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How to: Detect Duplicate IP Address With arping command under Linux

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[1]

Q. I run quite large network with different subnets. I'd like to know how can I find out duplicate IP address under Linux / UNIX?

A. You can use arping command. The arping utility performs an action similar to ping command, but at the Ethernet layer. You can send ARP REQUEST to a neighbor host / computers.

Task: Send ARP request

Let us find out reachability of an IP on the local Ethernet with arping i.e send ARP request 192.168.1.1:

```
$ sudo arping -I eth0 -c 3 192.168.1.1
```

Output:

```
ARPING 192.168.1.1 from 192.168.1.106 ra0
Unicast reply from 192.168.1.1 [00:18:39:6A:C6:8B] 2.232ms
Unicast reply from 192.168.1.1 [00:18:39:6A:C6:8B] 1.952ms
Sent 3 probes (1 broadcast(s))
Received 3 response(s)
```

Where,

- **-I eth0** : Specify network interface i.e. name of network device where to send ARP REQUEST packets. This option is required.
- **-c 3** : Stop after sending 3 ARP REQUEST packets

Task: Find duplicate IP

The -D option specifies duplicate address detection mode (DAD). It returns **exit status 0**, if **DAD succeeded** i.e. no replies are received.

```
$ sudo arping -D -I eth0 -c 2 192.168.1.1
```

If 192.168.1.1 duplicated you should see zero exit status:

```
$ echo $?
```

Always use following syntax for duplicate address detection with arping:

```
$ sudo arping -D -I <interface-name> -c 2 <IP-ADDRESS-TO-TEST>
$ echo $?
```

References:

- [Ethernet Layer Tools - arping](#) [2]
- [arping man page](#)

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[1] Image: <http://www.cyberciti.biz/faq/faq/category/troubleshooting/>

[2] Ethernet Layer Tools - arping: <http://linux-ip.net/html/tools-arping.html>

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