



LAB: Recursive Caching DNS sever

- `#` super user command.
- `$` normal user command.
- Username `apnic` and password `training`.

VM Details

```
[group01.apnictraining.net] [192.168.30.1]
[group02.apnictraining.net] [192.168.30.2]
.....
[group10.apnictraining.net] [192.168.30.10]
[group11.apnictraining.net] [192.168.30.11]
.....
[group20.apnictraining.net] [192.168.30.20]
[group21.apnictraining.net] [192.168.30.21]
.....
[group30.apnictraining.net] [192.168.30.30]
```

Lab Setup

1. Login to your server (SSH using the username and password given above), where **X** is your group number:

```
ssh apnic@192.168.30.X
```

2. Update the repository

```
sudo apt update && sudo apt upgrade
```

3. Install bind

```
sudo apt install bind9
```

4. Edit the `/etc/bind/named.conf.options` file

```
sudo vi /etc/bind/named.conf.options
```

- Add the following line to allow recursion:

```
recursion yes;
```

- Save and exit

```
:wq
```

- Restart bind

```
sudo systemctl restart bind9
```

- Verify the bind status

```
sudo rndc status  
sudo systemctl status bind9
```

5. Check if caching server works:

```
dig @localhost apnic.net
```

- note the Query time (msec)
- Try the command again and note the query time. What do you see? Why are the query times different compared to before?

```
dig @localhost apnic.net
```

6. Observe how recursion works:

```
dig @localhost apnic.net +trace
```

- Analyse the output to understand the DNS recursive query process (ask your Instructors if you have need clarifications)

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End of Lab
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