

Lesson 05 Demo 05

Configuring Docker to Use External DNS

Objective: To configure Docker Daemon to utilize External DNS for enhanced DNS resolution and network connectivity within containers

Tools required: Ubuntu OS and Docker

Prerequisites: None

Steps to be followed:

1. Configure the Docker Daemon config file to use external DNS

Step 1: Configure the Docker Daemon config file to use external DNS

- 1.1 Use the following command to create a file named **daemon.json**:

sudo nano /etc/docker/daemon.json

```
labsuser@ip-172-31-8-102:~$ sudo nano /etc/docker/daemon.json
labsuser@ip-172-31-8-102:~$ █
```

- 1.2 Add the following DNS key code to the **daemon.json** file:

```
{
  "data-root": "/mnt/docker-data",
  "storage-driver": "overlay2",
  "dns": ["8.8.8.8", "8.8.4.4"]
}
```

```
GNU nano 6.2 /etc/docker/daemon.json
{
  "data-root": "/mnt/docker-data",
  "storage-driver": "overlay2",
  "dns": ["8.8.8.8", "8.8.4.4"]
}
```

1.3 Use the following command to restart the Docker Daemon:

sudo service docker restart

```
labsuser@ip-172-31-8-102:~$ sudo nano /etc/docker/daemon.json
labsuser@ip-172-31-8-102:~$ sudo service docker restart
labsuser@ip-172-31-8-102:~$
```

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1.4 Use the following command to test the DNS by looking up an external domain:

sudo docker run nicolaka/netshoot nslookup google.com

```
labsuser@ip-172-31-8-102:~$ sudo docker run nicolaka/netshoot nslookup google.com
Unable to find image 'nicolaka/netshoot:latest' locally
latest: Pulling from nicolaka/netshoot
661ff4d9561e: Pull complete
995df079f4e4: Pull complete
dd60ddc09193: Pull complete
db21b8384e68: Pull complete
0c4b97b7a9f6: Pull complete
ab55214c6c7f: Pull complete
605fbab30112: Pull complete
4f4fb700ef54: Pull complete
ccf5fa44d580: Pull complete
bd3e8b5a2d54: Pull complete
76daa6c53003: Pull complete
f32b561aa773: Pull complete
b72ad7310ef5: Pull complete
a06bebdba965d: Pull complete
a1436cccfd44: Pull complete
Digest: sha256:b569665f0c32391b93f4de344f07bf6353ddff9d8c801ac3318d996db848a64c
Status: Downloaded newer image for nicolaka/netshoot:latest
Server:      8.8.8.8
Address:     8.8.8.8#53

Non-authoritative answer:
```

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- 1.5 Use the following command to run and test a container with a custom DNS:
sudo docker run --dns 8.8.4.4 nicolaka/netshoot nslookup facebook.com

```
a06bebda965d: Pull complete
a1436cccf44: Pull complete
Digest: sha256:b569665f0c32391b93f4de344f07bf6353ddff9d8c801ac3318d996db848a64c
Status: Downloaded newer image for nicolaka/netshoot:latest
Server:      8.8.8.8
Address:     8.8.8.8#53

Non-authoritative answer:
Name:   google.com
Address: 142.251.215.238
Name:   google.com
Address: 2607:f8b0:400a:80a::200e

labsuser@ip-172-31-8-102:~$ sudo docker run --dns 8.8.4.4 nicolaka/netshoot nslookup facebook.com
Server:      8.8.4.4
Address:     8.8.4.4#53

Non-authoritative answer:
Name:   facebook.com
Address: 157.240.3.35
Name:   facebook.com
Address: 2a03:2880:f101:83:face:b00c:0:25de

labsuser@ip-172-31-8-102:~$
```

By following these steps, you have successfully configured Docker Daemon to utilize External DNS for improved DNS resolution and network connectivity within containers.