How To: Make Sure /etc/resolv.conf Never Get Updated By DHCP Client

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I'm using GNU/Linux with the Internet Systems Consortium DHCP Client. The dhclient, provides a means for configuring one or more network interfaces using the Dynamic Host Configuration Protocol. It also updates my /etc/resolv.conf file each time my laptop connects to different network. I would like to keep my existing nameservers. How do I skip /etc/resolv.conf update on a Linux based system?

The DHCP protocol allows a host to contact a central server which maintains a list of IP addresses which may be assigned on one or more subnets. This protocol reduces system administration workload, allowing devices to be added to the network with little or no manual configuration. There are various method to fix this issue. Use any one of the following method.

WARNING! Many firewalls only allow access to certain nameservers only. So make sure your nameservers are supported. Also, many corporates block snooping name server such as OpenDNS due to privacy issues.

Option # 1: Write protecting /etc/resolv.conf file

Write protect your /etc/resolv.conf file using the chattr command on a Linux bases system. The syntax is:

```
# chattr +i /etc/resolv.conf
```

The `+i` option (attribute) write protects /etc/resolv.conf file on Linux so that no one can modify it including root user. You can use chflags command on FreeBSD based system.

Option #2: dhclient-script hooks

The DHCP client network configuration script is invoked from time to time by dhclient. This script is used by the dhcp client to set each interface's initial configuration prior to requesting an address, to test the address once it has been offered, and to set the interface's final configuration once a lease has been acquired.

This script is not meant to be customized by the end user. If local customizations are needed, they should be possible using the enter and exit hooks provided. These hooks will allow the user to override the default behavior of the client in creating a /etc/resolv.conf file.

When it starts, the client script first defines a shell function, make_resolv_conf, which is later used to create the /etc/resolv.conf file. To override the default behavior, redefine this function in the enter hook script.

Create hook to avoid /etc/resolv.conf file update

You need to create /etc/dhcp3/dhclient-enter-hooks.d/nodnsupdate file under Debian / Ubuntu Linux:

```
# vi /etc/dhcp3/dhclient-enter-hooks.d/nodnsupdate
```

Append following code:

```
#!/bin/sh
make_resolv_conf(){
        :
```

```
}
```

Save and close the file. Set permissions:

```
# chmod +x /etc/dhcp3/dhclient-enter-hooks.d/nodnsupdate
```

Above script will replace make_resolv_conf() with our own function. This functions does nothing.

A note about resolvconf program on a Debian or Ubuntu based system

If the resolvconf program is installed, you should not edit the resolv.conf configuration file manually on Debian or Ubuntu based system as it will be dynamically changed by programs in the system. If you need to manually define the nameservers (as with a static interface), add a line something like the following to the interfaces configuration file at /etc/network/interfaces file:

```
##Place the line indented within an iface stanza, e.g., right after the gat
dns-nameservers 8.8.8.8 127.0.0.1
```

A note about RHEL / CentOS / Fedora Linux

Place following code in /etc/dhclient-enter-hooks file:

```
# vi /etc/dhclient-enter-hooks
```

Append code:

Save and close the file. Another option is to modify your interface configuration file such as /etc/sysconfig/network-scripts/ifcfg-eth0 file and append any one of the following option:

```
# do not overwrite /etc/resolv.conf ##
PEERDNS=no
```

OR

```
## use the following nameservers in /etc/resolv.conf ##
PEERDNS=no
DNS1=8.8.8.8
DNS2=1.2.3.4
```

Save and close the file. Where,

1. **`PEERDNS=yes|no`** – Modify /etc/resolv.conf if peer uses msdns extension (PPP only) or DNS{1,2} are set, or if using dhclient. default to "yes".
2. **`DNS{1,2}=<ip address>`** – Provide DNS addresses that are dropped into the resolv.conf file if PEERDNS is not set to "no".

Option # 3: Configure dhclient.conf

/etc/dhclient.conf or /etc/dhcp/dhclient.conf file contains configuration information for dhclient. You can turn on or off DNS update and other options for specific interface or all interface using this file. The man pages for DHCLIENT.CONF and DHCP-OPTIONS point out that in dhclient.conf, you should add this:

```
supersede domain-name-servers 202.54.1.2, 199.2.3.4;
```

OR

```
prepend domain-name-servers 1.2.3.4, 1.2.3.5;
```

Here is a sample config for you:

```
timeout 60;
retry 60;
reboot 10;
select-timeout 5;
initial-interval 2;
reject 192.33.137.209;
```

```
interface "eth0" {
    send host-name "laptop-area51.nixcraft.net.in.home";
    send dhcp-client-identifier 00:30:48:33:BC:32;
    send dhcp-lease-time 3600;
    supersede domain-search "net.in.home", "cyberciti.biz", "vpx.nix
    prepend domain-name-servers 8.8.8.8, 127.0.0.1;
    request subnet-mask, broadcast-address, time-offset, routers,
         domain-search, domain-name, domain-name-servers, host-name;
    require subnet-mask, domain-name-servers;
}
```

Further readings:

- Configure Linux / UNIX Dns Resolver To Append Domain Search Names And Path (ndots options)
- Man pages – dhclient-script(8), dhclient(8),dhclient.conf(5)

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