

# Unable to resolve domain names inside docker container

Asked 7 years, 8 months ago Modified 3 years, 1 month ago Viewed 26k times

▲ I'm running a linux VM in virtualbox on my windows PC. I installed docker in the VM. Then I started an alpine container using `docker run -it alpine`.

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▼ In this container, I can ping external IPs successfully. But when I tried to ping domain names, e.g. google.com, it always return `ping: bad address 'google.com'`.

🔖 If I do `nslookup google.com`, it will tell me `can't resolve 'google.com'`. But all these operations can be done successfully in the VM (outside of the container).



In the `/etc/resolv.conf` of the container are the Google DNS server, `8.8.8.8` and `8.8.4.4`. While for the VM it's `127.0.1.1`.

Anyone know the similar issue?

`docker` `dns` `containers`

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edited Aug 20, 2020 at 13:48



aryanveer

666 ● 1 ● 6 ● 17

asked Jan 27, 2018 at 15:56



user1576177

201 ● 1 ● 2 ● 5

`sudo service docker restart` worked for me. – [AATHITH RAJENDRAN](#) Aug 9, 2021 at 7:20

## 6 Answers

Sorted by: Highest score (default) ▾

▲ This (relatively) old issue is because of a buggy implementation of musl DNS library, as laid out in [a comment of gliderlabs/docker-alpine #539](#).

6

▼ 

```
$ docker run -it --rm alpine:3.4 nslookup google.com
nslookup: can't resolve '(null)': Name does not resolve
```



```
Name:      google.com
Address 1: 216.58.200.46 tsa01s08-in-f46.1e100.net
Address 2: 2404:6800:4012:1::200e tsa03s06-in-x0e.1e100.net
```



Where in newer versions of alpine, this seems to be fixed because alpine version `>= 3.11.3` uses an internal implementation of DNS resolution instead of musl's one.

```
$ docker run -it alpine nslookup google.com
Server:      192.168.65.1
Address:    192.168.65.1:53

Non-authoritative answer:
Name:      google.com
Address:  2404:6800:4012:1::200e

Non-authoritative answer:
Name:      google.com
Address:  172.217.160.110
```

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answered May 7, 2021 at 8:08



[birkhoff](#)

900 ● 12 ● 22

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## Comments

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Try adding `{ "dns": ["8.8.8.8", "8.8.4.4"] }` in `/etc/docker/daemon.json`.

4

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answered Dec 10, 2020 at 13:08



[cvitaa11](#)

127 ● 4



## 1 Comment ▼

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[Cristian Florescu](#) Over a year ago

Order is very important. Internal dns should be in front of external dns addresses

▲ 1

Reply





I have a similar issue when running under a VM. You can just put the DNS server(s) in the `docker run` command.

1



```
docker run -it --dns 8.8.8.8 --dns 8.8.4.4 alpine
```



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answered Apr 21, 2021 at 11:46



Michael

9,038 ● 3 ● 31 ● 42



## Comments

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Depends on which network you work.

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In the default network, a container inherits the DNS settings of the host, as defined in the `/etc/resolv.conf` configuration file



when you use a custom network, then Docker's embedded DNS server will be used, which forwards external DNS lookups to the DNS servers configured on the host.



In both cases, you should not edit `/etc/resolv.conf` **of your container**. It's done by Docker.

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answered Apr 18, 2021 at 9:23



aholbreich

5,099 ● 2 ● 25 ● 40

## Comments

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I removed dns configuration from docker engine and it resolved my issue.

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Docker Desktop (Mac) > Docker Engine > remove dns part of json and restart docker.

You can also edit same file from: `~/docker/daemon.json`



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edited Oct 26, 2021 at 13:45

answered Oct 26, 2021 at 13:39



Gürçan Kavakçı

610 ● 1 ● 13 ● 27



## Comments

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One of the reasons is no network at all in the container:

0

```
# docker run alpine:3.15 ping 8.8.8.8
PING 8.8.8.8 (8.8.8.8): 56 data bytes
^C
--- 8.8.8.8 ping statistics ---
11 packets transmitted, 0 packets received, 100% packet loss
```



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edited Aug 22, 2022 at 8:31

answered Jul 28, 2022 at 3:32



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Oleg Neumyvakin

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