

# Docker for Microservices

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# Section 1 - About the course

# Syllabus (part 1)

- About the course
- Introduction to Docker
- Installation of Docker and other tools
- Command line structure - Basic Information
- Containers lifecycle (run, stop, rm)
- Docker Networking Basics
- Container Images - Docker Hub Registry
- Build Images - The Dockerfile Basics
- Persistent Data and Volumes

# Syllabus (part 2)

- Docker Compose: The Multi-Container Tool
- Introduction to Container Orchestration (Kubernetes and Docker Swarm)
- Other Resources

# Core Objectives:

- Introduce and Understand Linux Containers
- The basis of how Docker works
- How to install the Docker Community Edition
- How to manage image, containers, networks and volumes
- Build images using a Dockerfile
- Tag images and push them to Docker Hub
- Use Docker Compose to deploy Microservices
- Explore the Most Common Use Cases for Docker
- Understand what is container orchestration solution

# Prerequisites:

- No paid software required
- PC (Mac/Windows/Linux) with local admin access to install Docker
- Linux basics such as shell terminal, ssh and package managers
- Understand the basics of web and database servers (how they typically communicate, IP's, ports etc.)
- Have a GitHub and Docker Hub account

# Resources

- pdf slides
- Exercises and Hands-on Labs
- GitHub repository [dgs19](#)
- Slack Chat [slack-link](#)