PRACTICAL:

Please Note the practical will be done in groups

Two servers:

 primary (your group)

secondary (next group)

- •CentOS
- •BIND 9
- •domain: groupx.co.ke
- •Primary IP address: 196.X.X.X
- •Secondary IP address: 196.X.X.X

yum update -y

yum -y install bind bind-utils

Primary Server

vi /etc/named.conf

In order for the name server to respond to external requests, the named process will need to be bound to a public IP address. The any value will bind to all IP addresses assigned to the server

...
listen-on port 53 { any; };

listen-on-v6 port 53 { any; };

...

The name server will need to respond to all incoming queries for authoritative zones, but should not allow zone transfer requests by default nor allow recursive queries.

```
...
allow-query     { any; };

allow-transfer  { none; };

recursion no;

...
```

Here is the full named.conf file example adjusted for authoritative name services.

```
options {

    listen-on port 53 { any; };

    listen-on-v6 port 53 { any; };

    directory      "/var/named";

    dump-file      "/var/named/data/cache_dump.db";

    statistics-file "/var/named/data/named_stats.txt";

    memstatistics-file "/var/named/data/named_mem_stats.txt";

    allow-query     { any; };

    allow-transfer  { none; };

    recursion no;


    dnssec-enable yes;

    dnssec-validation yes;

    dnssec-lookaside auto;


    /* Path to ISC DLV key */

    bindkeys-file "/etc/named.iscdlv.key";
```

```
    managed-keys-directory "/var/named/dynamic";

};


logging {

    channel default_debug {

        file "data/named.run";

        severity dynamic;

    };

};


zone "." IN {

    type hint;

    file "named.ca";

};


include "/etc/named.rfc1912.zones";

include "/etc/named.root.key";
```

The path to the zone files and the zone details must be added to the /etc/named.rfc1912.zones file.

vi /etc/named.rfc1912.zones

The domain name section will be declared long with the path to the file containing the zone information, that this is the master zone, and the IP address of the secondary server.

zone "yourdomain.co.ke" IN {

```
    type master;

    file "yourdomain.co.ke.zone";

    allow-transfer { slave IP ADDRESS; };

};
```

Save and close the file.

CREATE ZONE FILE

The actual zone file can now be created.

vi /var/named/yourdomain.co.ke.zone

```
$TTL  86400
@  IN  SOA    ns1.yourdomain.co.ke. root.yourdomain.co.ke. (
    2019041001  ;Serial
    3600        ;Refresh
    1800        ;Retry
    604800      ;Expire
    86400       ;Minimum TTL
)
; Specify our two nameservers
        IN    NS           ns1.yourdomain.co.ke.
        IN    NS           ns2.yourdomain.co.ke.
; Resolve nameserver hostnames to IP, replace with your two NS IP addresses.
ns1        IN    A           master IP
ns2        IN    A           slave IP

; Define hostname which you wish to resolve
@          IN    A           196.1.4.146
www        IN    A           196.1.4.146
```

Save and close

Restart named:

service named restart

Once named has started successfully, we'll want to ensure that it is enabled as a startup service, by running the following:

chkconfig named on

Configure Secondary Server

Log into the secondary server and modify the /etc/named.conf file to match that of the primary server.

vi /etc/named.conf

Refer to the Configure Primary Server section for the named.conf. Once the file has been updated, the zone needs to be added to /etc/named.rfc1912.zones on the secondary server.

```
zone "yourdomain.co.ke" IN {

    type slave;

    file "slaves/yourdomain.co.ke.zone";

    masters { masterIP; };

};
```

Save the zone file and exit the editor. You should confirm there are no errors in the named.conf file before attempting to start the service.

named-checkconf

As was the case with the Primary:

service named start

chkconfig named on

At the master :

rndc reload

he following `dig` command can be run from either name server should return the records for the domain on that server.

dig any yourdomain.co.ke @localhost