Internationalized Domain Names

ALAC Meeting

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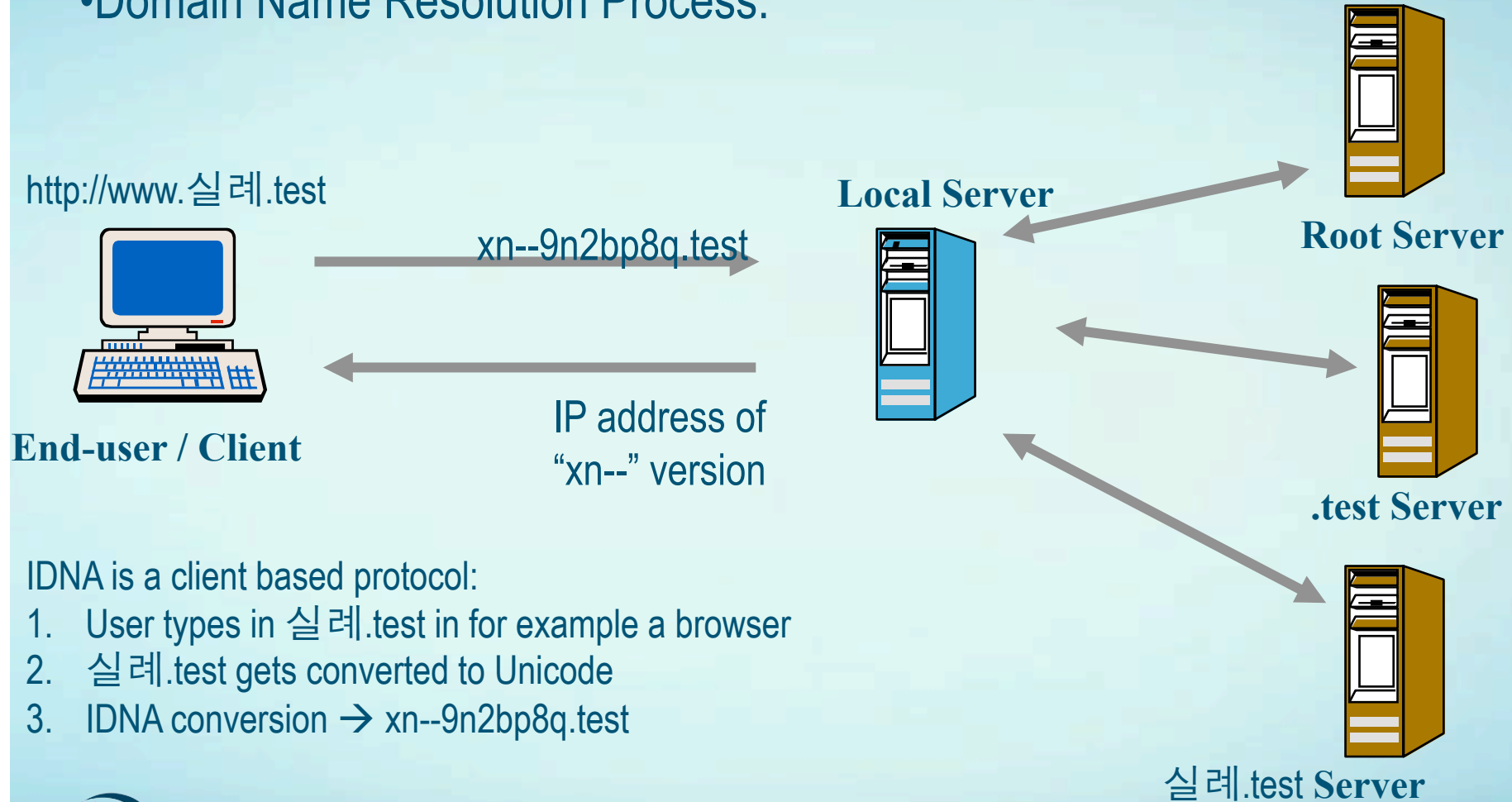
Agenda

- Definitions
- How does IDNs work
- Implementation experience
- What work still needs to be done?
- Summary

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IDN Definitions

- Internationalized domain names are:
  - Names with characters other than the standard ASCII (a,b,…z), (0,1,…9), (-)

- IDNs are about localized solutions
  - But need to be 'internationalized' due to the global nature of the Internet

- IDNs have existed as second level since 2003
  - under web protocol standards
  - email protocol standards are underway (IETF)

- We also need IDN TLDs
  - 北京.中国
  - [xn--1lq90i.xn--fiQs8S]

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IDNA – Protocol Functionality

- Domain Name Resolution Process:

http://www.실례.test

xn--9n2bp8q.test

IP address of "xn--" version

End-user / Client

Local Server

Root Server

.test Server

실례.test **Server**

IDNA is a client based protocol:
1. User types in 실례.test in for example a browser
2. 실례.test gets converted to Unicode
3. IDNA conversion → xn--9n2bp8q.test

I C A N N

IDNs only work if the application software works with IDNs

-standard implementation is important to ensure secure global user experience

-today browser developers have implemented IDNA differently

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Implementation Experience

- Which characters should be offered
  - Formal language, survey users, legal matters…

- Launch procedure, registration policy
  - IP rights, existing registration rights, fcfs?
  - Variant table, blocking registrations, pre-rights or packaged registrations

- IDN Guidelines and protocol adherence

- Registrar and user education & assistance
  - Web only based on application uptake, no email yet

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Towards IDN TLDs:
- What still needs to be done?

- IDN wiki – test facility
- IDN TLD processes at ICANN and IANA
- Main policy related question from users
- IDNA protocol revision at IETF
- IDN Guidelines

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IDN wiki at http://idn.icann.org

Script	Language	SLD.TLD U-labels	SLD A-label	TLD A-label
Arabic	Arabic	مثال.إختبار	xn--mgbh0fb	xn--kgbechtv
Arabic	Persian	مثال.آزمایشی	xn--mgbh0fb	xn--hgbk6aj7f53bba
Chinese, simplified	Chinese	例子.测试	xn--fsqu00a	xn--0zwm56d
Chinese, traditional	Chinese	例子.測試	xn--fsqu00a	xn--g6w251d
Cyrillic	Russian	пример.испытание	xn--e1afmkfd	xn--80akhbyknj4f
Devanagari	Hindi	उदाहरण.परीक्षा	xn--p1b6ci4b4b3a	xn--11b5bs3a9aj6g
Greek	Greek	παράδειγμα.δοκιμή	xn--hxajbheg2az3al	xn--jxalpdlp
Hangul	Korean	실례.테스트	xn--9n2bp8q	xn--9t4b11yi5a
Hebrew	Yiddish	בײַשפּיל.טעסט	xn--fdbk5d8ap9b8a8d	xn--deba0ad
Kanji Hirigana, and Katakana	Japanese	例え.テスト	xn--r8jz45g	xn--zckzah
Tamil	Tamil	உதாரணம்.பரிட்சை	xn--zkc6cc5bi7f6e	xn--hlcj6aya9esc7a

IDNwiki - IDNwiki - Windows Internet Explorer

http://idn.icann.org/

File   Edit   View   Favorites   Tools   Help

IDNwiki - IDNwiki

article | discussion | view source | history

IDNwiki

Welcome to the IDN TLD evaluation gateway!

There are new articles on Additional languages and Technical

navigation
- IDNwiki main page
- E-mail test
- Basic concepts
- Technical topics
- Software

interaction
- Recent changes
- Contact
- Wiki help

evaluation
- العربية
- 简体中文
- 繁體中文
- Ελληνικά
- हिन्दी
- 日本語
- 한국어
- فارسی
- Русский
- தமிழ்
- ייִדיש

additional

Contents [hide]
1 Introduction
2 Your participation is important!
3 Limited evaluation period
4 Things to test
5 Further information about the IDNwiki
6 The example.test names

Introduction

This page provides an introduction to a test of IDN top-level domain names that ICANN is coordinating. The test is based on eleven new internationalized domains representing the name **example.test** entirely in scripts other than the familiar Latin characters that appear in current top-level labels. The languages initially selected for illustrating this are listed in the table below, and the rationale behind their choice is discussed in the sidebar article on basic concepts. These TLDs can be accessed by clicking on the links in the first column in the table. However, as with any other IDNs, if they are typed or copied and pasted directly into the address line of a browser, they will only work if that browser has full support for IDN. The names in the second column are intended to be used in that manner and, if they don't initially perform as intended, some software reconfiguration may help. Additional articles discuss local configuration and individual software applications.

Your participation is important!

Public participation in the evaluation of these domains is one of the most important parts of the project. Joining this initiative requires nothing more than for you to click through one or more of the links in the table and report about the experience on the "discussion page" indicated with a tab at the top of this and the other IDNwiki articles.

- Were the results what you expected?

Local intranet   100%

start   Presentations   2 Microsoft Offic...   Beijing-Apr08 [Co...   SJ-Staff-IDN-traini...   IDNwiki - IDNwiki - ...   ram - Conversation   8:06 PM

Status of the .test wiki

- Purpose of the IDNwiki:
  – Introduce users to IDN TLDs

  – Applications test environment for usability

  – Registry information about user problems
- Conduct an experiment with IDN TLDs
  – not a pre-requisite for production in root zone

  – no registrations are available
- Functions as a "normal wiki", user access

Status of the .test wiki

- Adding new "features"
  - New languages:
    - Amharic (4th level under idn.icann.org)
    - Hebrew (2nd level under existing TLD)
    - Thai (4th level)
    - Urdu (4th level)
  - process available for others languages
  - DNSSEC signing the zones
  - exploring IDN email addition
    - experimental status of technical standard

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IDNwiki Access

- IDNwiki can be accessed at:
  - http://idn.icann.org
  - Thanks to users, moderators, and wiki staff,
    - includes useful information about IDN
    - in all available languages
  - Please:
    - Visit the site
    - Try IDNs
    - Report on results
    - Use information
    - Add information

Status of the IDNA revision

- Proposed revision at IETF
  - from extremely hard working participants
  - RFC4690 and associated internet drafts suggesting revisions and solutions to some problems

- Unicode version independent
  - Three categories by procedure not table
    - Protocol-valid (some w/ contextual rules)
    - Disallowed
    - Unassigned

- Attempting to plan for educational sessions on the difference between protocol versions

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Status of IDNA revision

Basis in RFC4690, describing issues

- draft-klensin-idnabis-issues-07.txt
  - overall rationale and explanation

- draft-klensin-idnabis-protocol-04.txt
  - registration vs. resolution

- draft-faltstrom-idnabis-tables-05.txt
  - category operations procedure
  - not table, but holds Unicode-5.0 result for reference

- draft-alvestrand-idna-bidi-04.txt
  - to allow combining marks at end of string, by test

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IANA management of IDN TLDs

- Process for insertion of IDN TLDs in root
  - exists for test domains only (IDN .test)
    - Developed w/ RSSAC & SSAC recommendations
  - need review, revision, and implementation
  - includes emergency removal procedure
    - for test IDN TLDs only
  - Initial review scheduled by IANA staff
    - Before 30 June 2008
    - Result to be published publicly

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ICANN TLD Allocation Processes

Country-code IDN TLDs – Fast Track

- Deploy non-contentious ccTLD equivalents quickly
- Where demand/readiness exists
- Don't wait for full ccNSO PDP
- Tomorrow, half day session on policy issues and methodology

Country-code IDN TLDs – Long Term

- Full policy that caters for all
- Follows the full ccNSO Policy Development Process
- Issues paper scheduled for publication by ICANN Paris meeting (Jun08)

New Generic TLDs

- New ongoing policy for new gTLDs
- Includes internationalized domains
- Focus on non-ASCII squatting & confusingly similarity solutions

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If I have registered [idn.tld] then will I also be the registrant of [idn.idn-tld] ?

- Policy considerations
  - related to IP rights vs. competition options
  - difficult to do meaningful translation of existing strings
- GNSO Policy:
  - No precedence for existing registries
  - Objection rights exists for confusingly similarity
- ccTLD operators and GAC are considering needs for IDN ccTLD aliasing solution
- If requested then technical solution is needed

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IDN Guidelines

- ICANN IDN Guidelines
  - Need revision to follow IDNA revision
  - Developed by ccTLD and gTLD registry operators
- Local community guidelines, for example:
  - Informal 'Arabic script' meetings in Dubai
  - language experts participate in IDNA review
    - Review of characters that are valid per the protocol
  - In addition to protocol, a need for:
    - local registration policies and variant tables

I C A N N

Summary – everything is under-way

- Protocol – general validity of character and in some extend string validity

- IDN Guidelines – implementation of protocol, and global rules for scripts and languages

- Local Directions – local rules for scripts and languages

→→→→

- Registry testing and implementations

- Application testing and implementations

- Allocation and Delegation Procedures

- Apps Developer, Registry, Registrar, Reseller, Registrant, User:

Outreach, Education, Information

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Thank You

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http://icann.org/topics/idn