**Template 2 – Detailed Responses to Technical and Operational Specifications**

Please answer the following questions by inserting your answers to each question in the rows below. The response rows are not size limited.

References apply to the Registry Technical Specification (**RTS**). In addition, for convenience, a reference has also been provided to the relevant section of the 2012 ICANN new *gTLD Applicant Guidebook, Module 2, Evaluation Questions and Criteria*, on the basis that many respondents may already have material that has been prepared for that purpose which can be adapted to the auDA requirements. See: <https://newgtlds.icann.org/en/applicants/agb/evaluation-questions-criteria-04jun12-en.pdf>.

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| --- | --- | --- |
| **Question** | **RTS#** | **ICANN#** |
| Describe the **high-level technical overview** of your entire solution with diagrams to highlight dataflows and provide context for the overall technical infrastructure. Detailed diagrams for the subsequent questions on the registration service, data directory service and Authoritative DNS Nameserver service should be able to map back to this high-level description. Please provide explanatory documentation for the elements in the diagrams. Please provide a summary of the overall resourcing that will be applied to establish and maintain the registry. A complete answer is expected to be about 10 pages (with each page containing about 4000 characters). | RTS | 31 |
| **Response** |
| Describe the **architecture** of your entire solution with diagrams. The documentation should include detailed network diagrams showing the full interplay of registry elements including but not limited to the registration service, registry database, data directory service, Authoritative DNS Nameserver service, data replication and disaster recovery options, and data escrow; the network and associated server infrastructure including TCP/IP addressing scheme, server infrastructure, operating systems and versions, and software and applications; a general overview of capacity planning including bandwidth allocation plans; list of data centre providers, public cloud providers, and telecommunications carriers; level of scalability and adaptability for protection against DDoS attacks. A complete answer is expected to be about 10 pages. | RTS | 32 |
| **Response**  |
| Please provide details of the **registry database** software, storage capacity, maximum transaction throughput (in total and by type of transaction), transaction control, user and credentials management, high availability arrangements, change management procedures, and reporting capabilities. A registry database data model can be included to provide additional clarity to this response. The description should include evidence of database capabilities that help provide security around the registry database – including auditing functions. | RTS | 33 |
| **Response**  |  |  |
| Please describe your plans with network diagrams for **IPv6 reachability**, for the registration service, WHOIS service, and Authoritative DNS Nameserver service. Identify which services and locations will use IPv6, and resourcing plans for initial implementation and ongoing operation. Describe your experience in operating similar services over IPv6, and give examples of specific services with geographic locations and data traffic and/or query rates using IPv6 addressing.  | RTS | 36 |
| **Response**  |
| Please describe your **monitoring and fault escalation processes** including a description of the proposed (or actual) arrangements for monitoring critical registry systems (including registration service, registry database, data directory service, and Authoritative DNS Nameserver services). The 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. Describe your resourcing plans (number and description of personnel roles allocated to this area). Describe your experience in monitoring and fault escalation procedures for similar services. A complete answer is expected to be about 10 pages. | RTS | 42 |
| **Response**  |
| Please provide a detailed description of your **EPP implementation** and how it will be modified to support the .au extensions, your testing methodology for the new functionality to ensure backward compatibility, and what toolkits you will have available for registrars. Describe your resourcing plans (number and description of personnel roles allocated to this area). Describe your experience in customising an EPP implementation and your experience assisting registrars to integrate to an EPP service. | 2.1 | 25 |
| **Response**  |
| Describe the operation of your **Registration Service**, a high-level description of the registration system, network diagram(s); server infrastructure diagram(s); interconnectivity with other registry systems; frequency of synchronisation between servers; synchronisation scheme (e.g. hot standby, cold standby), and resourcing plans (number and description of personnel roles allocated to this area). Describe your experience developing and operating a similar registration service, and give examples of specific services with number of registrations and number of registrars. A complete answer is expected to be about 10 pages (with each page containing about 4000 characters). | 2.2 | 24 |
| **Response**  |
| Please provide details of your implementation of a Registry Lock function.  | 2.2.3 | Nil |
| **Response**  |
| Please describe your experience doing registration data validation.  | 2.2.7 | Nil |
| **Response**  |
| Please provide details of your solution for the **Authoritative DNS Nameserver** service, including information on software, capacity, performance, scaling ability, server configuration, update propagation time, DNSSEC implementation, use of Anycast, support for IPv6, and headroom to address peak demand. Describe your resourcing plans (number and description of personnel roles allocated to this area). Describe your experience developing and operating a similar DNS service, and give examples of specific services with geographic locations and query rates. A complete answer is expected to be about 10 pages. | 2.3 | 35 |
| **Response**  |
| Please upload a copy of your **DNSSEC Practice Statement** (DPS), which should include the policies and procedures the proposed registry will follow, for example, for signing the zone file, for verifying and accepting DS records from child domains, and for generating, exchanging and storing key material. Describe your resourcing plans (number and description of personnel roles allocated to this area). Describe your experience in operating with DNSSEC, and give examples of specific services with the number of DS records and query rates for DNSSEC information. | 2.3 | 43 |
| **Response**  |
| Please provide details of how you will achieve Authoritative DNS **Nameserver reliability** and response times, including describing your plans for geographical and software diversity for the DNS service, including the intended physical locations of systems; primary and secondary servers; associated diagrams and resourcing plans for the initial implementation and ongoing maintenance of the registry.  | 2.3.1 | 34 |
| **Response**  |
| Please describe your solution for implementing the **Registration Data Directory service,** including support for the **WHOIS** port-43 protocol, the web based directory service, and the Registry Data Access Protocol (**RDAP**) interface. The description should include a high-level systems description, relevant network diagrams, server infrastructure, a description of interconnectivity with other registry systems, any use of separate databases and the frequency of synchronisation with the registry database, and abuse mitigation plans. Describe your resourcing plans (number and description of personnel roles allocated to this area). Describe your experience developing and operating a similar directory service, and give examples of specific services with number of records and query rates. A complete answer is expected to be about 10 pages. | 2.4 | 26 |
| **Response**  |
| Please describe your solution for implementing a domain name audit trail.  | 2.4.8 | Nil  |
| **Response**  |
| Please describe your processes for the accreditation of registrars, including your previous experience in this regard  | 2.6 | Nil  |
| **Response**  |
| Please upload a copy of your internal **security policy** documentation that addresses the security requirements in the Registry Technical Specification. The response should explain any security accreditations held and the frequency that these accreditations are audited. Describe your resourcing plans (number and description of personnel roles allocated to this area) to implement the security policy, and internally monitor compliance with the policy. Please provide details of independent security audits, and provide a copy of your most recent security audit along with your plans to address areas identified in the audit.  | 3 | 30 and 30 (b) |
| **Response**  |
| Please describe and upload a copy of your **business continuity plan**. This should include conducting registry operations using diverse, redundant infrastructure to ensure continued operating of critical business functions in the case of technical failure. The response should include, but is not limited to, the following elements of the business continuity plan: identification of risks and threats to compliance with registry continuity obligations, identification and definition of vital business functions, definitions of Recovery Point Objectives and Recovery Time Objective, and descriptions of testing plans. The plan should include identifying back-up providers and disaster recovery sites, or the plan for maintaining a host site. Describe your resourcing plans (number and description of personnel roles allocated to this area). Describe your experience recovering from major incidents, and give examples of specific instances where your business continuity was tested or initiated. | 4 | 39 |
| **Response**  |
| Please describe your plan for an **Emergency Transition** as described in the Registry Technical Specification. Elements of the plan may include, but are not limited to: preparatory steps needed for the transition of critical registry functions, monitoring during registry transition and efforts to minimise any interruption to critical registry functions during this time, and contingency plans in the event that any part of the registry transition is unable to move forward according to the plan. A complete answer is expected to be about 10 pages. | 4.1 | 40 |
| **Response**  |
| Please describe your **data backup** **policies and procedures**; type and frequency, hardware used, format, backup testing procedures, media storage controls and maintenance of backup. Describe your resourcing plans (number and description of personnel roles allocated to this area).  | 4 | 37 |
| **Response**  |
| Please describe your **fail-over testing plan,** including planning for testing at least twice per year.Examples may include a description of plans to test failover of data centres or cloud providers to alternate sites, from a hot or cold facility, registry data replication and escrow testing. The testing plan should include, but is not limited to the following elements: types of testing (e.g. walk throughs, takedown of sites) and the frequency of testing, how results are captured, what is done with the results and with whom results are shared, how test plans are updated (e.g. what triggers an update, change management processes for making updates), length of time to restore critical registry functions, length of time to restore all operations, inclusive of critical registry functions, and length of time to migrate from one site to another. Describe your resourcing plans (number and description of personnel roles allocated to this area).  | 4 | 41 |
| **Response**  |  |  |
| Please describe how you will comply with the **auDA Software Repository and Data Replication** requirements. Please upload a diagram of your solution, including a network diagram. Describe your resourcing plans (number and description of personnel roles allocated to this area).  | 5 | Nil |
| **Response**  |  |  |
| Please describe how you will comply with the **data escrow** requirements in the ccTLD Sponsorship agreement with ICANN. Describe your resourcing plans (number and description of personnel roles allocated to this area).  | 5 | 38 |
| **Response**  |
| Please describe your solution for meeting auDA’s reporting requirements  | 7 | Nil |
| **Response** |
| Please describe the services you have available for supporting registrars.  | 8 | 28 |
| **Response** |
| Explain how your solution implements **abuse prevention and mitigation**; what policies and procedures are used to minimise abuse or other activities that have negative impacts on other internet users; describe resourcing for the point of contact for abuse reporting, and the process to resolve abuse complaints. Explain the process for removing orphan glue records that may be causing abuse.  | 9 | 28 |
| **Response** |
| Please describe your solution for meeting auDA’s daily log requirements  | 10 | Nil |
| **Response** |