

13-SEP-2018

Dear ICANN,

Please find attached our comments pertaining the announcement for public comments:
[“Recommendations for Managing IDN Variant Top-Level Domains”](#).

Sincerely Yours,
Raed Al-Fayez
SaudiNIC

Comments on

Recommendations for Managing IDN Variant Top-Level Domains

We have the following notes regarding some issues discussed in:

- Section 3.2 (Enabling IDN Variant TLD Delegations) of the document: [IDN Variant TLD Implementation – Recommendations and Analysis](#)
- Section Appendix C (Limiting the IDN Variant Domain Names with the Delegation of IDN Variant TLDs) of the document: [IDN Variant TLD Implementation – Appendices \(A: Definitions, B: Use of ROID, C: Limiting Allocated Variant TLDs\)](#)
- Both sections tried to find a solution to the increased number of variants by maximizing the blocking variant labels.

We do agree with this fundamental premise and indeed it is one of major feature of our Variants Management System that we developed based on our 20 years of experience in Arabic IDNs. Furthermore, we do agree with SSAC statement ([Section 3.6: Blocked variant TLDs should be maximized](#)):

“Confusability cannot be considered in isolation from other issues related to security. Phishing and other social engineering attacks based on domain name confusion are a security problem for end users” (SAC 089). When resolving a domain name, there are two failure modes (SAC 60, IIR):

- a) Denial of service: the user attempts to visit <http://example.Y>, reading it as being the same as <http://example.X> ... but connection does not work because ... example.Y is not registered
- b) Misconnection: the user attempts to visit <http://example.Y>, reading it as being the same as <http://example.X> ... but arrives at a site controlled by a registrant different to that of example.X.

SSAC notes that misconnection causes worse results compared to denial of service because misconnection “presents issues of possible credential leakage, accidental disclosure of information, and user confusion and frustration” (SAC 60) and therefore should be avoided.”

Among other ground rules when identifying variants and constructing a variant table, we take into consideration identifying variants that are needed for international reachability across different input devices, since they are needed for domain name stability and reachability. Thus, the variant table should determine "activated" variants that must be allocated for reachability purposes, i.e., identify how users may type a domain name using different input devices from other languages. For example, Arabic user may use Urdu keyboard to register and/or reach an Arabic domain name.

One of the main principles for the stability of the Internet and Internationalized domain names is that the end user should be able to reach a website connected to his/her domain name regardless of location. In order to enforce this principle the input devices (language table) that the user may use to reach a domain name (based on the user location) should be carefully considered when defining variants. Consequently, a

variant management system should be aware of supported languages (through language tables) and input devices (through variant tables).

Consider, for instance, the case where a suitable variant is not allocated to the registrant this may cause a reachability problem and reduce the user acceptance. For example:

If “ابوظبي” (xn--mgbca7dzdo) [0627,0628,0648,0638,0628,064A] is delegated to a registry without its variant “ابوظبى” (xn--mgbca7dzd84b)[0627,0628,0648,0638,0628,06CC], then users with certain input devices will not be able to reach sites under this TLD (i.e., denial of service), causing instability and unreachability problem on DNS.

Thus, variants need to be studied from both similarity point of view (by language community) and reachability point of view (based on input devices used by other language communities). Therefore, for reachability purposes, it is believed that variants which are generated by the latter “activated” (automatically or manually) to the registrant since they are needed for domain name stability and reachability. So that, a registered domain name is accessed regardless of the input devices (language table) being used by the navigator users.

Finally, SaudiNIC would like to make sure that all the needed variants of the national IDN ccTLD “السعودية.” (xn--mgberp4a5d4ar) are not blocked by unnecessary rules without considering the community needs that address domain name stability and reachability. Here is a list of required variants of our IDN TLD “السعودية.” (xn--mgberp4a5d4ar) which was requested when we applied for it in the ccTLD IDN fast-track back in 2009:

#	U-Label	A-Label	Code Points (U-Label)	Reason
1	السعودية	xn--mgberp4a5d4ar	0627, 0644, 0633, 0639, 0648, 062F, 064A, 0629	The main IDN ccTLD string
2	السعوديه	xn--mgbqly7cvafr	0627, 0644, 0633, 0639, 0648, 062F, 064A, 0647	A desired variant for the Arabic language
3	السعودية	xn--mgberp4a5d4a87g	0627, 0644, 0633, 0639, 0648, 062F, 06CC, 0629	A desired variant for International reachability
4	السعودية	xn--mgbqly7c0a67fbc	0627, 0644, 0633, 0639, 0648, 062F, 06CC, 06C3	A desired variant for International reachability

[END of comments]