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Abstract

This document describes the interfaces between ICANN and Registries and Data Escrow Agents. These interfaces allow Registries and Data Escrow Agents upload the reports described in the Base Agreement of the new gTLD Applicant Guidebook.

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1. Introduction

This document describes the interfaces between ICANN and Registries and Data Escrow Agents. These interfaces allow Registries and Data Escrow Agents upload the reports described in the Base Agreement of the new gTLD Applicant Guidebook.

Authentication credentials for the interfaces described above are provided per TLD.

1.1. Terminology

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in [RFC 2119](#) [[RFC2119](#)].

XML is case sensitive. Unless stated otherwise, XML specifications and examples provided in this document MUST be interpreted in the character case presented in order to develop a conforming implementation.

"iirdea-1.0" is used as an abbreviation for "urn:ietf:params:xml:ns:iirdea-1.0". The XML namespace prefix "iirdea" is used, but implementations MUST NOT depend on it and instead employ a proper namespace-aware XML parser and serializer to interpret and output the XML documents.

2. Specification 2 - Data Escrow Reporting

This section describes the interfaces provided by ICANN for Registry Operators and Data Escrow Agents to comply with the reporting provisions detailed in Specification 2 of the Base Agreement of the new gTLD Applicant Guidebook [[ICANN-GTLD-AGB-20120604](#)].

2.1. Registry Operator Reporting

The new gTLD base Registry Agreement, Specification 2, Part A, [Section 7](#) requires Registry Operators to provide ICANN with a written statement that includes a copy of the report generated upon creation of an escrow deposit and a statement that the deposit has been inspected by the Registry Operator and is complete and accurate.

In order to comply with this provision, the Registry Operator sends a report to ICANN for each escrow deposit successfully received by the Data Escrow Agent, using the PUT HTTP verb in the interface provided by ICANN at:

<https://ry-api.icann.org/report/registry-escrow-report>

Registries MUST send a <rdeReport:report> object as defined in [[I-D.arias-noguchi-dnrd-objects-mapping](#)].

After successfully receiving a <rdeReport:report> object, ICANN validates it and provides a result code in the same HTTP transaction.

After sending the result code, the interface closes the TCP connection.

At 23:59 UTC, the last successful validated <rdeReport:report> object is stored and used by ICANN.

[2.1.1.](#) Result codes

The following table lists the result codes of the interface:

Result Code	Description
1000	No ERRORS were found and the report has been accepted by ICANN.
2001	The report did not validate against the schema.
2002	A report for that day already exists, the cut-off date already passed.

Data Escrow Reporting Result Codes

[2.2.](#) Data Escrow Agent Reporting

The new gTLD base Registry Agreement, Specification 2, Part B, [Section 7](#) requires Data Escrow Agents to deliver ICANN, a data escrow notification when a escrow deposit is successfully received from the Registry Operator regardless of the final status of the verification process.

In order to comply with this provision, the Data Escrow Agent sends a notification to ICANN for each escrow deposit received from the Registry Operator, using the PUT HTTP verb in the interface provided by ICANN at:

<https://ry-api.icann.org/report/escrow-agent-notification>

Data Escrow Agents MUST send a <rdeNotification:notification> object as defined in [[I-D.arias-noguchi-dnrd-objects-mapping](#)].

After successfully receiving a `<rdeNotification:notification>`, ICANN validates it and provides a result code in the same HTTP transaction.

After sending the result code, the interface closes the TCP connection.

At 23:59 UTC, the last successful validated `<rdeNotification:notification>` object is stored and used by ICANN.

2.2.1. Interface result code

The following table lists the result codes of the interface:

Result Code	Description
1000	No ERRORS were found and the notification has been accepted by ICANN.
2001	The notification did not validate against the schema.
2002	A notification for that day already exists, the cut-off date already passed.

Data Escrow Reporting Result Codes

3. Specification 3 - Registry Operator Monthly Reporting

Specification 3 of the new gTLD base Registry Agreement requires Registry Operators to provide a set of monthly reports per gTLD. Two type of reports are required to be sent by Registries: Per-Registrar Transactions Report and Registry Functions Activity Report. This section specifies the interface provided by ICANN to automate the upload of these reports by Registry Operators.

The cut-off date for the reception of the previous month report is the day 20 (23:59 UTC) of the current month, as described in the new gTLD Applicant Guidebook [[ICANN-GTLD-AGB-20120604](#)]. Before the cut-off date the Registry Operator could replace a successfully validated report as many times as it needs.

3.1. Per-Registrar Transactions Report

The Per-Registrar Transactions Report is a CSV report described in [Section 1](#) of Specification 3.

In order to comply with this provision, the Registry Operator sends a

CSV report on a monthly basis as described in the Agreement, using the PUT HTTP verb in the interface provided by ICANN at:

<https://ry-api.icann.org/report/registrar-transactions/<TLD>/<date>>

Where:

- * <TLD> MUST be substituted by the TLD for which the reports is being provided. In case of an IDN TLD, the A-label MUST be used.
- * <date> MUST be substituted by the month for which the reports is being provided in the form of YYYY-MM. Where 'YYYY' is the year and 'MM' is the two digit month number. For example:
2013-03

After successfully receiving a report, ICANN validates it and provides a result code in the same HTTP transaction.

After sending the result code, the interface closes the TCP connection.

3.1.1. Interface result codes

The following table lists the result codes of the interface:

Result Code	Description
1000	No ERRORS were found and the report has been accepted by ICANN.
2001	The structure of the report is invalid.
2002	A report for that month already exists, the cut-off date already passed.
2003	Negative numeric value present in the report.
2101	Incorrect totals present in the report.
2102	Non ICANN accredited registrar present in the report.
2103	Values found in the second field of the totals line.

Per-Registrar Transactions Report Result Codes

3.2. Registry Functions Activity Report

The Registry Functions Activity Report is a CSV report described in Specification 3, 2 of the new gTLD Applicant Guidebook [[ICANN-GTLD-AGB-20120604](#)].

In order to comply with this provision, the Registry Operator sends a CSV report on a montly basis as described in the Agreement, using the PUT HTTP verb in the interface provided by ICANN at:

<https://ry-api.icann.org/report/registry-functions-activity/<TLD>/<date>>

Where:

- * <TLD> MUST be substituted by the TLD for which the report is being provided. In case of an IDN TLD, the A-label MUST be used.
- * <date> MUST be substituted by the month for which the reports is being provided in the form of YYYY-MM. Where 'YYYY' is the year and 'MM' is the two digit month number. For example:
2013-03

After sucessfully receiving a report, ICANN validates it and provides a result code in the same HTTP transaction.

After sending the result code, the interface closes the TCP connection.

3.2.1. Interface result codes

The following table lists the result codes of the interface:

Result Code	Description
1000	No ERRORS were found and the report has been accepted by ICANN.
2001	The structure of the report is invalid.
2002	A report for that month already exists, the cut-off date already passed.
2003	Negative numeric value present in the report.

Registry Functions Activity Report Result Codes

4. IIRDEA Result Object

After processing the input provided in the interface, a response object as defined by the schema in [Section 5](#) is provided.

The interface provides a HTTP/200 status code when the interface was able to receive the input and sent a response.

The interface provides a HTTP/500 status code when the system is experiencing a general failure.

An example of a response object is presented below:

```
<?xml version="1.0" encoding="UTF-8"?>
<response xmlns="urn:ietf:params:xml:ns:iirdea-1.0">
  <result code="1000">
    <msg>No error</msg>
    <description>
      The report has been accepted by ICANN.
      Processing of the report will take place at 23:59 UTC.
    </description>
  </result>
</response>
```

5. Formal Syntax

The schema of the IIRDEA result code is presented here.

The BEGIN and END tags are not part of the schema; they are used to note the beginning and ending of the schema for URI registration purposes.

5.1. IIRDEA Result Schema

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```
BEGIN
<?xml version="1.0" encoding="UTF-8"?>
<schema targetNamespace="urn:ietf:params:xml:ns:iirdea-1.0"
  xmlns:iirdea="urn:ietf:params:xml:ns:iirdea-1.0"
  xmlns="http://www.w3.org/2001/XMLSchema"
  elementFormDefault="qualified">

  <annotation>
    <documentation>
      ICANN interfaces for registries and data escrow agents
    </documentation>
  </annotation>

  <element name="response" type="iirdea:responseType"/>

  <complexType name="responseType">
    <sequence>
      <element name="result" type="iirdea:resultType"/>
    </sequence>
  </complexType>

  <complexType name="resultType">
    <sequence>
      <element name="msg" type="token"/>
      <element name="description" type="string" minOccurs="0"/>
    </sequence>
    <attribute name="code" type="iirdea:codeType" use="required"/>
  </complexType>

  <simpleType name="codeType">
    <restriction base="integer">
      <enumeration value="1000"/>
      <enumeration value="2001"/>
      <enumeration value="2002"/>
      <enumeration value="2003"/>
      <enumeration value="2101"/>
      <enumeration value="2102"/>
      <enumeration value="2103"/>
    </restriction>
  </simpleType>
</schema>
END
```

6. Acknowledgements

TBD.

7. Change History

Version 00.

8. IANA Considerations

TODO

9. Security Considerations

TODO

10. References

10.1. Normative References

- [I-D.arias-noguchi-dnrd-objects-mapping]
Arias, F., Lozano, G., Noguchi, S., Gould, J., and C. Thippeswamy, "Domain Name Registration Data (DNRD) Objects Mapping", [draft-arias-noguchi-dnrd-objects-mapping-02](#) (work in progress), March 2013.
- [RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", [BCP 14](#), [RFC 2119](#), March 1997.
- [RFC3688] Mealling, M., "The IETF XML Registry", [BCP 81](#), [RFC 3688](#), January 2004.

10.2. Informative References

- [ICANN-GTLD-AGB-20120604]
ICANN, "gTLD Applicant Guidebook Version 2012-06-04", June 2012, <<http://newgtlds.icann.org/en/applicants/agb/guidebook-full-04jun12-en.pdf>>.

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