the file that defines the stanza. When a value is created, it is created in the first file that exists. If no files in the chain exist, then it creates the last file in the list.
- 3. Otherwise, \${HOME}/.kube/config is used and no merging takes place.

Usage

\$ kubectl config SUBCOMMAND

current-context

Display the current-context

kubectl config current-context

Displays the current-context

Usage

\$ kubectl config current-context

delete-cluster

Delete the minikube cluster

kubectl config delete-cluster minikube

Delete the specified cluster from the kubeconfig

Usage

\$ kubectl config delete-cluster NAME

delete-context

Delete the context for the minikube cluster

kubectl config delete-context minikube

Delete the specified context from the kubeconfig

Usage

\$ kubectl config delete-context NAME

get-clusters

List the clusters kubectl knows about

kubectl config get-clusters

Display clusters defined in the kubeconfig.

Usage

\$ kubectl config get-clusters

get-contexts

List all the contexts in your kubeconfig file

kubectl config get-contexts

Describe one context in your kubeconfig file.

kubectl config get-contexts my-context

Displays one or many contexts from the kubeconfig file.

Usage

\$ kubectl config get-contexts [(-o|--output=)name)]

Flags

Name	Shorthand	Default	Usage
no- headers		false	When using the default or custom-column output format, don't print headers (default print headers).
output	0		Output format. One of: name

rename-context

Rename the context 'old-name' to 'new-name' in your kubeconfig file

kubectl config rename-context old-name new-name

Renames a context from the kubeconfig file.

CONTEXT NAME is the context name that you wish to change.

NEW NAME is the new name you wish to set.

Note: In case the context being renamed is the 'current-context', this field will also be updated.

Usage

\$ kubectl config rename-context CONTEXT_NAME NEW_NAME

set

Set server field on the my-cluster cluster to https://1.2.3.4 (https://1.2.3.4)

kubectl config set clusters.my-cluster.server https://1.2.3.4

Set certificate-authority-data field on the my-cluster cluster.

kubectl config set clusters.my-cluster.certificate-authority-data \$(echo "cert_data_here" | base64

Set cluster field in the my-context context to my-cluster.

kubectl config set contexts.my-context.cluster my-cluster

Set client-key-data field in the cluster-admin user using --set-raw-bytes option.

kubectl config set users.cluster-admin.client-key-data cert_data_here --set-raw-bytes=true

Sets an individual value in a kubeconfig file

PROPERTY_NAME is a dot delimited name where each token represents either an attribute name or a map key. Map keys may not contain dots.

PROPERTY_VALUE is the new value you wish to set. Binary fields such as 'certificate-authority-data' expect a base64 encoded string unless the --set-raw-bytes flag is used.

Specifying a attribute name that already exists will merge new fields on top of existing values.

Usage

\$ kubectl config set PROPERTY_NAME PROPERTY_VALUE

Flags

Name	Shorthand	Default	Usage
set-raw-		false	When writing a []byte PROPERTY_VALUE, write the given string
bytes			directly without base64 decoding.

set-cluster

Set only the server field on the e2e cluster entry without touching other values.

kubectl config set-cluster e2e --server=https://1.2.3.4

Embed certificate authority data for the e2e cluster entry

kubectl config set-cluster e2e --embed-certs **--certificate-authority**=~/.kube/e2e/kubernetes.ca.crt

Disable cert checking for the dev cluster entry

kubectl config set-cluster e2e --insecure-skip-tls-verify=true

Set custom TLS server name to use for validation for the e2e cluster entry

kubectl config set-cluster e2e --tls-server-name=my-cluster-name

Sets a cluster entry in kubeconfig.

Specifying a name that already exists will merge new fields on top of existing values for those fields.

Usage

\$ kubectl config set-cluster NAME [--server=server] [--certificate-authority=path/to/certificate/authority]
[--insecure-skip-tls-verify=true] [--tls-server-name=example.com]

Flags

Name	Shorthand	Default	Usage
embed-certs		false	embed-certs for the cluster entry in kubeconfig

set-context

Set the user field on the gce context entry without touching other values

kubectl config set-context gce --user=cluster-admin

Sets a context entry in kubeconfig

Specifying a name that already exists will merge new fields on top of existing values for those fields.

Usage

\$ kubectl config set-context [NAME | --current] [--cluster=cluster_nickname] [--user=user_nickname] [-namespace=namespace]

Flags

Name	Shorthand	Default	Usage
current		false	Modify the current context

set-credentials

Set only the "client-key" field on the "cluster-admin" # entry, without touching other values:

kubectl config set-credentials cluster-admin --client-key=~/.kube/admin.key

Set basic auth for the "cluster-admin" entry

kubectl config set-credentials cluster-admin --username=admin --password=uXFGweU9135qcif

Embed client certificate data in the "cluster-admin" entry

kubectl config set-credentials cluster-admin --client-certificate=~/.kube/admin.crt --embed-certs=

Enable the Google Compute Platform auth provider for the "cluster-admin" entry

kubectl config set-credentials cluster-admin --auth-provider=gcp

Enable the OpenID Connect auth provider for the "cluster-admin" entry with additional args

kubectl config set-credentials cluster-admin --auth-provider=oidc --auth-provider-arg=client-id=fc

Remove the "client-secret" config value for the OpenID Connect auth provider for the "cluster-admin" entry

kubectl config set-credentials cluster-admin --auth-provider=oidc --auth-provider-arg=client-secre

Enable new exec auth plugin for the "cluster-admin" entry

kubectl config set-credentials cluster-admin --exec-command=/path/to/the/executable --exec-api-ver

Define new exec auth plugin args for the "cluster-admin" entry

kubectl config set-credentials cluster-admin --exec-arg=arg1 --exec-arg=arg2

Create or update exec auth plugin environment variables for the "cluster-admin" entry

kubectl config set-credentials cluster-admin --exec-env=key1=val1 --exec-env=key2=val2

Remove exec auth plugin environment variables for the "cluster-admin" entry

kubectl config set-credentials cluster-admin --exec-env=var-to-remove-

Sets a user entry in kubeconfig

Specifying a name that already exists will merge new fields on top of existing values.

Client-certificate flags: --client-certificate=certfile --client-key=keyfile

Bearer token flags: --token=bearer_token

Basic auth flags: --username=basic_user --password=basic_password

Bearer token and basic auth are mutually exclusive.

Usage

\$ kubectl config set-credentials NAME [--client-certificate=path/to/certfile] [--client-key=path/to/keyfile]
[--token=bearer_token] [--username=basic_user] [--password=basic_password] [--auth-provider=provider_name] [--auth-provider-arg=key=value] [--exec-command=exec_command] [--exec-api-version=exec_api_version] [--exec-arg=arg] [--exec-env=key=value]

Name	Shorthand	Default	Usage
auth- provider			Auth provider for the user entry in kubeconfig
auth- provider-arg		0	'key=value' arguments for the auth provider
embed-certs		false	Embed client cert/key for the user entry in kubeconfig
exec-api- version			API version of the exec credential plugin for the user entry in kubeconfig
exec-arg		0	New arguments for the exec credential plugin command for the user entry in kubeconfig

Name	Shorthand	Default	Usage
exec- command			Command for the exec credential plugin for the user entry in kubeconfig
exec-env		0	'key=value' environment values for the exec credential plugin

unset

Unset the current-context.

kubectl config unset current-context

Unset namespace in foo context.

kubectl config unset contexts.foo.namespace

Unsets an individual value in a kubeconfig file

PROPERTY_NAME is a dot delimited name where each token represents either an attribute name or a map key. Map keys may not contain dots.

Usage

\$ kubectl config unset PROPERTY_NAME

use-context

Use the context for the minikube cluster

kubectl config use-context minikube

Sets the current-context in a kubeconfig file

Usage

\$ kubectl config use-context CONTEXT_NAME

view

Show merged kubeconfig settings.

kubectl config view

Show merged kubeconfig settings and raw certificate data.

kubectl config view --raw

Get the password for the e2e user

kubectl config view -o jsonpath='{.users[?(@.name == "e2e")].user.password}'

Display merged kubeconfig settings or a specified kubeconfig file.

You can use --output jsonpath={...} to extract specific values using a jsonpath expression.

Usage

\$ kubectl config view

Name	Shorthand	Default	Usage
allow-		true	If true, ignore any errors in templates when a field or map key is
missing-			missing in the template. Only applies to golang and jsonpath
template-			output formats.
keys			

Name	Shorthand	Default	Usage
flatten		false	Flatten the resulting kubeconfig file into self-contained output (useful for creating portable kubeconfig files)
merge		true	Merge the full hierarchy of kubeconfig files
minify		false	Remove all information not used by current-context from the output
output	0	yaml	Output format. One of: json yaml name go-template go-template-file template templatefile jsonpath jsonpath-as-json jsonpath-file.
raw		false	Display raw byte data
template			Template string or path to template file to use when -o=go-template, -o=go-template-file. The template format is golang templates [http://golang.org/pkg/text/template/#pkg-overview (http://golang.org/pkg/text/template/#pkg-overview)].

explain

Get the documentation of the resource and its fields

kubectl explain pods

Get the documentation of a specific field of a resource

kubectl explain pods.spec.containers

List the fields for supported resources

This command describes the fields associated with each supported API resource. Fields are identified via a simple JSONPath identifier:

<type>.<fieldName>[.<fieldName>]

Add the --recursive flag to display all of the fields at once without descriptions. Information about each field is retrieved from the server in OpenAPI format.

Use "kubectl api-resources" for a complete list of supported resources.

Usage

\$ kubectl explain RESOURCE

Flags

Name	Shorthand	Default	Usage
api-version			Get different explanations for particular API version
recursive		false	Print the fields of fields (Currently only 1 level deep)

options

Print flags inherited by all commands

kubectl options

Print the list of flags inherited by all commands

Usage

\$ kubectl options

plugin

Provides utilities for interacting with plugins.

Plugins provide extended functionality that is not part of the major command-line distribution. Please refer to the documentation and examples for more information about how write your own plugins.

The easiest way to discover and install plugins is via the kubernetes sub-project krew. To install krew, visit https://github.com/kubernetes-sigs/krew/#installation (https://github.com/kubernetes-sigs/krew/#installation)

Usage

\$ kubectl plugin [flags]

list

List all available plugin files on a user's PATH.

Available plugin files are those that are: - executable - anywhere on the user's PATH - begin with "kubectl-"

Usage

\$ kubectl plugin list

Flags

Name	Shorthand	Default	Usage
name- only		false	If true, display only the binary name of each plugin, rather than its full path

version

Print the client and server versions for the current context

kubectl version

Print the client and server version information for the current context

Usage

\$ kubectl version

Name	Shorthand	Default	Usage
client		false	If true, shows client version only (no server required).
output	O		One of 'yaml' or 'json'.
short		false	If true, print just the version number.