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Lesson 05 Demo 03

Creating a Host Network

Objective: To create a host network for a standalone container and enable direct binding to the Docker host's network interface for seamless integration and optimal network performance

Tools required: Ubuntu OS and Docker

Prerequisites: None

Steps to be followed:

1. Initialize Docker swarm and create a standalone container
2. Inspect and verify container networking

Step 1: Initialize Docker swarm and create a standalone container

1.1 Initialize Docker swarm using the following command:
sudo docker swarm init

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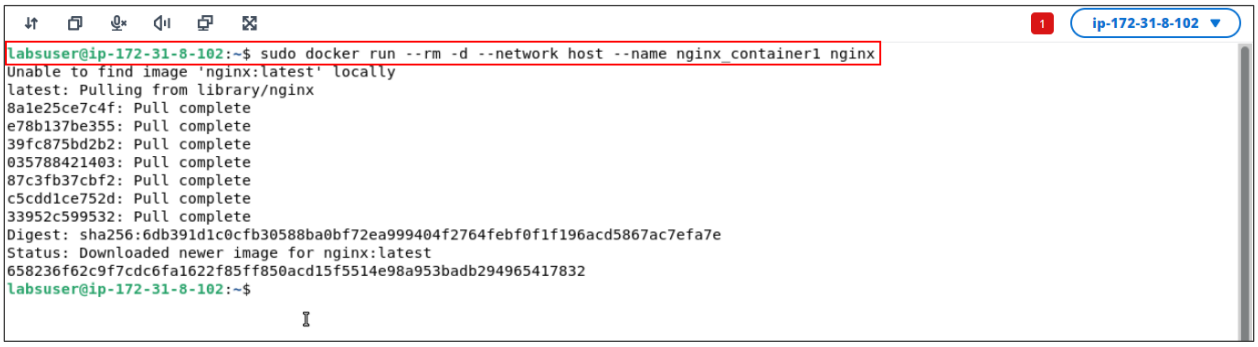
1.2 Run the following command to create and start a container as a detached process using the host networking driver:
sudo docker run --rm -d --network host --name nginx_container1 nginx

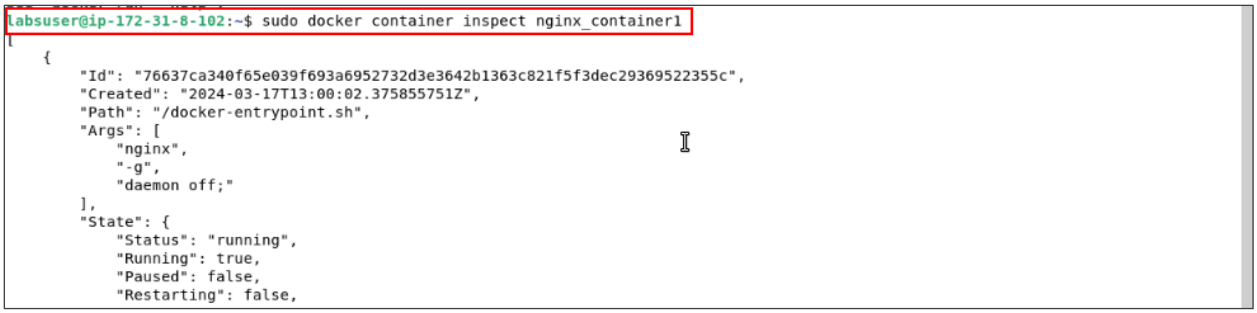


Note: The host networking driver works only on Linux hosts and is not supported on Docker Desktop for Mac or Windows Server.

1.3 Open the browser and navigate to **http://localhost:80/**

Step 2: Inspect and verify container networking

2.1 Inspect the container to check the **NetworkMode** under the **HostConfig** using the following command:
sudo docker container inspect nginx_container1



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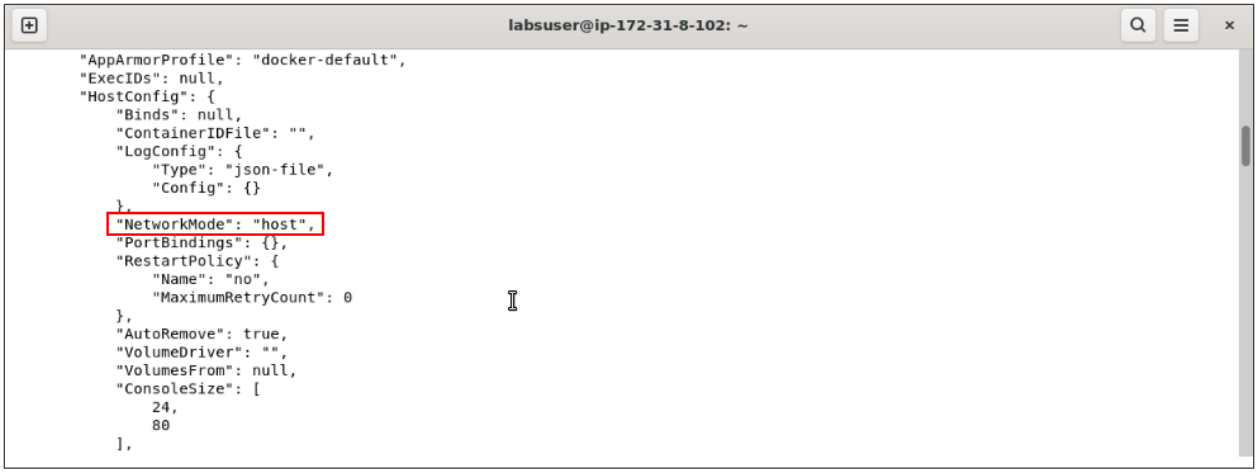
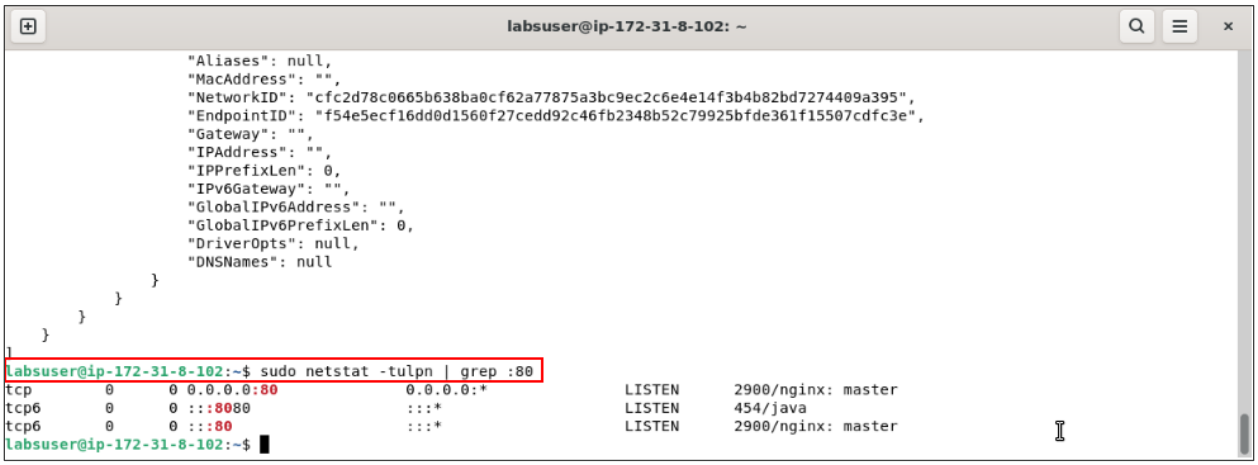


2.2 Verify the process that is bound to port 80 using the following netstat command:
sudo netstat -tulpn | grep :80



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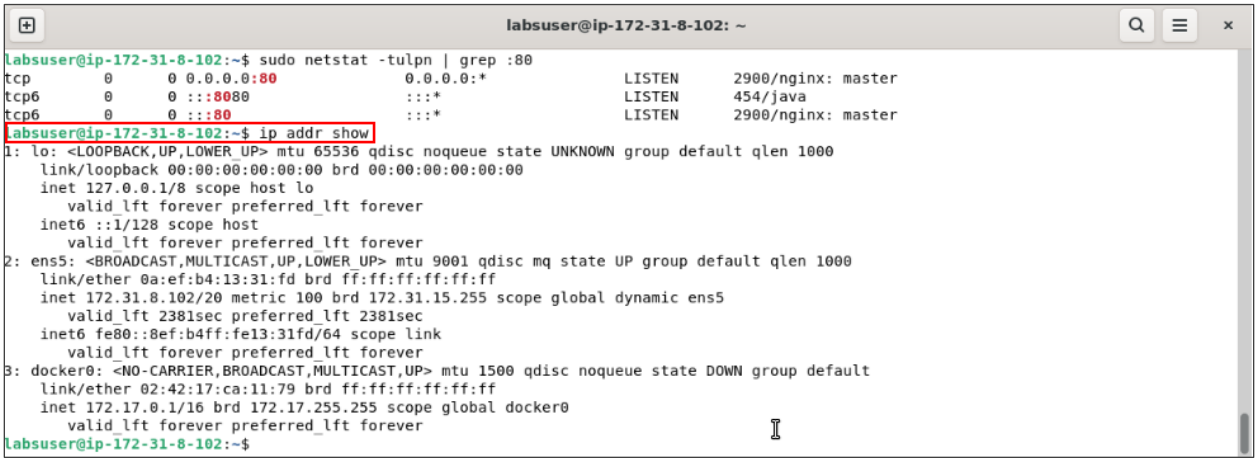
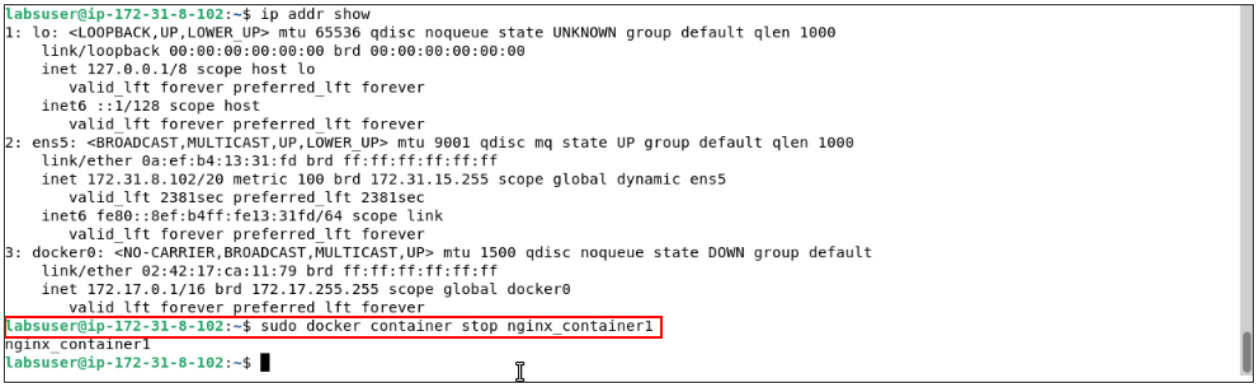
2.3 Examine all the network interfaces using the following command:
ip addr show



2.4 Stop the container using the following command:
sudo docker container stop nginx_container1



By following these steps, you have successfully created a host network for a standalone container to facilitate direct binding to the Docker host's network interface and ensure seamless integration and optimal network performance.