



Lab Exercise 8 – Dynamic Updates

Objective:

Be able to create a separate zone for dynamic update purposes and use "allow-update" statement in named.conf to activate dynamic update for a zone.

Be familiar with nsupdate by adding and deleting resource record from the created dynamic zone. Be able to implement TSIG with dynamic updates to secure and authenticate request.

Steps:

1. Under /var/named/master, create a new zone file for "dynamic.pcX.net" subdomain which contain SOA record and NS records only. Since we will try using dynamic update to add or delete resource records don't place other resource records manually.
2. Update your named.conf in /var/named/master to load a new zone "dynamic.mydomain.net." To make the zone dynamic, use "allow update" statement in your named.conf under your dynamic zone.

```
zone "dynamic.mydomain.net" {  
    type master;  
    file "db.mydomain.dynamic";  
    allow-update { 192.168.x.x; };  
};
```

Note: From the example, only the specified IP should be able to update the zone using nsupdate. We will change this later to use TSIG keys.

You can also create an access list for all dynamic users.

```
acl dynupd-users {  
    192.168.101.1; 192.168.101.99;  
};
```

If you do this, change the allow-update option to allow only the defined ACL.

```
allow-update { "dynupd-users"; };
```

3. Run your name server and run "nsupdate" from other terminal window.

```
nsupdate  
    > server 192.168.x.x  
    > zone dynamic.mydomain.net
```

```
> update add my.dynamic.mydomain.net 8600 A 192.168.x.x
> send
> quit
```

If this results in an error (ex. SERVFAIL), it could be a permission error. Make sure that your file `db.mydomain.dynamic` is writable by the group. Use `chmod` command to do this.

4. Use `dig` to query the server for the record you have added/deleted, changes should be visible.

```
dig @server zone type
```

where:

`server` - is the ip of server running dynamic zone.

`zone` - is your dynamic zone

`type` - is the resource record type (A, MX, TXT)

5. Ask your colleagues to be a slave of your "dynamic.mydomain.net" zone.
6. Use TSIG to secure your dynamic zone for dynamic update.

```
zone "dynamic.pcX.net" {
    allow-transfer { key ns1-ns2.dynamic.pcX.net };
    allow-update { key ns1-ns2.dynamic.pcx.net };
};
```

Note: Since `allow-transfer` is for zone transfer and `allow-update` is for dynamic update, it is not recommended to use the same secret key since server performing dynamic update could be different from machine performing zone transfer.