

Installing/Configuring BIND9 for ENUM/DNS on Ubuntu

The information listed below is referenced from the following

link: <http://blog.tayfundogan.com/2009/06/how-to-install-bind9-as-enum-server.html>

Please note that this is an example configuration and should be used only as a guide.

The numbers listed need to be changed to suit your purposes as also does the ENUM tree referenced. In this example, the configuration is built based on the golden tree; e164.arpa.

How to install BIND9 as ENUM Server on Ubuntu

Why do you need an ENUM server?

ENUM server works like DNS server but it matches Phone number with SIP URI instead of IP and URL. Some IMS Core systems use this kind of resolutions.

Installing BIND9

I'm going to explain this for Ubuntu Server, it is quite easy to install but tricky to configure at the beginning.

1) apt-get install bind9

2) After installation successfully completed, go to /etc/bind/ directory. You need to edit following files only.

named.conf

named.conf.options

named.conf.enum (actually we will create it in next step)

db.e164.arpa (actually we will create it in next step)

3) named.conf

add following line

```
include "/etc/bind/named.conf.enum";
```

4) named.conf.enum

add following line

```
zone "e164.arpa" {  
  
type master;  
  
file "/etc/bind/db.e164.arpa";  
  
};
```

5) db.e164.arpa

```
$TTL 86400
```

```
e164.arpa. IN SOA ns.e164.arpa. root.e164.arpa. (
```

```
2004011522 ; Serial no., based on date
```

```
21600 ; Refresh after 6 hours
```

```
3600 ; Retry after 1 hour
```

```
604800 ; Expire after 7 days
```

```
3600 ; Minimum TTL of 1 hour
```

```
)
```

```
e164.arpa. 43200 IN NS ns.e164.arpa.
```

```
;
```

```
ns.e164.arpa. 43200 IN A 192.168.1.2
```

```
0.9.8.7.6.5.4.3.2.1.e164.arpa. NAPTR 10 100 "u" "E2U+sip" "!^.*$!sip:info@example.com!".
```

```
0.9.8.7.6.5.4.3.2.1.e164.arpa. NAPTR 10 101 "u" "E2U+h323"  
"!^.*$!h323:info@example.com!".
```

```
0.9.8.7.6.5.4.3.2.1.e164.arpa. NAPTR 10 102 "u" "E2U+msg"  
"!^.*$!mailto:info@example.com!".
```

```
8.1.2.7.5.9.3.3.1.6.1.e164.arpa. NAPTR 100 10 "U" "SIP+E2U"  
"!^.*$!sip:16133957218@example.com!".
```

6) named.conf.options

```
#logging {  
  
# channel query-log {  
  
# file "/var/log/query-log" versions 2 size 10m;  
  
# print-time yes;  
  
# print-category yes;  
  
# };  
  
# category queries { query-log; } ;  
  
#};  
  
#  
  
#options {  
  
# directory "/var/cache/bind";  
  
// If there is a firewall between you and nameservers you want  
// to talk to, you might need to uncomment the query-source  
// directive below. Previous versions of BIND always asked  
// questions using port 53, but BIND 8.1 and later use an unprivileged  
// port by default.  
  
// query-source address * port 53;  
  
// If your ISP provided one or more IP addresses for stable  
// nameservers, you probably want to use them as forwarders.  
  
// Uncomment the following block, and insert the addresses replacing  
// the all-0's placeholder.  
  
// forwarders {  
  
// 0.0.0.0;
```

```
// };  
  
# auth-nxdomain no; # conform to RFC1035  
  
#  
  
#};
```

7) You need to restart bind service

```
/etc/init.d/bind9 restart
```

8) Now you can query your request with dig tool

```
dig @ 8.1.2.7.5.9.3.3.1.6.1.e164.arpa -t NAPTR
```

You suppose to get following answer

```
:: ANSWER SECTION:
```

```
8.1.2.7.5.9.3.3.1.6.1.e164.arpa. 86400 IN NAPTR 100 10 "U" "SIP+E2U"  
"!^.*$!sip:16133957218@example.com!" .
```

Credit: Bill Efthimiou, AARnet