

Kubectl Autocomplete

```
# setup autocomplete in bash
```

Kubectl Autocomplete (cont)

```
source <(kubectl completion bash)
```

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Kubectl Autocomplete (cont)

```
# setup autocomplete in zsh
```

Kubectl Autocomplete (cont)

```
source <(kubectl completion zsh)
```

Kubectl Context and Configuration

```
# Show Merged kubeconfig settings.
```



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Kubectl Context and Configuration (cont)

kubectl config view

Kubectl Context and Configuration (cont)

```
# use multiple kubeconfig files at the same time  
and view merged config
```

Kubectl Context and Configuration (cont)

```
KUBECONFIG=~/.kube/config:~/.kube/kubconfig  
2 kubectl config view
```



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Kubectl Context and Configuration (cont)

Get the password for the e2e user

Kubectl Context and Configuration (cont)

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

Kubectl Context and Configuration (cont)

Display the current-context

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Kubectl Context and Configuration (cont)

```
kubectl config current-context
```

Kubectl Context and Configuration (cont)

```
# set the default context to my-cluster-name
```

Kubectl Context and Configuration (cont)

```
kubectl config use-context my-cluster-name
```



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Kubectl Context and Configuration (cont)

```
# add a new cluster to your kubeconf that
supports basic auth
```

Kubectl Context and Configuration (cont)

```
kubectl config set-credentials
kubeuser/foo.kubernetes.com --
username=kubeuser --
password=kubepassword
```

Kubectl Context and Configuration (cont)

```
set a context utilizing a specific username and
namespace.
```

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Kubectl Context and Configuration (cont)

```
kubectl config set-context gce --  
user=cluster-admin --namespace=foo  
&& kubectl config use-context gce
```

Updating Resources

```
# Rolling update pods of frontend-v1
```

Updating Resources (cont)

```
kubectl rolling-update frontend-v1 -f  
frontend-v2.json
```



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Updating Resources (cont)

```
# Change the name of the resource and update  
the image
```

Updating Resources (cont)

```
kubectl rolling-update frontend-v1 frontend-v2 --  
image=image:v2
```

Updating Resources (cont)

```
# Update the pods image of frontend
```

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Updating Resources (cont)

```
kubectl rolling-update frontend --  
image=image:v2
```

Updating Resources (cont)

```
# Abort existing rollout in progress
```

Updating Resources (cont)

```
kubectl rolling-update frontend-v1 frontend-v2 --  
rollback
```



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Updating Resources (cont)

```
# Replace a pod based on the JSON passed  
into stdin
```

Updating Resources (cont)

```
cat pod.json | kubectl replace -f -
```

Updating Resources (cont)

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Updating Resources (cont)

Force replace, delete and then re-create the resource. Will cause a service outage.

Updating Resources (cont)

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

Updating Resources (cont)



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Updating Resources (cont)

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

Updating Resources (cont)

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

Updating Resources (cont)



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Updating Resources (cont)

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

Updating Resources (cont)

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

Updating Resources (cont)



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Updating Resources (cont)

Add a Label

Updating Resources (cont)

```
kubectl label pods my-pod new-label=awesome
```

Updating Resources (cont)

Add an annotation

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Updating Resources (cont)

```
kubectl annotate pods my-pod icon-  
url=http://goo.gl/XXBTWq
```

Updating Resources (cont)

```
# Auto scale a deployment "foo"
```

Updating Resources (cont)

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



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Creating Objects

```
# create resource(s)
```

Creating Objects (cont)

```
kubectl create -f ./my-manifest.yaml
```

Creating Objects (cont)

```
# create from multiple files
```



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Creating Objects (cont)

```
kubectl create -f ./my1.yaml -f ./my2.yaml
```

Creating Objects (cont)

```
# create resource(s) in all manifest files in dir
```

Creating Objects (cont)

```
kubectl create -f ./dir
```



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Creating Objects (cont)

```
# create resource(s) from url
```

Creating Objects (cont)

```
kubectl create -f https://git.io/vPieo
```

Creating Objects (cont)

```
# start a single instance of nginx
```



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Creating Objects (cont)

```
kubectl run nginx --image=nginx
```

Creating Objects (cont)

```
# get the documentation for pod and svc manifests
```

Creating Objects (cont)

```
kubectl explain pods,svc
```

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Creating Objects (cont)

Create multiple YAML objects from stdin

Creating Objects (cont)

```
cat <<EOF | kubectl create -f -
apiVersion: v1
kind: Pod
metadata:
  name: busybox-sleep
spec:
  containers:
  - name: busybox
    image: busybox
    args:
    - sleep
    - "1000000"
---
apiVersion: v1
kind: Pod
metadata:
  name: busybox-sleep-less
spec:
  containers:
  - name: busybox
    image: busybox
    args:
    - sleep
    - "1000"
EOF
```

Creating Objects (cont)

Create a secret with several keys



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Creating Objects (cont)

```
cat <<EOF | kubectl create -f -
apiVersion: v1
kind: Secret
metadata:
  name: mysecret
type: Opaque
data:
  password: $(echo "s33msi4" | base64)
  username: $(echo "jane" | base64)
EOF
```

Viewing, Finding Resources

```
# List all services in the namespace
```

Viewing, Finding Resources (cont)

```
kubectl get services
```



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Viewing, Finding Resources (cont)

List all pods in all namespaces

Viewing, Finding Resources (cont)

```
kubectl get pods --all-namespaces
```

Viewing, Finding Resources (cont)

List all pods in the namespace, with more details

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Viewing, Finding Resources (cont)

kubectl get pods -o wide

Viewing, Finding Resources (cont)

List a particular deployment

Viewing, Finding Resources (cont)

kubectl get deployment my-dep

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Viewing, Finding Resources (cont)

Describe commands with verbose output

Viewing, Finding Resources (cont)

kubectl describe nodes my-node
kubectl describe pods my-pod

Viewing, Finding Resources (cont)

List Services Sorted by Name

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Viewing, Finding Resources (cont)

```
kubectl get services --sort-by=.metadata.name
```

Viewing, Finding Resources (cont)

```
# List pods Sorted by Restart Count
```

Viewing, Finding Resources (cont)

```
kubectl get pods --sort-by='.status.containerStatuses[0].restartCount'
```



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Viewing, Finding Resources (cont)

```
# Get the version label of all pods with label  
app=cassandra
```

Viewing, Finding Resources (cont)

```
kubectl get pods --selector=app=cassandra rc -  
o \'  
jsonpath='{.items[*].metadata.labels.version}'
```

Viewing, Finding Resources (cont)

```
# Get ExternalIPs of all nodes
```

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Viewing, Finding Resources (cont)

```
kubectl get nodes -o
jsonpath='{.items[*].status.addresses[?(@.type=="ExternalIP")].address}'
```

Viewing, Finding Resources (cont)

```
# List Names of Pods that belong to Particular
RC
```

Viewing, Finding Resources (cont)

```
# "jq" command useful for transformations that
are too complex for jsonpath
```



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Viewing, Finding Resources (cont)

```
sel=${$(kubectl get rc my-rc --output=json | jq -j
'.spec.selector | to_entries | .[] | "\(.key)=\
(.value),")%?}
echo $(kubectl get pods --selector=$sel --
output=jsonpath={.items..metadata.name})
```

Viewing, Finding Resources (cont)

Check which nodes are ready

Viewing, Finding Resources (cont)

```
JSONPATH='{range .items[]}
{@.metadata.name}:{range
@.status.conditions[]}{@.type}={@.status};
{end}{end}' \
&& kubectl get nodes -o
jsonpath=$JSONPATH | grep "Ready=True"
```

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