`docker inspect` is a read-only command used to display detailed information about Docker objects such as containers and images. This information includes configuration details like IP address, hostname, environment variables, and more. However, you cannot directly edit this information using `docker inspect`. Instead, you must modify the configuration when creating the container or modify the container's settings using other Docker commands.

Here's how to change the IP address and hostname of a Docker container:

1. Change IP Address

To set a specific IP address for a Docker container, you need to create a custom Docker network and then start the container within that network with the desired IP.

Step 1: Create a Custom Network

You can create a custom bridge network and specify the subnet and gateway:

```bash
Copy code
docker network create --subnet=192.168.1.0/24 my_custom_network
```

This command creates a custom network called `my_custom_network` with the subnet `192.168.1.0/24`.

Step 2: Run a Container with a Specific IP Address

When starting a container, you can specify the IP address within the custom network:

```bash
Copy code
docker run -d --name my_container --network my_custom_network --ip
192.168.1.100 my_image
```

- `-d` runs the container in detached mode.
- `--name` specifies the container name.
- `--network` specifies the network to connect to.
- `--ip` specifies the IP address to assign to the container.
- `my_image` is the name of the Docker image.

2. Change Hostname

You can set the hostname of a Docker container at creation using the `--hostname` flag.

Step 1: Run a Container with a Custom Hostname

```bash
Copy code
docker run -d --name my_container --hostname my_custom_hostname my_image
```

- `--hostname` specifies the hostname for the container.

Example: Setting Both IP Address and Hostname

To set both a custom IP address and hostname, you combine the options as follows:

```bash
Copy code
docker run -d --name my_container --network my_custom_network --ip
192.168.1.100 --hostname my_custom_hostname my_image
```

3. Modifying Existing Containers

To change the network settings of an existing container, you'll need to:

1. Stop the container.
2. Remove the container.
3. Recreate the container with the desired settings.

Stop and Remove the Container

```bash
Copy code
docker stop my_container
docker rm my_container
```

Recreate the Container

Recreate the container with the desired network settings and hostname, as shown in the previous examples.

Additional Tips

- **Inspect the Container**: You can use `docker inspect` to verify the container's settings.

  ```bash
  Copy code
  docker inspect my_container
  ```

- **Using Docker Compose**: If you're using Docker Compose, you can specify the network and hostname settings in the `docker-compose.yml` file.

Summary

To change a Docker container's IP address and hostname, you must set these configurations when creating the container. You cannot modify them after the container is running without recreating it. Always ensure that the custom network settings do not conflict with your existing network infrastructure.