# Registry Service Provider Evaluation Handbook

This document describes the application submission process for Registry Service Providers (RSPs). Users will provide information within the application system, and the data will be reviewed, evaluated, and published.

May 2024 Version 1.1





## **TABLE OF CONTENTS**

1. Introduction	5
1.1. Updates to the RSP Handbook	6
1.2. Questions About the RSP Evaluation Program	6
1.3. Types of RSP	6
2. Program Timelines	8
2.1. Evaluation Periods	8
2.2. Application Submission Dates	8
2.3. List of Evaluated RSPs	9
3. Information for All Applicants	9
3.1. Eligibility	9
3.2. Required Documents	10
3.3. Terms and Conditions and Terms of Use	10
3.4. Data Privacy	10
3.5. Publication of Applications	11
3.6. Notice of Changes to Information	11
4. Submitting an Application	11
4.1. Evaluation Processing Steps	12
4.2. Customer Service During the Application Process	20
4.3. Service Level Targets	20
4.4. Backup Application Process	21
4.5. Limited Challenge/Appeal Mechanism	21
5. Fees and Payments	21
5.1. RSP Evaluation Fee	21
5.2. Potential Additional Fees Required	22
5.3. Payment Methods	22
5.4. Withdrawal, Abandonment, and Unsuccessful Evaluations	22
6. Parties Involved in Evaluation	22
6.1. Panels and Roles	22
6.2. Panel Selection Process	23
6.3. Code of Conduct and Conflict of Interest Guidelines	23
6.4. Communications Channels	23
7. Registry System Testing (RST)	23
7.1. Evaluation Methodology	24
7.2. Main RSP Registry System Testing	24
7.3. DNSSEC RSP Registry System Testing	25



7.4. DNS RSP Registry System Testing	25
7.5. Proxy RSP Registry System Testing	25
7.6. Testing Setup	26
7.7. Testing Process	26
8. RSP Evaluation Program – Terms and Conditions	26
Appendix A. RSP Application Technical Questions	26
Main RSP	27
DNS RSP	53
DNSSEC RSP	71
Proxy RSP	86
Appendix B. IDN Services Application Technical Questions	106
IDN.1. Level 1 Questions	106
IDN.2. Level 2 Questions	106
IDN.3. Level 3 Questions	108
Appendix C. Registry Services Application Questions	109
RS.1. Existing Registry Services	109
RS.2. New Registry Services	110
Appendix D. RSP Reference Material	115

## **RSP Handbook**

## **Document Meta-Data:**

• This document will be published as a stand-alone handbook and also as a module of the larger Applicant Support Guidebook.

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## 1. Introduction

This handbook provides an overview of the process and establishes the criteria to become an evaluated Registry Services Provider (RSP) as part of the New gTLD Program: Next Round ("Next Round").

RSPs play an important role in the Domain Name System (DNS) eco-system, including supporting technical operations and providing services to Registry Operators (ROs) for top-level domains (TLDs), and RSPs are an important component of applications for new gTLDs. As part of the overall New gTLD Program: Next Round gTLD application process, ROs must identify an evaluated RSP that will provide support for all critical registry functions<sup>1</sup>.

The RSP Evaluation Program provides testing and evaluation to ensure the RSP meets certain technical and operational requirements to provide technical services to ROs. The program allows a successfully evaluated RSP to be identified by an RO applicant in the New gTLD Program.

Note that ROs may provide their own technical operations or outsource certain technical operations to third-party providers. Regardless of the organization providing these operations, the entities providing such operations are referred to as RSPs. Outsourcing technical operations to third-party RSPs can help ROs to reduce costs, improve efficiency, and focus on core business activities.

The RSP Evaluation Program is offering the option for an RSP to be evaluated prior to the opening of the next round of new gTLD applications. Opting to undergo the RSP evaluation process before the opening of the application submission period for the New gTLD Program may reduce the overhead and time necessary to complete a new gTLD application. Alternatively, an RSP may also be evaluated while an RO's new gTLD application is being evaluated if it has been selected by the RO but did not opt to be evaluated prior to the opening of the new gTLD application window.

Please note that the RSP Evaluation Program is not a certification program. The program provides an evaluation at a specific point in time of potential RSPs based on criteria developed by ICANN in consultation with the community. It is the responsibility of new gTLD applicants who plan to outsource certain technical operations to an RSP to do its diligence to ensure it would like to engage the services of a particular RSP.

<sup>&</sup>lt;sup>1</sup> Defined in Paragraph 6.1 of Specification 10 of the ICANN Registry Agreement (version 2024) as DNS, DNSSEC, EPP, RDAP, and Data Escrow.

## RSP Handbook

This handbook refers to sections of the current base Registry Agreement; for the avoidance of doubt, those refer to the <u>ICANN Registry Agreement as approved by the Board 21 January</u> 2024 called "ICANN Registry Agreement (version 2024)" in the rest of the document.

## 1.1. Updates to the RSP Handbook

This handbook forms the basis of the RSP Evaluation Program. Changes to the RSP Handbook and the RSP Evaluation Program will be governed by the same framework for predictability, transparency, and fair processes and procedures governing the rest of the New gTLD Program as established through Recommendations 2.1 and 2.7 (see the <a href="Predictability Framework">Predictability Framework</a>). Any updates or revisions will be posted on <a href="ICANN's website">ICANN's website</a>.

## 1.2. Questions About the RSP Evaluation Program

For general questions about the RSP Evaluation program, a user should use the customer support resources available via <a href="ICANN Global Support">ICANN Global Support</a>.

Before using the RSP Portal, applicants may seek clarification about any aspect of the RSP Evaluation Program by sending email to <a href="mailto:globalsupport@icann.org">globalsupport@icann.org</a>. Applicants that are unsure of the requirements needed to successfully pass RSP evaluation are encouraged to seek clarifying information before using the RSP Portal.

For assistance with questions an applicant may have during the process of completing the evaluation, applicants should use the RSP Portal. Applicants that are unsure of the information being sought in a question or the parameters for acceptable documentation are encouraged to communicate these questions through the RSP Portal. This helps to reduce the number of clarifying questions with evaluators, which could potentially impact the time frame associated with application processing.

ICANN org will not grant requests for in-person, telephone, or video consultations regarding the preparation of an application.

Answers to inquiries will only provide clarification about the application and procedures. ICANN org will not provide consulting, financial, or legal advice.

## 1.3. Types of RSP

There are multiple types of RSPs, each delivering a set of unique functions necessary for the operation of a gTLD. An organization can fulfill one or more of these functions, and must separately apply for each type of RSP they intend to fulfill. At a minimum, the operations necessary to operate a gTLD are provided by a Main RSP, a DNSSEC RSP, and one or more DNS RSPs.

## RSP Handbook

## 1.3.1. Main RSP

A Main RSP is responsible for the registrations of domain names and the reporting functions associated with domain registration. A Main RSP will operate a domain registration database, conduct data escrow and reporting operations regarding those registrations, operate Extensible Provisioning Protocol (EPP) and Registration Data Access Protocol (RDAP) services, and conduct other functions as required by ROs through their agreements with ICANN.

Main RSPs may offer to support additional Registry Services that ROs are authorized by ICANN to provide (see Exhibit A of the registry agreement of the gTLDs currently delegated). Registry Services must be approved by ICANN org. Main RSPs are automatically approved to offer to ROs those Registry Services categorized as <a href="Fast Track">Fast Track</a>, when the pre-approved Registry Agreement amendment language is used by the ROs. All other Registry Services require evaluation before approval by ICANN org; evaluation of those Registry Services may incur additional fees.

<u>This webpage</u> lists the Registry Services approved through the RSEP evaluation process that may be considered prototypes of the Registry Services applicable under the RSP Evaluation Program for Main RSPs.

## 1.3.2. DNSSEC RSP

A DNSSEC RSP operates the cryptographic functions necessary for the Domain Name System Security Extensions (DNSSEC) of a gTLD. These functions include the maintenance and safe handling of cryptographic materials and the cryptographic signing of DNS zone data.

## 1.3.3. DNS RSP

A DNS RSP operates authoritative DNS servers for a gTLD. This function typically entails the deployment of multiple DNS servers around the world, usually using IP anycast, to serve the domains of a gTLD. An RO may use more than one DNS RSP in order to provide additional resilience and each RSP used by an RO for this purpose must be evaluated.

## **1.3.4. Proxy RSP**

Some ROs may perform registration validation to comply with applicable local law in a given jurisdiction, which is an optional Registry Service that must be approved by ICANN. In some cases, an RO may want to perform this registration validation service through a Proxy RSP. In addition to performing the validation service, the Proxy RSP also ensures that any infrastructure deployed in that jurisdiction operates in accordance with the relevant specifications from the ICANN Registry Agreement (version 2024).

# TCANN

## RSP Handbook

A Proxy RSP typically operates EPP and RDAP services under the applicable laws of the jurisdiction by interacting with the Main RSP. A Proxy RSP may also operate a proxy RDAP service for a Main RSP under the applicable laws of the jurisdiction. The <u>Registration Validation With Proxy</u> service is an example of the nature of a Proxy RSP.

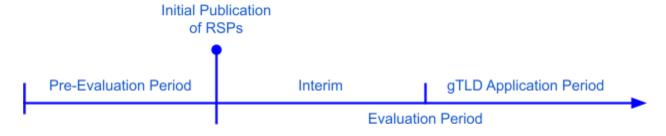
## 2. Program Timelines

Organizations are not required to have a fully-operational RSP when applying for evaluation. It will be necessary, however, for an organization to demonstrate a clear understanding of the key technical and operational aspects of an RSP, and to pass technical tests that will require critical aspects of the RSP to function. RSPs will be required to be fully functional and operational and to pass technical tests before gTLD delegation.

## 2.1. Evaluation Periods

RSPs may be assessed in an evaluation period that precedes the opening of the application submission period for the New gTLD Program: Next Round opens for gTLD applications. This early evaluation period is called "pre-evaluation".

RSPs that have not sought evaluation during the pre-evaluation period must be evaluated during the gTLD application period. The evaluation criteria and testing will be the same as that which occurs during the RSP pre-evaluation period.



RSP Evaluation Program Timeline

The RSP pre-evaluation period will begin approximately 18 months prior to the opening of the application submission period for new gTLD applications. This will allow RSP applicants sufficient time to complete the process and their name to be published on a publicly available list of RSPs.

## 2.2. Application Submission Dates

ICANN org plans to open the application submission period for RSP Pre-Evaluation on 19 November 2024. ICANN org plans to close this submission period on 20 May 2025. It is

# TCANN

## RSP Handbook

anticipated that RSP evaluations for the Pre-Evaluation phase will conclude approximately six months after the close of the pre-evaluation period.

ICANN org plans to re-open the application submission period for RSP Evaluation when the gTLD application submission period opens. RSP applicants that are not evaluated during the pre-evaluation phase must seek evaluation during the new gTLD application submission period and may be selected by ROs upon successful evaluation. ICANN org plans to close the second evaluation period when the Next Round gTLD application submission period closes. RSPs that pass evaluation after the RSP Pre-Evaluation Phase will be added to the public list of evaluated RSPs.

## 2.3. List of Evaluated RSPs

ICANN org plans to publish a list of RSPs that have been evaluated during the pre-evaluation phase on 9 December 2025, subject to the Service Level Target for the public RSP list (see <u>4.3. Service Level Targets</u>).

Publicly listed RSPs will have an obligation to maintain current information with ICANN org. This includes contact information, infrastructure capacity, management of pre-approved services, and any other information that may be required in their role as an RSP. RSPs must use the RSP Portal to communicate this information to ICANN org. RSPs failing to meet these obligations may be removed from this list.

## 3. Information for All Applicants

## 3.1. Eligibility

Any established corporation, organization, or institution may submit an RSP application. Applications from individuals or sole proprietorships will not be considered. Applications from or on behalf of yet-to-be-formed legal entities, or applications presupposing the future formation of a legal entity (for example, a pending joint venture) will not be considered.

The RSP Portal requires applicants to provide information on the legal establishment of the applying entity, as well as to identify the directors, officers, partners, persons of significant influence, and major shareholders of that entity.

Background screening at both entity and individual level will be conducted to confirm eligibility for all applicants. This inquiry is conducted on the basis of the information provided by the applicant. ICANN org may take into account information received from any source if it is relevant to the criteria in this section. ICANN org directs a third-party vendor to conduct a background



screening to help determine if the applicant is an entity that ICANN org can do business with. The criteria used to determine eligibility by ICANN org will be published <a href="https://herecommons.org/new-nc-en-ligibility-by-lcann-nc-en-ligibility-by-

Background screening information will not be made publicly available by ICANN.

Each applicant will also undergo a legal compliance check separate from background screening, as described in Section <u>4.1.4. Legal Compliance</u>.

## 3.2. Required Documents

All applicants should be prepared to submit documentation of applicant's establishment as a specific type of entity in accordance with the applicable laws of its jurisdiction.

As indicated in the relevant questions, supporting documentation should be submitted in the original language. Certified English translations are required.

All documents must be valid at the time of submission.

## 3.3. Terms and Conditions and Terms of Use

All applicants must agree to a set of Terms and Conditions for the application process. The Terms and Conditions are available in this handbook. Additionally, each user of the RSP Portal and/or the Registry System Testing (RST) System must agree to a Terms of Use in the RSP Portal.

## 3.4. Data Privacy

Any Personal Information (as defined in the ICANN Privacy Policy) collected, used, or submitted in connection with the RSP Evaluation Program and/or RST will be processed only for lawful purposes and consistent with the purposes for which it was collected. Such Personal Information will be processed in accordance with the <a href="New gTLD Program: Next Round Privacy Statement">Next Round Privacy Statement</a> and ICANN Privacy Policy.



## 3.5. Publication of Applications

Portions of all RSP applications, IDN Services applications, and Registry Services applications will be made public on the published list of evaluated RSPs. This includes responses to select technical questions.

## 3.6. Notice of Changes to Information

If at any time during the evaluation process, information previously submitted by an applicant becomes untrue or inaccurate, the applicant must promptly notify ICANN org via the RSP Portal. This includes but is not limited to applicant-specific information such as changes in ownership or control of the applicant organization, technical information about the applicant's RSP services, past performance, and security certifications.

ICANN org reserves the right to require a re-evaluation of the applicant in the event of a material change. This may involve additional fees.

Failure to notify ICANN org of any change in circumstances that would render any information provided in an application false or misleading may result in denial of the application.

## 4. Submitting an Application

Applicants must complete the application form and submit supporting documents using ICANN's RSP Portal. To access the system, each applicant must first <u>register as an RSP Portal user</u>.

The RSP Portal gives applicants the ability to provide required information and responses to application questions, and to submit supporting documentation as attachments. Restrictions on the length of responses and size of attachments as well as file formats are included in the instructions on the RSP Portal. Responses support only plain text; applicants may submit information as PDF attachments where text length and formatting are found to be too restrictive. When possible, applicants are encouraged to submit responses in plain text but not doing so will not impact evaluations.

All responses to technical questions, including questions regarding the technical aspects of Internationalized Domain Name (IDN) services and questions regarding additional Registry Services, must be submitted in English.

ICANN org will not accept application forms or supporting materials submitted through means other than the RSP Portal (e.g., hard copy, fax, email), unless such submission is in accordance with specific instructions from ICANN org to the applicant.

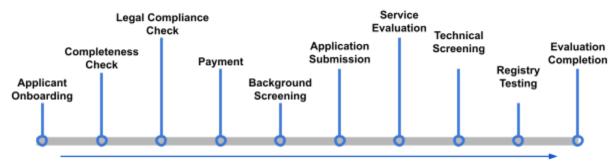


RSP applicants will find access links to the RSP Portal at

https://newgtldprogram.icann.org/en/application-rounds/round2/rsp/apply. Upon agreement to the Terms of Use for the RSP Portal and the RST System, RSP Portal users will be required to first create an ICANN account, if they do not already have one, at <a href="https://account.icann.org/">https://account.icann.org/</a> in order to enter into and use the RSP Portal.

The RSP Portal will send notifications to applicants via email. However, applicants should not not rely solely on email notifications and are encouraged instead to log into the RSP Portal periodically to check for notifications and review the status of any work within the RSP Portal.

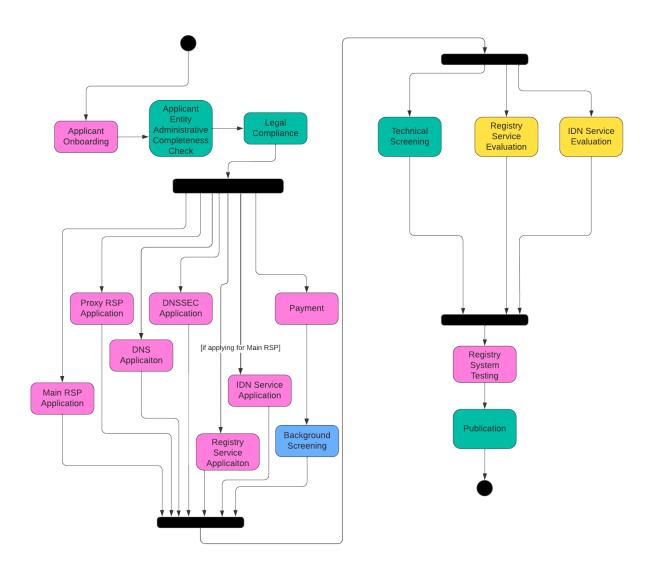
## 4.1. Evaluation Processing Steps



Progression of the RSP Evaluation Process

The evaluation of an RSP takes place in several sequential stages. Advancement to the next stage is dependent upon the successful completion of the previous stage. Upon submission, each application will receive a technical screening.

## **RSP Handbook**



## 4.1.1. User Registration

Usage of the RSP Portal is available to the public. All users must first create an ICANN account at <a href="https://account.icann.org">https://account.icann.org</a>. The user's ICANN account credentials are used to enter into the RSP Portal. Access to the RSP Portal from an ICANN account will require users to enable Multi-Factor Authentication (MFA).

## 4.1.2. RSP Applicant Onboarding

Before applying to be an RSP, users will be required to onboard their RSP applicant organization. Each RSP applicant organization must have a minimum of two users registered in the RSP Portal, and may have as many as five users. Two of the users must be "primary" users with the authority to invite other users of the organization to register and use the RSP Portal.

## RSP Handbook

Only one user may enter an RSP application, Registry Services application, or Internationalized Domain Name (IDN) Service application, and that user will be the main point of contact for that application. Applications can be reassigned among users of the organization. Multiple applications may be in progress, completed, and submitted at the same time.

Information collected about the RSP applicant organization includes data specifically about the organization and named individuals with significant influence over the organization, such as key executives and stakeholders. This information is used to conduct checks and background screening, as well as to conduct the evaluation of the RSP and publish the provider's information on the RSP list.

Additionally, each RSP applicant organization must identify and provide the name and contact information of an Application Fee Payor. The Application Fee Payor is an individual designated by the applicant organization to issue payments by the organization to ICANN.

Neither the Application Fee Payor nor any of the key personnel, such as executives and stakeholders, are required to be registered users of the RSP Portal.

RSP applicant organizations will be required to attest to whether they are Universal Acceptance (UA)-ready according to the <u>Universal Acceptance (UA) Roadmap for Domain Name Registry and Registrar Systems</u>. UA-readiness is not required, but will be communicated to new gTLD applicants.

Onboarding an RSP applicant does not require all information to be provided at once. Users will be able to save and provide information at their own pace. However, once submitted, applicant information can only be changed through the Change Request process.

## 4.1.3. Completeness Check

ICANN org will conduct an administrative completeness check on submitted organizational profiles. Administrative completeness consists of a review to ensure that all required organizational and user information is legible and complete, mandatory questions are answered, and required supporting documents are provided.

During the completeness check, ICANN org may seek clarifications or additional information from RSP applicants. Applicants will be given 30 calendar days to resolve any questions or provide additional information requested by ICANN org.

## RSP Handbook

## 4.1.4. Legal Compliance

ICANN must comply with all U.S. laws, rules, and regulations. One such set of regulations is the economic and trade sanctions program administered by the Office of Foreign Assets Control (OFAC) of the U.S. Department of the Treasury. These sanctions have been imposed on certain countries, as well as on individuals and entities that appear on OFAC's List of Specially Designated Nationals and Blocked Persons (the SDN List). ICANN is prohibited from providing most goods or services to residents of sanctioned countries or their governmental entities or to SDNs without an applicable U.S. government authorization or exemption. ICANN generally will not seek a license to provide goods or services to an individual or entity on the SDN List. In the past, when ICANN has been asked to provide services to individuals or entities that are not SDNs, but are residents of sanctioned countries, ICANN has sought and been granted licenses as required. In any case, however, OFAC could decide not to issue a license.

During this stage, ICANN org may seek clarification or additional information from RSP applicants. Applicants will be given 30 calendar days to resolve any questions or provide additional information requested by ICANN org.

## **4.1.5. Payment**

RSP applicants who have cleared <u>Legal Compliance</u> will receive instructions on how to submit payment for the RSP evaluation fee.

RSP applicants will be allowed to enter application information in the RSP Portal before payment is received by ICANN org. However, applicants will be unable to submit any complete applications until payment is received and background screening of the organization has been completed.

RSP applicants are required to pay all requested fees within 45 calendar days after they receive payment instructions from ICANN org. RSP Applicants will be notified upon receipt of payment by ICANN org. Applicants that have difficulty arranging payment within 45 calendar days may seek an extension if they can provide compelling evidence of their efforts, difficulties encountered, and an estimated date of payment completion.

Organizations are not required to have an operational RSP at this stage of the evaluation. It will be necessary, however, to demonstrate an understanding of the key technical and operational aspects of an RSP and that it has accomplished some of the groundwork involved.



## 4.1.6. Background Screening

Background screening will begin after payment of fees. The background screening evaluates the identities of the organization and the individuals named as part of the organization against the criteria for eligibility described in Section 3.1. Eligibility.

ICANN org will submit identifying information for the entity, officers, directors, and major shareholders to an international background screening service.

RSP applicants will be given 30 calendar days to resolve any issues or provide additional information requested by ICANN org.

## 4.1.7. Technical Questionnaire

A separate technical questionnaire will be available for each RSP application, and the form will vary, depending on the type of RSP being applied for. Users will be provided a means to answer application questions at their own pace, and save answers as needed. Users will not be required to provide answers to each question of a technical questionnaire in one sitting. However, once the technical questionnaire has been submitted, it can only be changed through the Change Request process.

Answers to all technical questions and supporting documentation submitted as attachments must be in English.

Each question of the technical questionnaire is scored on a pass/fail basis. Many questions will require RSP applicants to provide descriptions of processes or technical mechanisms. Answers that adequately address the content of the questions will be evaluated as a pass.

The RSP questions may be found in Appendix A. RSP Application Technical Questions.

## 4.1.8. Technical Screening

ICANN org will conduct a technical screening on submitted applications only after the RSP applicant has passed background screening. This screening consists of a review to ensure that:

- All mandatory questions have been answered;
- Required supporting documents have been provided in the proper format(s); and
- All answers have been reviewed for relevance to the guestions.

Application responses will be reviewed to ensure they are complete, relevant, and appropriately responsive to the information being sought for the relevant type of RSP application being submitted. ICANN org will denote responses that are incomplete or irrelevant; notify RSP

# TCANN

## RSP Handbook

applicants of any issues; and provide RSP applicants a limited period of time in which to address them. The application will not proceed until the applicant makes corrections.

During this stage, evaluators may seek clarification or additional information from RSP applicants. Applicants will be given 30 calendar days to resolve any clarifications or provide additional information requested by ICANN org.

## 4.1.12 Extended Evaluation

RSP applicants who are unable to obtain a successful evaluation of the <u>Technical Screening</u> may request to proceed to <u>Registry System Testing</u> and then enter into an Extended Evaluation. During Extended Evaluation, applicants will be given 30 calendar days to resolve any failing technical questions.

As with the Technical Screening, evaluators may seek clarifications or additional information from RSP applicants. Applicants will be given 30 calendar days to resolve any clarifications or provide additional information requested by ICANN org.

## 4.1.10. Registry System Testing

For each RSP application and IDN Service applications, RSP applicants will proceed to Registry System Testing (RST) upon successful completion of technical screening. This testing requires RSP applicants to demonstrate the capacity to operate a functional RSP. RSP applicants must pass RST for each type of RSP application and IDN service to complete an evaluation.

RSP applicants will provide, via the RSP Portal, onboarding data for the Registry System Test (RST) system. At that time, a test request will be provisioned in the RST system according to the RSP application type. RSP applicants will then be able to conduct technical testing at their own pace via the RST Application Programming Interface (RST-API). RSPs may run tests multiple times if necessary. However, completion of RST requires a final passing run of all RST tests.

RSP applicants will have access to an escalation process during RST. This escalation process may be used by applicants to receive clarification of test results or to seek adjustment to test results that may be incorrect.

All testing must be completed within 180 calendar days after the start of registry system testing. All testing and associated applications that do not complete within the current gTLD application round will be considered abandoned.

See Section 7. Registry System Testing (RST) for more details.



## 4.1.11. Registry Services Evaluation

RSP applicants applying to be a Main RSP will be able to apply to be evaluated to provide additional Registry Services. These additional Registry Services would be included in the registry agreement for registries supported by the Main RSP. Registry Services may be added to an application in two ways:

- Simplified Registry Services Evaluation: If the RSP applicant is currently serving as an RSP for a gTLD and wishes to offer a Registry Service currently being offered to a gTLD, the applicant can provide:
  - a. The name of the Registry Service,
  - b. The TLDs in which the Registry Service is offered, and
  - c. A description of the Registry Service. The description of the Registry Service should not materially deviate from the contractual language used in the given gTLDs.

Upon submission, these Registry Services will be evaluated.

2. **Full Registry Services Evaluation:** ICANN org will evaluate the service using the principles of the <u>RSEP Policy</u> for Registry Services that are not eligible for simplified registry service evaluation. Upon submission, these Registry Services will be evaluated.

All Main RSP applicants are automatically pre-approved to offer to ROs all <u>Fast Track Registry Services</u> when using the pre-approved Registry Agreement Amendment language by the RO. If an RSP is not planning to implement the service in a way that a Registry Operator could use the pre-approved Registry Agreement Amendment language for a Fast Track Registry Service, they must apply for a Registry Service as described above.

Registry Services applications will be evaluated by ICANN org in parallel to the processing of the Main RSP application. During the processing of a Registry Service application, evaluators may seek clarifications or additional information from RSP applicants with regard to the application. Applicants will be given 30 calendar days to resolve any clarifications or provide additional information being sought.

RSP applicants may apply for more than one Registry Service, and RSP applicants may apply for additional Registry Services through the RSP Portal after having been successfully evaluated as a Main RSP.

The Registry Services questions may be found in <u>Appendix C. Registry Services Application</u> <u>Questions</u>.

## RSP Handbook

## 4.1.12. Internationalized Domain Name (IDN) Evaluation

A Main RSP may apply to support IDN services based on support for variant TLDs and support for variant IDNs in the second-level.

Each IDN Service application requires the RSP applicant to answer an IDN technical questionnaire first. All IDN service technical questions will be evaluated on a pass/fail basis. Questions will require RSP applicants to provide documentation of or otherwise describe the technical aspects of IDN services. Answers to questions that materially cover the subject matter will be graded as a pass.

IDN services are denoted by three support levels:

Level 1	IDNs offered at the second level will have no variant management.
Level 2	The RSP may manage variant IDNs in the second level and will not support variant TLDs.
Level 3	The RSP may manage variant IDNs in the second level and may support variant TLDs.

An RSP applicant will only be allowed to select one IDN support level, and RSP applicants will be required to select IDN language/script pairs from a pre-defined catalog. The pre-defined catalog contains all languages/scripts covered in the <a href="Second-Level Label Generation Rules">Second-Level Label Generation Rules</a> (LGRs) with Full Variant Set tables and languages in the <a href="IANA language subtag registry">IANA language subtag registry</a> for which the Suppress-Script parameter contains a script in the <a href="Root Zone Label Generation">Root Zone Label Generation</a> Rules. For all other languages and scripts, ROs will be able to apply for these usages through the <a href="IDN Service">IDN Service</a> request upon execution of the Registry Agreement. For each language/script pair selected not using a <a href="Second-Level Label Generation Rules">Second-Level Label Generation Rules</a> (LGRs) with Full Variant Set, RSP applicants will be required to upload an applicable IDN table in RFC 7940 format.

IDN applications will be evaluated by ICANN org in parallel to the processing of the Main RSP application. During the processing of an IDN service application, evaluators may seek clarifications or additional information from RSP applicants with regard to the application. Applicants will be given 30 calendar days to resolve any clarifications or provide additional information being sought.

RSP applicants may apply for more than one IDN service, and may apply for additional IDN services through the RSP Portal after having been successfully evaluated as a Main RSP.

# TCANN

## **RSP Handbook**

Subsequent IDN service applications may invalidate previous IDN service applications if the IDN tables used for these services require harmonization between approved applicable IDN tables.

IDN Service questions may be found in <u>Appendix B. IDN Services Application Technical</u> Questions.

## 4.2. Customer Service During the Application Process

Assistance will be available to RSP applicants through the RSP Portal. Should users or RSP applicants be unable to use the RSP Portal, assistance may also be sought through <a href="ICANN Global Support">ICANN Global Support</a>.

## 4.3. Service Level Targets

ICANN org commits to the following service level targets (SLTs) during the RSP evaluation process. Each SLT is expressed as a range of calendar days, excluding extended ICANN office closures which occur between and inclusive with Christmas and January 1st. SLTs exclude the time during which a response is pending from an applicant.

Process	SLT
Applicant Completeness Check	5 - 10
Background Screening	20 - 30
Technical Screening	10 - 60
Registry System Testing	N/A
ICANN org Response to Inquiries Subject to the complexity of the inquiry	5 - 10
Registry Services Evaluation	10 - 30
IDN Service Evaluation	20 - 60
Publication of Evaluated RSP	10
Change Request Subject to the complexity of the change request	10 - 40

# TCANN.

## **RSP Handbook**

## 4.4. Backup Application Process

If the RSP Portal is unavailable for a period of time that would prevent an RSP applicant from submitting a completed application on time, ICANN org will provide alternative instructions for submitting applications.

## 4.5. Limited Challenge/Appeal Mechanism

The RSP Evaluation Program's limited challenge and appeal mechanism takes the form of the Extended Evaluation.

## 5. Fees and Payments

This section describes the fees to be paid by the RSP applicant as well as payment instructions.

## 5.1. RSP Evaluation Fee

The evaluation fee is required from all applications in the RSP Evaluation Program. This fee is separate and not dependent on nor a dependency of the fee for application of a gTLD.

This fee will be payable to ICANN only via bank wire transfer. Users will be able to begin the RSP application process and enter information into the technical questionnaires before payment is received, but the RSP applicant will be unable to submit any applications until payment is received. ICANN org will not begin its evaluation of an application unless it has received the full evaluation fee.

The evaluation fee is set to recover costs associated with the program. The fee is set to ensure that the program is fully funded and revenue-neutral and is not subsidized by existing contributions from ICANN funding sources.

The evaluation fee covers all required reviews, evaluations, and testing for all RSP applications and IDN service applications, and is a singular fee for all applicants That is, all applicants will pay only one fee even when applying for one or multiple types of RSPs, Registry Services, or IDN services.

Note, that if a Registry Service application requires the evaluation by a third-party panel, an additional fee will be incurred for this specific review. See <u>5.2. Potential Additional Fees</u>
Required.

## **RSP Handbook**

An RSP applicant that wishes to withdraw an application must initiate the process through the RSP Portal. Withdrawal of an application is final and irrevocable. In the case of withdrawal, no refunds on the RSP evaluation fee will be issued.

The RSP evaluation fee schedule will be published in a future version of this RSP Handbook, an addendum to this RSP Handbook, the RSP website, or some combination thereof.

## 5.2. Potential Additional Fees Required

If applicable, the Registry Services review fee is payable for additional costs incurred in referring an application to a third-party panel for an extended technical review. RSP applicants will be notified if a Registry Service application requires third-party panel evaluation and the amount of the associated fee. In every case, the RSP applicant will be advised of the cost before initiation of the review.

## 5.3. Payment Methods

Payments to ICANN must be submitted by wire transfer. Instructions for making a payment by wire transfer will be available in the RSP Portal.

## 5.4. Withdrawal, Abandonment, and Unsuccessful Evaluations

RSP applicants may withdraw their application at any time during the application process. RSP applicants that wish to submit a new application after having withdrawn a previous application or after having a previous application become unsuccessfully evaluated will be required to pay the same processing fee and proceed through the process as a new application.

## 6. Parties Involved in Evaluation

A number of independent experts and groups may play a part in performing various reviews in the evaluation process. A brief description of the various panels, their roles in the evaluation process, and the circumstances under which they work, is included in this section.

## 6.1. Panels and Roles

Members of all panels are required to abide by an established Code of Conduct and Conflict of Interest guidelines.

## 6.1.1. Third-Party Technical Evaluation Panel

The third-party technical evaluation panel will review the technical components of a RSP application against the criteria in this handbook in order to determine whether the RSP applicant is technically and operationally capable of operating and performing the functions of an RSP.



## 6.1.2. Registry Services Third-Party Panel

The registry services third-party panel will review proposed registry services in the application to determine if they pose a risk of a meaningful adverse impact on security or stability.

## 6.2. Panel Selection Process

ICANN org has selected qualified third-party providers to perform the various reviews. In addition to the specific subject matter expertise needed for each panel, special qualifications are required, including:

- Ability to convene or have the capacity to convene globally diverse panels and to evaluate applications from all regions of the world.
- Familiarity with the IETF IDNA standards, Unicode standards, relevant RFCs, and the terminology associated with IDNs.
- Experience with the relevant standards used when providing the following services: DNS, EPP, RDAP, DNSSEC, and Data Escrow.
- Ability to scale quickly to meet the demands of the evaluation of an unknown number of applications. At present, it is not known how many applications will be received, how complex they will be, nor whether they will be predominantly for Main RSPs or other types.
- The ability to evaluate applications within the required time frames.

## 6.3. Code of Conduct and Conflict of Interest Guidelines

The RSP Evaluation Program will be governed by the same Code of Conduct and Conflict of Interest Guidelines governing the rest of the New gTLD Program and once finalized will be published here.

## 6.4. Communications Channels

Defined channels for technical support or exchanges of information with ICANN org and with evaluation panels are available to RSP applicants during the RSP evaluation periods via the RSP Portal. Contacting individual ICANN staff members, Board members, or individuals engaged by ICANN to perform an evaluation role in order to lobby for a particular outcome or to obtain confidential information about applications under review is not appropriate. In the interests of fairness and equivalent treatment for all applicants, any such individual contacts will be referred to the use of the RSP Portal.

## 7. Registry System Testing (RST)

Every RSP applicant is required to undergo Registry System Testing (RSTs) for the types of RSP for which they are applying.

## RSP Handbook

These plans make use of existing test suites used for "business as usual" tests (such as pre-delegation tests, RSP transition tests, and changes to Registry Services), as well as new test suites designed specifically for the RSP evaluation program.

## 7.1. Evaluation Methodology

RST will follow the same methodology as that used for conducting "business as usual" RSTs. In summary, the process is as follows:

- The RSP portal will create test request objects for each type of RSP being applied for and, in the case of IDNs, a test object per IDN Table being evaluated. Certain test parameters will be pre-defined at the time of creation and are determined by the information provided by the RSP applicant.
- 2. The RSP applicant must then configure its system to accommodate the test. This will involve creating test TLD(s) and registrar account(s), scheduling certain operational processes, and adding IP address information to its firewalls to allow ICANN org to access its registry services. Any information or resources needed to carry out this step will be provided in the RST system.
- 3. The RSP applicant must then submit the required input parameters via the RST-API. These parameters include but are not limited to service hostnames, authentication credentials, service parameters, and samples of various file formats.
- 4. The RSP applicant then uses the RST-API to initiate the test. Testing is fully automated. RSP applicants can use the API to monitor the progress and outcome of the test.
- 5. If the test passes, the process is completed and the application can proceed into the next phase.
- 6. If the test fails, or an error occurs, then the RSP applicant can use the API to reset the test, reconfigure its systems, resubmit input parameters, and start a new test run. This may be repeated as often as necessary until a pass result is achieved.
- 7. RSP applicants may seek help regarding these tests using the RSP Portal.

## 7.2. Main RSP Registry System Testing

The Main RSP test plan is a subset of the standard pre-delegation and RSP transition test, and covers the following areas:

- Extensible Provisioning Protocol (EPP): This test suite validates the RSP applicant's
  implementation of the Extensible Provisioning Protocol. The EPP service will be tested to
  ensure conformance with the RFC specifications and the requirements of the ICANN
  Registry Agreement (version 2024).
- Registration Data Access Protocol (RDAP): This test suite validates the RSP applicant's implementation of the RDAP service. This test suite is based on ICANN's

existing RDAP Conformance Tool (rdapct)<sup>2</sup>. The test verifies compliance with the relevant RFCs, the ICANN RDAP Technical Implementation Guide<sup>3</sup>, and the ICANN RDAP Response Profile<sup>4</sup>.

- Registry Data Escrow (RDE): This test verifies that the RSP applicant can generate a
  data escrow deposit that complies with the relevant RFCs, the requirements of the
  ICANN Registry Agreement (version 2024), and ICANN's reporting requirements.
- Internationalized Domain Names (IDN): This test verifies the RSP applicant's ability to comply with the relevant RFCs and guidelines for the IDN tables offered, including its ability to support provision of IDN variants as described in 4.1.12. Internationalized Domain Name (IDN) Evaluation.
- Minimum Rights Protection Mechanisms (RPMs): This test verifies the RSP
  applicant's ability to comply with the minimum RPMs defined in the ICANN Registry
  Agreement (version 2024), specifically, support for sunrise periods and trademark
  claims, and the Extensible Provisioning Protocol (EPP) launch extension (RFC 8334).

## 7.3. DNSSEC RSP Registry System Testing

For RSPs wishing to offer DNSSEC signing services, the DNSSEC RSP test plan includes the DNSSEC test suite used during pre-delegation and RSP transition tests, by including an additional suite focussed on DNSSEC operations.

In the DNSSEC operations suite, RSP applicants must demonstrate that they are able to carry out the operational practices outlined in RFC 6781, namely KSK/ZSK/CSK and algorithm rollovers for large zones.

## 7.4. DNS RSP Registry System Testing

For RSPs wishing to offer Authoritative DNS services, the DNS RSP test plan is based on the Authoritative DNS test suite used for pre-delegation and RSP transition tests. It verifies the service's conformance to the RFCs and the relevant specifications of the ICANN Registry Agreement (version 2024).

## 7.5. Proxy RSP Registry System Testing

For RSPs wishing to offer support for the registry service: Registration Validation per Applicable Law with Proxy, the RSP must undergo testing using the proxy RSP test suite. This suite tests the Proxy RSP's integration between the proxy RSP's infrastructure (EPP and RDAP services) and the primary RSP's services, specifically EPP, RDAP, and DNS services.

<sup>&</sup>lt;sup>2</sup> https://github.com/icann/rdap-conformance-tool

<sup>&</sup>lt;sup>3</sup> https://www.icann.org/en/system/files/files/rdap-technical-implementation-quide-15feb19-en.pdf

<sup>4</sup> https://www.icann.org/en/system/files/files/rdap-response-profile-15feb19-en.pdf



## 7.6. Testing Setup

To initiate RST, RSP applicants will provide credentials and other information necessary for the RST service to access the RSP applicant's registry systems. This information is provided via the RSP Portal.

Test plans within RST are provisioned according to the type of applications under consideration (e.g., Main RSP, DNS RSP, etc.). Each test plan is composed of multiple test suites, where each test suite is a set of inter-dependent test cases.

Formal definitions of the RST test plans, test suites, and test cases may be found in GitHub.

## 7.7. Testing Process

Usage of the RST service is self-paced and under the control of each RSP applicant. The RST service is commanded via an API. RSP applicants invoke each test case using this API, and may repeat tests as often as is necessary.

The definition of the RST-API may be found <a href="here">here</a>.

## 8. RSP Evaluation Program – Terms and Conditions

The Terms and Conditions of the RSP Evaluation Program will be available here.

## Appendix A. RSP Application Technical Questions

The questions provided in this document will appear in the RSP Portal, the on-line system to be used for RSP Evaluation applications, in the manner noted for each question and in the order and sections given in this document.

The following questions are broken into multiple sections. Many of the questions are common to each type of RSP. When questions are common to each type of RSP, this is noted.

Depending on the questions, answers are to be provided in various ways. When answers are free text, a character limit will be specified. Some answers will require attachments of diagrams. Some questions will require an answer of Yes or No, where an answer of No may indicate a failing score. In the RSP Portal, these questions will allow applicants to provide explanatory comments when the applicant selects No. These comments will be passed on to the evaluator for a final determination of a pass/fail score.

# TCANN.

## RSP Handbook

Some questions pertain to types of anycast DNS in which a distinction between global and non-global is necessary. Global anycast DNS refers to DNS service intended to serve DNS queries to any client throughout the world (e.g., over transit links). Non-global anycast DNS refers to DNS service intended to serve DNS queries to specific parts of the world (e.g., over peering at an IxP).

## Main RSP

The Main RSP is responsible for the creation and maintenance of domain name registrations in a Shared Registration System (SRS). This encompasses the lifecycle of domain name registrations using protocols such as the Extensible Provisioning Protocol (EPP), and adherence to policies regarding transparency of domain name registrations through reporting, the Registration Data Access Protocol (RDAP), data escrow of domain registration data, and other functions.

Applications to be a Main RSP are not evaluated in relation to Authoritative DNS and DNSSEC services. Organizations should separately apply to be a DNS and/or DNSSEC RSP if those services are offered to Registry Operators.

## **MAIN.1. Security Controls**

Provide a summary of the security controls for the proposed registry service provider, encompassing both physical security and logical security regarding the operation of gTLD registry services. This information applies to in-house and all third-party (e.g. cloud providers, software vendors) vendors relevant to the registry services under application.

Provide answers for the following:

## MAIN.1.1. Third-Party Certificate

Does or will this RSP have a publicly verifiable, third-party certification (e.g. ISO 27001) held directly by the organization and relevant to the registry services under application?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

## MAIN.1.2. Information Security Management System

Describe the information security management system (ISMS) implemented by this RSP.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.

# TCANN.

## **RSP Handbook**

- o This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

## MAIN.1.3. Physical Access Controls

Does or will this RSP have processes and controls to manage physical access to infrastructure and systems, including building access controls, security cameras and/or other sensors, physical environmental monitoring and safety equipment, and alarm systems related to the physical infrastructure?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

## MAIN.1.4. System Access Controls

Does or will this RSP have processes and controls to manage non-physical access to infrastructure, including network access from both internal systems and external Internet systems, intrusion detection systems, security information and event management systems, network firewalls, network segmentation and isolation, user identification and authentication, and authorization schemes?

- The answer to this question will be published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

## MAIN.1.5. Vendor Management

Does or will this RSP have processes and controls pertaining to the selection of vendors and equipment suppliers, management and maintenance of assets while in use, procurement of assets, and safe disposal of assets?

- The answer to this question will be published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

## MAIN.1.6. Cryptographic Material

Does or will this RSP routinely renew and keep safe **all** cryptographic material necessary for the operation of the RSP?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.



## MAIN.1.7. Secure Data At-Rest

Does or will this RSP secure (e.g. encryption, tamper detection, etc...) at-rest data relevant to the operation of the RSP, including but not limited to DNSSEC if applicable?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

## MAIN.1.8. Secure Data In-Transit

Does or will this RSP secure (e.g. encryption, tamper detection, etc...) in-transit data relevant to the operation of the RSP, including but not limited to DNSSEC if applicable?

- The answer to this question will be published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

## MAIN.1.9. Virtualization Controls

If applicable, does or will this RSP have security controls for data in virtualized environments, including controls relevant to both on-premises or private virtualization environments as well as public clouds, network isolation, memory isolation, process isolation, and hypervisor access controls?

- The answer to this question *will be* published.
- Answer format: Yes, No, or Not Applicable.
- This is a sub-question common to all types of RSP.

## MAIN.1.10. CISO

Does or will this RSP have a senior executive primarily in charge of and responsible for security?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

## MAIN.1.11. Emerging Threats

Describe the dedicated resources used to address emerging threats. This includes, but is not limited to, the utilization of either an in-house or third-party Computer Emergency Response Team (CERT), penetration testing schedule, software supply chain scanning, and participation in DNS, network, and/or security related forums (e.g. NANOG, RIPE, DNS-OARC).

• The answer to this question will not be published.

# TCANN.

## **RSP Handbook**

- Answer format: free text of no more than 4,000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

## MAIN.1.12. Background Checks

Does or will this RSP conduct background checks, both initial and on-going, of personnel and vendors relevant to the registry services under application?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

## MAIN.1.13. DDOS

Describe the solutions and mitigations to be used to thwart Distributed Denial of Service (DDOS) attacks against the RDAP and EPP services.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

## MAIN.1.14. BCP 38

Does or will this RSP implement BCP 38?

- The answer to this question will be published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

## MAIN.1.15. Secure Routing

Does or will this RSP implement routing security of some nature, such as automated route filters, RPKI route origin validation, or other operational practices defined by the Internet Society and Global Cyber Alliance's Mutually Agreed Norms for Routing Security (MANRS)?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

## MAIN.1.16. KSK Rollovers

Does or will this RSP perform a Key Signing Key (KSK) rollover at least once per year for each gTLD it operates in coordination with the DNSSEC RSP?

• The answer to this question *will be* published.

Answer format: Yes or No.

## MAIN.2. Technical Overview

Provide a technical overview of the systems, software, and technical practices of the registry service provider.

Provide answers for the following:

## MAIN.2.1. Systems and Software

Describe the systems and software relating to the operation of the RSP and the purpose and function for each. This must include, but is not limited to, types of operating systems, application software, programming languages, virtualization environments, network elements, appliances, and sizing requirements. The given list must contain software and systems which are both modern and in common use.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

## MAIN.2.2. Standard Hardware Maintenance

Does or will this RSP have documented, regular, and active practices for the maintenance of hardware relevant to the registry services under application?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

## MAIN.2.3. Standard Software Maintenance

Does or will this RSP have documented, regular, and active practices for the maintenance, upgrading, and patching of software relevant to the registry services under application?

- The answer to this question will be published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

## MAIN.2.4. Standard Hardware Lifecycle

Does or will this RSP have documented, regular, and active practices for the lifecycle of hardware relevant to the registry services under application?

- The answer to this question will be published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

## MAIN.2.5. Secure Software Development

Does or will this RSP have documented, regular, and active practices for the secure development of software?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

## MAIN.2.6. Hardware Maintenance Contingency

Does or will this RSP have documented contingency plans for extraordinary scenarios regarding the maintenance of hardware relevant to the registry services under application?

- The answer to this question will be published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

## MAIN.2.7. Software Maintenance Contingency

Does or will this RSP have documented contingency plans for extraordinary scenarios regarding the maintenance, upgrading, and patching of software relevant to the registry services under application?

- The answer to this question *will be* published.
- o Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

## MAIN.2.8. Hardware Lifecycle Contingency

Does or will this RSP have documented contingency plans for extraordinary scenarios regarding the lifecycle of hardware relevant to the registry services under application?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

## MAIN.2.9. Software Development Contingency

Does or will this RSP have documented contingency plans for extraordinary scenarios regarding the development of software?

• The answer to this question *will be* published.

# TCANN.

## **RSP Handbook**

- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

## MAIN.2.10. IaC

Does or will this RSP use Infrastructure-as-Code (IaC) to manage all systems relevant to operation of the registry services under application?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

## MAIN.2.11. Automated Orchestration

Does or will this RSP use automated orchestration to manage all systems relevant to the operation of the registry services under application?

- The answer to this question *will be* published.
- o Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

## MAIN.3. Architecture

Provide an architectural overview of the systems and software of the registry service provider, including descriptions of software architecture, systems dependencies, data flow within the registry, and logical systems interconnections.

Provide answers for the following:

## MAIN.3.1. Network Architecture

Describe the network architecture relevant to the registry services under application. This includes, but is not limited to, descriptions of network segmentation, interior and exterior routing schemes, virtual private networks, and IP addressing plans.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- This answer must include attachments of diagrams in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

## MAIN.3.2. Fault Tolerance

Describe the methods for resiliency of servers, including the use of load balancers, proxies, reverse proxies, caches, and other network elements.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.

## RSP Handbook

- This answer must include attachments of diagrams in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

## MAIN.3.3. Tier III Data Center

Does or will this RSP have at least two Tier III (as defined here: https://uptimeinstitute.com/tiers) or equivalent data centers having no inter-dependencies?

- The answer to this question will be published.
- Answer format: Yes or No.
- This answer must include an attachment of the certification or equivalent documentation in either JPG, PNG, or PDF format.
- Relevant Link: [Uptime Institute](https://uptimeinstitute.com/tiers)

## MAIN.3.4. SRS to DNSSEC Data Transfer

Describe the data replication from the SRS to the DNS signing infrastructure, whether in-house or third-party (i.e. Main RSP -> DNSSEC RSP).

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- o This answer must include attachments of diagrams in PNG, JPG, or PDF format.

## MAIN.4. Data Store

Describe the data store used by the registry service provider, including performance characteristics, backup and recovery procedures, schema and schema evolution practices, security, and other relevant information.

Provide answers for the following:

## MAIN.4.1. Data Storage

Describe how the technology used to store registration data ensures high availability and fault tolerance in order to meet the standards established in the Service Level Requirements of the ICANN Registry Agreement (version 2024).

- The answer to this question will not be published.
- o Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.

## MAIN.4.2. Data Replication

Describe how data is replicated between data centers in order to meet the standards

## RSP Handbook

established in the Service Level Requirements of the ICANN Registry Agreement (version 2024).

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.

## MAIN.4.3. On-site Backups

Does or will this RSP have on-site backups of registration data?

- The answer to this question will be published.
- Answer format: Yes or No.

## MAIN.4.4. Off-site Backups

Does or will this RSP have off-site backups of registration data?

- The answer to this question will be published.
- Answer format: Yes or No.

## MAIN.4.5. Data Retention

Does or will this RSP practice data retention policies with regard to backups of registration data?

- The answer to this question *will be* published.
- Answer format: Yes or No.

## MAIN.4.6. Registration Data Backups

Does or will this RSP practice documented standards regarding media and data backups for registration data?

- The answer to this question *will be* published.
- Answer format: Yes or No.

## MAIN.4.7. Recovery Practices

Does or will this RSP practice regularly scheduled validation of registration data backups, separately from recovery practices?

- The answer to this question *will be* published.
- Answer format: Yes or No.

## MAIN.4.8. Scheduled Recovery

Does or will this RSP practice regularly scheduled recovery of registration data backups?

• The answer to this question *will be* published.

Answer format: Yes or No.

## MAIN.4.9. Production Data

Does or will this RSP forbid the use of production data in testing and/or development environments?

- The answer to this question *will be* published.
- Answer format: Yes or No.

## MAIN.4.10. Schema Changes

Describe the practices regarding the changing of schemas and non-automated mutations to registration data in the data store for the purposes of mitigating the risk of downtime and outages.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.

## MAIN.4.11. Data Throughput

Provide the peak and sustained throughput of transactional data written to and read from the data store, maximum capacity in raw and materialized registration data in the data store, and describe the methods used to determine this information.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.

## MAIN.4.12. Encrypted Registration Data At-Rest

Does or will this RSP encrypt registration data at-rest in the data store?

- The answer to this question will be published.
- Answer format: Yes or No.

## MAIN.4.13. Encrypted Registration Data In-Transit

Does or will this RSP encrypt registration data in-transit to and from the data store?

- The answer to this question *will be* published.
- Answer format: Yes or No.

## MAIN.4.14. Cryptographic Material Renewal

Does or will this RSP regularly and frequently renew the cryptographic material used for the encryption of registration data both at-rest and in-transit with regard to the data store in accordance with industry best common practices?

## TEANN.

#### RSP Handbook

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### MAIN.4.15. Cryptographic Material Handling

Does or will this RSP keep safe the cryptographic material used for the encryption of registration data both at-rest and in-transit with regard to the data store in accordance with industry best common practices?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### MAIN.4.16. Cryptographic Algorithms

Does or will this RSP use modern and known-secure cryptographic algorithms for the encryption of registration data at-rest and in-transit with regard to the data store?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### MAIN 4 17 Customer Data

Describe the security controls of customer credentials, personal data, and sensitive information, including access and recovery of this information.

- The answer to this question will not be published.
- Answer format: free text of no more than 4.000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.

#### MAIN.4.18. Hashing Algorithms

Describe the hashing algorithms used for the storage of customer credentials, including all relevant parameters (e.g. work factor).

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.

#### MAIN.5. EPP Service

Describe the use of the Extensible Provisioning Protocol (EPP) by the registry service provider. Provide details on usage of EPP extensions, performance characteristics, security controls to be used with EPP, and other technical details.

Provide answers for the following:

### RSP Handbook

#### MAIN.5.1. RFC 5730

Does or will this RSP implement RFC 5730 ("Extensible Provisioning Protocol (EPP)")?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### MAIN.5.2. RFC 5731

Does or will this RSP implement RFC 5731 ("Extensible Provisioning Protocol (EPP) Domain Name Mapping")?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### MAIN.5.3. RFC 5734

Does or will this RSP implement RFC 5734 ("Extensible Provisioning Protocol (EPP) Transport over TCP")?

Answer format: Yes or No.

#### MAIN.5.4. RFC 5910

Does or will this RSP implement RFC 5910 ("Domain Name System (DNS) Security Extensions Mapping for the Extensible Provisioning Protocol (EPP)")?

- The answer to this question will be published.
- Answer format: Yes or No.

#### MAIN.5.5. RFC 5732

If applicable, does or will this RSP implement RFC 5732 ("Extensible Provisioning Protocol (EPP) Host Mapping")?

- The answer to this question *will be* published.
- o Answer format: Yes, No, or Not Applicable.

#### MAIN.5.6. RFC 5733

If applicable, does or will this RSP implement RFC 5733 ("Extensible Provisioning Protocol (EPP) Contact Mapping")?

- The answer to this question will be published.
- Answer format: Yes, No, or Not Applicable.



#### MAIN.5.7. RFC 8334

Does or will this RSP implement RFC 8334 ("Launch Phase Mapping for the Extensible Provisioning Protocol (EPP)")?

- The answer to this question will be published.
- Answer format: Yes or No

#### MAIN.5.8. RFC 8748

If applicable, does or will this RSP implement RFC 8748 ("Registry Fee Extension for the Extensible Provisioning Protocol (EPP)")?

- The answer to this question *will be* published.
- o Answer format: Yes, No, or Not Applicable.

#### MAIN.5.9. EPP Contacts

Does or will this RSP forbid access to contacts via EPP to registrars other than the sponsoring registrar?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### MAIN.5.10. EPP Extensions

Provide a list of all EPP extensions to be used that are registered in the IANA EPP extensions registry, and an attestation that all EPP extensions to be used are registered with the IANA as per RFC 7451 ("Extension Registry for the Extensible Provisioning Protocol").

- The answer to this question *will be* published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.

#### MAIN.5.11. Unregistered EPP Extensions

Does or will this RSP forgo the use of any EPP extensions which are not registered with the IANA as per RFC 7451 ("Extension Registry for the Extensible Provisioning Protocol")?

- The answer to this question will be published.
- Answer format: Yes or No.

#### MAIN.5.12. EPP Performance

Does or will this RSP implement and operate EPP according to the performance

### RSP Handbook

requirements defined in the standards established in Specification 10 of the ICANN Registry Agreement (version 2024)?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### MAIN.5.13. EPP Equal Access

Does or will this RSP have controls to prevent EPP misuse and ensure all registrars have fair and equal access to EPP per the standards established in Specification 9 of the ICANN Registry Agreement (version 2024)?

- The answer to this question will be published.
- Answer format: Yes or No.

#### MAIN.5.14. EPP Client Connections

Describe how data integrity is achieved across multiple client connections, including but not limited to usage of soft-state and eventual consistency if applicable, and the application of Atomicity, Consistency, Isolation, and Durability (ACID) principles.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.

#### MAIN.5.15. RFC 9325

Does or will this RSP implement RFC 9325 ("Recommendations for Secure Use of Transport Layer Security (TLS) and Datagram Transport Layer Security (DTLS)") notwithstanding RFC 5734 ("Extensible Provisioning Protocol (EPP) Transport over TCP")? Note: while RFC 9325 covers TLS and DTLS, EPP only uses TLS.

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### MAIN.5.16. EPP Cryptographic Material Renewal

Does or will this RSP regularly and frequently renew the cryptographic material used to secure EPP communications in accordance with industry best common practices?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### MAIN.5.17. EPP Cryptographic Material Handling

Does or will this RSP keep safe the cryptographic material used to secure EPP communication in accordance with industry best common practices?

The answer to this question will be published.

## **RSP Handbook**

Answer format: Yes or No.

#### MAIN.5.18. EPP Reporting

Does or will this RSP meet the standards established in Specification 3 of the ICANN Registry Agreement (version 2024) with respect to EPP?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### MAIN.5.19. EPP Virtualization

Does or will this RSP compartmentalize (e.g. virtualization) the EPP service in such a manner that each compartment (e.g. containers, virtual machines, physical machines) is dedicated to EPP (excluding system services such as monitoring, remote access and NTP)?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### **MAIN.6. RDAP Service**

Describe the use of the Registration Data Access Protocol (RDAP) by the registry service provider. Provide details on usage of RDAP extensions, performance characteristics, security controls to be used with RDAP, and other technical details.

Provide answers for the following:

#### MAIN.6.1. RFC 7480

Does or will this RSP implement RFC 7480 ("HTTP Usage in the Registration Data Access Protocol (RDAP)")?

- The answer to this question *will be* published.
- Answer format: Yes or No.

### MAIN.6.2. RFC 7481

Does or will this RSP implement RFC 7481 ("Security Services for the Registration Data Access Protocol (RDAP)")?

- The answer to this question *will be* published.
- Answer format: Yes or No.



#### MAIN.6.3. Current RFC 8521

Does or will this RSP implement RFC 8521 ("Registration Data Access Protocol (RDAP) Object Tagging") for all currently operated gTLDs?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### MAIN.6.4. Future RFC 8521

Does this RSP plan to continue to implement RFC 8521 ("Registration Data Access Protocol (RDAP) Object Tagging") for all gTLDs operated in the future?

- The answer to this question will be published.
- Answer format: Yes or No.

#### MAIN.6.5. RFC 9082

Does or will this RSP implement RFC 9082 ("Registration Data Access Protocol (RDAP) Query Format")?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### MAIN.6.6. RFC 9083

Does or will this RSP implement RFC 9083 ("JSON Responses for the Registration Data Access Protocol (RDAP)")?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### MAIN.6.7. Current RFC 9224

Does or will this RSP implement RFC 9224 ("Finding the Authoritative Registration Data Access Protocol (RDAP) Service") for all currently operated gTLDs?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### MAIN.6.8. Future RFC 9224

Will this RSP implement RFC 9224 ("Finding the Authoritative Registration Data Access Protocol (RDAP) Service") for all gTLDs operated in the future?

- The answer to this question *will be* published.
- Answer format: Yes or No.



#### MAIN.6.9. RDAP Technical Implementation Guide

Does or will this RSP implement the ICANN gTLD RDAP Technical Implementation Guide?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### MAIN.6.10. RDAP Response Profile

Does or will this RSP implement the ICANN gTLD RDAP Response Profile?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### MAIN.6.11. RDAP Extensions

Provide a list of all RDAP extensions to be used.

- The answer to this question *will be* published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.

#### MAIN.6.12. Unregistered RDAP Extensions

Does or will this RSP forgo the use of any RDAP extensions which are not registered with the IANA as per RFC 7480 ("HTTP Usage in the Registration Data Access Protocol (RDAP)")?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### MAIN.6.13. RDAP Performance

Does or will this RSP meet the standards established in the Service Level Agreements specified in Specification 10 of the ICANN Registry Agreement (version 2024) with regard to RDAP?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### MAIN.6.14. RDAP Data Mining

Does or will this RSP implement methods to prevent mining of registration data via RDAP?

- The answer to this question *will be* published.
- Answer format: Yes or No.



#### MAIN.6.15. RFC 9325

Does or will this RSP implement RFC 9325 ("Recommendations for Secure Use of Transport Layer Security (TLS) and Datagram Transport Layer Security (DTLS)") with respect to RDAP? Note: while RFC 9325 covers TLS and DTLS, RDAP only uses TLS.

- The answer to this question will be published.
- Answer format: Yes or No.

#### MAIN.6.16. RDAP Cryptographic Material Renewal

Does or will this RSP regularly and frequently renew the cryptographic material used to secure RDAP communications in accordance with industry best common practices?

- The answer to this question will be published.
- Answer format: Yes or No.

#### MAIN.6.17. RDAP Cryptographic Material Handling

Does or will this RSP keep safe the cryptographic material used to secure RDAP communication in accordance with industry best common practices?

- The answer to this question will be published.
- Answer format: Yes or No.

#### MAIN.6.18. RDAP Reporting

Does or will this RSP meet the standards established in Specification 3 of the ICANN Registry Agreement (version 2024) with respect to RDAP?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### MAIN.6.19. RDAP Virtualization

Does or will this RSP compartmentalize (e.g. virtualization) the RDAP service in such a manner that each compartment (e.g. containers, virtual machines, physical machines) is dedicated to RDAP (excluding system services such as monitoring, remote access and NTP)?

- The answer to this question will be published.
- Answer format: Yes or No.

### **MAIN.7. Internet Connectivity**

Describe the IPv4 and IPv6 connectivity and reachability of the registry service provider, including performance characteristics, transit, cloud, and/or backbone providers, peering exchanges, routing stability and other information.



Provide answers for the following:

#### MAIN.7.1. IPv4 Connectivity

Provide a list of the transit, cloud, backbone, and network providers and points of presence through which IPv4 services are to be provided, including egress and ingress data transfer speeds.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.

#### MAIN.7.2. IPv6 Connectivity

Provide a list of the transit, cloud, backbone, and network providers and points of presence through which IPv6 services are to be provided, including egress and ingress data transfer speeds.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.

#### MAIN.7.3. IPv4 RDAP

Does or will this RSP meet the standards established in Specification 10 of the ICANN Registry Agreement (version 2024) with regard to RDAP and IPv4?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### MAIN.7.4. IPv4 EPP

Does or will this RSP meet the standards established in Specification 10 of the ICANN Registry Agreement (version 2024) with regard to EPP and IPv4?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### MAIN.7.5. IPv6 RDAP

Does or will this RSP meet the standards established in Specification 10 of the ICANN Registry Agreement (version 2024) with regard to RDAP and IPv6?

- The answer to this question *will be* published.
- Answer format: Yes or No.



#### MAIN.7.6. IPv6 EPP

Will this RSP meet the standards established in Specification 10 of the ICANN Registry Agreement (version 2024) with regard to EPP and IPv6 if requested by a registrar?

- The answer to this question *will be* published.
- Answer format: Yes or No.

### **MAIN.8.** Abuse Prevention and Mitigation

Describe the proposed policies and procedures to minimize abusive registrations and other activities that have a negative impact on Internet users.

Provide answers for the following:

#### MAIN.8.1. Domain Registration Abuse

Will this RSP provide tools and mechanisms to Registry Operators for the purposes of automated processing and identification of abusive domain registrations.

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### MAIN.8.2. EPP and RDAP Status Values

Describe the EPP and RDAP status values as they relate to domain name registrations considered to be abusive registrations and those not considered to be abusive registrations.

- The answer to this question *will be* published.
- Answer format: free text of no more than 4,000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.

#### **MAIN.9. Rights Protection**

Describe the tools that may be used by a gTLD to comply with the policies and practices of Rights Protection Management.

Provide answers for the following:

#### MAIN.9.1. URS

Describe the EPP and RDAP status values and their applicability to Uniform Rapid Suspension (URS).

## TCANN.

## **RSP Handbook**

- The answer to this question *will be* published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.

#### MAIN.9.2. RFC 9361

Does or will this RSP implement the Registry Operator-related elements of RFC9361

- The answer to this question *will be* published.
- Answer format: Yes or No.

### **MAIN.10.** Registration Lifecycle

Provide a detailed description of the proposed registration lifecycle for domain names. Explain the various registration states, state transition timelines, and relationship of these states with EPP and RDAP.

Provide answers for the following:

#### MAIN.10.1. Registration Lifecycle

Describe all potential registration lifecycle(s) of domain names supported in the system.

- The answer to this question **will be** published.
- Answer format: free text of no more than 4,000 characters.
- o This answer must include attachments of diagrams in PNG, JPG, or PDF format.

#### MAIN.10.2. Domain Registration Values

Describe the registration lifecycle(s) of domain names with respect to EPP status values and RDAP status values.

- The answer to this question *will be* published.
- Answer format: free text of no more than 4,000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.

#### MAIN.10.3. Nameserver Registration Values

Describe the nameserver host lifecycle, including relevance to EPP and RDAP status values, with respect to the lifecycle of domain names. This should include a description of nameservers as either attributes of domains or as host objects.

- The answer to this question will be published.
- Answer format: free text of no more than 4,000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.



#### MAIN.10.4. Contact Registration Values

If applicable, describe the contact lifecycle, including relevance to EPP and RDAP status values, with respect to the lifecycle of domain names and nameservers. Include a description of the deletion of orphaned contacts.

- The answer to this question *will be* published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.

#### MAIN.10.5. Orphaned Glue

Does or will this RSP be capable of removing orphaned glue in accordance with the standards established in Specification 6 of the ICANN Registry Agreement (version 2024)?

- The answer to this question *will be* published.
- o Answer format: Yes, No or Not Applicable.

#### MAIN.10.6. BRDA

Describe the systems, software, and processes used to integrate to ICANN's Bulk Registration Data Access [BRDA, Specification 4 of the ICANN Registry Agreement (version 2024)], ICANN's Registration Reporting System [RRI, Specification 2 and Specification 3 of the ICANN Registry Agreement (version 2024)], and ICANN's Zone File Access [ZFA, Specification 4 of the ICANN Registry Agreement (version 2024)].

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.

#### MAIN.10.7. Data Escrow

Describe how this RSP will meet the standards established in Specification 2 of the ICANN Registry Agreement (version 2024), and describe any other data escrow processes. This includes escrow extensions for data related additional registry services.

- The answer to this question *will be* published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.

### **MAIN.11. Registry Continuity**

Describe how the registry service provider will comply with registry continuity, including but not limited to obligations as described in Specification 6 (section 3) of the ICANN Registry Agreement (version 2024). This includes conducting registry operations using diverse,

## **RSP Handbook**

redundant servers to ensure continued operation of critical functions in the case of technical failure.

Provide answers for the following:

#### MAIN.11.1. Registry Continuity Exercise

Does or will this RSP regularly exercise registry continuity actions?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### MAIN.11.2. Registry Continuity Compliance

Describe how this RSP will meet the standard established in Specification 6.3 of the ICANN Registry Agreement (version 2024).

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

#### MAIN.11.3. Transfer of Operations

Does or will this RSP be capable of transferring all applicable operations to another RSP as defined by the <u>Material Subcontracting Arrangement Technical Questions</u>?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### MAIN.11.4. EBERO

Does or will this RSP participate in coordinated Emergency Back-end Registry Operator (EBERO) transitions, including but not limited to maintaining the DNSSEC chain of trust, of hosted gTLDs when the business relationship of this RSP and the Registry Operator is not in good standing?

- The answer to this question will be published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### **MAIN.12. Monitoring and Fault Escalation**

Describe arrangements for monitoring critical registry systems (including SRS, database systems, EPP services, RDAP services, network connectivity, routers and firewalls). This

#### RSP Handbook

description should explain how these systems are monitored and the mechanisms that will be used for fault escalation and reporting, and should provide details of the proposed support arrangements for these registry systems.

Provide answers for the following:

#### MAIN.12.1. Internal Monitoring

Does or will this RSP monitor for faults inside its own network?

- The answer to this question *will be* published.
- o Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### MAIN.12.2. External Monitoring

Does or will this RSP monitor for faults from a point outside any of its own networks?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### MAIN.12.3. Fault Triage

Does or will this RSP have documented processes for aggregation and triage of faults?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### MAIN.12.4. Fault Mitigation

Does or will this RSP have documented processes to mitigate faults once detected?

- The answer to this question will be published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### MAIN.12.5. Regional Points of Presence

Provide a list of at least one point of presence where fault monitoring is conducted from each of the continents of North America, Central or South America, Asia, Europe, and Africa.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.



#### MAIN.12.6. Fault Minimization

Does or will this RSP have processes to minimize faults during maintenance of systems, including both automated processes and manual change control processes?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### MAIN.12.7. On-call Staff

Does or will this RSP have personnel capable of reacting to and mitigating faults 24 hours per day of every day of every year of service?

- The answer to this question will be published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### MAIN.12.8. Service Disruptions

Provide documentation regarding any RSP functions currently being served for any gTLD, the domain names of the gTLDs, and all service disruptions for each gTLD in the past six months, where a service disruption is defined by Specification 10 of the ICANN Registry Agreement (version 2024).

- The answer to this question *will be* published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

#### MAIN.13. Capacity

Provide a summary of capacity capabilities and other information necessary for the adequate approval of the RSP to accommodate the projected forecast of gTLD(s). The Main RSP should at least support the aggregate of the expected number of domain names within 3 years for all TLDs using the RSP plus the currently supported TLDs, if any.

Provide answers for the following:

#### MAIN.13.1. DUMs per TLD

Provide the maximum number of Domains Under Management (DUMs) per TLD, and describe the methods used to determine this information.

• The answer to this question will not be published.

## **RSP Handbook**

- Answer format: free text of no more than 4,000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

#### MAIN.13.2. Maximum TLDs

Provide the maximum number of TLDs that may be serviced, and describe the methods used to determine this information.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

#### MAIN.13.3. Current DUMs

Provide the current TLDs being serviced and the DUMs for each, if any.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

#### MAIN.13.4. Maximum Capacity

Provide the maximum number of TLDs and combined DUMs that can be serviced from the least-capable data center. If service is provided using public cloud services, provide the maximum capacity based on the contracted resources. Describe the methods used to determine this information.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

#### MAIN.13.5. Available Load

Provide documentation that either services contracted from a public cloud provider or services provided from private sources demonstrate the needed capacity as stated above. This documentation may include, but is not limited to, number of servers, contracted bandwidth from network providers, and load test reports.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.



#### **DNS RSP**

The DNS RSP is responsible for providing DNS infrastructure and service for a TLD. A DNS RSP does not pertain to providing the Shared Registration System (SRS) components or DNSSEC components necessary for a TLD. Organizations should apply to be a Main RSP and/or DNSSEC RSP separately if providing those services is being sought.

A DNS RSP must implement anycast to all DNS nameservers, and must document anycast DNS nodes that provide limited, localized, or non-global anycast service.

### **DNS.1. Security Controls**

Provide a summary of the security controls for the proposed registry service provider, encompassing both physical security and logical security regarding the operation of gTLD registry services. This information applies to in-house and all third-party (e.g. cloud providers, software vendors) vendors relevant to the registry services under application.

Provide answers for the following:

#### DNS.1.1. Third-Party Certificate

Does or will this RSP have a publicly verifiable, 3rd party certification (e.g. ISO 27001) held directly by the organization and relevant to the registry services under application?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNS.1.2. Information Security Management System

Describe the information security management system (ISMS) implemented by this RSP.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

#### DNS.1.3. Physical Access Controls

Does or will this RSP have processes and controls to manage physical access to infrastructure and systems, including building access controls, security cameras and/or other sensors, physical environmental monitoring and safety equipment, and alarm systems related to the physical infrastructure?

## TCANN.

## **RSP Handbook**

- The answer to this question will be published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNS.1.4. System Access Controls

Does or will this RSP have processes and controls to manage non-physical access to infrastructure, including network access from both internal systems and external Internet systems, intrusion detection systems, security information and event management systems, network firewalls, network segmentation and isolation, user identification and authentication, and authorization schemes?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNS.1.5. Vendor Management

Does or will this RSP have processes and controls pertaining to the selection of vendors and equipment suppliers, management and maintenance of assets while in use, procurement of assets, and safe disposal of assets?

- The answer to this question will be published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNS.1.6. Cryptographic Material

Does or will this RSP routinely renew and keep safe **all** cryptographic material necessary for the operation of the RSP?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNS.1.7. Secure Data At-Rest

Does or will this RSP secure (e.g. encryption, tamper detection, etc...) at-rest data relevant to the operation of the RSP, including but not limited to DNSSEC if applicable?

- The answer to this question will be published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.



#### DNS.1.8. Secure Data In-Transit

Does or will this RSP secure (e.g. encryption, tamper detection, etc...) in-transit data relevant to the operation of the RSP, including but not limited to DNSSEC if applicable?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNS.1.9. Virtualization Controls

If applicable, does or will this RSP have security controls for data in virtualized environments, including controls relevant to both on-premises or private virtualization environments as well as public clouds, network isolation, memory isolation, process isolation, and hypervisor access controls?

- The answer to this question *will be* published.
- o Answer format: Yes, No, or Not Applicable.
- This is a sub-question common to all types of RSP.

#### DNS.1.10. CISO

Does or will this RSP have a senior executive primarily in charge of and responsible for security?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNS.1.11. Emerging Threats

Describe the dedicated resources used to address emerging threats. This includes, but is not limited to, the utilization of either an in-house or third-party Computer Emergency Response Team (CERT), penetration testing schedule, software supply chain scanning, and participation in DNS, network, and/or security related forums (e.g. NANOG, RIPE, DNS-OARC).

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

#### DNS.1.12. Background Checks

Does or will this RSP conduct background checks, both initial and on-going, of personnel and vendors relevant to the registry services under application?

## 1CANN

## **RSP Handbook**

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNS.1.13. DDOS

Describe the solutions and mitigations to be used to thwart Distributed Denial of Service (DDOS) attacks against the authoritative DNS services.

- The answer to this question *will be* published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

#### DNS.1.14. BCP 38

Does or will this RSP comply with BCP 38?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNS.1.15. Secure Routing

Does or will this RSP implement routing security of some nature, such as automated route filters, RPKI route origin validation, or other operational practices defined by the Internet Society and Global Cyber Alliance's Mutually Agreed Norms for Routing Security (MANRS)?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### **DNS.2. Technical Overview**

Provide a technical overview of the systems, software, and technical practices of the registry service provider.

Provide answers for the following:

#### DNS.2.1. Systems and Software

Describe the systems and software relating to the operation of the RSP and the purpose and function for each. This must include, but is not limited to, types of operating systems, application software, programming languages, virtualization environments, network

#### RSP Handbook

elements, appliances, and sizing requirements. The given list must contain software and systems which are both modern and in common use.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

#### DNS.2.2. Standard Hardware Maintenance

Does or will this RSP have documented, regular, and active practices for the maintenance of hardware relevant to the registry services under application?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNS.2.3. Standard Software Maintenance

Does or will this RSP have documented, regular, and active practices for the maintenance, upgrading, and patching of software relevant to the registry services under application?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNS.2.4. Standard Hardware Lifecycle

Does or will this RSP have documented, regular, and active practices for the lifecycle of hardware relevant to the registry services under application?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNS.2.5. Secure Software Development

Does or will this RSP have documented, regular, and active practices for the secure development of software?

- The answer to this question will be published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNS.2.6. Hardware Maintenance Contingency

Does or will this RSP have documented contingency plans for extraordinary scenarios

#### RSP Handbook

regarding the maintenance of hardware relevant to the registry services under application?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNS.2.7. Software Maintenance Contingency

Does or will this RSP have documented contingency plans for extraordinary scenarios regarding the maintenance, upgrading, and patching of software relevant to the registry services under application?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNS.2.8. Hardware Lifecycle Contingency

Does or will this RSP have documented contingency plans for extraordinary scenarios regarding the lifecycle of hardware relevant to the registry services under application?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNS.2.9. Software Development Contingency

Does or will this RSP have documented contingency plans for extraordinary scenarios regarding the development of software?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNS.2.10. IaC

Does or will this RSP use Infrastructure-as-Code (IaC) to manage all systems relevant to operation of the registry services under application?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNS.2.11. Automated Orchestration

Does or will this RSP use automated orchestration to manage all systems relevant to the operation of the registry services under application?

## 1SANN

## **RSP Handbook**

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### **DNS.3. Architecture**

Provide an architectural overview of the systems and software of the registry service provider, including descriptions of software architecture, systems dependencies, data flow within the registry, and logical systems interconnections.

Provide answers for the following:

#### DNS.3.1. Network Architecture

Describe the network architecture relevant to the registry services under application. This includes, but is not limited to, descriptions of network segmentation, interior and exterior routing schemes, virtual private networks, and IP addressing plans.

- o The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- o This answer must include attachments of diagrams in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

#### DNS.3.2. Fault Tolerance

Describe the methods for resiliency of servers, including the use of load balancers, proxies, reverse proxies, caches, and other network elements.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- This answer must include attachments of diagrams in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

#### DNS.3.3. DNS Resiliency

Describe the methods resiliency for DNS, including the use of anycast, primary and secondary DNS authoritative servers, and hidden DNS zone transfer servers.

- The answer to this question *will be* published.
- Answer format: free text of no more than 4,000 characters.
- This answer must include attachments of diagrams in PNG, JPG, or PDF format.

#### DNS.3.4. DNS Zone Distribution Data Center

Does or will this RSP have at least two Tier III (as defined here:

## TCANN

### RSP Handbook

https://uptimeinstitute.com/tiers) or equivalent data centers having no inter-dependencies for DNS zone distribution?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This answer must include an attachment of the certification or equivalent documentation in either JPG, PNG, or PDF format.
- Relevant Link: [Uptime Institute](https://uptimeinstitute.com/tiers)

#### DNS.3.5. Anycast Data Center

Does or will this RSP have at least two Tier III or equivalent data centers having no inter-dependencies for global DNS anycast service?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This answer must include an attachment of the certification or equivalent documentation in either JPG, PNG, or PDF format.

#### DNS.3.6. DNSSEC to DNS Data Transfer

Description of data replication between DNS servers and data replication from the DNSSEC signing infrastructure to the DNS servers, whether in-house or with third-parties (i.e. DNSSEC RSP -> DNS RSP).

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- o This answer must include attachments of diagrams in PNG, JPG, or PDF format.

### **DNS.4. Geographic Diversity**

Provide a description of the geographical diversity of services for the registry service provider. Describe the physical location of data centers and cloud providers, nameserver, back-up storage sites, and network operations centers.

Provide answers for the following:

#### DNS.4.1. Geographic DNS Service

Describe the geographic diversity for all DNS nodes, including detailed distinctions between unicast nodes, anycast nodes serving global traffic, and anycast nodes serving non-global, regional, or local traffic.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- o This answer must include attachments of diagrams in PNG, JPG, or PDF format.



### DNS.4.2. Geographic Risk Mitigation

Provide evidence of a geographic, topological, and national diversity that greatly reduces the risk profile of the proposed registry by ensuring the continuance of the DNS Registry Service.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- This answer must include attachments of separate documentation in PNG, JPG, or PDF format.

#### DNS.4.3. DNS Failure

Does or will this RSP have enough coverage of DNS service to accommodate failures of any DNS point-of-presence to maintain minimum Service Level Requirements?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### **DNS.5. DNS Service**

Describe the nature, architecture, and operation of nameservers and DNS service, including compliance with the relevant DNS standards.

The response should include but is not limited to:

#### DNS.5.1. Service Architecture

Descriptions of service architecture for all DNS node types, including unicast nodes, anycast nodes serving global traffic, and anycast nodes serving non-global, regional, or local traffic.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- o This answer must include attachments of diagrams in PNG, JPG, or PDF format.

#### DNS.5.2. RFC 1034

Does or will this RSP implement RFC 1034 ("DOMAIN NAMES - CONCEPTS AND FACILITIES")?

- The answer to this question *will be* published.
- Answer format: Yes or No.



#### DNS.5.3. RFC 1035

Does or will this RSP implement RFC 1035 ("DOMAIN NAMES - IMPLEMENTATION AND SPECIFICATION")?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### DNS.5.4. RFC 1123

Does or will this RSP implement RFC 1123 ("Requirements for Internet Hosts -- Application and Support")?

- The answer to this question will be published.
- Answer format: Yes or No.

#### DNS.5.5. RFC 1982

Does or will this RSP implement RFC 1982 ("Serial Number Arithmetic")?

- The answer to this question will be published.
- Answer format: Yes or No.

#### DNS.5.6. RFC 2181

Does or will this RSP implement RFC 2181 ("Clarifications to the DNS Specification")?

- The answer to this question will be published.
- Answer format: Yes or No.

#### DNS.5.7. RFC 3226

Does or will this RSP implement RFC 3226 ("DNSSEC and IPv6 A6 aware server/resolver message size requirements")?

- The answer to this question will be published.
- Answer format: Yes or No.

#### DNS.5.8. RFC 3596

Does or will this RSP implement RFC 3596 ("DNS Extensions to Support IP Version 6")?

- o The answer to this question will be published.
- Answer format: Yes or No.

#### DNS.5.9. RFC 3597

Does or will this RSP implement RFC 3597 ("Handling of Unknown DNS Resource Record (RR) Types")?



- The answer to this question will be published.
- Answer format: Yes or No.

#### DNS.5.10. RFC 4343

Does or will this RSP implement RFC 4343 ("Domain Name System (DNS) Case Insensitivity Clarification")?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### DNS.5.11. RFC 6891

Does or will this RSP implement RFC 6891 ("Extension Mechanisms for DNS (EDNS(0)))"?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### DNS.5.12. RFC 7766

Does or will this RSP implement RFC 7766 ("DNS Transport over TCP - Implementation Requirements")?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### DNS.5.13. RFC 5001

Does or will this RSP implement RFC 5001 ("DNS Name Server Identifier (NSID) Option")?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### DNS.5.14. RFC 6186

Does or will this RSP operate DNS service according to RFC 6186 ("Use of SRV Records for Locating Email Submission/Access Services")?

- The answer to this question will be published.
- Answer format: Yes or No.

#### DNS.5.15. RFC 8906

Does or will this RSP operate DNS service according to RFC 8906 ("A Common Operational Problem in DNS Servers: Failure to Communicate")?

- The answer to this question *will be* published.
- Answer format: Yes or No.



#### DNS.5.16. RFC 9199

Does or will this RSP operate DNS service according to RFC 9199 ("Considerations for Large Authoritative DNS Server Operators")?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### DNS.5.17. RFC 9210

Does or will this RSP operate DNS service according to RFC 9210 ("DNS Transport over TCP - Operational Requirements")?

- The answer to this question will be published.
- Answer format: Yes or No.

#### DNS.5.18. DNS Performance

Does or will this RSP meet the standards established in the Service Level Agreements defined in Specification 10 of the ICANN Registry Agreement (version 2024) with regard to DNS?

- The answer to this question will be published.
- Answer format: Yes or No.

#### DNS.5.19. DNS Virtualization

Does or will this RSP compartmentalize (e.g. virtualization) the DNS service in such a manner that each compartment (e.g. containers, virtual machines, physical machines) is dedicated to DNS (excluding system services such as monitoring, remote access and NTP)?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### DNS.5.20. DNS Software

Provide a list of DNS software implementations including version numbers, either open source, commercial, or proprietary.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.

#### DNS.5.21. Individual Node Monitoring

Does or will this RSP monitor all unique DNS servers of all anycast nodes?

• The answer to this question *will be* published.

## TCANN

## **RSP Handbook**

Answer format: Yes or No.

#### DNS.5.22. IANA Compliance

Does or will this RSP operate authoritative DNS servers according to the IANA Technical Requirements for Authoritative Name Servers

(https://www.iana.org/help/nameserver-requirements)?

- The answer to this question *will be* published.
- Answer format: Yes or No.

### **DNS.6. Internet Connectivity**

Describe the IPv4 and IPv6 connectivity and reachability of the registry service provider, including performance characteristics, transit, cloud, and/or backbone providers, peering exchanges, routing stability and other information.

Provide answers for the following:

#### DNS.6.1. IPv4 Connectivity

Provide a list of the transit, cloud, backbone, and network providers and points of presence through which IPv4 services are to be provided, including egress and ingress data transfer speeds.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

#### DNS.6.2. IPv6 Connectivity

Provide a list of the transit, cloud, backbone, and network providers and points of presence through which IPv6 services are to be provided, including egress and ingress data transfer speeds.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

#### DNS.6.3. IPv4 Performance

Does or will this RSP meet the standards established in Specification 10 of the ICANN Registry Agreement (version 2024) with regard to DNS and IPv4?

• The answer to this question *will be* published.

## TCANN.

## **RSP Handbook**

Answer format: Yes or No.

#### DNS.6.4. IPv6 Performance

Does or will this RSP meet the standards established in Specification 10 of the ICANN Registry Agreement (version 2024) with regard to DNS and IPv6?

- o The answer to this question will be published.
- Answer format: Yes or No.

#### DNS.6.5. IPv4 Points of Presence

Provide a list of points of presence where IPv4 services are to be provided, including the number of IPv4 unicast, IPv4 global anycast and IPv4 non-global anycast DNS nodes at each point of presence.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- This answer may include diagrams in PNG, JPG, or PDF format.

#### DNS.6.6. IPv6 Points of Presence

Provide a list of points of presence where IPv6 services are to be provided, including the number of IPv6 unicast, IPv6 global anycast and IPv6 non-global anycast DNS nodes at each point of presence.

- The answer to this question will not be published.
- Answer format: free text of no more than 4000 characters.
- This answer may include diagrams in either PNG, JPG, or PDF format.

### **DNS.7. DNS Service Continuity**

Describe how the DNS service provider will comply with DNS service continuity, including but not limited to obligations as described in Specification 6 (section 3) to the ICANN Registry Agreement (version 2024). This includes conducting DNS service operations using diverse, redundant servers to ensure continued operation of critical functions in the case of technical failure.

Provide answers for the following:

#### DNS.7.1. DNS Service Continuity Exercise

Does or will this RSP regularly exercise DNS service continuity actions?

- The answer to this question will be published.
- Answer format: Yes or No.

## **RSP Handbook**

This is a sub-question common to all types of RSP.

#### DNS.7.2. Continuity Compliance

Describe how this RSP will meet the standard established in Specification 6.3 of the ICANN Registry Agreement (version 2024).

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

#### DNS.7.3. Transfer of Operations

Does or will this RSP be capable of transferring all applicable operations to another RSP as defined by the <u>Material Subcontracting Arrangement Technical Questions</u>?

- The answer to this question *will be* published.
- o Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNS.7.4. EBERO

Does or will this RSP participate in coordinated Emergency Back-end Registry Operator (EBERO) transitions, including but not limited to maintaining the DNSSEC chain of trust, of hosted gTLDs when the business relationship of this RSP and the Registry Operator is not in good standing?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

### **DNS.8. Monitoring and Fault Escalation Processes**

Describe arrangements for monitoring critical registry systems (including DNS services, network connectivity, routers and firewalls). This description should explain how these systems are monitored and the mechanisms that will be used for fault escalation and reporting, and should provide details of the proposed support arrangements for these registry systems.

Provide answers for the following:

#### DNS.8.1. Internal Monitoring

Does or will this RSP monitor for faults inside its own network?

The answer to this question will be published.

## TCANN.

## **RSP Handbook**

- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNS.8.2. External Monitoring

Does or will this RSP monitor for faults from a point outside any of its own networks?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNS.8.3. Fault Triage

Does or will this RSP have documented processes for aggregation and triage of faults?

- The answer to this question will be published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNS.8.4. Fault Mitigation

Does or will this RSP have documented processes to mitigate faults once detected?

- The answer to this question *will be* published.
- o Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNS.8.5. Regional Points of Presence

Provide a list of at least one point of presence where fault monitoring is conducted from each of the continents of North America, Central or South America, Asia, Europe, and Africa.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

#### DNS.8.6. Fault Minimization

Does or will this RSP have processes to minimize faults during maintenance of systems, including both automated processes and manual change control processes?

- The answer to this question will be published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.



#### DNS.8.7. On-call Staff

Does or will this RSP have personnel capable of reacting to and mitigating faults 24 hours per day of every day of every year of service?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNS.8.8. Service Disruptions

Provide documentation regarding any RSP functions currently being served for any gTLD, the domain names of the gTLDs, and all service disruptions for each gTLD in the past six months, where a service disruption is defined by Specification 10 of the ICANN Registry Agreement (version 2024)).

- The answer to this question *will be* published.
- Answer format: free text of no more than 4,000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

#### DNS.8.9. Zone Pipelines

Describe the processes to insure accurate, complete and compliant DNS zones such as staged roll-outs, zone pipelines, and other quality assurance methodologies.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.

#### DNS.8.10. Zone Consistency

Describe the processes to ensure the contents of the DNS zone from each DNS point-of-presence are consistent.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.

#### **DNS.9.** Capacity

Provide a summary of capacity capabilities and other information necessary for the adequate approval of the RSP to accommodate the projected forecast of gTLD(s). The Main RSP should at least support the aggregate of the expected number of domain names within 3 years for all TLDs using the RSP plus the currently supported TLDs, if any.



Provide answers for the following:

#### DNS.9.1. DUMs per TLD

Provide the maximum number of Domains Under Management (DUMs) per TLD, and describe the methods used to determine this information.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

#### DNS.9.2. Maximum TLDs

Provide the maximum number of TLDs that may be serviced, and describe the methods used to determine this information.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

#### DNS.9.3. Current DUMs

Provide the current TLDs being serviced and the DUMs for each, if any.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

#### DNS.9.4. Maximum Capacity

Provide the maximum number of TLDs and combined DUMs that can be serviced from the least-capable data center. If service is provided using public cloud services, provide the maximum capacity based on the contracted resources. Describe the methods used to determine this information.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

#### DNS.9.5. Available Load

Provide documentation that either services contracted from a public cloud provider or services provided from private sources demonstrate the needed capacity as stated

### RSP Handbook

above. This documentation may include, but is not limited to, number of servers, contracted bandwidth from network providers, and load test reports.

- o The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

#### **DNSSEC RSP**

The DNSSEC RSP is responsible for providing cryptographic operations relevant for the creation and safekeeping of DNSSEC key material and providing the necessary operations for the cryptographic signing of DNS zone data. Organizations should apply to be a Main RSP and/or DNS RSP separately if providing those services is being sought.

#### **DNSSEC.1. Security Controls**

Provide a summary of the security controls for the proposed registry service provider, encompassing both physical security and logical security regarding the operation of gTLD registry services. This information applies to in-house and all third-party (e.g. cloud providers, software vendors) vendors relevant to the registry services under application.

Provide answers for the following:

#### DNSSEC.1.1. Third-Party Certificate

Does or will this RSP have a publicly verifiable, third-party certification (e.g. ISO 27001) held directly by the organization and relevant to the registry services under application?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNSSEC.1.2. Information Security Management System

Describe the information security management system (ISMS) implemented by this RSP.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

#### DNSSEC.1.3. Physical Access Controls

Does or will this RSP have processes and controls to manage physical access to

## **RSP Handbook**

infrastructure and systems, including building access controls, security cameras and/or other sensors, physical environmental monitoring and safety equipment, and alarm systems related to the physical infrastructure?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNSSEC.1.4. System Access Controls

Does or will this RSP have processes and controls to manage non-physical access to infrastructure, including network access from both internal systems and external Internet systems, intrusion detection systems, security information and event management systems, network firewalls, network segmentation and isolation, user identification and authentication, and authorization schemes?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNSSEC.1.5. Vendor Management

Does or will this RSP have processes and controls pertaining to the selection of vendors and equipment suppliers, management and maintenance of assets while in use, procurement of assets, and safe disposal of assets?

- The answer to this question will be published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNSSEC.1.6. Cryptographic Material

Does or will this RSP routinely renew and keep safe **all** cryptographic material necessary for the operation of the RSP?

- The answer to this question will be published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNSSEC.1.7. Secure Data At-Rest

Does or will this RSP secure (e.g. encryption, tamper detection, etc...) at-rest data relevant to the operation of the RSP, including but not limited to DNSSEC if applicable?

- The answer to this question will be published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.



#### DNSSEC.1.8. Secure Data In-Transit

Does or will this RSP secure (e.g. encryption, tamper detection, etc...) in-transit data relevant to the operation of the RSP, including but not limited to DNSSEC if applicable?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNSSEC.1.9. Virtualization Controls

If applicable, does or will this RSP have security controls for data in virtualized environments, including controls relevant to both on-premises or private virtualization environments as well as public clouds, network isolation, memory isolation, process isolation, and hypervisor access controls?

- The answer to this question *will be* published.
- o Answer format: Yes, No, or Not Applicable.
- This is a sub-question common to all types of RSP.

#### DNSSEC.1.10. CISO

Does or will this RSP have a senior executive primarily in charge of and responsible for security?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNSSEC.1.11. Emerging Threats

Describe the dedicated resources used to address emerging threats. This includes, but is not limited to, the utilization of either an in-house or third-party Computer Emergency Response Team (CERT), penetration testing schedule, software supply chain scanning, and participation in DNS, network, and/or security related forums (e.g. NANOG, RIPE, DNS-OARC).

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

#### DNSSEC.1.12. Background Checks

Does or will this RSP conduct background checks, both initial and on-going, of personnel and vendors relevant to the registry services under application?

# TCANN.

# **RSP Handbook**

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNSSEC.1.13. DDOS

Describe the solutions and mitigations to be used to thwart Distributed Denial of Service (DDOS) attacks against the DNSSEC infrastructure.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

#### DNSSEC.1.14. BCP 38

Does or will this RSP comply with BCP 38?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

# DNSSEC.1.15. Secure Routing

Does or will this RSP implement routing security of some nature, such as automated route filters, RPKI route origin validation, or other operational practices defined by the Internet Society and Global Cyber Alliance's Mutually Agreed Norms for Routing Security (MANRS)?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

# **DNSSEC.2.** Technical Overview

Provide a technical overview of the systems, software, and technical practices of the registry service provider.

Provide answers for the following:

#### DNSSEC.2.1. Systems and Software

Describe the systems and software relating to the operation of the RSP and the purpose and function for each. This must include, but is not limited to, types of operating systems, application software, programming languages, virtualization environments, network

# ICANN

#### RSP Handbook

elements, appliances, and sizing requirements. The given list must contain software and systems which are both modern and in common use.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

#### DNSSEC.2.2. Standard Hardware Maintenance

Does or will this RSP have documented, regular, and active practices for the maintenance of hardware relevant to the registry services under application?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNSSEC.2.3. Standard Hardware Lifecycle

Does or will this RSP have documented, regular, and active practices for the maintenance, upgrading, and patching of software relevant to the registry services under application?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNSSEC.2.4. Standard Hardware Lifecycle

Does or will this RSP have documented, regular, and active practices for the lifecycle of hardware relevant to the registry services under application?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNSSEC.2.5. Secure Software Development

Does or will this RSP have documented, regular, and active practices for the secure development of software?

- The answer to this question will be published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNSSEC.2.6. Hardware Maintenance Contingency

Does or will this RSP have documented contingency plans for extraordinary scenarios

# ICANN

#### RSP Handbook

regarding the maintenance of hardware relevant to the registry services under application?

- The answer to this question *will be* published.
- o Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNSSEC.2.7. Software Maintenance Contingency

Does or will this RSP have documented contingency plans for extraordinary scenarios regarding the maintenance, upgrading, and patching of software relevant to the registry services under application?

- The answer to this question will be published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNSSEC.2.8. Hardware Lifecycle Contingency

Does or will this RSP have documented contingency plans for extraordinary scenarios regarding the lifecycle of hardware relevant to the registry services under application?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNSSEC.2.9. Software Development Contingency

Does or will this RSP have documented contingency plans for extraordinary scenarios regarding the development of software?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- o This is a sub-question common to all types of RSP.

#### DNSSEC.2.10. IaC

Does or will this RSP use Infrastructure-as-Code (IaC) to manage all systems relevant to operation of the registry services under application?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNSSEC.2.11. Automated Orchestration

Does or will this RSP use automated orchestration to manage all systems relevant to the operation of the registry services under application?

# ICANN.

# **RSP Handbook**

- The answer to this question will be published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### **DNSSEC.3. Architecture**

Provide answers for the following:

#### DNSSEC.3.1. Network Architecture

Describe the network architecture relevant to the registry services under application. This includes, but is not limited to, descriptions of network segmentation, interior and exterior routing schemes, virtual private networks, and IP addressing plans.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- o This answer must include attachments of diagrams in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

#### DNSSEC.3.2. Fault Tolerance

Describe the methods for resiliency of servers, including the use of load balancers, proxies, reverse proxies, caches, and other network elements.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- o This answer must include attachments of diagrams in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

#### DNSSEC.3.3. Tier III Data Center

Does or will this RSP have at least two Tier III (as defined here: https://uptimeinstitute.com/tiers) or equivalent data centers having no inter-dependencies?

- The answer to this question will be published.
- Answer format: Yes or No.
- This answer must include an attachment of the certification or equivalent documentation in either JPG, PNG, or PDF format.
- Relevant Link: [Uptime Institute](https://uptimeinstitute.com/tiers)

#### DNSSEC.3.4. Zone Resiliency

Describe the methods providing resiliency for DNSSEC, including the use of hidden DNS zone transfer servers.

The answer to this question will not be published.

# ICANN.

# **RSP Handbook**

- Answer format: free text of no more than 4,000 characters.
- This answer must include attachments of diagrams in PNG, JPG, or PDF format.

#### DNSSEC.3.5. DNSSEC to DNS Data Transfer

Describe the data transfer between DNS signing services and infrastructure to DNS authoritative servers, whether in-house or third-party (i.e. DNSSEC RSP -> DNS RSP).

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- This answer must include attachments of diagrams in PNG, JPG, or PDF format.

#### DNSSEC.3.6. SRS to DNSSEC Data Transfer

Describe the data transfer from the SRS to the DNSSEC signing infrastructure, whether in-house or third-party (i.e. Main RSP -> DNSSEC RSP).

- The answer to this question will not be published.
- o Answer format: free text of no more than 4,000 characters.
- o This answer must include attachments of diagrams in PNG, JPG, or PDF format.

#### DNSSEC.3.7. Signing Performance

Provide the peak and sustained signing performance of the DNS signing infrastructure, and describe the methods used to collect this information.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- o This answer must include attachments of diagrams in PNG, JPG, or PDF format.

#### DNSSEC.3.8. Cryptographic Hardware and Software

Describe the hardware and software used to secure cryptographic material, cryptographic key escrow management, and hardware failover mechanisms related to DNSSEC services.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.

#### DNSSEC.3.9. FIPS 140-3

Does or will this RSP use hardware security modules (HSMs) certified to at least FIPS 140-3 Level 3?

- The answer to this question *will be* published.
- Answer format: Yes or No.



### **DNSSEC.4. DNSSEC Capabilities**

Describe the nature, architecture, and operation of nameservers and DNSSEC service, including compliance with the relevant DNS and DNSSEC standards.

Provide answers for the following:

#### DNSSEC.4.1. DPS

Provide the DNSSEC Policy and Practice Statement (DPS) to be used, in addition to any other relevant information regarding the handling and maintenance of DNSSEC cryptographic key material.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- This answer must include an attachment of the DPS in PNG, JPG, or PDF format.

#### DNSSEC.4.2. Signing Infrastructure

Descriptions of the architecture and operation of DNSSEC signing infrastructure.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- This answer must include attachments of diagrams in PNG, JPG, or PDF format.

#### DNSSEC.4.3. RFC 4033

Does or will this RSP implement RFC 4033 ("DNS Security Introduction and Requirements")?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### DNSSEC.4.4. RFC 4034

Does or will this RSP implement RFC 4034 ("Resource Records for the DNS Security Extensions")?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### DNSSEC.4.5. RFC 4035

Does or will this RSP implement RFC 4035 ("Protocol Modifications for the DNS Security Extensions")?

The answer to this question will be published.

# ICANN.

# **RSP Handbook**

Answer format: Yes or No.

#### DNSSEC.4.6. RFC 4509

Does or will this RSP implement RFC 4509 ("Use of SHA-256 in DNSSEC Delegation Signer (DS) Resource Records (RRs)")?

- The answer to this question will be published.
- Answer format: Yes or No.

#### DNSSEC.4.7. RFC 6840

Does or will this RSP implement RFC 6840 ("Clarifications and Implementation Notes for DNS Security (DNSSEC)")?

- The answer to this question will be published.
- Answer format: Yes or No.

#### DNSSEC.4.8. RFC 6781

Does or will this RSP implement RFC 6781 ("DNSSEC Operational Practices, Version 2")?

- The answer to this question will be published.
- Answer format: Yes or No.

#### DNSSEC.4.9. RFC 7583

Does or will this RSP implement RFC 7583 ("DNSSEC Key Rollover Timing Considerations")?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### DNSSEC.4.10. RFC 9276

Does or will this RSP implement RFC 9276 ("Guidance for NSEC3 Parameter Settings")?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### DNSSEC.4.11. RFCs 6605, 5702, and 8080

Does or will this RSP implement any of RFC 6605 ("Elliptic Curve Digital Signature Algorithm (DSA) for DNSSEC"), RFC 5702 ("Use of SHA-2 Algorithms with RSA in DNSKEY and RRSIG Resource Records for DNSSEC"), and/or RFC 8080 ("Edwards-Curve Digital Security Algorithm (EdDSA) for DNSSEC")?

• The answer to this question *will be* published.

# ICANN

# **RSP Handbook**

Answer format: Yes or No.

#### DNSSEC.4.12. DNSSEC Performance

Provide the peak and sustained DNSSEC signing operations, including measurements for both incremental and full zone updates and the methods used for each. Describe the methods used to obtain these measurements.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.

#### DNSSEC.4.13. DNSSEC Fault Tolerance

Describe the fault tolerance methods used by the DNSSEC signing infrastructure and zone signature consistency as it applies to failure scenarios.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- o This answer must include diagrams in PNG, JPG, or PDF format.

#### DNSSEC.4.14. KSK Rollovers

Does or will this RSP perform a Key Signing Key (KSK) rollover at least once per year for each gTLD it operates in coordination with the Main RSP?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### DNSSEC.4.15. DNSSEC Virtualization

Does or will this RSP compartmentalize (e.g. virtualization) the DNSSEC service in such a manner that each compartment (e.g. containers, virtual machines, physical machines) is dedicated to DNSSEC (excluding system services such as monitoring, remote access NTP)?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### **DNSSEC.5. DNSSEC Service Continuity**

Describe how the DNSSEC service provider will comply with DNSSEC service continuity, including but not limited to obligations described in Specification 6 (section 3) to the ICANN Registry Agreement (version 2024). This includes conducting DNSSEC service operations using diverse, redundant servers to ensure continued operation of critical functions in the case of technical failure.

# ICANN

# **RSP Handbook**

Provide answers for the following:

#### DNSSEC.5.1. DNSSEC Service Continuity Exercise

Does or will this RSP regularly exercise DNSSEC service continuity actions?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNSSEC.5.2. Continuity Compliance

Describe how this RSP will meet the standard established in Specification 6.3 of the ICANN Registry Agreement (version 2024).

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

#### DNSSEC.5.3. Transfer of Operations

Does or will this RSP be capable of transferring all applicable operations to another RSP as defined by the <u>Material Subcontracting Arrangement Technical Questions</u>?

- The answer to this question will be published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNSSEC.5.4. EBERO

Does or will this RSP participate in coordinated Emergency Back-end Registry Operator (EBERO) transitions, including but not limited to maintaining the DNSSEC chain of trust, of hosted gTLDs when the business relationship of this RSP and the Registry Operator is not in good standing?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### **DNSSEC.6. Monitoring and Fault Escalation Processes**

Describe arrangements for monitoring critical registry systems (including DNS security services, network connectivity, routers and firewalls). This description should explain how these systems are monitored and the mechanisms that will be used for fault escalation and reporting, and should provide details of the proposed support arrangements for these registry systems.



#### Provide answers for the following:

#### DNSSEC.6.1. Internal Monitoring

Does or will this RSP monitor for faults inside its own network?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNSSEC.6.2. External Monitoring

Does or will this RSP monitor for faults from a point outside any of its own networks?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNSSEC.6.3. Fault Triage

Does or will this RSP have documented processes for aggregation and triage of faults?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNSSEC.6.4. Fault Mitigation

Does or will this RSP have documented processes to mitigate faults once detected?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNSSEC.6.5. Regional Points of Presence

Provide a list of at least one point of presence where fault monitoring is conducted from each of the continents of North America, Central or South America, Asia, Europe, and Africa.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

#### DNSSEC.6.6. Fault Minimization

Does or will this RSP have processes to minimize faults during maintenance of systems, including both automated processes and manual change control processes?

# TCANN.

# **RSP Handbook**

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNSSEC.6.7. On-call Staff

Does or will this RSP have personnel capable of reacting to and mitigating faults 24 hours per day of every day of every year of service?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### DNSSEC.6.8. Service Disruptions

Provide documentation regarding any RSP functions currently being served for any gTLD, the domain names of the gTLDs, and all service disruptions for each gTLD in the past six months, where a service disruption is defined by Specification 10 of the ICANN Registry Agreement (version 2024).

- The answer to this question *will be* published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

#### DNSSEC.6.9. Zone Pipelines

Describe the processes to insure accurate, complete and compliant DNS zones such as staged roll-outs, zone pipelines, and other quality assurance methodologies.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.

# **DNSSEC.7.** Capacity

Provide a summary of capacity capabilities and other information necessary for the adequate approval of the RSP to accommodate the projected forecast of gTLD(s). The Main RSP should at least support the aggregate of the expected number of domain names within 3 years for all TLDs using the RSP plus the currently supported TLDs, if any.

Provide answers for the following:



#### DNSSEC.7.1. DUMs per TLD

Provide the maximum number of Domains Under Management (DUMs) per TLD, and describe the methods used to determine this information.

- The answer to this question will not be published.
- Answer format: free text of no more than 4.000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

#### DNSSEC.7.2. Maximum TLDs

Provide the maximum number of TLDs that may be serviced, and describe the methods used to determine this information.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

#### DNSSEC.7.3. Current DUMs

Provide the current TLDs being serviced and the DUMs for each, if any.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

#### DNSSEC.7.4. Maximum Capacity

Provide the maximum number of TLDs and combined DUMs that can be serviced from the least-capable data center. If service is provided using public cloud services, provide the maximum capacity based on the contracted resources. Describe the methods used to determine this information.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

#### DNSSEC.7.5. Available Load

Provide documentation that either services contracted from a public cloud provider or services provided from private sources demonstrate the needed capacity as stated

# TCANN.

### RSP Handbook

above. This documentation may include, but is not limited to, number of servers, contracted bandwidth from network providers, and load test reports.

- o The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

# **Proxy RSP**

A Proxy RSP is responsible for operating an RSP in a designated jurisdiction. Proxy RSPs must adhere to regulations and legislation of that jurisdiction, while also ensuring that any infrastructure deployed in that jurisdiction operates in accordance with the relevant specifications from the ICANN Registry Agreement (version 2024).

A Proxy RSP operates EPP and RDAP services under the applicable laws of the jurisdiction and sends domain registrations to a Main RSP. A Proxy RSP also operates a proxy RDAP service for a Main RSP under the applicable laws of the jurisdiction.

# **PROXY.1. Security Controls**

Provide a summary of the security controls for the proposed registry service provider, encompassing both physical security and logical security regarding the operation of gTLD registry services. This information applies to in-house and all third-party (e.g. cloud providers, software vendors) vendors relevant to the registry services under application.

Provide answers for the following:

#### PROXY.1.1. Third-Party Certificate

Does or will this RSP have a publicly verifiable, 3rd party certification (e.g. ISO 27001) held directly by the organization and relevant to the registry services under application?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

# PROXY.1.2. Information Security Management System

Describe the information security management system (ISMS) implemented by this RSP.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.

# TCANN.

# **RSP Handbook**

- o This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

#### PROXY.1.3. Physical Access Controls

Does or will this RSP have processes and controls to manage physical access to infrastructure and systems, including building access controls, security cameras and/or other sensors, physical environmental monitoring and safety equipment, and alarm systems related to the physical infrastructure?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### PROXY.1.4. System Access Controls

Does or will this RSP have processes and controls to manage non-physical access to infrastructure, including network access from both internal systems and external Internet systems, intrusion detection systems, security information and event management systems, network firewalls, network segmentation and isolation, user identification and authentication, and authorization schemes?

- The answer to this question will be published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### PROXY.1.5. Vendor Management

Does or will this RSP have processes and controls pertaining to the selection of vendors and equipment suppliers, management and maintenance of assets while in use, procurement of assets, and safe disposal of assets?

- The answer to this question will be published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### PROXY.1.6. Cryptographic Material

Does or will this RSP routinely renew and keep safe *all* cryptographic material necessary for the operation of the RSP?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.



#### PROXY.1.7. Secure Data At-Rest

Does or will this RSP secure (e.g. encryption, tamper detection, etc...) at-rest data relevant to the operation of the RSP, including but not limited to DNSSEC if applicable?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### PROXY.1.8. Secure Data In-Transit

Does or will this RSP secure (e.g. encryption, tamper detection, etc...) in-transit data relevant to the operation of the RSP, including but not limited to DNSSEC if applicable?

- The answer to this question will be published.
- Answer format: Yes or No.
- o This is a sub-question common to all types of RSP.

#### PROXY.1.9. Virtualization Controls

If applicable, does or will this RSP have security controls for data in virtualized environments, including controls relevant to both on-premises or private virtualization environments as well as public clouds, network isolation, memory isolation, process isolation, and hypervisor access controls?

- The answer to this question *will be* published.
- Answer format: Yes, No, or Not Applicable.
- This is a sub-question common to all types of RSP.

#### PROXY.1.10. CISO

Does or will this RSP have a senior executive primarily in charge of and responsible for security?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### PROXY.1.11. Emerging Threats

Describe the dedicated resources used to address emerging threats. This includes, but is not limited to, the utilization of either an in-house or third-party Computer Emergency Response Team (CERT), penetration testing schedule, software supply chain scanning, and participation in DNS, network, and/or security related forums (e.g. NANOG, RIPE, DNS-OARC).

• The answer to this question will not be published.

# TCANN.

#### RSP Handbook

- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

#### PROXY.1.12. Background Checks

Does or will this RSP conduct background checks, both initial and on-going, of personnel and vendors relevant to the registry services under application?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### PROXY.1.13. DDOS

Describe the solutions and mitigations to be used to thwart Distributed Denial of Service (DDOS) attacks against the RDAP and EPP services.

- o The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

#### PROXY.1.14. BCP 38

Does or will this RSP implement BCP 38?

- The answer to this question will be published.
- Answer format: Yes or No.
- o This is a sub-question common to all types of RSP.

#### PROXY.1.15. Secure Routing

Does or will this RSP implement routing security of some nature, such as automated route filters, RPKI route origin validation, or other operational practices defined by the Internet Society and Global Cyber Alliance's Mutually Agreed Norms for Routing Security (MANRS)?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

# PROXY.2. Technical Overview

Provide a technical overview of the systems, software, and technical practices of the registry service provider.



Provide answers for the following:

#### PROXY.2.1. Systems and Software

Describe the systems and software relating to the operation of the RSP and the purpose and function for each. This must include, but is not limited to, types of operating systems, application software, programming languages, virtualization environments, network elements, appliances, and sizing requirements. The given list must contain software and systems which are both modern and in common use.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

#### PROXY.2.2. Standard Hardware Maintenance

Does or will this RSP have documented, regular, and active practices for the maintenance of hardware relevant to the registry services under application?

- The answer to this question will be published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### PROXY.2.3. Standard Software Maintenance

Does or will this RSP have documented, regular, and active practices for the maintenance, upgrading, and patching of software relevant to the registry services under application?

- The answer to this question will be published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### PROXY.2.4. Standard Hardware Lifecycle

Does or will this RSP have documented, regular, and active practices for the lifecycle of hardware relevant to the registry services under application?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.



#### PROXY.2.5. Secure Software Development

Does or will this RSP have documented, regular, and active practices for the secure development of software?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### PROXY.2.6. Hardware Maintenance Contingency

Does or will this RSP have documented contingency plans for extraordinary scenarios regarding the maintenance of hardware relevant to the registry services under application?

- The answer to this question will be published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### PROXY.2.7. Software Maintenance Contingency

Does or will this RSP have documented contingency plans for extraordinary scenarios regarding the maintenance, upgrading, and patching of software relevant to the registry services under application?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### PROXY.2.8. Hardware Lifecycle Contingency

Does or will this RSP have documented contingency plans for extraordinary scenarios regarding the lifecycle of hardware relevant to the registry services under application?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### PROXY.2.9. Software Development Contingency

Does or will this RSP have documented contingency plans for extraordinary scenarios regarding the development of software?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.



#### PROXY.2.10. IaC

Does or will this RSP use Infrastructure-as-Code (IaC) to manage all systems relevant to operation of the registry services under application?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### PROXY.2.11. Automated Orchestration

Does or will this RSP use automated orchestration to manage all systems relevant to the operation of the registry services under application?

- The answer to this question will be published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### PROXY..3. Architecture

Provide an architectural overview of the systems and software of the registry service provider, including descriptions of software architecture, systems dependencies, data flow within the registry, and logical systems interconnections.

Provide answers for the following:

#### PROXY.3.1. Network Architecture

Describe the network architecture relevant to the registry services under application. This includes, but is not limited to, descriptions of network segmentation, interior and exterior routing schemes, virtual private networks, and IP addressing plans.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- o This answer must include attachments of diagrams in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

### PROXY.3.2. Fault Tolerance

Describe the methods for resiliency of servers, including the use of load balancers, proxies, reverse proxies, caches, and other network elements.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- This answer must include attachments of diagrams in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

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### RSP Handbook

#### PROXY.3.3. Tier III Data Center

Does or will this RSP have at least two Tier III (as defined here: https://uptimeinstitute.com/tiers) or equivalent data centers having no inter-dependencies?

- The answer to this question will be published.
- Answer format: Yes or No.
- This answer must include an attachment of the certification or equivalent documentation in either JPG, PNG, or PDF format.
- Relevant Link: [Uptime Institute](https://uptimeinstitute.com/tiers)

#### PROXY.4. EPP Service

Describe the use of the Extensible Provisioning Protocol (EPP) by the registry service provider. Provide details on usage of EPP extensions, performance characteristics, security controls to be used with EPP, and other technical details.

Provide answers for the following:

#### PROXY.4.1. RFC 5730

Does or will this RSP implement RFC 5730 ("Extensible Provisioning Protocol (EPP)")?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### PROXY.4.2. RFC 5731

Does or will this RSP implement RFC 5731 ("Extensible Provisioning Protocol (EPP) Domain Name Mapping")?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### PROXY.4.3. RFC 5734

Does or will this RSP implement RFC 5734 ("Extensible Provisioning Protocol (EPP) Transport over TCP")?

- o The answer to this question will be published.
- Answer format: Yes or No.

# ICANN

### RSP Handbook

#### PROXY.4.4. RFC 5910

Does or will this RSP implement RFC 5910 ("Domain Name System (DNS) Security Extensions Mapping for the Extensible Provisioning Protocol (EPP)")?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### PROXY.4.5. RFC 5732

If applicable, does or will this RSP implement RFC 5732 ("Extensible Provisioning Protocol (EPP) Host Mapping")?

- The answer to this question *will be* published.
- o Answer format: Yes, No, or Not Applicable.

#### PROXY.4.6. RFC 5733

If applicable, does or will this RSP implement RFC 5733 ("Extensible Provisioning Protocol (EPP) Contact Mapping")?

- The answer to this question *will be* published.
- o Answer format: Yes, No, or Not Applicable.

#### PROXY.4.7. RFC 8334

If applicable, does or will this RSP implement RFC 8334 ("Launch Phase Mapping for the Extensible Provisioning Protocol (EPP)")?

- The answer to this question *will be* published.
- Answer format: Yes, No, or Not Applicable.

#### PROXY.4.8. RFC 8334 Mechanisms

If RFC 8334 ("Launch Phase Mapping for the Extensible Provisioning Protocol (EPP)") is not applicable to this RSP, describe the mechanism to support sunrise and claims in EPP. Please answer with "Not Applicable" or "N/A" if this RSP does or will implement RFC 8334.

- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.
- Note that this question does not need to be answered if the RSP does implement RFC 8334 ("Launch Phase Mapping for the Extensible Provisioning Protocol (EPP)"). See sub-question above.



#### PROXY.4.9. RFC 8748

If applicable, does or will this RSP implement RFC 8748 ("Registry Fee Extension for the Extensible Provisioning Protocol (EPP)")?

- The answer to this question *will be* published.
- o Answer format: Yes, No, or Not Applicable.

#### PROXY.4.10. EPP Extensions

Provide a list of all EPP extensions to be used that are registered in the IANA EPP extensions registry, and an attestation that all EPP extensions to be used are registered with the IANA as per RFC 7451 ("Extension Registry for the Extensible Provisioning Protocol").

- The answer to this question *will be* published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.

#### PROXY.4.11. Unregistered EPP Extensions

Does or will this RSP forgo the use of any EPP extensions which are not registered with the IANA as per RFC 7451 ("Extension Registry for the Extensible Provisioning Protocol")?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### PROXY.4.12. EPP Performance

Does or will this RSP implement and operate EPP according to the performance requirements defined in standards established in Specification 10 of the ICANN Registry Agreement (version 2024)?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### PROXY.4.13. EPP Equal Access

Does or will this RSP have controls to prevent EPP misuse and ensure all registrars have fair and equal access to EPP per the standards established in Specification 9 of the ICANN Registry Agreement (version 2024)?

- The answer to this question will be published.
- Answer format: Yes or No.

#### PROXY.4.14. EPP Client Connections

Describe how data integrity is achieved across multiple client connections, including but

# ICANN

### RSP Handbook

not limited to usage of soft-state and eventual consistency if applicable, and the application of Atomicity, Consistency, Isolation, and Durability (ACID) principles.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.

#### PROXY.4.15. EPP 9325

Does or will this RSP implement RFC 9325 ("Recommendations for Secure Use of Transport Layer Security (TLS) and Datagram Transport Layer Security (DTLS)") notwithstanding RFC 5734 ("Extensible Provisioning Protocol (EPP) Transport over TCP")?

- The answer to this question will be published.
- Answer format: Yes or No.

#### PROXY.4.16. EPP Cryptographic Material Renewal

Does or will this RSP regularly and frequently renew the cryptographic material used to secure EPP communications in accordance with industry best common practices?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### PROXY.4.17. EPP Cryptographic Material Handling

Does or will this RSP keep safe the cryptographic material used to secure EPP communication in accordance with industry best common practices?

- The answer to this question *will be* published.
- Answer format: Yes or No.

### PROXY.4.18. EPP Reporting

Does or will this RSP meet the standards established in Specification 3 of the ICANN Registry Agreement (version 2024) with respect to EPP?

- The answer to this question will be published.
- Answer format: Yes or No.

#### PROXY.4.19. EPP Virtualization

Does or will this RSP compartmentalize (e.g. virtualization) the EPP service in such a manner that each compartment (e.g. containers, virtual machines, physical machines) is dedicated to EPP (excluding system services such as monitoring, remote access and NTP)?

The answer to this question will be published.

# ICANN.

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Answer format: Yes or No.

#### PROXY.5. RDAP

Describe the use of the Registration Data Access Protocol (RDAP) by the registry service provider. Provide details on usage of RDAP extensions, performance characteristics, security controls to be used with RDAP, and other technical details.

Provide answers for the following:

#### PROXY.5.1. RFC 7480

Does or will this RSP implement RFC 7480 ("HTTP Usage in the Registration Data Access Protocol (RDAP)")?

- The answer to this question *will be* published.
- Answer format: Yes or No.

### PROXY.5.2. RFC 7481

Does or will this RSP implement RFC 7481 ("Security Services for the Registration Data Access Protocol (RDAP)")?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### PROXY.5.3. RFC 9082

Does or will this RSP implement RFC 9082 ("Registration Data Access Protocol (RDAP) Query Format")?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### PROXY.5.4. RFC 9083

Does or will this RSP implement RFC 9083 ("JSON Responses for the Registration Data Access Protocol (RDAP)")?

- The answer to this question *will be* published.
- Answer format: Yes or No.

# PROXY.5.5. RDAP Technical Implementation Guide

Does or will this RSP implement the ICANN gTLD RDAP Technical Implementation Guide?

The answer to this question will be published.

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Answer format: Yes or No.

#### PROXY.5.6. RDAP Response Profile

Does or will this RSP implement the ICANN gTLD RDAP Response Profile?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### PROXY.5.7. RDAP Extensions

Provide a list of all RDAP extensions to be used.

- The answer to this question *will be* published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.

#### PROXY.5.8. Unregistered RDAP Extensions

Does or will this RSP forgo the use of any RDAP extensions which are not registered with the IANA as per RFC 7480 ("HTTP Usage in the Registration Data Access Protocol (RDAP)")?

- The answer to this question will be published.
- Answer format: Yes or No.

#### PROXY.5.9. RDAP Performance

Does or will this RSP meet the standards established in the Service Level Agreements defined in Specification 10 of the ICANN Registry Agreement (version 2024) with regard to RDAP?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### PROXY.5.10. RDAP Data Mining

Does or will this RSP implement methods to prevent mining of registration data via RDAP?

- The answer to this question will be published.
- Answer format: Yes or No.

#### PROXY.5.11. RFC 9325

Does or will this RSP implement RFC 9325 ("Recommendations for Secure Use of Transport Layer Security (TLS) and Datagram Transport Layer Security (DTLS)") with respect to RDAP?

• The answer to this question *will be* published.

Answer format: Yes or No.

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#### PROXY.5.12. RFC Cryptographic Material Renewal

Does or will this RSP regularly and frequently renew the cryptographic material used to secure RDAP communications in accordance with industry best common practices?

- The answer to this question will be published.
- Answer format: Yes or No.

#### PROXY.5.13. RFC Cryptographic Material Handling

Does or will this RSP keep safe the cryptographic material used to secure RDAP communication in accordance with industry best common practices?

- The answer to this question will be published.
- Answer format: Yes or No.

#### PROXY.5.14. RDAP Reporting

Does or will this RSP meet the standards established in Specification 3 of the ICANN Registry Agreement (version 2024) with respect to RDAP?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### PROXY.5.15. RDAP Virtualization

Does or will this RSP compartmentalize (e.g. virtualization) the RDAP service in such a manner that each compartment (e.g. containers, virtual machines, physical machines) is dedicated to RDAP (excluding system services such as monitoring, remote access and NTP)?

- The answer to this question *will be* published.
- Answer format: Yes or No.

## **PROXY.6. Internet Connectivity**

Describe the IPv4 and IPv6 connectivity and reachability of the registry service provider, including performance characteristics, transit, cloud, and/or backbone providers, peering exchanges, routing stability and other information.

Provide answers for the following:

#### PROXY.6.1. IPv4 Connectivity

Provide a list of the transit, cloud, backbone, and network providers and points of



presence through which IPv4 services are to be provided, including egress and ingress data transfer speeds.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.

#### PROXY.6.2. IPv6 Connectivity

Provide a list of the transit, cloud, backbone, and network providers and points of presence through which IPv6 services are to be provided, including egress and ingress data transfer speeds.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.

#### PROXY.6.3. IPv4 RDAP

Does or will this RSP meet the standards established in Specification 10 of the ICANN Registry Agreement (version 2024) with regard to RDAP and IPv4?

- The answer to this question will be published.
- Answer format: Yes or No.

#### PROXY.6.4. IPv4 EPP

Does or will this RSP meet the standards established in Specification 10 of the ICANN Registry Agreement (version 2024) with regard to EPP and IPv4?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### PROXY.6.5. IPv6 RDAP

Does or will this RSP meet the standards established in Specification 10 of the ICANN Registry Agreement (version 2024) with regard to RDAP and IPv6?

- The answer to this question *will be* published.
- Answer format: Yes or No.

#### PROXY.6.6. IPv6 EPP

Will this RSP meet the standards established in Specification 10 of the ICANN Registry Agreement (version 2024) with regard to EPP and IPv6 if requested by a registrar?

- The answer to this question will be published.
- Answer format: Yes or No.



### PROXY.7. Registration Lifecycle

Provide a detailed description of the proposed registration lifecycle for domain names. Explain the various registration states, state transition timelines, and relationship of these states with EPP and RDAP.

Provide answers for the following:

#### PROXY.7.1. Registration Lifecycle

Describe all potential registration lifecycle(s) of domain names supported in the system.

- The answer to this question *will be* published.
- Answer format: free text of no more than 4,000 characters.
- o This answer must include attachments of diagrams in PNG, JPG, or PDF format.

#### PROXY.7.2. Domain Registration Values

Describe the registration lifecycle(s) of domain names with respect to EPP status values and RDAP status values.

- The answer to this question *will be* published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.

#### PROXY.7.3. Nameserver Registration Values

Describe the nameserver host lifecycle, including relevance to EPP and RDAP status values, with respect to the lifecycle of domain names. This should include a description of nameservers as either attributes of domains or as host objects.

- The answer to this question *will be* published.
- Answer format: free text of no more than 4,000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.

#### PROXY.7.4. Contact Registration Values

If applicable, describe the contact lifecycle, including relevance to EPP and RDAP status values, with respect to the lifecycle of domain names and nameservers. Include a description of the deletion of orphaned contacts.

- The answer to this question will be published.
- Answer format: free text of no more than 4,000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.



### PROXY.7.5. Orphaned Glue

Does or will this RSP be capable of removing orphaned glue in accordance with the standards established in Specification 6 of the ICANN Registry Agreement (version 2024)?

- The answer to this question *will be* published.
- o Answer format: Yes, No, or Not Applicable.

#### PROXY.7.6. BRDA

Describe the systems, software, and processes used to integrate to ICANN's Bulk Registration Data Access [BRDA, Specification 4 of the ICANN Registry Agreement (version 2024)], ICANN's Registration Reporting System [RRI, Specification 2 and Specification 3 of the ICANN Registry Agreement (version 2024)], and ICANN's Zone File Access [ZFA, Specification 4 of the ICANN Registry Agreement (version 2024)].

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.

#### PROXY.7.7. Data Escrow

Describe how this RSP will meet the standards established in Specification 2 of the ICANN Registry Agreement (version 2024), and describe any other data escrow processes. This includes escrow extensions for data related additional registry services.

- The answer to this question *will be* published.
- Answer format: free text of no more than 4,000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.

# **PROXY.8. Registry Continuity**

Describe how the registry service provider will comply with registry continuity, including but not limited to obligations as described in Specification 6 (section 3) to the ICANN Registry Agreement (version 2024). This includes conducting registry operations using diverse, redundant servers to ensure continued operation of critical functions in the case of technical failure.

Provide answers for the following:

PROXY.8.1. Registry Continuity Exercise

Does or will this RSP regularly exercise registry continuity actions?

• The answer to this question *will be* published.



- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### PROXY.8.2. Registry Continuity Compliance

Describe how this RSP will meet the standard established in Specification 6.3 of the ICANN Registry Agreement (version 2024).

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

# PROXY.9. Monitoring and Fault Escalation

Describe arrangements for monitoring critical registry systems (including SRS, database systems, EPP services, RDAP services, network connectivity, routers and firewalls). This description should explain how these systems are monitored and the mechanisms that will be used for fault escalation and reporting, and should provide details of the proposed support arrangements for these registry systems.

Provide answers for the following:

#### PROXY.9.1. Internal Monitoring

Does or will this RSP monitor for faults inside its own network?

- The answer to this question will be published.
- Answer format: Yes or No.
- o This is a sub-question common to all types of RSP.

#### PROXY.9.2. External Monitoring

Does or will this RSP monitor for faults from a point outside any of its own networks?

- The answer to this question will be published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### PROXY.9.3. Fault Triage

Does or will this RSP have documented processes for aggregation and triage of faults?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.



#### PROXY.9.4. Fault Mitigation

Does or will this RSP have documented processes to mitigate faults once detected?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### PROXY.9.5. Fault Minimization

Does or will this RSP have processes to minimize faults during maintenance of systems, including both automated processes and manual change control processes?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### PROXY.9.6. On-call Staff

Does or will this RSP have personnel capable of reacting to and mitigating faults 24 hours per day of every day of every year of service?

- The answer to this question will be published.
- Answer format: Yes or No.
- This is a sub-question common to all types of RSP.

#### PROXY.9.7. Service Disruptions

Provide documentation regarding any RSP functions currently being served for any gTLD, the domain names of the gTLDs, and all service disruptions for each gTLD in the past six months, where a service disruption is defined by Specification 10 of the ICANN Registry Agreement (version 2024)).

- The answer to this question *will be* published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

#### PROXY.10. Capacity

Provide a summary of capacity capabilities and other information necessary for the adequate approval of the RSP to accommodate the projected forecast of gTLD(s).

Provide answers for the following:



#### PROXY.10.1. DUMs per TLD

Provide the maximum number of Domains Under Management (DUMs) per TLD, and describe the methods used to determine this information.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.
- o This is a sub-question common to all types of RSP.

#### PROXY.10.2. Maximum TLDs

Provide the maximum number of TLDs that may be serviced, and describe the methods used to determine this information.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

#### PROXY.10.3. Current TLDs

Provide the current TLDs being serviced and the DUMs for each, if any.

- The answer to this question will not be published.
- Answer format: free text of no more than 4.000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

#### PROXY.10.4. Maximum Capacity

Provide the maximum number of TLDs and combined DUMs that can be serviced from the least-capable data center. If service is provided using public cloud services, provide the maximum capacity based on the contracted resources. Describe the methods used to determine this information.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

#### PROXY.10.5. Available Load

Provide documentation that either services contracted from a public cloud provider or services provided from private sources demonstrate the needed capacity as stated



above. This documentation may include, but is not limited to, number of servers, contracted bandwidth from network providers, and load test reports.

- o The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.
- This is a sub-question common to all types of RSP.

# Appendix B. IDN Services Application Technical Questions

A Main RSP may apply to support IDN services based on support for variant TLDs and support for variant IDNs in the second-level. IDN services are denoted by three support levels as defined in 4.1.12. Internationalized Domain Name (IDN) Evaluation.

Applicants will be required to answer technical questions appropriate to the level of service selected.

### IDN.1. Level 1 Questions

Provide answers to the following:

#### IDN.1.1. IDN Guidelines

Does or will the RSP implement the IDN Guidelines 4.1?

- The answer to this question *will be* published.
- Answer format: Yes or No.
- o Relevant Link: [IDN Guidelines
  - 4.1](https://www.icann.org/en/system/files/files/idn-guidelines-22sep22-en.pdf)

#### IDN.1.2. Architecture

Describe the software architecture, systems dependencies, data flow with the registry, and logical systems interconnections for supporting the following: a) IDN validation with IDNA2008, b) IDN tables, c) IDN provisioning via EPP, and d) datastore capabilities.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- o This answer must include diagrams in PNG, JPG, or PDF format.

#### IDN.2. Level 2 Questions

Provide answers to the following:



#### IDN.2.1. IDN Guidelines

Does or will the RSP implement the IDN Guidelines 4.1?

- The answer to this question will be published.
- Answer format: Yes or No.
- Relevant Link: [IDN Guidelines
  - 4.1](https://www.icann.org/en/system/files/files/idn-guidelines-22sep22-en.pdf)

#### IDN.2.2. Architecture

Describe the software architecture, systems dependencies, data flow with the registry, and logical systems interconnections for supporting the following: a) IDN validation with IDNA2008, b) IDN tables, c) IDN provisioning via EPP, and d) datastore capabilities.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- This answer must include diagrams in PNG, JPG, or PDF format.

#### IDN.2.3. Second Level IDN Support

Describe the software architecture, systems dependencies, data flow within the registry, and logical systems interconnections for supporting variant IDNs at the second-level. This information should include a) the method(s) used to calculate variants, b) registration lifecycle of variants including primary/source names, c) lookup of IDN variants in RDAP, and d) variant management in EPP.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- o This answer must include diagrams in PNG, JPG, or PDF format.

#### IDN.2.4. Same Entity Allocation

Describe how compliance will be achieved for second-level variant labels that arise from a registration based on a second-level IDN table where all allocatable variant labels in the set must only be allocated to the same entity or withheld for possible allocation only to that entity (e.g., all allocatable second-level labels {s1, s1v1, ...} under the TLD.

Note: if the RSP will support a minimal registration data set as defined in the Registration Data Consensus Policy for gTLDs, please explain how this RSP will comply with the requirement in this section for minimal and full registration data sets. A contractual control may be acceptable to comply with this section in case of a minimal registration data set.

The answer to this question will be published.



- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.

#### IDN.3. Level 3 Questions

Provide answers to the following:

#### IDN.3.1. IDN Guidelines

Does or will the RSP implement the IDN Guidelines 4.1?

- The answer to this question will be published.
- Answer format: Yes or No.
- o Relevant Link: [IDN Guidelines
  - 4.1](https://www.icann.org/en/system/files/files/idn-guidelines-22sep22-en.pdf)

#### IDN.3.2. Architecture

Describe the software architecture, systems dependencies, data flow with the registry, and logical systems interconnections for supporting the following: a) IDN validation with IDNA2008, b) IDN tables, c) IDN provisioning via EPP, and d) datastore capabilities.

- The answer to this question will not be published.
- Answer format: free text of no more than 4,000 characters.
- o This answer must include diagrams in PNG, JPG, or PDF format.

#### IDN.3.3. Second Level IDN Support

Describe the software architecture, systems dependencies, data flow within the registry, and logical systems interconnections for supporting variant IDNs at the second-level under all allocated variant TLD labels. This information should include a) the method(s) used to calculate variants, b) registration lifecycle of variants including primary/source names under all allocated variant TLD labels, c) lookup of IDN variants in RDAP, and d) variant management in EPP.

- The answer to this question will not be published.
- Answer format: free text of no more than 4.000 characters.
- o This answer must include diagrams in PNG, JPG, or PDF format.

#### IDN.3.4. Same Entity Allocation

Describe how this RSP's implementation will comply with the following: For second-level variant labels that arise from a registration based on a second-level IDN table, all allocatable variant labels in the set must only be allocated to the same entity or withheld for possible allocation only to that entity (e.g., all allocatable second-level labels {s1, s1v1, ...} under all allocated variant TLD labels {t1, t1v1, ...}).



Note: if the RSP will support a minimal registration data set as defined in the Registration Data Consensus Policy for gTLDs, please explain how this RSP will comply with the requirement in this section for minimal and full registration data sets. A contractual control may be acceptable to comply with this section in case of a minimal registration data set.

- The answer to this question *will be* published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.

# Appendix C. Registry Services Application Questions

The RSP Portal will have facilities for Main RSP applicants to add additional Registry Services to be offered by the RSP to Registry Operators as defined in <u>4.1.11. Registry Services</u> Evaluation.

Applicants will be required to answer technical questions appropriate to the type of evaluation of the Registry Service.

# RS.1. Existing Registry Services

Applicants currently operating Registry Services for a gTLD may apply to offer those Registry Services with their Main RSP to Registry Operators.

Provide answers for the following:

#### RS.1.1. Service Name

Please specify the name of the Registry Service.

- The answer to this question *will be* published.
- Answer format: free text of no more than 500 characters.

#### RS.1.2. Approved gTLDs

Please specify all gTLDs for which you are the RSP where the service is currently approved and specified in an existing ICANN Registry Agreement.

- The answer to this question will be published.
- Answer format: free text of no more than 500 characters.

#### RS.1.3. Service Description

Please provide the proposed language that describes the service. By providing this



language, the RSP agrees to notify gTLD applicants that this language will be used in the registry agreement if the service is supported in the gTLD.

Note: if the description of the service is materially different from the language in the registry agreement of the gTLDs listed in question 1, the proposed service will need to undergo full registry services evaluation.

- The answer to this question *will be* published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.

# RS.2. New Registry Services

Applicants may apply to offer Registry Services that they currently do not offer for a gTLD or are not Fast Track Registry Services.

#### **RS.2.1. Proposed Service Description**

Provide answers for the following:

#### RS.2.1.1. Service Name

Name of proposed service.

- The answer to this question *will be* published.
- Answer format: free text of no more than 100 characters.

#### RS.2.1.2. Service Description

Provide a general description of the proposed service including the impact to external users and how it will be offered.

- The answer to this question *will be* published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.

#### RS.2.1.3. Technical Description

Provide a technical description of the proposed service.

- o The answer to this question will be published.
- Answer format: free text of no more than 4,000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.



#### RS.2.1.4. Currently Approved RSEP

If this proposed service has already been approved by ICANN org for any gTLD, identify and provide a link to the RSEP request for the same service that was most recently approved.

- o The answer to this question will be published.
- Answer format: free text of no more than 1000 characters.

#### RS.2.1.5. Service Benefits

Describe the benefits of the proposed service and who would benefit from the proposed service.

- The answer to this question will be published.
- Answer format: free text of no more than 4,000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.

#### RS.2.1.6. Additional Information

If additional information should be considered with the description of the proposed service, elaborate or attach one or more file(s) below.

- The answer to this question *will be* published.
- Answer format: free text of no more than 4.000 characters.
- This answer may have optional attachments in either PNG, JPG, or PDF format

#### RS.2.2. Security and Stability

Provide answers for the following:

#### RS.2.2.1. Domain Lifecycle

What effect, if any, will the proposed service have on the life cycle of domain names?

- The answer to this question *will be* published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.

#### RS.2.2.2. Registration Data Storage

Does the proposed service alter the storage and input of Registry Data? If yes, please explain.

- The answer to this question *will be* published.
- Answer format: free text of no more than 4,000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.



### RS.2.2.3. Registration Performance

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

- The answer to this question *will be* published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.

#### RS.2.2.4. Technical Concerns

Have technical concerns been raised about the proposed service? If so, identify the concerns and describe how you intend to address those concerns.

- The answer to this question will be published.
- Answer format: free text of no more than 4,000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.

#### RS.2.2.5. Quality Assurance

Describe the quality assurance plan and/or testing of the proposed service prior to deployment.

- The answer to this question will be published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.

#### RS.2.2.6. Relevant RFCs and White Papers

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

- The answer to this question *will be* published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.

#### **RS.2.3. Contractual Provisions**

Provide answers to the following:

#### RS.2.3.1. Relevant Contractual Provisions

List the relevant contractual provisions impacted by the proposed service necessary for a Registry Operator to use this proposed registry service. This includes, but is not limited



to, Consensus Policies, previously approved amendments or services, Reserved Names, and Rights Protection Mechanisms.

- The answer to this question *will be* published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.

#### RS.2.3.2. Reporting Impact

What effect, if any, will the proposed service have upon a Registry Operator in regard to the reporting of data to ICANN?

- The answer to this question *will be* published.
- Answer format: free text of no more than 4,000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.

#### RS.2.3.3. RDDS Impact

What effect, if any, will the proposed service have upon a Registry Operator in regard to Registration Data Directory Service (RDDS)?

- The answer to this question *will be* published.
- Answer format: free text of no more than 4,000 characters.
- This answer may include attachments in PNG, JPG, or PDF format.

#### **RS.2.4.** Authorization Language

Provide answers to the following:

#### RS.2.4.1. RA Amendment

A Registry Agreement (RA) amendment is required when the proposed service: (i) contradicts existing provisions in the RA or (ii) is not contemplated in the RA and, therefore, needs to be added to Exhibit A of the RA and/or as an appropriate addendum/appendix. If applicable, provide draft language (or a link to previously approved RA amendment language) describing the service to be used by a Registry Operator in an RA amendment if the proposed service is approved. If an RA amendment is not applicable, respond with "N/A" and provide a complete response to question 4.2.

- The answer to this question will be published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.

#### RS.2.4.2. RA Provisions

If the proposed service is permissible under an existing provision of an ICANN Registry



Agreement, identify the provision and provide rationale. If not applicable, respond with "N/A" and provide a complete response to question 4.1.

- The answer to this question will be published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.

#### RS.2.5. Consultation

Provide answers to the following:

#### RS.2.5.1. Community Feedback

Describe your consultations with the community, experts, and/or others. This can include, but is not limited to, the relevant community for a sponsored or community TLD, registrars or the registrar constituency, end users and/or registrants, or other constituency groups. What were the quantity, nature, and results of the consultations? How will the proposed service impact these groups? Which groups support or oppose this proposed service?

- The answer to this question *will be* published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.

#### RS.2.6. Other

Provide answers to the following:

#### RS.2.6.1. Intellectual Property Considerations

Would there be any intellectual property impact or considerations raised by the proposed service? If so, please describe them.

- The answer to this question *will be* published.
- Answer format: free text of no more than 4.000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.

#### RS.2.6.2. Exclusive Intellectual Property

Does the proposed service contain intellectual property exclusive to you? If so, please describe them.

- The answer to this question will be published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.



#### RS.2.6.3. Other Relevant Information

Provide any other relevant information to include with the request. If none, respond with "N/A."

- The answer to this question *will be* published.
- Answer format: free text of no more than 4,000 characters.
- o This answer may include attachments in PNG, JPG, or PDF format.

#### RS.2.6.4. Additional Information

If additional information should be considered, elaborate or attach one or more file(s) below.

- The answer to this question will be published.
- Answer format: free text of no more than 4,000 characters.
- This answer may have optional attachments in PNG, JPG, or PDF format.

# Appendix D. RSP Reference Material

The following references are available regarding some of the necessary technical services provided to gTLDs by RSPs:

- ICANN Glossary
- Zone File Access (ZFA)
- Centralized Zone Data Service (CZDS)
- Trademark ClearingHouse (TMCH)
- Registration Reporting Interface (RRI)
- Registry Data Escrow (RDE)
- Monitoring System API Specification (MoSAPI)
- Registration Data Access Protocol (RDAP)
- Extensible Provisioning Protocol (EPP) Status Codes
- The Domain Name System (DNS)
- DNS Security Extensions (DNSSEC)
- Root Zone Management (RZM) User Guide
- Operations Handbook for Registry Operators