

Resolution of Bundled Names

ICANN 60

Ning Kong

CNNIC

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Use Cases

- V-label.TLD
 - different labels ending with the same TLD
 - color.com == colour.com
 - 清华大学.cn == 清華大学.cn
- LABEL.V-tld
 - same label ending with different TLDs
 - example.com == example.net
 - example.ong == example.ngo

.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
 - ✓ ΝΙΚΟΣ.gr (xn--uxachku.gr)
 - ✓ Νίκος.gr (xn--kxawhkp.gr)
 - ✓ Νικος.gr (xn--uxachkp.gr)

Godaddy Use Cases

Today

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

Tomorrow

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

Requirements

- Option 1:
 - Mapping finite number of activated domain names
- Option 2:
 - Mapping Infinite number of domain names or variants

Problem Statement

- In band solution
 - CNAME
 - Mapping itself
 - DNAME
 - Mapping its children
- Out of band solution
 - Manual configuration
 - Inefficiency
 - Error prone

Possible Solution

- BNAME
 - Redirect one name itself and its children to the other name

Pls see <https://www.ietf.org/internet-drafts/draft-yao-dnsex-bname-06.txt>

Possible Solution

- Zone Clone
 - Replicate the content of a DNS zone into one or more other DNS zones
 - The problem for zone clone is that it can not deal with the children names which are delegated

Pls see <https://tools.ietf.org/html/draft-vixie-dnsexst-dnsshadow-00>

Possible Solution

- C+D
 - Manually Configure CNAME and DNAME together

Pls see <https://tools.ietf.org/html/draft-sury-dnsex-cname-dname-00>

General Questions

- If two names are purposed to be used in the same way, do we need to make DNS identical resolution?
- Is it possible to make one name be identical to another in DNS resolution?
 - If not in old system, is it possible to design a new naming system? The new naming system focuses on solving issues of bundled DNS name?
- Do we need to a mechanism to tell applications that two names are bundled?

Questions for future Work

- Is this a problem ICANN community cares for?
 - If yes, should this problem be solved in ICANN or IETF?
- Which kind of companies and organizations are interested in this work?
- Any interests from the room?

Any Other Questions?

Thanks