Setting Up Portainer

Linux Training Academy

Lesson Overview

- Learn why Portainer is a popular tool for Docker management
- Understand how to install Portainer step-by-step
- Get a quick walkthrough of Portainer’s main features

What is Portainer?

- Open-source container management tool
- Offers a web interface for Docker environments
- Manages containers, images, volumes, networks, and more
- Simplifies common Docker tasks
- Lets you focus on deploying applications
- Reduces effort spent on managing systems

Why Use Portainer?

- Web-based interface eases fear for Docker newcomers
- Reduces overwhelm when managing environments
- Offers real-time monitoring of container status and resources
- View container health and performance at a glance
- Simplifies deployment of applications
- Manage everything directly from the web interface

Directory Structure for Installing Portainer

- Use **/opt/docker** for Docker config files
- Keeps Docker files separate from system/user data
- **/opt** is meant for optional software and add-ons
- Each Docker app gets its own subdirectory
  - Example: Portainer config in **/opt/docker/portainer**
- Promotes a consistent and organized structure

Two Ways to Run Containers

- You can use **docker run** or **docker compose**
- Both achieve the same outcome
- But differ in ease of use and management
- Choosing the right one early can save frustration later

When to Use docker run

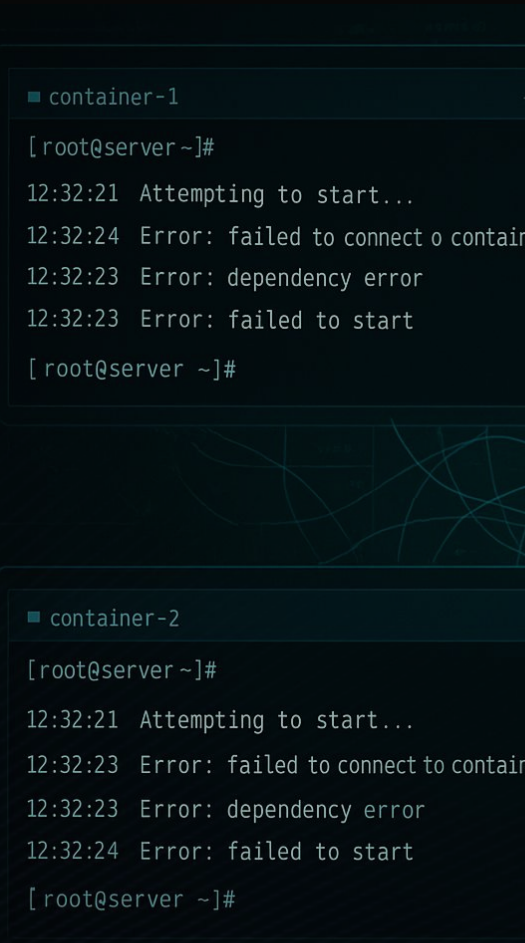
- Great for **simple containers** with minimal options
- Works best with few configuration needs

When docker run Is Not The Best Choice

- More options = longer, unreadable commands
- Volumes, ports, environment variables, restart policies complicate things
- Commands become hard to repeat and maintain

Challenges with Multi-Container Apps

- Need multiple docker run commands
- Must launch in correct order
- Requires proper network configuration
- Gets messy fast



Why Use Docker Compose Instead

- Define everything in a **YAML** file
- Human-readable and easy to update
- Use one command: **docker compose up**
- Ensures consistency and simplicity

File Naming in Docker Compose

- Standard filename is **compose.yaml**
- Replaces older names like **docker-compose.yml**
- We'll use compose.yaml in this course
- Concepts and functionality **remain the same**

Lesson Recap

- Portainer is a popular tool for managing Docker environments
- How to deploy, configure and access Portainer on your Tailscale network.