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**ICANN Registry Interfaces**  
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**Abstract**

This document describes the interfaces provided by ICANN to Registry Operators in order to fulfill the requirements of Specification 2 and 3 of the New gTLD Base Agreement. The interface provided by ICANN to Data Escrow Agents in order to fulfill the requirements of Specification 2 of the New gTLD Base Agreement is also described in this document.

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## **1. Introduction**

This document describes the interfaces provided by ICANN to Registry Operators in order to fulfill the requirements of Specification 2 and 3 of the New gTLD Base Agreement. The interface provided by ICANN to Data Escrow Agents in order to fulfill the requirements of Specification 2 of the New gTLD Base Agreement is also described in this document.

Authentication credentials for the interfaces are provided by ICANN to the Registry Operator per TLD. The Registry Operator receives a set of credentials to be used by the Registry Operator and by the Data Escrow Agent for authentication to the after-mentioned interfaces.

### **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.

## **2. Interfaces for Specification 2 - Data Escrow Reporting**

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

### **2.1. Registry Operator Reporting**

The New gTLD Base 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 a 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 <rdeReport:report> element to ICANN for each deposit successfully sent to 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/<TLD>/<id>>

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.
- \* <id> MUST be substituted by the identifier assigned to this report, which MUST be the same as the "id" attribute from the <deposit>.

Note: The interface supports overwriting the information of a particular report "id" to support async interfaces between Registry Operators and Data Escrow Agents.

#### **2.1.1.1. <report> object**

The <report> element contains the following child elements:

- o An <id> element contains the identifier assigned to this report. The report identifier MUST be the same as the "id" attribute from the <deposit>.
- o A <version> element contains the version of the specification used. This value MUST be 1.
- o A <rydeSpecEscrow> element contains the version of the Registry Data Escrow Specification (e.g. [draft-arias-noguchi-registry-data-escrow-06](#)) used to create the deposit. After the specification is published as an RFC, the value MUST be the RFC number assigned by IANA.
- o A <rydeSpecMapping> element contains the version of the Domain Name Registration Data (DNRD) Objects Mapping (e.g. [draft-arias-noguchi-dnrd-objects-mapping-05](#)) used to create the deposit. After the specification is published as an RFC, the value MUST be the RFC number assigned by IANA.
- o A <resend> element contains the value of the "resend" attribute of the <deposit>.
- o A <crDate> element contains the date and time that the deposit was created by the Registry Operator.
- o A <kind> element is used to identify the kind of deposit: FULL, INCR (Incremental) or DIFF (Differential).



- o A <watermark> element contains the data and time corresponding to the Timeline Watermark (<watermark> element) of the <deposit>.
- o A <header> element contains the header of the <deposit>.

Example <report> object:

```
<?xml version="1.0" encoding="UTF-8"?>
<rdeReport:report
  xmlns:rdeReport="urn:ietf:params:xml:ns:rdeReport-1.0"
  xmlns:rdeHeader="urn:ietf:params:xml:ns:rdeHeader-1.0">
  <rdeReport:id>20101017001</rdeReport:id>
  <rdeReport:version>1</rdeReport:version>
  <rdeReport:rydeSpecEscrow>
    draft-arias-noguchi-registry-data-escrow-06
  </rdeReport:rydeSpecEscrow>
  <rdeReport:rydeSpecMapping>
    draft-arias-noguchi-dnrd-objects-mapping-05
  </rdeReport:rydeSpecMapping>
  <rdeReport:resend>0</rdeReport:resend>
  <rdeReport:crDate>2010-10-17T00:15:00.0Z</rdeReport:crDate>
  <rdeReport:kind>FULL</rdeReport:kind>
  <rdeReport:watermark>2010-10-17T00:00:00Z</rdeReport:watermark>
  <rdeHeader:header>
    <rdeHeader:tld>test</rdeHeader:tld>
    <rdeHeader:count
      uri="urn:ietf:params:xml:ns:rdeDomain-1.0">2</rdeHeader:count>
    <rdeHeader:count
      uri="urn:ietf:params:xml:ns:rdeHost-1.0">1</rdeHeader:count>
    <rdeHeader:count
      uri="urn:ietf:params:xml:ns:rdeContact-1.0">1</rdeHeader:count>
    <rdeHeader:count
      uri="urn:ietf:params:xml:ns:rdeRegistrar-1.0">1
    </rdeHeader:count>
    <rdeHeader:count
      uri="urn:ietf:params:xml:ns:rdeIDN-1.0">1</rdeHeader:count>
    <rdeHeader:count
      uri="urn:ietf:params:xml:ns:rdeNNDN-1.0">1</rdeHeader:count>
    <rdeHeader:count
      uri="urn:ietf:params:xml:ns:rdeEppParams-1.0">1
    </rdeHeader:count>
  </rdeHeader:header>
</rdeReport:report>
```





## **2.2. Data Escrow Agent Reporting**

The New gTLD Base Agreement, Specification 2, Part B, [Section 7](#) requires Data Escrow Agents, to deliver to ICANN a notification every time a successfully processed deposit is received from the Registry Operator regardless of the final status of the verification process.

There are three types of notices:

Deposit Receipt Failure Notice (DRFN): generated by the Escrow Agent when no deposit is received pursuant to the schedule specified in Specification 2.

Deposit Verification Failure Notice (DVFN): generated by the Escrow Agent when a deposit is received, but the final result of the verification process is failure.

Deposit Verification Pass Notice (DVPN): generated by the Escrow Agent when a deposit is received and the final result of the verification process is success.

In order to comply with this provision, the Data Escrow Agent sends a `<rdeNotification:notification>` element to ICANN, using the POST HTTP verb in the interface provided by ICANN at:

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

Where:

- \* `<TLD>` MUST be substituted by the TLD for which the notification is being provided. In case of an IDN TLD, the A-label MUST be used.

If by 23:59 UTC, a deposit has not been successfully processed regardless of the final status of the verification process, a `<rdeNotification:notification>` with DRFN status MUST be send to ICANN.

### **2.2.1. `<notification>` object**

The `<notification>` element contains the following child elements:

- o A `<deaName>` element contains the name of the Data Escrow Agent.
- o A `<version>` element contains the version of the specification used. This value MUST be 1.



- o A <repDate> element contains the reported date. In case of a DVPN or DVFN notification this value MUST be the date of the <watermark> element of the <deposit>. In case of a DRFN deposit notification, this value MUST be the date for which no deposit was received from the Registry Operator.
- o A <status> element is used to specify the status of <repDate>. The possible values of status are: DVPN, DVFN and DRFN.
  - \* DVPN
  - \* DVFN
  - \* DRFN
- o An OPTIONAL <reDate> element contains the date and time that the deposit was successfully received by the Data Escrow Agent. In case of a DRFN deposit notification this element MUST NOT be present.
- o An OPTIONAL <vaDate> element contains the date and time that the deposit was successfully validated by the Data Escrow Agent. In case of a DRFN deposit notification this element MUST NOT be present.
- o An OPTIONAL <lastFullDate> element contains the date of the Timeline Watermark (<watermark> element) of the most recent FULL deposit that was successfully validated by the Data Escrow Agent. This element MUST NOT be present if a successfully validated full deposit has never been deposited.
- o An OPTIONAL <report> element is used by the Data Escrow Agent to provide extended information about the deposit. In case of a DRFN deposit notification this element MUST NOT be present. In case of a DVPN or DVFN deposit notification this element MUST be present. When this element is present, the <rdeHeader:header> element MUST be generated by the Data Escrow Agent for the Timeline Watermark (<watermark> element) of the deposit being processed. If the deposit being processed is a differential or incremental deposit, the Data Escrow Agent MUST process the last full plus all differentials or last full plus last incremental escrow deposits to generate the <rdeHeader:header> element.
- o Note: In case of a DVPN or DVFN deposit notification, the <rdeReport:id> is used as unique identifier.

Example <notification> object:



```
<?xml version="1.0" encoding="UTF-8"?>
<rdeNotification:notification
  xmlns:rdeNotification="urn:ietf:params:xml:ns:rdeNotification-1.0"
  xmlns:rdeReport="urn:ietf:params:xml:ns:rdeReport-1.0"
  xmlns:rdeHeader="urn:ietf:params:xml:ns:rdeHeader-1.0">
  <rdeNotification:deaName>Escrow Agent Inc.</rdeNotification:deaName>
  <rdeNotification:version>1</rdeNotification:version>
  <rdeNotification:repDate>2010-10-17</rdeNotification:repDate>
  <rdeNotification:status>DVPN</rdeNotification:status>
  <rdeNotification:reDate>
    2010-10-17T03:15:00.0Z
  </rdeNotification:reDate>
  <rdeNotification:vaDate>
    2010-10-17T05:15:00.0Z
  </rdeNotification:vaDate>
  <rdeNotification:lastFullDate>
    2010-10-14
  </rdeNotification:lastFullDate>
  <rdeReport:report>
    <rdeReport:id>20101017001</rdeReport:id>
    <rdeReport:version>1</rdeReport:version>
    <rdeReport:rydeSpecEscrow>
      draft-arias-noguchi-registry-data-escrow-06
    </rdeReport:rydeSpecEscrow>
    <rdeReport:rydeSpecMapping>
      draft-arias-noguchi-dnrd-objects-mapping-05
    </rdeReport:rydeSpecMapping>
    <rdeReport:resend>0</rdeReport:resend>
    <rdeReport:crDate>2010-10-17T00:15:00.0Z</rdeReport:crDate>
    <rdeReport:kind>FULL</rdeReport:kind>
    <rdeReport:watermark>2010-10-17T00:00:00Z</rdeReport:watermark>
    <rdeHeader:header>
      <rdeHeader:tld>test</rdeHeader:tld>
      <rdeHeader:count
        uri="urn:ietf:params:xml:ns:rdeDomain-1.0">2</rdeHeader:count>
      <rdeHeader:count
        uri="urn:ietf:params:xml:ns:rdeHost-1.0">1</rdeHeader:count>
      <rdeHeader:count
        uri="urn:ietf:params:xml:ns:rdeContact-1.0">1</rdeHeader:count>
      <rdeHeader:count
        uri="urn:ietf:params:xml:ns:rdeRegistrar-1.0">1
      </rdeHeader:count>
      <rdeHeader:count
        uri="urn:ietf:params:xml:ns:rdeIDN-1.0">1</rdeHeader:count>
      <rdeHeader:count
        uri="urn:ietf:params:xml:ns:rdeNNDN-1.0">1</rdeHeader:count>
      <rdeHeader:count
        uri="urn:ietf:params:xml:ns:rdeEppParams-1.0">1
```



```
        </rdeHeader:count>
    </rdeHeader:header>
</rdeReport:report>
</rdeNotification:notification>
```

### **3. Interfaces of Specification 3 - Registry Operator Monthly Reporting**

Specification 3 of the New gTLD Base 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 interfaces provided by ICANN to automate the upload of these reports by Registry Operators.

The cut-off date for the reception of the reports specified in specification 3 is defined in the New gTLD Base Agreement of 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 New gTLD Base 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





### **3.2. Registry Functions Activity Report**

The Registry Functions Activity Report is a CSV report described in [Section 2](#) of Specification 3 of the New gTLD Base Agreement 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 monthly basis as described in the New gTLD Base 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

## **4. Interface details**

The client MUST set "text/xml" in the HTTP header Content-type when using the Data Escrow Agent Reporting and Registry Operator Reporting interfaces. The client MUST set "text/csv" in the HTTP header Content-type when using the Per-Registrar Transactions Report Registry Functions Activity Report interfaces.

The Data Escrow Agent Reporting and Registry Operator Reporting interfaces support HTTP streams only (HTTP multi-part forms are not supported).

After successfully receiving an input in any of the interfaces described above, ICANN validates it and provides a result code in the same HTTP transaction. The interface set the HTTP header Content-type: text/xml, when sending the IIRDEA result.

- o The interface provides a HTTP/200 status code if the interface was able to receive the input and no problem was found in the input.
- o The interface provides a HTTP/400 if the input is incorrect or the syntax of the input is invalid.



- o The interface provides a HTTP/401 status code if the credentials provided does not authorize the Registry Operator to upload a report for that <TLD>.
- o The interface provides a HTTP/403 status code if the credentials provided are valid but are being used to access a resource that permission is not granted for or the connecting IP address is not whitelisted for the <TLD>.
- o The interface provides a HTTP/500 status code if the system is experiencing a general failure. The sending party is responsible to send the input again.

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

#### **4.1. IIRDEA Result Object**

After processing the input provided in any of the interfaces described in this document, a response object as defined by the schema in [Section 6](#) is provided in the HTTP Entity-body when an HTTP/200 and HTTP/400 status code is sent by the interface.

An example of a response object is presented below:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<response xmlns="urn:ietf:params:xml:ns:iirdea-1.0">
  <result code="2001">
    <msg>The structure of the report is invalid.</msg>
    <description>
      'XX' could not be parsed as a number (line: 2 column:3)
    </description>
  </result>
</response>
```

The following sections provide the IIRDEA Result Codes per interface:

##### **4.1.1. Registry Operator Reporting**

The following table lists the result codes of the interface:



| Result Code | Message  |
|-------------|--|
| 1000        | No ERRORS were found and the report has been accepted by ICANN.                                    |
| 2001        | The report did not validate against the schema.  |
| 2004        | Report for a date in the future. The <crDate> and <watermark> date should not be in the future.    |
| 2005        | Version is not supported.  |
| 2006        | The <id> in the <report> element and the <id> in the URL path do not match.                        |
| 2007        | Interface is disabled for this TLD.  |
| 2008        | The <crDate> and <watermark> date should not be before the creation date of the TLD in the system. |
| 2202        | The <TLD> in the <header> and the <TLD> in the URL path do not match.                              |
| 2205        | Report regarding a differential deposit received for a Sunday (<watermark>).                       |
| 2206        | csvDomain and rdeDomain count provided in the <header>.  |

#### Data Escrow Reporting Result Codes

##### [4.1.2.](#) Data Escrow Agent Reporting

The following table lists the result codes of the interface:

| Result Code | Message   |
|-------------|---|
| 1000        | No ERRORS were found and the notification has been accepted by ICANN.   |
| 2001        | The notification did not validate against the schema.   |
| 2002        | A DVPN notification exists for that date (<repDate>).   |
| 2004        | Notification for a date in the future. The <crDate> and <watermark> and <repDate> date should not be in the future. |
| 2005        | Version is not supported.   |
| 2007        | Interface is disabled for this TLD.   |
| 2008        | The <crDate> and <watermark> and <repDate> date should not be before the creation date of the TLD in the system.    |
| 2201        | The <repDate> and <watermark> in the notification do not match.   |
| 2202        | The <TLD> in the <header> and the <TLD> in the URL path do not match.   |

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|                     |  |  |
|---------------------|--|--|
| 2203                | A Deposit Verification Pass Notice (DVPN) notification   |  |
|                     | was received, but the Domain Name count is missing in    |  |
|                     | the <header>.  |  |
| 2204                | The notification for the report "id" already exists.     |  |
| 2205                | Notification regarding a differential deposit received   |  |
|                     | for a Sunday (<repDate>).                                |  |
| 2206                | csvDomain and rdeDomain count provided in the <header>.  |  |
| 2207                | A DVPN or DVFN was received, but the <report> element is |  |
|                     | missing in the notification.                             |  |
| 2208                | A DRFN was received, but a <report> element exists in    |  |
|                     | the notification.  |  |
| +-----+-----+-----+ |  |  |

#### Data Escrow Reporting Result Codes

##### [4.1.3.](#) Per-Registrar Transactions Report

The following table lists the result codes of the interface:

|                     |   |  |
|---------------------|---|--|
| Result              | Message   |  |
| Code                |   |  |
| +-----+-----+-----+ |   |  |
| 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.         |  |
| 2004                | Report for a month in the future.                     |  |
| 2007                | Interface is disabled for this TLD.                   |  |
| 2008                | Reported month before the creation date of the TLD in |  |
|                     | the system.   |  |
| 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

##### [4.1.4.](#) Registry Functions Activity Report

The following table lists the result codes of the interface:





| Result Code | Message  |
|-------------|--|
| 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.                            |
| 2004        | Report for a month in the future.  |
| 2007        | Interface is disabled for this TLD.                                      |
| 2008        | Reported month before the creation date of the TLD in the system.        |

Registry Functions Activity Report Result Codes

## 5. Monitoring compliance with the New gTLD Base Agreement

Registries MAY monitor compliance with Specification 2 and 3 of the New gTLD Base Agreement using the following interfaces that supports the HEAD HTTP verb:

### 5.1. Monitoring compliance with Data Escrow Reports

Registries MAY monitor compliance with Specification 2 (Data Escrow Reports) using the following interface:

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

Where:

- \* <TLD> MUST be substituted by the TLD being queried. In case of an IDN TLD, the A-label MUST be used.
- \* <date> MUST be substituted by the day being queried. For example: 2013-03-02

Possible results are:

- \* The interface provides a HTTP/200 status code, if a syntactically valid data escrow report was received for the queried date.



- \* The interface provides a HTTP/404 status code, if a syntactically valid data escrow report has not been received for the queried date.

## **5.2. Monitoring compliance with Data Escrow Notifications**

Registries and Data Escrow Agents MAY monitor compliance with Specification 2 (Data Escrow Notifications) using the following interface:

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

Where:

- \* <TLD> MUST be substituted by the TLD being queried. In case of an IDN TLD, the A-label MUST be used.
- \* <date> MUST be substituted by the day being queried. For example: 2013-03-02

Possible results are:

- \* The interface provides a HTTP/200 status code, if a syntactically valid data escrow notification was received for the queried date.
- \* The interface provides a HTTP/404 status code, if a syntactically valid data escrow notification has not been received for the queried date.

## **5.3. Monitoring compliance with Registry Functions Activity Report**

Registries MAY monitor compliance with Specification 3 (Registry Functions Activity Report) using the following interface:

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

Where:

- \* <TLD> MUST be substituted by the TLD being queried. In case of an IDN TLD, the A-label MUST be used.
- \* <date> MUST be substituted by the month being queried. For example: 2013-03



Possible results are:

- \* The interface provides a HTTP/200 status code, if a syntactically valid registry functions activity report was received for the queried month.
- \* The interface provides a HTTP/404 status code, if a syntactically valid registry functions activity report has not been received for the queried month.

#### **5.4. Monitoring compliance with Per-Registrar Transactions Report**

Registries MAY monitor compliance with Specification 3 (Per-Registrar Transactions Report) using the following interface:

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

Where:

- \* <TLD> MUST be substituted by the TLD being queried. In case of an IDN TLD, the A-label MUST be used.
- \* <date> MUST be substituted by the month being queried. For example: 2013-03

Possible results are:

- \* The interface provides a HTTP/200 status code, if a syntactically valid per-registrar transactions report was received for the queried month.
- \* The interface provides a HTTP/404 status code, if a syntactically valid per-registrar transactions report has not been received for the queried month.

## **6. Formal Syntax**

The schema of the IIRDEA, Reports and Notifications are 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.



### **6.1. 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="unsignedShort">
      <minInclusive value="1000"/>
      <maxInclusive value="9999"/>
    </restriction>
  </simpleType>
</schema>
END
```

## [6.2.](#) Report Object

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

  <import namespace="urn:ietf:params:xml:ns:rde-1.0"
    schemaLocation="rde-1.0.xsd"/>
  <import namespace="urn:ietf:params:xml:ns:rdeHeader-1.0"
    schemaLocation="rde-header-1.0.xsd" />

  <annotation>
    <documentation>
      Registry Data Escrow Report schema
    </documentation>
  </annotation>

  <!-- Root Element -->
  <element name="report" type="rdeReport:reportType"/>

  <!-- Report Type -->
  <complexType name="reportType">
    <sequence>
      <element name="id" type="rde:depositIdType"/>
      <element name="version" type="unsignedShort"/>
      <element name="rydeSpecEscrow" type="token"/>
      <element name="rydeSpecMapping" type="token"/>
      <element name="resend" type="unsignedShort"/>
      <element name="crDate" type="dateTime"/>
      <element name="kind" type="rde:depositTypeType"/>
      <element name="watermark" type="dateTime"/>
      <element ref="rdeHeader:header"/>
    </sequence>
  </complexType>
</schema>
END
```

### **6.3. Notification Object**

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BEGIN

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

  <import namespace="urn:ietf:params:xml:ns:rdeReport-1.0"
    schemaLocation="rde-report-1.0.xsd"/>

  <annotation>
    <documentation>
      Registry Data Escrow Notification schema
    </documentation>
  </annotation>

  <!-- Root Element -->
  <element name="notification" type="rdeNotification:notificationType"/>

  <!-- Notification -->
  <complexType name="notificationType">
    <sequence>
```





```
<element name="deaName" type="rdeNotification:nameType"/>
<element name="version" type="unsignedShort"/>
<element name="repDate" type="date"/>
<element name="status" type="rdeNotification:statusType"/>
<element name="reDate" type="dateTime" minOccurs="0"/>
<element name="vaDate" type="dateTime" minOccurs="0"/>
<element name="lastFullDate" type="date" minOccurs="0"/>
<element ref="rdeReport:report" minOccurs="0"/>
</sequence>
</complexType>

<simpleType name="nameType">
  <restriction base="normalizedString">
    <minLength value="1" />
    <maxLength value="255" />
  </restriction>
</simpleType>

<simpleType name="statusType">
  <restriction base="token">
    <enumeration value="DVPN"/>
    <enumeration value="DVFN"/>
    <enumeration value="DRFN"/>
  </restriction>
</simpleType>
</schema>
END
```

## **7. Acknowledgements**

Special suggestions that have been incorporated into this document were provided by David Kipling, James Gould, Gregory Zaltsman, Brett Carr and Harel Efraim.

## **8. Change History**

### **8.1. Version 00**

Initial version.

### **8.2. Version 01**

- o <rdeReport:report> and <rdeNotification:notification> moved from escrow drafts to this draft



- o Added <crDate> to <rdeReport:report>
- o <reDate> element of <rdeReport:report> is now OPTIONAL
- o Added <deaName> element to <rdeNotification:notification>
- o <rydeSpecEscrow> and <rydeSpecMapping> added to the draft
- o Several report elements are OPTIONAL to support async interfaces between Registry Operators and Data Escrow Agents
- o Added <TLD> and <id> to registry-escrow-report interface in order to make the interface idempotent and support async RyO-DEA interfaces
- o Added <TLD> to escrow-agent-notification interface
- o The escrow-agent-notification uses POST and not PUT, this has been fixed
- o Several clarifications

### **[8.3.](#) Version 02**

- o Added and updated several result codes.
- o Added <version> element.
- o Added Content-type definition.

### **[8.4.](#) Version 03**

- o Added several result codes.
- o unsignedShort is now used for result code in iirdea schema.
- o Enumeration was removed from the iirdea schema.

### **[8.5.](#) Version 04**

- o Added result codes: 2207 and 2208.
- o Removed result codes: 2203.
- o Added clarification regarding the support of HTTP streams.



## **9. IANA Considerations**

TODO

## **10. Security Considerations**

TODO

## **11. References**

### **11.1. Normative References**

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Thippeswamy, "Domain Name Registration Data (DNRD) Objects  
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- [RFC3688] Mealling, M., "The IETF XML Registry", [BCP 81](#), [RFC 3688](#),  
January 2004.

### **11.2. Informative References**

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ICANN, "gTLD Applicant Guidebook Version 2012-06-04",  
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guidebook-full-04jun12-en.pdf](http://newgtlds.icann.org/en/applicants/agb/guidebook-full-04jun12-en.pdf)>.

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