Kubernetes Commands Cheatsheet

DigiTalk

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DigiTalk Channel: https://www.youtube.com/channel/UCCGTnI9vvF_ETMhGUXGdFWw
Playlists: https://www.youtube.com/@digitalk.middleware/playlists
Weblogic Server Architecture: https://youtu.be/gNqeIfLjUqw

DigiTalk Udemy Courses and Coupon Code

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Coupon Code: C18706747898A6D0C132

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General Commands

Get Current Context

kubectl config current-context

Displays the current Kubernetes context.

Set Context

kubectl config use-context <context-name>

Switches to a different Kubernetes context.

Namespace Management

Create a Namespace

kubectl create namespace <namespace-name>

Creates a new namespace.

List All Namespaces

kubectl get namespaces

Lists all namespaces in the cluster.

Set Current Namespace

kubectl config set-context --current --namespace=<namespace-name>

Sets the default namespace for the current context.

Get Pods in a Specific Namespace

kubectl get pods -n <namespace-name>

Lists all pods in a specific namespace.

Get Services in a Specific Namespace

kubectl get services -n <namespace-name>

Lists all services in a specific namespace.

Delete a Namespace

kubectl delete namespace <namespace-name>

Deletes a specific namespace.

Pod Management

Create a Pod

kubectl run <pod-name> --image=<image-name>

Creates a new pod with the specified image.

List All Pods

kubectl get pods

Lists all pods in the current namespace.

Describe a Pod

kubectl describe pod <pod-name>

Displays detailed information about a specific pod.

Delete a Pod

kubectl delete pod <pod-name>

Deletes a specific pod.

Exec into a Pod

kubectl exec -it <pod-name> -- <command>

Executes a command inside a running pod.

Get Pods with Label Selector

kubectl get pods -l <label-key>=<label-value>

Lists pods matching a specific label.

Deployment Management

Create a Deployment

kubectl create deployment <deployment-name> --image=<image-name>

Creates a deployment with the specified image.

List All Deployments

kubectl get deployments

Lists all deployments in the current namespace.

Describe a Deployment

kubectl describe deployment <deployment-name>

Displays detailed information about a specific deployment.

Update a Deployment

kubectl set image deployment/<deployment-name> <container-name>=<new-image>

Updates the image of a deployment.

Roll Back a Deployment

kubectl rollout undo deployment/<deployment-name>

Rolls back a deployment to a previous version.

Check Deployment Status

kubectl rollout status deployment/<deployment-name>

Checks the status of a deployment rollout.

Service Management

Expose a Deployment as a Service

kubectl expose deployment <deployment-name> --type=<service-type> --port=<port>

Exposes a deployment as a service.

List All Services

kubectl get services

Lists all services in the current namespace.

Describe a Service

kubectl describe service <service-name>

Displays detailed information about a specific service.

Delete a Service

kubectl delete service <service-name>

Deletes a specific service.

ConfigMap and Secret Management

Create a ConfigMap from a File

kubectl create configmap <configmap-name> --from-file=<file-path>

Creates a ConfigMap from a file.

Create a Secret from Literal Values

kubectl create secret generic <secret-name> --from-literal=<key>=<value>

Creates a Secret from literal key-value pairs.

List All ConfigMaps

kubectl get configmaps

Lists all ConfigMaps in the current namespace.

Describe a ConfigMap

kubectl describe configmap <configmap-name>

Displays detailed information about a specific ConfigMap.

List All Secrets

kubectl get secrets

Lists all Secrets in the current namespace.

Describe a Secret

kubectl describe secret <secret-name>

Displays detailed information about a specific Secret.

Persistent Volume (PV) and Persistent Volume Claim (PVC)

Create a Persistent Volume from a YAML File

kubectl apply -f <pv-file>.yaml

Creates a Persistent Volume from a YAML file.

List All Persistent Volumes

kubectl get pv

Lists all Persistent Volumes in the cluster.

Describe a Persistent Volume

kubectl describe pv <pv-name>

Displays detailed information about a specific Persistent Volume.

Create a Persistent Volume Claim from a YAML File

kubectl apply -f <pvc-file>.yaml

Creates a Persistent Volume Claim from a YAML file.

List All Persistent Volume Claims

kubectl get pvc

Lists all Persistent Volume Claims in the current namespace.

Logs and Monitoring

View Logs for a Pod

kubectl logs <pod-name>

Displays logs from a specific pod.

Stream Logs for a Pod

kubectl logs -f <pod-name>

Streams live logs from a specific pod.

View Logs for a Pod with a Label Selector

kubectl logs -l <label-key>=<label-value>

Displays logs for pods matching a label.

Scaling and Autoscaling

Scale a Deployment

kubectl scale deployment <deployment-name> --replicas=<number>

Scales a deployment to the specified number of replicas.

Autoscale a Deployment

kubectl autoscale deployment <deployment-name> --min=<min-replicas> --max=<max-replicas> --cpu-percent=<cpu-threshold>

Autoscale a deployment based on CPU usage.

Role-Based Access Control (RBAC)

Create a Role

kubectl create role <role-name> --verb=<verb> --resource=<resource>

Creates a role with specific permissions.

Create a RoleBinding

kubectl create rolebinding <rolebinding-name> --role=<role-name> --user=<user-name>

Binds a role to a user in the current namespace.

List All Roles

kubectl get roles

Lists all roles in the current namespace.

List All RoleBindings

kubectl get rolebindings

Lists all RoleBindings in the current namespace.

Ingress and Networking

Create an Ingress Resource

kubectl apply -f <ingress-file>.yaml

Creates an Ingress resource from a YAML file.

List All Ingresses

kubectl get ingress

Lists all Ingress resources in the current namespace.

Describe an Ingress

kubectl describe ingress <ingress-name>

Displays detailed information about a specific Ingress.

Job and CronJob Management

Create a Job

kubectl apply -f <job-file>.yaml

Creates a Job from a YAML file.

List All Jobs

kubectl get jobs

Lists all Jobs in the current namespace.

Describe a Job

kubectl describe job <job-name>

Displays detailed information about a specific Job.

Create a CronJob

kubectl apply -f <cronjob-file>.yaml

Creates a CronJob from a YAML file.

List All CronJobs

kubectl get cronjobs

Lists all CronJobs in the current namespace.

Troubleshooting and Debugging

Debug a Pod with an Interactive Shell

kubectl exec -it <pod-name> -- /bin/bash

Opens an interactive shell inside a running pod.

List Events in a Namespace

kubectl get events

Lists all events in the current namespace.

Get Resource Usage (CPU/Memory)

kubectl top nodes

Displays resource usage for all nodes.

Get Resource Usage for Pods

kubectl top pods

Displays resource usage for pods in the current namespace.

Miscellaneous

Apply a Configuration File

kubectl apply -f <file-name>.yaml

Applies a configuration from a YAML file.

Delete Resources Defined in a YAML File

kubectl delete -f <file-name>.yaml

Deletes resources defined in a YAML file.

Port Forwarding

kubectl port-forward <pod-name> <local-port>:<pod-port>

Forwards a local port to a port on a pod.

Run a Pod with Temporary Command

kubectl run <pod-name> --image=<image-name> -- <command>

Runs a pod with a temporary command.

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