

Lab 5: Secondary DNS

Objective:

To help students to understand how to setup Secondary DNS Server and will edit multiple zone files.

Scenario:

- Domain name: **coyote365.net**
- IP Address Range:

192.168.0.0/24
192.168.1.0/24
192.168.2.0/24
192.168.3.0/24

- Host Names:

HOSTNAME	IP Address
hadrian.coyote365.net	192.168.1.1
fwall.coyote365.net	192.168.1.1
ns.coyote365.net	192.168.1.2
ns2.coyote365.net	192.168.1.3
www.coyote365.net	192.168.1.4
lin.coyote365.net	192.168.1.100
win.coyote365.net	192.168.1.101
blaze.coyote365.net	192.168.2.1
silicon.coyote365.net	192.168.3.1
baker.coyote365.net	192.168.3.2
zzyzx.coyote365.net	192.168.3.100

[0] Create a virtual machine: Name: ns2, RAM: 256MB, HDD: 8GB

[1] Installation:

```
[root@ns2 /root]# yum -y install bind bind-utils bind-libs
```

[2] Configuration:

```
[root@ns2 /root]# cp -apr /usr/share/doc/bind-9.3.*/sample/etc/* /etc
```

```
[root@ns2 /root]# cp -apr /usr/share/doc/bind-9.3.*/sample/var/named/* /var/named
```

Edit: /etc/named.conf (Delete all the lines with comments and edit the file as follow)

```
options
{
    query-source    port 53;
    directory       "/var/named"; // the default
    dump-file       "data/cache_dump.db";
    statistics-file  "data/named_stats.txt";
    memstatistics-file "data/named_mem_stats.txt";
    pid-file        "/var/run/named/named.pid";
    forwarders {192.168.1.2;};
    allow-query     { any; };
};

controls {
    inet 127.0.0.1 allow { localhost; } keys { rndckey; };
};
```

```

zone "localhost" IN {
    type master;
    file "localhost.zone";
    allow-update { none; };
};
logging
{
    channel default_debug {
        file "data/named.run";
        severity dynamic;
    };
};
key ddns_key
{
    algorithm hmac-md5;
    # In vi editor, Press Esc, and :!/usr/sbin/dns-keygen > dnskey to generate TSIG keys
    # Move the cursor to the right after "secret"
    # then Press Esc, and Type :r dnskey to insert dnskey into the page.
    secret " eDMHhnGja0gsnlBXVmIPnb1RLWksR2mDpYnEwKMu0JdkFP4uA2JEktZgSTSK";
    |← (Move the cursor right above here)
};
view "external"
{
    include "/etc/named.root.hints";
    zone "coyote365.net" {
        type slave;
        file "named.coyote365.net.hosts";
        allow-transfer { 192.168.1.2; };
        masters { 192.168.1.2; };
    };
    zone "1.168.192.in-addr.arpa" {
        type slave;
        file "named.rev.192.168.0.hosts";
        allow-transfer { 192.168.1.2; };
        masters { 192.168.1.2; };
    };
    zone "1.168.192.in-addr.arpa" {
        type slave;
        file "named.rev.192.168.1.hosts";
        allow-transfer { 192.168.1.2; };
        masters { 192.168.1.2; };
    };
    zone "2.168.192.in-addr.arpa" {
        type slave;
        file "named.rev.192.168.2.hosts";
        allow-transfer { 192.168.1.2; };
        masters { 192.168.1.2; };
    };
    zone "3.168.192.in-addr.arpa" {
        type slave;
        file "named.rev.192.168.3.hosts";
        allow-transfer { 192.168.1.2; };
        masters { 192.168.1.2; };
    };
};

```

[3] Change permission of /var/named directory:

```
[root@ns2 /root]# chmod -R /var/named/
```

[4] Start the DNS service:

```
[root@ns2 /root]# service named start
```

```
[root@ns2 /root]# chkconfig named on
```

[5] DNS Testing: (Test all hostnames and IP Addresses with nslookup command)

Edit /etc/resolv.conf file:

```
[root@ns2 ~]# vi /etc/resolv.conf
```

```
search coyote365.net
```

```
nameserver 192.168.0.2
```

Test DNS:

```
[root@ns2 ~]# nslookup hadrian.coyote365.net
```

```
[root@ns2 ~]# nslookup 192.168.1.1
```

Test more entries.

[6] Log into Primary DNS and Update the entries with following:

HOSTNAME	IP Address
acme.coyote365.net	192.168.1.5
beehive.coyote365.net	192.168.1.6
gimme.coyote365.net	192.168.2.2
oakhills.coyote365.net	192.168.2.3

[7] Log into Secondary DNS and restart DNS and test DNS2:

```
[root@ns2 /root]# service named restart
```

```
[root@ns2 ~]# nslookup acme.coyote365.net
```

```
[root@ns2 ~]# nslookup 192.168.1.5
```