AfNOG 2005
Track E1 - Scalable Internet Services

Domain Name System - Exercise 4

Setting up an Authoritative Master/Primary Name Server

In the previous exercise we setup a caching-only nameserver.
In this exercise we will setup an authoritative master/primary nameserver.

1. Choose a new domain: _____.afnogws.gh

2. Change directory to /var/named/etc/namedb

```
# cd /var/named/etc/namedb
```

3. The primary and secondary zone file directories already exist.

```
# ls -l master
# ls -l slave
```

4. Create the zone file for your domain <domain-name>.afnogws.gh.

```
# vi master/gh.afnogws.<domain-name>
```

5. Add the following lines to the gh.afnogws.<domain-name> file. Replace all
   instances of "<domain-name>" with the domain name that you have selected to use,
   and "##" with your PC number.

```
$TTL 10m
@     IN   SOA    pc##.t1.ws.afnog.org.   root.pc##.t1.ws.afnog.org.  (
                         2005041900      ;serial YYYYMMDDnn
                         30m             ;refresh
                         10m             ;retry
                         4w              ;expire
                         10m             ;nttl
                         )

      IN   NS        pc#.t1.ws.afnog.org.    ; Master Nameserver

www   IN   A        196.200.219.#              ; Your own IP Address
```

Note:
we have purposely chosen low values for TTL, refresh, retry. For a production domain
you would use higher values, e.g. $TTL 1d

6. Edit the /var/named/etc/namedb/named.conf to configure your machine as a master nameserver. The entries you make at the end of the /etc/namedb/named.conf file are as follows.

```
zone "<domain-name>.afnogws.gh" {
        type master;
        file "master/gh.afnogws.<domain-name>";
        allow-transfer { 196.200.219.#; };
        allow-update { none; };
};
```

Note:
Replace <domain-name> with your master/primary zone on the worksheet or one that you have selected to use.

7. Load the zone file.

```
# rndc reload
```

8. Check if named is running by issuing the following command.

```
# ps -auxw | grep named
```

9. Check if named started without any errors.

```
# tail /var/log/messages
(or /var/named/var/log/named.log if you have changed the
location of your log files)
```
If there are any errors correct them and reload the zone file.

10. Check that you are giving authoritative answers for your domain.

```
# dig +norec @196.200.219.# <domain-name>.afnogws.gh. soa
# dig +norec @196.200.219.# <domain-name>.afnogws.gh. ns
# dig +norec @196.200.219.# <domain-name>.afnogws.gh. a
```
Check that you get an AA (authoritative Answer).

This takes us to the next exercise where you will be setting up a slave/secondary nameserver.