DHCP Server - dnsmasq

By default, Endian Firewall is enabled with dhcpd. dnsmasq is also installed, but cannot serve computer names managed by dhcpd. For this reason, I have disabled dhcpd and modified the dnsmasq settings to act as a DNS and DHCP server. You need to setup the config files that will get loaded by dnsmasq when it starts.

Configuration

Edit /etc/dnsmasq/dnsmasq.d/custom.conf, following are minimum entries, expand as you need

```
# never forward plain names
domain-needed

# never forward addresses in the non-routed address spaces
bogus-priv

# do no poll /etc/resolv.conf for changes
no-poll

# Add other name servers here, with domain specs if they are for
# non-public domains.
server=168.126.63.1
server=168.126.63.2

# specify interfaces where dnsmasq will listen for DHCP and DNS requests
# add the bridge for the green and the orange network
interface=br0
interface=br1

# add the domain to simple names automatically
expand-hosts

# define the domain name
domain=condrau.com

# enable the dhcp server for the green interface only
dhcp-range=br0,192.168.1.100,192.168.27.200,12h

# add clients identified by adapter or name to obtain static addresses
# dhcp-host=00:00:00:00:00:00,laptop,192.168.1.20
# dhcp-host=desktop,192.168.1.21

# Add domains which you want to force to an IP address here.
# The example below send any host in doubleclick.net to a local
```

```
# webserver.
address=/doubleclick.net/127.0.0.1
```

Modify /etc/dnsmasq/dnsmasq.conf.tmpl as follows

```
# the main configuration file is found in 'conf-dir'
# bco, 2014-01-18
#if $DNSMASQ_ANTISPYWARE == 'on'
conf-file=/var/signatures/dnsmasq/blackholedns.conf
#end if
conf-dir=/etc/dnsmasq/dnsmasq.d
#if $DS.dnsmasq.local_nameserver
  #for $zone in $DS.dnsmasq.local_nameserver
    #if $zone.DOMAIN and $zone.IP
server=/$zone.DOMAIN/$zone.IP
    #end if
  #end for
#end if

#try
#include "/var/efw/dnsmasq/dnsmasq.custom.tmpl"
#except
#pass
#end try
```

This is necessary so you can make all dnsmasq settings in /etc/dnsmasq/dnsmasq.d/custom.conf, except for the ones which are controlled through Endian's web interface.

Stop dhcpd and restart dnsmasq

You first must disable dhcpd in the web interface of efw, menu **Services**, otherwise the internal settings will not be set properly. After that, do the following commands on the command line.

```
/etc/init.d/dhcpd stop
/etc/init.d/dnsmasq restart
```

This guide was taken from LAN Clients DNS-Records via DHCP and adapted to my setup.

Trace DNS queries

```
nslookup -debug condrau.com
```

Web interface

Navigate to Menu **Services** and make sure DHCP is disabled for all networks. Then, modify

/home/httpd/cgi-bin/dhcp.cgi:

```
# disable activation of DHCP server if DNSMASQ handles DHCP requests
# bco, 2014-01-18
my $dnsmasq = 1;
```

Find line 536 in the original file which should contain “&openbox('100%', 'left', 'DHCP');” and insert the following lines before line 536:

```
if ($dnsmasq == 1) {
&openbox('100%', 'left', 'DHCP');
printf <<END
This machines uses <b>DNSMASQ</b> to serve DHCP leases.
Please modify '/etc/dnsmasq/dnsmasq.conf.tmpl' for changes.
(bco, 2014-01-18)
END
;
&closebox();
} else {
```

Insert before line 890 of the original file (just before “&closebigbox();”:

```
}#if bco
```

To add an info box which displays the current leases, add the following code between “&closebox();” and “} else {”:

```
my $leases = "/var/lib/misc/dnsmasq.leases";
use POSIX qw(strftime);
# bco, 2014-03-09
&openbox('100%', 'left', 'Current leases ('.strftime("%Y-%m-%d, %H:%M:%S",
localtime()).')');
open my $file, "<", $leases or die "$leases: $!";
print '<b><u>Lease expires</td><td><b><u>Mac address</td><td><b><u>IP
address</td><td><b><u>Hostname</td></tr><tr><td>';
my $i = 0;
while (my $line = <$file>) {
  @elements = split(/ /,$line);
  $i = 0;
  foreach (@elements) {
    if ($i == 0) {
      print strftime("%Y-%m-%d, %H:%M:%S", localtime($_));
      print '</td><td>';
    } elsif ($i <= 3) {
      print $_;
      print '</td><td>';
    } else {
    }
    $i = $i + 1;
  }
```

```
  print '</td></tr><tr><td>';
}
close $file;
&closebox();
```

Replace client

If you need to replace a client with a static IP address, do the following:

```
# /etc/init.d/dnsmasq stop
# vim /etc/dnsmasq/dnsmasq.d/custom.conf # replace the client's MAC address
# rm /var/lib/misc/dnsmasq.leases
# /etc/init.d/dnsmasq start
```

Trouble Shooting

- Find a Rogue DHCP Server on your network
- Find Rogue DHCP Server

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