

Linux

BIND and network unreachable messages

Sometimes you'll see messages like the following ones in your log file (messages are slightly obfuscated to protect innocent :)):

```
Jun 29 14:32:11 someserver named[1459]: error (network unreachable) resolving
'www.eolprocess.com/A/IN': 2001:503:a83e::2:30#53
Jun 29 14:32:11 someserver named[1459]: error (network unreachable) resolving
'www.eolprocess.com/A/IN': 2001:503:231d::2:30#53
```

What these messages say is that network that contains address 2001:503:231d::2:30 is unreachable. So, what's happening?

The problem is that all modern operating systems support IPv6 out of the box. The same is for growing number of software packages, among them is BIND too. So, operating system configures IPv6 address on interface and application thinks that IPv6 works and configures it. But, IPv6 doesn't work outside of the local network (there is no IPv6 capable router) so, IPv6 addresses, unless in local networks, are unreachable.

So, you might ask now: but everything otherwise works, why is this case special! Well, the problem is that some DNS servers, anywhere in hierarchy, support IPv6, but not all. And when our resolver gets IPv6 address in response, it defaults to it and ignores IPv4. It obviously can not reach it so it logs a message and then tries IPv4. Once again, note that this IPv6 address can pop up anywhere in hierarchy, it isn't necessary to be on the last DNS server. In this concrete case name server for eolprocess.com doesn't support IPv6, but some name server for the top level com domain do support it!

To prevent those messages from appearing add option `-4` to bind during startup. On CentOS (Fedora/RHEL) add or modify the line `OPTIONS` in `/etc/sysconfig/named` so that it includes option `-4`, i.e.

```
OPTIONS="-4"
```

In openSUSE you must insert `-4` in `NAMED_ARGS`:

```
NAMED_ARGS="-4"
```

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Verfasser: n/a

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