

Use Cases

.CN & .GR

Jiankang Yao

DNS Bundled Domains



.CN & .GR cases

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Under .CN, there are more than **2 Million** Chinese Domain Names

互联网中心.cn 的whois信息

域名: 互联网中心.cn  Simplified version
对应punycode域名: xn--fiq7iq58bfy3a8bb.cn
域名: 互聯網中心.cn  Traditional version
对应punycode域名: xn--fiq7iq58bzh2ae4c.cn
ROID: 20040301s54321s00073084-cn
域名状态: serverDeleteProhibited
域名状态: serverTransferProhibited
域名状态: serverUpdateProhibited
注册者ID: sanf144334
注册者: 中国互联网络信息中心
注册者联系人邮件: servicei@cnnic.cn
所属注册服务机构: 北京新网数码信息技术有限公司
域名服务器: nm.cnnic.net.cn
注册时间: 2000-11-06 00:00:00
到期时间: 2017-09-12 12:00:00
DNSSEC: unsigned

- Bundled Domain Names
 - 互联网中心.cn
 - 互聯網中心.cn
- All bundled Chinese Domain Names under .CN are Configured to have same NS records, and are supposed to have the same DNS resolution

.GR use cases

- All of Greece male names end at a final sigma (**about 30% of Greece IDN domain names**)
- .GR bundled domain names,
 - ✓ The upper case (ends at a normal sigma, without tonos)
 - ✓ The lower case (ends at a final sigma, has a tonos sign)
 - ✓ The lower case with a final sigma, without a tonos as a bundle.
- Use DNAME for bundled domain names under .GR
 - ✓ Νίκοϲ.gr (xn--kxawhkp.gr) , ΝΙΚΟϲ.gr (xn--uxachku.gr) and Νίκοϲ.gr (xn--uxachkp.gr) at the registry level

Vaggelis Segredakis said:“As you understand, it would be perfect for the user if it could be possible with one DNS entry to have all these up and running, however with today’s solutions this is not an option. We have asked in the past for a unified RR in the top level to deal with such mappings but it was rejected from certain members of the technical community as not viable. So, I am happy to see your effort moving along and I hope there is a way to overcome certain difficulties that might appear in the way.”

The information here is provided by Vaggelis Segredakis from .GR registry

Use Cases

.TW

Naiwen Hsu

DNS Bundled Domains .TW use cases

Nai-Wen Hsu (snw@twnic.net.tw)

TWNIC

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Bundled Domains for Same registrant and same destination

註冊原型域名: 講師.tw (xn--eut431h.tw)
繁體對照字域名: 講師.tw (xn--eut431h.tw)
簡體對照字域名: 讲师.tw (xn--ett892h.tw)
自動核配域名: 講師.台灣 (xn--eut431h.xn--kpry57d)
自動解析域名: 講師.tw (xn--eut431h.tw)

Traditional 講師.台灣 (xn--eut431h.xn--kpry57d)
Simplified 讲师.台灣 (xn--ett892h.xn--kprw13d)

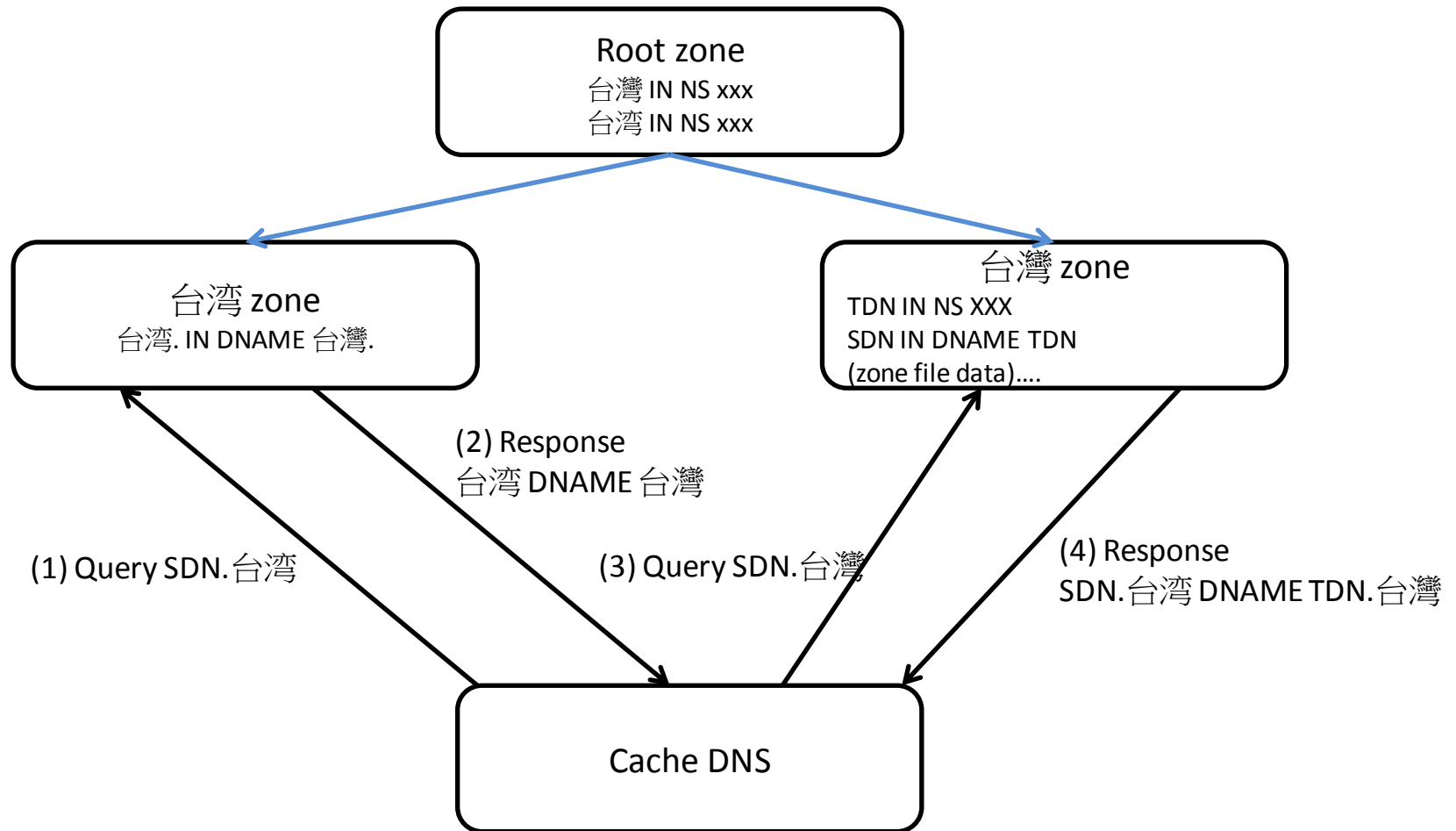
保留字域名(由下列相關字組合之域名):

講 讲
师 師

Contact:
wang 168@ene
Record expires on
Record created on
Registration Service

```
snw@ubuntu: ~  
;; global options: +cmd  
;; Got answer:  
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 64294  
;; flags: qr rd ra; QUERY: 1, ANSWER: 6, AUTHORITY: 0, ADDITIONAL: 1  
;; OPT PSEUDOSECTION:  
;; EDNS: version: 0, flags:;, udp: 3072  
;; QUESTION SECTION:  
www.讲师.台灣. IN A  
;; ANSWER SECTION:  
台灣. 86400 IN DNAME 台灣.  
www.讲师.台灣. 86400 IN CNAME www.讲师.台灣.  
讲师.台灣. 86400 IN DNAME 講師.台灣.  
www.讲师.台灣. 86400 IN CNAME www.講師.台灣.  
www.講師.台灣. 14400 IN CNAME 講師.台灣.  
講師.台灣. 14400 IN A 198.55.121.35  
;; Query time: 284 msec  
;; SERVER: 168.95.1.1#53(168.95.1.1)  
;; WHEN: 六 11月 12 16:03:28 CST 2016  
;; MSG SIZE rcvd: 196  
snw@ubuntu: ~$
```

DNAME solution



DNAME issue

- Pro

- Registrant only maintain single zone regardless of how many bundled domains

- Con

- The owner name of a DNAME is not redirected itself

```
snw@ubuntu: ~  
;<<<> DiG 9.9.5-W1 <<<> 講師.台灣.  
;<<<> global options: +cmd  
;<<<> Got answer:  
;<<<> ->>HEADER<<<- opcode: QUERY, status: NOERROR, id: 6861  
;<<<> flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1  
  
;<<<> OPT PSEUDOSECTION:  
;<<<> EDNS: version: 0, flags:;, udp: 3072  
;<<<> QUESTION SECTION:  
;<<<> 講師.台灣.                IN      A  
  
;<<<> ANSWER SECTION:  
;<<<> 講師.台灣.                14400  IN      A      198.55.121.35  
  
;<<<> Query time: 138 msec  
;<<<> SERVER: 168.95.1.1#53(168.95.1.1)  
;<<<> WHEN: 六 11月 12 16:26:17 CST 2016  
;<<<> MSG SIZE rcvd: 68  
  
snw@ubuntu:~$ dig idn 讲师.台灣.  
  
;<<<> DiG 9.9.5-W1 <<<> 讲师.台灣.  
;<<<> global options: +cmd  
;<<<> Got answer:  
;<<<> ->>HEADER<<<- opcode: QUERY, status: NOERROR, id: 44276  
;<<<> flags: qr rd ra; QUERY: 1, ANSWER: 2, AUTHORITY: 1, ADDITIONAL: 1  
  
;<<<> OPT PSEUDOSECTION:  
;<<<> EDNS: version: 0, flags:;, udp: 3072  
;<<<> QUESTION SECTION:  
;<<<> 讲师.台灣.                IN      A  
  
;<<<> ANSWER SECTION:  
;<<<> 台灣.                    86400  IN      DNAME  台灣.  
;<<<> 讲师.台灣.                86400  IN      CNAME  讲师.台灣.  
  
;<<<> AUTHORITY SECTION:  
;<<<> 台灣.                    900    IN      SOA    d.dns.tw. snw.twnic.net.  
;<<<> tw. 2010229942 3600 900 1296000 900  
  
;<<<> Query time: 18 msec  
;<<<> SERVER: 168.95.1.1#53(168.95.1.1)  
;<<<> WHEN: 六 11月 12 16:26:19 CST 2016  
;<<<> MSG SIZE rcvd: 161  
  
snw@ubuntu:~$
```

Use Cases

.CZ

Ondřej Surý



Internet Naming Aliases

.CZ Use Cases

Ondřej Surý • ondrej.sury@nic.cz • 16. 11. 2016

Latin Extended-A vs US-ASCII problem

Many Czech words contain characters with acute, caron and ring

Žlutoučký kůň pěl ďábelské ódy

The usual mapping just strip the diacritics marks

It might change the meaning of the word

Examples

vláda – government (vlada.cz)

Vláďa – a male name

nic – nothing

nič – destroy (IMP)

Script problem or naming problem?

Synonyms?

chlapec – hoch – kluk (all mean “a boy”)

Dashes?

knot-dns.cz vs. knotdns.cz

vse-pro-chleba.cz vs. vseprochleba.cz

Brands

ietf.org vs bearded-kindergarten.org

Case Studies

GoDaddy

Richard Merdinger

DNS Bundled Domains

Registrar Perspective
(aka Beyond DNS)

Richard Merdinger
<rmerdinger@godaddy.com>

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Multidimensional identity use cases

Today

- ricksrestaurant.com
- ricksrestaurant.com/menu
- ricksrestaurant.com/asia
- ricksrestaurant.com/jp
- ricksrestaurant.com/tokyo
- ricksrestaurant.com/yokohama

Tomorrow

- ricksrestaurant.com
- ricks.restaurant
- ricks.menu
- ricks.asia
- ricks.jp
- ricks.tokyo
- ricks.yokohama

Hundreds of Registries, Thousands of Registrars Millions of Identities

- Bundled Domain Names = Identities
- More than DNS Records
 - Allocation: Registries, Registrars, EPP
 - Management: Registrars, Registrars, Resellers
 - Resolution: DNS
 - Content: SSL, Web, Mail, Apps
- Today's solution not fit for gTLDs
 - Left to right more general
 - Single SLD per SSL, etc.
- Need a solution to bind multi-domain identities from the “outside”