Proposed Service

Name of Proposed Service:

IDN Variants management change: Discontinuation of DNAME and Adoption of NS Records

Technical description of Proposed Service:

.cat currently uses DNS DNAME records (rather than separate NS records) to represent the IDN variants associated with a domain name in the .cat TLD zone. For example, the records for the domain barca.cat with the name servers "ns1.barca.cat" (192.168.1.1) and "ns2.example.info" and the variants "barça.cat" and "bàrca.cat" look like this:

```
barca    NS     ns1.barca
barca    NS     ns2.example.info
ns1.barca  A   192.168.1.1
xn--bara-2oa   DNAME  barca
xn--bara-0na   DNAME  barca
```

This approach has the advantage that registrars only need to provision a zone for the main domain (here: "barca.cat") on their name servers (and not for the variants) to make the variants work, too. It also allows the use of DNSSEC data for the main domain alone to achieve a proper DNSSEC setup for the variants as well. However, the approach comes with the severe drawback that, due to a limitation of the DNAME record’s specification, this only works for real sub-domains of the variant names, but not for the variant names themselves. So, for the example above, while the names "www.xn--brca-0na.cat" or "mail.xn--brca-0na.cat" could resolve, the names "xn--brca-0na.cat" or "xn--bara-2oa.cat" would not resolve. To overcome this problem (which is also recognized and therefore deprecated by ICANN), the new .cat Registration System handles IDN variants differently, namely by inserting individual delegation points into the zone, with NS records for each variant, like this:

```
barca    NS     ns1.barca
barca    NS     ns2.example.info
ns1.barca  A   192.168.1.1
xn--brca-0na   NS   ns1.barca
xn--brca-0na   NS   ns2.example.info
xn--brca-0na   NS   ns1.barca
xn--brca-0na   NS   ns2.example.info
```

Note that the name servers are always the same for the variants as for the main domain. Assigning individual name servers to IDN variants is not supported. In contrast to the DNAME approach, this solution allows to make full use of the IDN variants, including the variant names themselves in addition to their sub-domains. However, registrars must make sure to provision not only a zone for the main domain on the specified name servers, but also zones for all specified variant names to make them resolve properly.

Consultation

Please describe with specificity your consultations with the community, experts and or others. What were the quantity, nature and content of the consultations?:

See below
a. If the registry is a sponsored TLD, what were the nature and content of these consultations with the sponsored TLD community?:

Many registrants have raised the limitations in DNAME as the reason for not using more extensively their IDN domain names. The subdomain limitation described above is a severe drawback for web and mail usage.

b. Were consultations with gTLD registrars or the registrar constituency appropriate? Which registrars were consulted? What were the nature and content of the consultation?:

Registrars have shown explicit support for this change since the launch of .cat, given the constrains DNAME imposes. The concrete technical changes were discussed in march 2015 during the last .cat registrars’ meeting. The feature was described in full detail, and tentative migration timeframes, coincident in time with the generic platform migration .cat will undergo after the Registry Agreement renewal is finalized, were provided. No registrar had any significant objections.

c. Were consultations with other constituency groups appropriate? Which groups were consulted? What were the nature and content of these consultations?:

N/A

d. Were consultations with end users appropriate? Which groups were consulted? What were the nature and content of these consultations?:

See a) above.

e. Who would endorse the introduction of this service? What were the nature and content of these consultations?:

puntCAT as the steward of the .cat community.

f. Who would object the introduction of this service? What were(or would be) the nature and content of these consultations?:

No objections are foreseen, as this is a technical feature that improves the functionality and compatibility of the .cat IDN domain names.
Timeline

Please describe the timeline for implementation of the proposed new registry service:

The timeline for the implementation is subject to general platform migration .cat has prepared following the technical changes included in the Registry Agreement renewal. We expect this renewal process to be finalized in September 2015. Our initial migration schedule sets November 1st as the date in which we will move from our current SRS platform to the new one. The new platform OT+E will be available for registrars briefly. The new platform can accommodate both IDN Variants management, and our aim is to discontinue DNAME. The New SRS OT&E platform has been available since June 29th.

Business Description

Describe how the Proposed Service will be offered:

This service will be offered to all potential .cat registrants that are interested in registering .cat domain names with IDN variants with no cost added to the registration fees.

Describe quality assurance plan or testing of Proposed Service:

As described in the Timeline description above, this service is part of the features .cat will offer after the move to the new SRS platform. This platform is being managed by .cat's back-end Registry provider, CORE Association. This platform is being used by every new gTLD supported by CORE Association, among them 3 IDN TLDs, and more than 10 ASCII TLDs supporting second level IDN registrations.

Please list any relevant RFCs or White Papers on the proposed service and explain how those papers are relevant:

RFCs 5890, 5891, 5892, 5893 and their successors and the ICANN IDN Guidelines at <http://www.icann.org/en/topics/idn/implementation-guidelines.htm>, as they may be amended, modified, or superseded from time to time.

Contractual Provisions

List the relevant contractual provisions impacted by the Proposed Service:
Any part of the Registry Agreement that refers to DNAME records. The Registry Agreement is currently undergoing a renewal process. The renewal agreement language is based on the new gTLD Registry Agreement. The .cat Registry Agreement proposed language can be found here: Proposed Renewal Registry Agreement. Sections 1 and 3 of the Exhibit A contain references to DNAME records. They should be replaced by reference to NS Records.

What effect, if any, will the Proposed Service have on the reporting of data to ICANN:

No effect

What effect, if any, will the Proposed Service have on the Whois:

No effect

Contract Amendments

Please describe or provide the necessary contractual amendments for the proposed service:

Sections 1 and 3 of the Exhibit A containing references to DNAME will be replaced by reference to NS RECORDS.

1.6. DNAME records for active IDN variants will be replaced by NS records for active IDN variants and Active variant IDNs must be provisioned in the TLD’s DNS zone file using DNAME resource records redirecting to the canonical name. will be replaced by . Active variant IDNs must be provisioned in the TLD's DNS zone file using the same NS records as the main/ASCII domain.

Benefits of Service

Describe the benefits of the Proposed Service:

Improvement in the functionality and compatibility of the .cat IDN domain names

Competition

Do you believe your proposed new Registry Service would have any positive or negative effects on competition? If so, please explain:
How would you define the markets in which your proposed Registry Service would compete?:

N/A

What companies/entities provide services or products that are similar in substance or effect to your proposed Registry Service?:

N/A

In view of your status as a registry operator, would the introduction of your proposed Registry Service potentially impair the ability of other companies/entities that provide similar products or services to compete?:

N/A

Do you propose to work with a vendor or contractor to provide the proposed Registry Service? If so, what is the name of the vendor/contractor, and describe the nature of the services the vendor/contractor would provide.:

The proposed Registry Service will be provided by puntCAT’s current back-end provider, CORE Association.

Have you communicated with any of the entities whose products or services might be affected by the introduction of your proposed Registry Service? If so, please describe the communications.:

As described above, registrars have been requesting this change, and they’ve been informed about the technical details and implementation guidelines and timeframe with no single objection being raised.

Do you have any documents that address the possible effects on competition of your proposed Registry Service? If so, please submit them with your application. (ICANN will keep the documents confidential).:

N/A

Security and Stability
Does the proposed service alter the storage and input of Registry Data?:

\n\nNo

Please explain how the proposed service will affect the throughput, response time, consistency or coherence of responses to Internet servers or end systems:

\n\nThe .cat zone will be affected by the change, as DNAME will disappear and more NS Records will be present, but this does not affect in any way the throughput, response time, consistency or coherence of responses to Internet servers or end systems.

Have technical concerns been raised about the proposed service, and if so, how do you intend to address those concerns?:

\n\nNo technical concerns have been raised

Other Issues

Are there any Intellectual Property considerations raised by the Proposed Service:

N/A

Does the proposed service contain intellectual property exclusive to your gTLD registry?:

N/A

List Disclaimers provided to potential customers regarding the Proposed Service:

N/A

Any other relevant information to include with this request:

The .cat registrar Technical Documentation is provided. Section 4 of the Migration Guide covers the current and New Variant
Handling.

Appendix A (cat-registrar-documentation.pdf)