Cheatsheet: Introduction to Containers with Docker, Kubernetes and OpenShift

Estimated time: 40 minutes

Docker CLI

Command	Description
curl localhost	Pings the application.
docker build	Builds a Docker image from a specified Dockerfile.
docker build . -t	Builds the image and tags the image id.
docker CLI	Starts the Docker Command Line Interface (CLI).
docker container rm	Removes a container.
docker images	Displays a list of all available Docker images.
docker ps	Lists the containers.
docker ps -a	Lists the containers that ran and exited successfully.
docker pull	Pulls the latest image or repository from a registry.
docker push	Pushes an image or a repository to a registry.
docker run	Runs a command in a new container.
docker run -p	Runs the container by publishing the ports.
docker stop	Stops one or more running containers.
docker stop $(docker ps -q)	Stops all currently running containers.
docker tag	Creates a tag for a target image that refers to a source image.
docker –version	Displays the version of the Docker CLI.
exit	Closes the terminal session.
export MY_NAMESPACE	Exports a namespace as an environment variable.
git clone	Clones the git repository that contains the artifacts needed.
ibmcloud cr images	Lists images in the IBM Cloud Container Registry.
ibmcloud cr login	Logs your local Docker daemon into IBM Cloud Container Registry.
ibmcloud cr namespaces	Displays the namespaces available to the current user in the IBM Cloud Container Registry.
ibmcloud cr region-set	Ensures that you are targeting the region appropriate to your cloud account.
ibmcloud target	Provides information about the account you're targeting.
ibmcloud version	Displays the current version of the IBM Cloud CLI.
ls	Lists the files and directories in the current directory.

Understanding Kubernetes Architecture

Command	Description
for …do	Runs a sequence of commands multiple times as specified.
kubectl apply	Applies a specified configuration to a resource.
kubectl config get-clusters	Displays all clusters defined in the kubeconfig.
kubectl config get-contexts	Displays the current context.
kubectl create	Creates a new Kubernetes resource based on a given specification.
kubectl delete	Deletes resources.
kubectl describe	Provides details of a resource or group of resources.
kubectl expose	Exposes a resource to the internet as a Kubernetes service.
kubectl get	Displays resources.
kubectl get pods	Lists all the Pods.

kubectl get pods -o wide	Lists all the Pods with details.
kubectl get deployments	Displays all deployments created.
kubectl get services	Lists the services created.
kubectl proxy	Creates a proxy server between a localhost and the Kubernetes API server.
kubectl run	Creates and runs a particular image in a pod.
kubectl version	Prints the client and server version information.

Managing Applications with Kubernetes

Command	Description
kubectl autoscale deployment	Autoscales a Kubernetes Deployment.
kubectl create configmap	Creates a ConfigMap resource.
kubectl get deployments -o wide	Lists deployments with details.
kubectl get hpa	Lists Horizontal Pod Autoscalers (hpa).
kubectl scale deployment	Scales a deployment.
kubectl set image deployment	Updates the current deployment.
kubectl rollout	Manages the rollout of a resource.
kubectl rollout restart	Restarts the resource so that the containers restart.
kubectl rollout undo	Rollbacks the resource.

OpenShift CLI

Command	Description
oc get	Displays a resource.
oc project	Switches to a different project.
oc version	Displays version information.

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