

Docker – Beyond the Basics

Docker Configuration and Management

- Describe the various steps to create an account on Docker Hub
- Define the process of creating a Docker image from an existing container
- Apply the Docker push command to push the image to the registry
- Use the Docker history command to find all the intermediate image layers
- Distinguish between the Docker commands when performing image maintenance
- Recall the components and the steps in building Docker images
- Summarize the different approaches to building Docker images
- Use Docker commands to run an interactive shell
- Create a Dockerfile that layers on the server and the site content in a single build
- Create Docker images using a Dockerfile
- Install the fedora-dockerfiles package to get the Dockerfiles
- Create a Docker container that just runs Firefox
- Run an application that requires running multiple services simultaneously
- Run Docker inspect to examine volume configuration
- Describe the methods and the attributes to gain access to volumes
- Analyze how a deployed web server is configured and built
- Describe where to get files to create and write the map
- List the steps to run the container server
- Use the worker to bridge multiple servers together with volumes
- List the Docker network-related command line options
- Describe how Docker configures DNS with containers and virtual files
- Describe how the communication between two containers is governed at the operating system level
- Recognize whether a container can communicate to the outside world
- Describe how to configure containers to accept incoming connections
- Describe how to use Pipework for Docker container network configuration
- Use Docker to create and layer an image

Working with Docker Machine, Security, and APIs

- Describe how Docker handles IPv4 and IPv6 addressing
- Use NDP proxying to connect Docker containers to the Internet via IPv6
- Describe how Docker uses switched and routed network environments

- Set up SELinux on CentOS/RHEL/Fedora systems
- Describe how to allow a nonprivileged volume access to host files from a container
- Describe how Linux divides the privileges of the root user
- Share a namespace between two or more containers
- Create a Docker image with a preinstalled Riak
- Create an SSHd service in a Docker container
- Create a Docker container for MongoDB
- Use Shippable to perform CI/CD and then deploy it on Red Hat's OpenShift
- Use Drone to configure projects to automatically build, test, and deploy
- Use Docker with OpenShift Origin to configure Platform-as-a-Service
- Describe how OpenShift triggers the Docker build and how to supply to the Docker context to build images
- Use the Docker Trusted Registry Accounts API
- Use the Docker Trusted Registry Teams API
- Use the Docker Trusted Registry Accounts Repositories API
- Use the Docker User Owned Repository Access API
- Use the Docker Organization Owned Repository Access API
- Use the Docker Organization Owned Repository Namespace API
- Describe how the Docker machine creates Docker hosts on your computer or data center
- Use the Docker machine to create, use, and manage a Docker host inside of VirtualBox
- Use the Docker machine to use the same interface to create hosts in local, virtual, or cloud platforms
- Distinguish between the different drivers on the Docker machine and describe the tasks they perform
- Describe the Docker Machine commands and how they are used
- Use Docker to create a complex deployment using IP addressing, security, and DTR APIs