Dnsmasq : For Simple DNS Configurations

Dnsmasq is a simple way to set up a DNS server for a small network, rather than going to the trouble of configuring BIND.

- Installation
- Firewall
- Configuration

Related articles.

- Linux DNS Configuration
- DNS Configuration for the SCAN used with Oracle RAC Database 11g Release 2
- Dnsmasq : For Simple DNS Configurations on Mac OS X

Installation

The Dnsmasq service is installed from a Yum repository using the following command.

```
# yum install dnsmasq
```

Turn on the Dnsmasq server and make sure it starts automatically on reboot.

```
# service dnsmasq start
# chkconfig dnsmasq on
```

Dnsmasq is configured by altering the contents of the "/etc/dnsmasq.conf" file and the contents of the "/etc/hosts" file.

The service can be stopped, started and restarted using the following commands.

```
# service dnsmasq stop
# service dnsmasq start
# service dnsmasq restart
```

Firewall

If you are using the Linux firewall, you need to open port 53 specifically.

For the iptables firewall, use the following commands.

```
# iptables -I INPUT -p tcp --dport 53 -j ACCEPT
# iptables -I INPUT -p udp --dport 53 -j ACCEPT
# service iptables save
```

For the firewalld firewall, use the following commands to open the port for the current runtime and permanently to persist through reboots.

```
# firewall-cmd --zone=public --add-port=53/tcp
# firewall-cmd --zone=public --add-port=53/udp
```

```
# firewall-cmd --permanent --zone=public --add-port=53/tcp
# firewall-cmd --permanent --zone=public --add-port=53/udp
```

Configuration

You don't need to do any specific DNS configuration as Dnsmasq will use the contents of the "/etc/hosts" to resolve any name requests. Anything it can't find there will be forwarded to the nameservers listed in the "/etc/resolv.conf" file.

For example, adding the following entries to the "/etc/hosts" file on the server running Dnsmasq, will allow it to act as a DNS, resolving those names.

```
# Oracle Linux 6 - RAC Installation
192.168.0.111   ol6-112-rac1.localdomain           ol6-112-rac1
192.168.0.112   ol6-112-rac2.localdomain           ol6-112-rac2
192.168.1.111   ol6-112-rac1-priv.localdomain      ol6-112-rac1-priv
192.168.1.112   ol6-112-rac2-priv.localdomain      ol6-112-rac2-priv
192.168.0.113   ol6-112-rac1-vip.localdomain       ol6-112-rac1-vip
192.168.0.114   ol6-112-rac2-vip.localdomain       ol6-112-rac2-vip
192.168.0.115   ol6-112-scan.localdomain           ol6-112-scan
192.168.0.116   ol6-112-scan.localdomain           ol6-112-scan
192.168.0.117   ol6-112-scan.localdomain           ol6-112-scan
```

Any machines in the network that need to use this DNS server for name resolution need their "/etc/resolv.conf" file amended so the "nameserver" entry points at this server.

```
search localdomain
nameserver 192.168.0.4
```

Edit the "/etc/dnsmasq.conf" file to prevent local network queries being forwarded. My internal domain is called "localdomain", so I add the following setting, then restart Dnsmasq.

```
local=/localdomain/
```