

Question 1: What is the difference between a Docker container and a Docker image?

Answer: An image is a read-only template for creating containers, while a container is a running instance of that image. An image can be thought of as a blueprint or recipe for a container, while a container is the actual instantiation of that blueprint.

Question 2: How would you troubleshoot a Docker container that is failing to start or experiencing other issues?

Answer: When troubleshooting a Docker container that is failing to start or experiencing other issues, there are several steps you can take to diagnose and resolve the problem. Here are some common troubleshooting steps:

Check the container logs: Use the `docker logs` command to view the logs for the container. This can give you clues as to why the container is failing to start or experiencing other issues.

Check the Docker daemon logs: Use the `journalctl` command (on Linux) to view the logs for the Docker daemon. This can help you identify any issues with the Docker daemon itself, which may be preventing the container from starting.

Check the container configuration: Make sure that the container configuration is correct, including the image name, container name, and any environmental variables or other settings.

Check for port conflicts: If the container is configured to listen on a specific port, make sure that there are no other containers or processes running on the same port.

Restart the Docker daemon: Sometimes restarting the Docker daemon can resolve issues with containers failing to start.

Check for available system resources: Make sure that the host system has enough resources (memory, CPU, etc.) available to run the container.

Remove and recreate the container: If all else fails, you may need to remove the container and recreate it from scratch, using the correct configuration and settings.

By following these troubleshooting steps, you can diagnose and resolve many common issues with Docker containers.

Question 3: What is the key difference between a Dockerfile and a docker-compose.yml file?

Answer: The main difference between a Dockerfile and a `docker-compose.yml` file is that a Dockerfile is used to build a Docker image, while a `docker-compose.yml` file is used to define and run a set of Docker containers.