



المشروع التجريبي لاسماء النطاقات العربية

كيفية إعداد الخادمت الأساسية لنطاقات العربية

How to Setup an Arabic Root Server

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Arabic Domain Names Pilot Project

1. Introduction

If each Arab country runs its own (isolated) Arabic ccTLD server, users in other Arab countries would not be able to reach its Arabic domain names. Therefore, we need a mechanism to interconnect Arabic ccTLD servers..

The technical committee agreed on using the current Arabic root servers (which are located in AE and SA). They will be responsible for the root zone files for all the Arabic ccTLD that are members of the Arab League (e.g. السعودية, قطر، البحرين، الإمارات، عمان، مصر، سوريا). This scenario makes the modification for any Arabic ccTLD zone file very easy and centralized between the root servers. Also it simplify the name resolution by adding one layer above the Arabic ccTLD servers that receives resolution queries first and redirects them the corresponding Arabic ccTLD server.

Since the Arabic root servers already setup and configured, this document is for documentation purposes. Also, it can be used later when more mirrors of the Arabic root server are needed in other countries. This step should be approved by the steering committee.

~~If any member of the Arab countries who have contributed in the pilot project wants to setup an Arabic root server they should contact the technical committee 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, their request will be forward to the steering committee for approval.~~

2. Recommendations

Since this is a pilot project, the technical committee recommends the following:

- ◆ Do not use an existing (operational) DNS server as an Arabic ccTLD server.
- ◆ Set up the ccTLD server on a brand new secure DNS server (e.g. PII Linux box with bind 8 or 9) with permanent Internet connectivity.
- ◆ The name server should only replay to DNS queries regarding Arabic domain names under the Arabic ccTLD that are registered in this project. [هل هذا مهم]
- ◆ Use the following format for naming your ccTLD server: ar-root.<domain> , (e.g. ar-ccTld.nic.net.sa).

3. Configuring Bind name server

To setup an Arabic root server you need to configure bind (using named.conf) as secondary for all the registered Arabic ccTLDs in this project. The technical committee will provide this information. Here is an example:

```
// e.g. : add these lines to your named.conf file.
// contact the technical committee to get the updated list
zone "xn--mgberp4a5d4ar" {
    type slave;
    file "idn.sa.zone" ;
    masters {213.42.20.76; }; };
zone "xn--kgbeam7a8h" {
    type slave;
    file "idn.ae.zone" ;
    masters {213.42.20.76; }; };
```

```
zone "xn--wgb16a" {
    type slave;
    file "idn.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 (should be hidden) and will get a copy of the simple Arabic ccTLD zone files (22 zones 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 technical committee to send you the updated file (see Appendix I) 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 the technical committee to get the updated list
Include "Arabic_Root_slave_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:

```
$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: idn.sa.zone

Note: The Arabic root server will have this configuration file:

```
// e.g. : add these lines to your named.conf file.
// contact the technical committee to get the updated list
zone "xn--mgberp4a5d4ar" {
    type master;
    file "idn.sa.zone" ;};
zone "xn--kgbeam7a8h" {
    type master;
    file "idn.ae.zone" ;};
zone "xn--wgb16a" {
    type master;
    file "idn.qa.zone" ;};
.
```

File: named.conf

More information

- ◆ The Project website:
<http://www.arabic-domains.org>
- ◆ 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/>

Appendix I

```

//***** Appendix *****
// This file holds information about The Arabic
// Domain Name Pilot Project
//
// To setup an Arabic root server you need to include
// this file from your DNS server configuration file
// (named.conf), as follows:
//   Include "Arabic_ccTLD_slave_zone_files.inc";
//
// To get the latest and up-to-date file check
// the web site www.arabic-domains.org
// for file name "Arabic_ccTLD_slave_zone_files.inc"
//
// last update:   June 6, 2005
//

zone "xn--igbhz7gpa" {
    type slave;
    file "idn.jo.zone" ;
    masters { 213.42.20.76; }; };

zone "xn--kgdbap4b0ij" {
    type slave;
    file "idn.ae.zone" ;
    masters { 213.42.20.76; }; };

zone "xn--mgbcpq6gpa1a" {
    type slave;
    file "idn.bh.zone" ;
    masters { 213.42.20.76; }; };

zone "xn--pgbs0dh" {
    type slave;
    file "idn.tn.zone" ;
    masters { 213.42.20.76; }; };

zone "xn--lgbbat1ad8j" {
    type slave;
    file "idn.dz.zone" ;
    masters { 213.42.20.76; }; };

zone "xn--mgbu4chg" {
    type slave;
    file "idn.km.zone" ;
    masters { 213.42.20.76; }; };

zone "xn--ngbee7iid" {
```

```

type slave;
file "idn.dj.zone" ;
masters { 213.42.20.76; }; };

zone "xn--mgberp4a5d4ar" {
type slave;
file "idn.sa.zone" ;
masters { 213.42.20.76; }; };

zone "xn--mgbaxp8fpl" {
type slave;
file "idn.sd.zone" ;
masters { 213.42.20.76; }; };

zone "xn--ogbpf8fl" {
type slave;
file "idn.sy.zone" ;
masters { 213.42.20.76; }; };

zone "xn--mgba5b5cceu" {
type slave;
file "idn.so.zone" ;
masters { 213.42.20.76; }; };

zone "xn--mgba3a5azci" {
type slave;
file "idn.iq.zone" ;
masters { 213.42.20.76; }; };

zone "xn--mgb9awbf" {
type slave;
file "idn.om.zone" ;
masters { 213.42.20.76; }; };

zone "xn--ygbi2ammx" {
type slave;
file "idn.ps.zone" ;
masters { 213.42.20.76; }; };

zone "xn--wgb16a" {
type slave;
file "idn.qa.zone" ;
masters { 213.42.20.76; }; };

zone "xn--mgbg8edvm" {
type slave;
file "idn.kw.zone" ;
masters { 213.42.20.76; }; };

zone "xn--mgb7fjb" {

```

```
type slave;
file "idn.lb.zone" ;
masters { 213.42.20.76; }; }
```

```
zone "xn--mgb7fyab" {
type slave;
file "idn.ly.zone" ;
masters { 213.42.20.76; }; }
```

```
zone "xn--wgbh1c" {
type slave;
file "idn.eg.zone" ;
masters { 213.42.20.76; }; }
```

```
zone "xn--mgbc0a9azcg" {
type slave;
file "idn.ma.zone" ;
masters { 213.42.20.76; }; }
```

```
zone "xn--mgbah1a3hjkrd" {
type slave;
file "idn.mr.zone" ;
masters { 213.42.20.76; }; }
```

```
zone "xn--mgb2ddes" {
type slave;
file "idn.ye.zone" ;
masters { 213.42.20.76; }; }
```