

ccTLD WHOIS DATA VERIFICATION/VALIDATION SURVEY RESULTS SUMMARY

Between 22 January and 28 February 2014, the Expert Working Group (EWG) on Next Generation Registration Directory Services (RDS) [surveyed ccTLD operators](#), seeking information about existing ccTLD Whois data verification/validation practices to help determine what practices might be commercially reasonable and feasible for gTLD domain names.

A summary of ccTLD operator responses is provided herein. This summary reflects practices voluntarily described by just seven (7) ccTLD operators. As such, this summary simply *ILLUSTRATES* existing ccTLD Whois data verification/validation practices; it is **NOT STATISTICALLY REPRESENTATIVE** of all ccTLDs.

Demographics

Full or partial survey responses were collected from ten (10) ccTLD operators.

Three (3) operators responded to demographic questions but then exited without describing any validation/verification practices; their ccTLD operators are not included in this summary.

Seven (7) substantive responses were submitted by operators responsible for the following ccTLDs:

.ca	.jp	.nz
.es	.no (and .sj and .bv)	.ru (and .PΦ)
.fr (and .re and .tf)		

Table 1. ccTLDs operators included in this Summary

Further demographics provided by the seven ccTLD operators fully participating in this survey:

Australia	Japan	Spain
Belarus	New Zealand	United Kingdom
Canada	Norway	Ukraine
France	Russia	United States
Germany		

Table 2. Top Registrant Locations covered by this Summary

Australia	Japan	Russia	Switzerland
Canada	New Zealand	Singapore	United Kingdom
France	Norway	Spain	United States
Germany	Other EU		

Table 3. Registrar Locations covered by this Summary

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Data Elements Collected

Data Elements collected from Registrants by participating ccTLD operators included the following:

Name of Person or Organization	8 ccTLD operators ¹
Postal Address Details, including: Street, City, Province/State, Postal Code, Postal Area, Country, Country Code, Prefectural, City Government	7 ccTLD operators ² , with varying fields optional
Email Address	7 ccTLD operators ²
Telephone Number	7 ccTLD operators ²
Fax Number (including Fax or Other Number)	4 ccTLD operators
DNS / Name Servers (hostnames, IP addresses)	4 ccTLD operators
Registration Status, Registration Date, Expiration Date, Last Update	2 ccTLD operators
DNSSEC/Signing Key	2 ccTLD operators
Date of Birth	2 ccTLD operators
Domain Name	2 ccTLD operators ¹

Table 4. Data Elements Most Often Collected by Respondents

Furthermore, some type of unique Registrant identifier was collected by 5 ccTLD operators:

- Proof of Registrant’s identity (document number, date of issue, issuing authority)
- Organization Number, or Personal ID Number if registrant is a private individual
- Spanish ID (NF/NE)
- Optional SIREN, VAT, DUNS, WALDEC, and Local ID numbers for corporate Registrants
- Taxpayer’s Identification Number or Identifier in the Trade Register (for foreign corporations)

Additionally, data elements noted in just one response apiece included:

Mobile Phone Number	Include In DNS
Presence Requirement Category	Registrar of Record
Language	Date Cancelled
Birth Place, Birth Town, Birth CC	Date Locked
Trademark if any	Host Information (IPv4 & IPv6)
Natural person / Moral person	Contact Web Page (option)

Table 5. Data Elements Collected by just one Respondent

Individual responses also identified optional data elements and distinctions made between data collected from individuals (natural persons) versus corporations (legal persons).

¹ One response collected Registrant and Domain Names in both Japanese and English/ASCII

² One response stated simply “Contact Details” for the Registrant, Administrative Contact, and Technical Contact

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Data Elements Validated or Verified

Data Elements validated or verified to any extent by many participating ccTLD operators included:

Name of Person or Organization	4 ccTLD operators
Postal Address (Street, City, Province/State)	4 ccTLD operators
Postal Code/Postal Area	4 ccTLD operators
Country Code	3 ccTLD operators
Prefectural and City Government	1 ccTLD operator
Email Address	7 ccTLD operators
Telephone Number	7 ccTLD operators
Fax Number (including Fax or Other Number)	3 ccTLD operators
DNS / Name Servers	2 ccTLD operators
DNSSEC/Signing Key	1 ccTLD operator
Domain Name	2 ccTLD operators
ID	4 ccTLD operators

Table 6. Data Elements Most Often Validated/Verified by Respondents

Next, ccTLD operators were asked to describe the rules applied to validate/verify each data element, including syntax checks, operational verification, cross-validation against other elements, and/or identity confirmation. Rules cited most often by respondents are listed in Table 7:

Name of Person or Organization	Cannot be empty/min 1 char
Postal Address (Street, City, Province/State) ³	Cannot be empty/min 1 char Postal standards
Postal Code/Postal Area	Validation rules Postal standards National Post-supplied list
Country	Cannot be empty/min 1 char
Country Code	List of allowed country codes ISO standard
Email Address	Basic syntax checks xx@yy.TLD in IANA list
Telephone, Fax and Mobile Numbers ⁴	Area code must be numeric CC + 9 or more numbers Basic syntax checks In-country number plan check

³ Responses often did not detail the checks performed on individual postal address fields

⁴ Responses often applied the same checks to all collected phone numbers (telephone, fax, or other)

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	Verify SMS function
DNS / Name Servers	Basic syntax checks
Domain Name	Allowed character set
Individual ID ⁵	Official Algorithm (Spain) Proving Documents (Russia)
Business ID	Existence and Legal Status (France)

Table 7. Validation/Verification Rules often described by Respondents

Further details provided by some ccTLD operators included the following:

- If a cancellation procedure is started, the Registrant is expected to provide documentation (copy of ID or deed of incorporation etc) and email must be in use.
- Verification is performed on the Registrant’s chosen Presence Requirement; postal address is confirmed during this process.
- Registrant Name and ID (Organization or Personal ID number) are cross-checked against each other. For organizations, validated with national company register. For individuals, tool is used to generate own unique personal ID from birth code (SSN)⁶.
- AFNIC provided a detailed description of validation/verification rules, show in Table 8 below.

For individual registrants, Afnic checks if the registrant is reachable (phone number or email address) and eligible against “.fr” naming policy criteria i.e. Any individual residing and any legal entity having its headquarters or principal place of business as specified below may apply to register or renew a domain name in each of the top-level domains:

- within the territory of one of the member states of the European Union;
- within the territory of the following countries: Iceland, Liechtenstein, Norway and Switzerland.

“Qualification” procedure consists of two distinct processes:

- A Verification process: this process requires no intervention on the part of registrars. This step is used to place tags on the database when the data have been verified and to notify the registrar of the results of the verification.
- A Substantiation process: this is a procedure which only takes place after a complaint has been filed, or a report that the result of the verification process is not a positive one, or when the data are clearly implausible. It is therefore only triggered on a small volume of data compared with the actual volumes of identification operations. The procedure, which is relatively similar to the identification procedure, involves suspending the portfolio for a maximum period of 30 days and then, if necessary, blocking the portfolio for the same period, before deleting the portfolio if the requested documents have not been provided by the registrar.

Verification process:

The Verification procedure consists in checking the eligibility and reachability of a holder, and in updating the Whois database by tags. It focuses on a holder’s contact object identified by its NIC handle, and only in exceptional cases has any effect on the portfolio of domain names associated with it.

The Verification process is used in the four following cases:

- to finalize an operation on a domain name whose incoming holder has never been qualified before,
- when AFNIC decides to carry out a qualification check on a holder
- when a third party reports an irregularity to AFNIC,
- on the initiative of a registrar wishing to qualify the data on its portfolio of holder contacts.

The Verification process can result in a success, partial success, or failure. In the case of a wholly or partially successful verification, the holder information that has been positively verified is then tagged and the registrar is informed of the outcome (notification by EPP and by e-mail). If the verification is not wholly or partially successful, no tag will be visible in the Whois database, but the registrar is informed of the outcome (notification by EPP and by e-mail). If further to a report by a third party, the verification fails, or the holder contact data are clearly implausible, a substantiation process is initiated. The registrar can carry out the Verification on

⁵ For more about checks performed on Individual or Business IDs, see “Unique IDs” question on page 8.

⁶ <http://www.norid.no/registrar/soknad/verktoy/pid/pid-automat-en.html>

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the registrations in its own portfolio. This will also induce the presence of a tag in the Whois database. Changing contact data will delete the corresponding tags in the database. AFNIC may verify a contact already verified by a registrar. In this case, the potentially existing tag is cancelled and replaced by the AFNIC tag.

Substantiation process:

Substantiation consists in requesting a series of supporting documents from the registrar. It is required in the three following cases:

- after a Verification which highlights the implausible nature of the data provided concerning the holder contact,
- after a Verification which wholly or partially fails, equivalent to a report to the AFNIC,
- after a properly documented complaint has been filed with AFNIC.

The Substantiation process can result either in a successful verification, or in a failure. If the requisite supporting documents have been provided on time by the registrar, the holder contact is then positively verified in the Whois database and the registrar is informed of the outcome (notification by EPP and by email). If not, the corresponding portfolio is then deleted.

Table 8. AFNIC Validation/Verification Rules

Next, for each validated/verified Data Element, ccTLD operators were asked to describe possible results (e.g., email address syntactically correct but unconfirmed vs. email address confirmed). Few respondents answered this question; those that did said:

- The current registration tool only sets some checks to try to improve the data is syntactically correct, but does not ensure it is fully correct.
- Telephone number may be correct/incorrect; SMS function may be supported/not; and national ID information may be verified/not verified.
- Reachability: Telephone number AND / OR email confirmed (OK/KO).
Individual Eligibility: Postal address for residence confirmed.
Corporate Eligibility: Business name and/or identifier and legally active status confirmed.

Validation/Verification Systems and Processes

Having established the data elements to be verified and the rules to be applied to them, ccTLD operators were asked about procedures and systems used to conduct these verifications. Several individual ccTLD operator responses are summarized below:

- Standard syntax validations are applied to writeable transactions processes by SRS and EPP; however, some historical data imported in 2002/2003 may not meet all requirements.
- Checked by Registry system. In case of some 3LD names, the existence of Registrants is checked by using a public database of companies.
- Registration tool has some filters related to syntax rules. In the cancellation procedure, the Legal Department manually handles requests for additional info and validation. Registrars are expected to request and keep registrant documentation that could be used for validation.
- Procedure is specified by Registrar.
- Two Checks: Eligibility Data and Reachability Data. Status may be Pending or OK. (See full text of AFNIC response for further details.)
- Validations are completed by Registry database and internally using address accuracy software. Verifications are completed during audit process of our Presence Requirement.

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Five (5) ccTLD operators said they performed validation at the time of registration and subsequent update. Four (4) ccTLD operators also said they performed re-validation when notified by a third-party or Registrar about an inaccuracy. Further comments about when validation/verification is performed:

- Existing syntax rules for contact data are applied upon registration by the registration tool. Validation performed during cancellation takes place after registration, once the Registry decides to launch a cancellation procedure, on request of a legitimate third party. Registry is currently drafting a plan to make audits of data to improve quality.
- Telephone number and email are verified on registration and update; ID information may be verified at any time, initiated by Registrar or third-party request.
- Randomly, once domain name is registered (minimum 100 domains checked per day), and also upon third party request.
- Performed by Registry at the time a contact create or update request is received. Verification is completed during our continuous audit process on Presence Requirements.

When asked who perform(s) validation or verification, responses were evenly divided between Registry (4) and Registrar (4) – often both. Specifically:

- Operator manually asks Registrar to verify Registrant Contact Name and Details. If Registrar is unable to resolve, operator attempts to contact Registrant directly.
- Only Registry performs validation.
- Registry's registration tool, cancellation procedures, *.gob.es and edu.es, and Registrars.
- Registrar.
- Registry agent performs random/motivated checks; Registrar can also update status via EPP.
- Registrars are required to ensure that validation business rules are programmed in their process to collect information. Registry also validates information passed to us, passing any error back to Registrar.

Four (4) ccTLD operators said validation occurred in real-time. Steps that require offline processing with delayed results were described as follows:

- Approximately 10-15 minutes, calling telephone numbers, emailing, posting letters.
- In real-time during registration; offline processing during cancellation.
- To prove ID information, Registrant must submit legal documents within 7 days.
- Real-time actions and offline processing; whole process will not exceed 15 days.
- Validation of Registrant data elements completed in real-time. Verification is a separate process that is completed on targeted populations on routine basis.

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Validation/Verification Failure and Remediation

All ccTLD operators responding to these questions stated that Registrants were given an opportunity to correct inaccurate data. Processes used to notify Registrants about inaccuracies included:

- Registrant is contacted manually and advised they need to update details. If Registrant does not correct details, the name may be cancelled with 90-day Pending Release period during which they may supply valid details and have name reinstated.
- All validation/verification failures require submission of correct information.
- Registrants have 10 days to send valid contact information, including documented proof, or domain name will be deleted.
- When telephone number or email is being changed, syntax is checked automatically and rejected if incorrect, with unlimited retries. Registrar has the right to examine ID information by requesting Registrant's clarifications or supporting documents via email. If Registrant fails to provide documents within 7 days, Registrar has right to suspend transfer, delegation or termination application processing or terminate delegation.
- Registrant receives email requesting supporting evidence for items transmitted during registration (i.e., proof of identity, address, email and telephone number). If error is not remedied within 30 days, DN is blocked for 30 days, and then deleted.
- Real-time error codes are returned for failed contact create and update transactions. For verification process, Registrant is notified and given opportunity to correct through Registrar.

Just one respondent provided verification/validation failure rates: Eligibility data failure rate (6.3%), Reachability data failure rate (0.4%) or Both (1%). Most ccTLD operators said that failures were not tracked and/or that failures caused create/update transactions to be rejected.

Validation/Verification Costs and Software/Services

No ccTLD operator provided specific cost information associated with performing all Data Element validation/verification. However:

- Four (4) explicitly indicated they could not estimate costs.
- One said the cost was zero (0) because it was performed automatically by the Registry system.
- Three (3) estimated that validation and verification performed in-house by their Registry required 1 or 2 full-time equivalents (FTEs).

Two ccTLD operators identified commercial service providers, software vendors, or databases used to conduct Whois data validation/verification:

- A national, European public database provider for corporate information such EBR, Google Maps for address verification, public directories (e.g., yellow/white pages) for corporations/individuals.

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- At this time, we conduct internal analysis using Experian QAS, Canadian trademark database, Canadian corporate registries, and ESC corporate services.

Privacy and Proxy Considerations and Unique Identifiers

Four (4) respondents stated that Proxy registration services were NOT allowed in their ccTLDs.

Only one respondent allowed Proxy Services, and did so without any additional verification procedures.

Regarding conditions in which Data Elements are NOT publicly displayed in Whois, respondents said:

- Only name and email is displayed in Whois contacts.
- For private individuals, no personal data (including name) is publicly displayed in Whois. Whois output indicates domain is registered by individual with link to web form for sending email notification to Registrant.
- In accordance with the French Data Protection Authority, when a domain name is registered by an individual, the Registrant may opt by default for the “restricted information” option. When chosen, no personal information (name, address, telephone, fax, or email address) is displayed within Whois, except for technical contact, Registrar details, and DNS servers.
- Built-in privacy protection options can be used to limit personal information available through Whois. Option is enabled by default for individual Registrants and can be changed through Registrar. When privacy protection is disabled, additional data displayed includes Registrant Name, Administrative and Technical Contact data, and (in March 2014) Registrant’s postal address, phone, fax and email.

When asked if there were specific Data Elements not to collected or displayed in order to comply with Data Protection laws, respondents were evenly split, with:

- Three (3) NOT limiting data collection/display,
- Three (3) limiting collection/display for privacy reasons, and
- Two (2) of those limiting display of personal data for individual registrants by default.

When asked whether they issued unique identifiers to Registrants:

- Three (3) respondents did NOT issue unique identifiers
- Two (2) DID issue NIC-Handles, displaying them in Whois,
- One (1) support NIC-Handles sent by Registrars but did NOT display them in Whois.

For example, Afnic auto-generates NIC-Handles when the Registrar created the domain name holder contact via EPP. This identifier is displayed in Whois and used for trade, transfer, and recover operations.

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Reference Documents and Further Information

Links provided by ccTLD operators to public documents describing these procedures included:

- <http://cctld.ru/en/docs/rules.php>
- <http://jprs.jp/doc/rule/rule-wideusejp.html> and [disclose-list.html#nameLink5](http://jprs.jp/doc/rule/rule-wideusejp.html#nameLink5)
- <http://www.afnic.fr/medias/documents/procedures-manual-fr-2012-12-17.pdf>
- <http://www.norid.no/registrar/soknad/veiledning/registrere-oppdatere-en.html>

Six (6) ccTLD operators were interested in working with other ccTLDs and/or ICANN to identify possible data validation/verification solutions or work to standardize data validation and verification practices across ccTLDs. The willingness of these respondents to share additional insights is appreciated.