
DEVOPS DOCKER

1.Introduction to Docker

- 1.1. Understanding Containerization
- 1.2. Docker Architecture
- 1.3. Docker Components
- 1.4. Installing Docker
- 1.5. Docker Hub and Docker Store

2.Docker Basics

- 2.1 Working with Containers
- 2.2 Docker Images (Creating, Pulling, Pushing)
- 2.3 Container Lifecycle
- 2.4 Docker file and Building Custom Images
- 2.5 Docker Networking
- 2.6 Docker Volumes

3.Docker Compose

- 3.1 Introduction to Docker Compose
- 3.2 Creating Docker Compose Files
- 3.3 Managing Multi-Container Applications
- 3.4 Networking in Docker Compose
- 3.5 Docker Compose Commands

4.Docker Registry

- 4.1 Setting up a Private Docker Registry
- 4.2 Pushing and Pulling Images to/from a Private Registry
- 4.3 Docker Registry Authentication

5. Docker in DevOps Workflows

- 5.1 Integrating Docker with CI/CD Pipelines
- 5.2 Dockerizing Applications
- 5.3 Automating Docker Deployments
- 5.4 Continuous Integration with Docker

6. Docker Orchestration

- 6.1 Introduction to Docker Swarm and Kubernetes
- 6.2 Deploying Multi-Container Applications on Docker Swarm
- 6.3 Introduction to Kubernetes Pods, Services, and Deployments
- 6.4 Managing Containers at Scale

7. Docker Security

- 7.1 Docker Security Best Practices
- 7.2 Isolating Containers
- 7.3 Docker Content Trust
- 7.4 Docker Bench for Security

8. Docker Monitoring and Logging

- 8.1 Monitoring Docker Containers and Services
- 8.2 Docker Health checks
- 8.3 Centralized Logging with Docker
- 8.4 Integration with Monitoring Tools

9. Advanced Docker Topics

- 9.1 Docker Storage Drivers

- 9.2 Docker Networking Modes
- 9.3 Docker Overlay Networks
- 9.4 Building Microservices with Docker
- 9.5 Docker for Windows and Docker for Mac

10. Best Practices and Troubleshooting

- 10.1 Docker Best Practices
- 10.2 Troubleshooting Common Docker Issues
- 10.3 Docker Gotchas and Tips

11. Case Studies and Hands-On Projects

- 11.1 Real-world scenarios and case studies
- 11.2 Building and deploying complex applications
- 11.3 Troubleshooting and optimizing Docker deployments



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