The GCC Pilot Project for Arabic Domain Names

How to Setup an Arabic Root Server

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1. Introduction

If any member of the GCC countries how have contributed in the pilot project wants to setup an Arabic root server they should contact the GCC-ADNS Taskforce and inform them about their desire and the IP address of their brand new name server that will act as an Arabic ccTLD root server.

2. Recommendation for the Arabic root server

The Arabic root server should be installed on a new secure DNS server (e.g. PII Linux box with bind 8 or 9) with permanent Internet connectivity. And that name server will only replay to the DNS queasier regarding Arabic ccTLD that are registered in this project (e.g. السعودية، قطر، البحرين، الإمارات، عمان، الكويت).

3. Configuring Bind name server

To setup your Arabic root server you need to configure bind to host all the registered Arabic ccTLD in this project (GCC-ADNS Taskforce will provide them for you) as "secondary server" in the bind configuration file "named.conf":

```
// e.g. : add these lines to your named.conf file.
// contact GCC-ADNS Taskforce to get the updated list
zone "xn--mgberp4a5d4ar" {                  // AlSaudiah
        type slave;
        file "slave.xn--mgberp4a5d4ar.sa.zone" ;
        masters {213.42.20.76; }; };
zone "xn--kgbeam7a8h" {                  //Emarat with hamza
        type slave;
        file "slave.xn--kgbeam7a8h.ae.zone" ;
        masters {213.42.20.76; }; };
zone "xn--wgbl6a" {                  //Qatar
        type slave;
        file "slave.xn--wgbl6a.qa.zone" ;
        masters {213.42.20.76; }; };
```

File: named.conf

As what you can see your name server will contact the primary Arabic root server (might be hidden root server) and will get a copy of the simple Arabic GCC ccTLD zone files (initially 6 zone each one of them has his own "NS" records that points to the Arabic ccTLD server).
Note: there should be no hint/cache file in bind configuration. This will stop the Arabic ccTLD root server from contacting any other root server on the internet for any information.

Hint: You can ask the GCC-ADNS Taskforce to send you the updated file that you can include in your "named.conf" instead of defining them directly by using this statement:

```
// e.g. : add these lines to your named.conf file.
// contact GCC-ADNS Taskforce to get the updated list
Include "Root_Arabic_ccTLD_zone_files.inc";
```
File: named.conf

The content of each Arabic Zone file that is distributed by the primary Arabic ccTLD root server will look similar to this:

```
// e.g. : add these lines to your named.conf file.
// contact GCC-ADNS Taskforce to get the updated list
$ORIGIN .
$TTL 10800      ; 3 hours
ar-root.nic.net.sa    IN A    212.26.18.12

xn--mgberp4a5d4ar      SOA     ns1.uaenic.ae.
hostmaster.mail.emirates.net.ae. (
                              4         ; serial
                              10800     ; refresh (3 hours)
                              300       ; retry (5 minutes)
                              604800    ; expire (1 week)
                              10800     ; minimum (3 hours)
                              )
                    NS     ar-root.nic.net.sa.
```
File: slave.xn--mgberp4a5d4ar.sa.zone

More information
- The GCC ADNS Taskforce website:
  http://www.arabic-domains.org.sa
- Bind DNS server:
  http://www.isc.org/sw/bind/
- The DNS resource directory:
  http://www.dns.net/dnsrd/
- GNU Libidn:
  http://www.gnu.org/software/libidn/