

Virtual Keyboard - بازار.

Siavash Shahshahani
Michael Bauland

CORE Association
Knipp Medien und Kommunikation GmbH

TechDay, ICANN 57, Hyderabad, 2016-11-05

Agenda

- 1 Motivation #1 (typing)
- 2 Motivation #2 (domain label meta-info)
- 3 Keyboard Overview
- 4 Practical Examples

Agenda

- 1 Motivation #1 (typing)
- 2 Motivation #2 (domain label meta-info)
- 3 Keyboard Overview
- 4 Practical Examples

Arabic Script Usage



Arabic Script TLD

An innovative totally
Script-based IDN TLD



Not Based On
One Single Language

بازار. nic. cp. // https:



Internet Council
of Registrars

بازار. xn--mgbab2bd



Language ▾

LOGIN



User Name*

Password*

[Password forgotten?](#)

Login

APPLICATION CREATE

BASIC DOMAIN DATA

Step **1**

Launch Phase*

Registrar*

Script*

Domain Name(s)*

- xn--mgbab1cyj1y
- xn--zgb7a23ab
- xn--ghb9iyh
-
-

AuthInfo

Period (Years)*

CONTACTS

2

HOSTS

3

DNSSEC

4

EPP

5

APPLICATION CREATE

BASIC DOMAIN DATA

Step 1

Launch Phase*

Registrar*

Script*

Domain Name(s)*

1. باقاريا
2. مېشى
3. پھل
- 4.
- 5.

Unicode

Punycod

AuthInfo *An AuthInfo will be generated.*

Period (Years)*

Next

CONTACTS

2

HOSTS

3

DNSSEC

4

EPP

5

English Keyboard



Agenda

- 1 Motivation #1 (typing)
- 2 Motivation #2 (domain label meta-info)
- 3 Keyboard Overview
- 4 Practical Examples

بازار IDN Table

- Accessible via the IANA IDN repository
https://www.iana.org/domains/idn-tables/tables/xn--mgbab2bd_arab_1.0.txt
- Contains letters from different Arabic languages
- Complex (context sensitive) rules to validate labels and to generate variant labels (and their canonical form)

Example Rule

Comment: YEH Group (part 1)
Look-behind:
Pattern: U+064A | U+06CC
Look-ahead: {T}* {RD}
Index: U+064A
Variants: U+064A, U+06CC

Comment: YEH Group (part 2)
Look-behind:
Pattern: U+0649 | U+06CC
Look-ahead: {T}* {UL} | \$
Index: U+0649
Variants: U+0649, U+06CC

- {L} denotes characters that are left-joining
- {R} denotes characters that are right-joining
- {D} denotes characters that are dual-joining (i.e. both left- and right-joining)
- {U} denotes characters that are unable to join
- {T} denotes combining characters

Agenda

- 1 Motivation #1 (typing)
- 2 Motivation #2 (domain label meta-info)
- 3 **Keyboard Overview**
- 4 Practical Examples

1	2	3	4	5	6	7	8	9	0	-	Bksp
	ق	و	ع	ر	ت	ى	أ	ي	ؤ	پ	
⬆ Lock	ا	س	د	ف	گ	ه	ج	ك	ل		
Shift	ز	ح	ص	ث	ب	ن	م	ة			

A-Label 0 character(s)

U-Label 0 character(s)

Reference view of U-Label

Variants

Codepoints

١	٢	٣	٤	٥	٦	٧	٨	٩	٠	-	Bksp
ف		غ	ر	ث	ئ	ؤ	ى	ؤ			
Lock	آ	ش	ذ	ب	ن	ه	چ	ک	ل		
Shift	ژ	خ	ض	و		ث		ط			

A-Label 0 character(s)

U-Label 0 character(s)

Reference view of U-Label

Variants

Codepoints

A-Label 0 character(s)

U-Label 0 character(s)

Reference view of U-Label

Variants

Codepoints

Agenda

- 1 Motivation #1 (typing)
- 2 Motivation #2 (domain label meta-info)
- 3 Keyboard Overview
- 4 Practical Examples

Practical Examples

- Example 1: باقاریا
- Example 2: میثی
- Example 3: پهل

keyboard.nic. بازار