The GCC Pilot Project for Arabic Domain Names

How to Setup an Arabic ccTLD Server

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1. Introduction

If any country wants to contribute in the pilot project for implementing Arabic Domain names in the GCC countries they should setup and runs their own Arabic ccTLD server(s) for the chosen Arabic domain name that represent their country name. They should contact the GCC-ADNS Taskforce and inform them about the chosen domain name (Note: there is an ISO standard for representing countries names in the Arabic language in simple and detailed format) and the IP address(s) of your Arabic ccTLD server(s).

2. Recommendation for the Arabic ccTLD server

Since this project is a test bed we recommend setup the Arabic ccTLD server on a new secure DNS server (e.g. PII Linux box with bind 8 or 9) with permanent Internet connectivity. However the ccTLD administrator is free to use any existing name server in their network and configure it to act as Arabic ccTLD server on their own responsibility.

3. Get the ASC (puny code) representation of your Arabic ccTLD

You can use any tool on the Internet that convert IDN domain name to the corresponded ASCII format. As an example, an Arabic domain name , "السعودية", will look like the following form "**xn--mgberp4a5d4ar**" after converting it from IDN to ASCII format (using "stringprep", "nameprep" and "punycode" operations).

Hint: you can use this tool http://arabic-domains.org.sa/idn.php

4. Configuring Bind name server

To setup your Arabic ccTLD server you need to configure bind to host your Arabic ccTLD as "primary server" in the bind configuration file "named.conf":

```
// add these lines to your named.conf file.
zone "xn--mgberp4a5d4ar" {
        type master;
        file "xn--mgberp4a5d4ar.sa.zone" ;
};
```

File: named.conf

In Addition, you need to setup and configure the zone file for your Arabic ccTLD:

```
$TTL 172800     ; 2 days
@           IN SOA  ar-cctld.nic.net.sa. hostmaster.isu.net.sa. (
                            2          ; serial
                            86400      ; refresh (1 day)
                            7200       ; retry   (2 hours)
                            3600000    ; expire  (1000 hours)
                            172800     ; minimum (2 days)
                            )
                    NS      ar-cctld.nic.net.sa.

; netaq
xn--mgb5a8an            NS      ns1.nic.net.sa.
xn--mgb5a8an            NS      ns2.nic.net.sa.

; moq3
xn--4gbrim             NS      ns1.nic.net.sa.
xn--4gbrim             NS      ns2.nic.net.sa.

; dalel
xn--ugb6bax            NS      ns1.nic.net.sa.
xn--ugb6bax            NS      ns2.nic.net.sa.
;
; etc..
```

File: xn--mgberp4a5d4ar.sa.zone

Note: As what you can see defining your Arabic ccTLD is that same as defining any domain name on any DNS server.

5. Mirroring other Arabic ccTLD zone files

Each GCC ccTLD server can act as secondary for other GCC ccTLD, which will add more redundancy and localization for the DNS queries. And this can be achieved by contacting other GCC ccTLD administrators and asking them to allow zone transfer for their Arabic ccTLD domain name. And to configure bind to act as secondary for other Arabic ccTLD:

```
// add these lines to your named.conf file.
zone "xn--mgberp4a5d4ar" {
        type slave;
        file "xn--mgberp4a5d4ar.sa.zone" ;
        masters { 212.26.18.12; };
};
```

File: named.conf

6. Registering some test Arabic domains

As what have agreed on each GCC ccTLD can register some test Arabic domain names such as:

Example	Arabic test Domain name	Purpose
موقع.السعودية	موقع.<اسم الدولة>	A site for testing Arabic domain name in each GCC ccTLD
دليل.الإمارات	دليل.<اسم الدولة>	A site that list all the registered Arabic test domain names in each GCC ccTLD.
مركز-التسجيل.قطر	مركز-التسجيل.<اسم الدولة>	A site for registering Arabic test domain names in each GCC ccTLD

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/