

Module 4: Introduction to Containers

What Are Containers?

Containers are lightweight, portable environments that package applications and their dependencies together. They ensure that software runs consistently across different computing environments.

Key Concepts:

- **Images:** Templates for creating containers.
- **Containers:** Running instances of images.
- **Dockerfile:** A script for building Docker images.

Popular Tool: Docker

Installation (Step-by-Step):

1. **Download Docker Desktop:**
 - Visit [Docker Official Website](#).
 - Download Docker Desktop for your operating system (Windows/Mac).
2. **Install Docker:**
 - Run the installer and follow on-screen instructions.
 - Restart your computer if prompted.
3. **Verify Installation:**
 - Open your terminal or command prompt.
 - Run `docker --version` to check if Docker is installed.

Ease of Use:

- **User-Friendly:** Intuitive for beginners.
- **Widely Used:** Popular in DevOps workflows.
- **Open Access:** Free for personal and small business use.