Containers, Kubernetes and OpenShift

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## **MODULE 1 Understanding the Benefits of Containers**

## Review of Docker Concepts and Understanding a Dockerfile

<https://cf-courses-data.static.labs.skills.network/ql8XRVVFS9xt1b5Vn4qFmQ/instructions-v1.md.html?origin=www.coursera.org>

Introduction to Containers, Docker and IBM Cloud Container Registry

<https://cf-courses-data.static.labs.skills.network/cc201/labs/1_ContainersAndDocker/instructions.md.html>

Summary & Highlights: Understanding the Benefits of Containers

* A container is a unit of software that encapsulates everything needed to build, ship, and run applications.
* Containers lower deployment time and costs, improve utilization, automate processes, and support next-gen applications (microservices). Major container vendors include Docker, Podman, LXC, and Vagrant.
* Docker is an open platform used for developing, shipping, and running applications as containers.
* Docker containers are not a good fit for applications based on monolithic architecture or applications that require high performance or security.
* Docker architecture consists of the Docker client, the Docker host, and the container registry.
* The Docker host contains objects such as the Dockerfiles, images, containers, networks, storage volumes, and other objects, such as plugins and add-ons.
* Docker uses networks to isolate container communications.
* Docker uses volumes and binds mounts to persist data even after a container stops running.
* Plugins, such as storage plugins, provide the ability to connect to external storage platforms.

Cheat Sheet: Docker CLI

<https://cf-courses-data.s3.us.cloud-object-storage.appdomain.cloud/cc201/Cheatsheets/C5M1%20cheatsheet.md.html?origin=www.coursera.org>

Module 1 Glossary: Containers Basic

<https://cf-courses-data.s3.us.cloud-object-storage.appdomain.cloud/cc201/Cheatsheets/C5M1%20Glossary.md.html?origin=www.coursera.org>