Question 25: Demonstration of Technical & Operational Capability (External) - EPP

The answer is based on information provided by the Service Provider appointed by the Applicant .

The Service Provider has been a pioneer and innovator in the use of EPP. .INFO was the first EPP-based TLD registry and launched on EPP version 02/00. It will operate the EPP registrar interface as well as a web-based interface for this TLD in accordance with RFCs and global best practices. In addition, it will maintain a proper OT&E (Operational Testing and Evaluation) environment to facilitate registrar system development and testing.

The EPP technical performance meets or exceeds all ICANN requirements as demonstrated by:
• A completely functional, state-of-the-art, EPP-based SRS that currently meets the needs of various TLDs and will meet this new TLD's needs;
• A track record of success in developing extensions to meet client and registrar business requirements such as multi-script support for IDNs;
• Supporting six ICANN TLDs on EPP: .INFO, .ORG, .MOBI, .AERO, .ASIA and .XXX
• EPP software that is operating today and has been fully tested to be standards-compliant;
• Proven interoperability of existing EPP software with ICANN-accredited registrars, and;
• An SRS that currently processes over 200 million EPP transactions per month for both .INFO and .ORG. Overall, the system processes over 700 million EPP transactions per month for all 16 TLDs under management.

The EPP service is offered in accordance with the performance specifications defined in the new TLD Registry Agreement, Specification 10.

EPP Standards

The registry system complies with the following revised versions of the RFCs and operates multiple ICANN TLDs on these standards, including .INFO, .ORG, .MOBI, .ASIA and .XXX. The systems have been tested by our Quality Assurance ("QA") team for RFC compliance, and have been used by registrars for an extended period of time:

- 3735 - Guidelines for Extending EPP
- 3915 - Domain Registry Grace Period Mapping
- 5730 - Extensible Provisioning Protocol (EPP)
- 5731 - Domain Name Mapping
- 5732 - Host Mapping
- 5733 - Contact Mapping
- 5734 - Transport Over TCP
- 5910 - Domain Name System (DNS) Security Extensions Mapping for the Extensible Provisioning Protocol (EPP)

This TLD will support all valid EPP commands. The following EPP commands are in operation today and will be made available for this TLD. See attachment #25a for the base set of EPP commands and copies of the XSD schema files, which define all the rules of valid, RFC compliant EPP commands and responses that it supports. Any customized EPP extensions, if necessary, will also conform to relevant RFCs.

The staff members actively participated in the Internet Engineering Task Force (IETF) process that finalized the new standards for EPP. It will continue to actively participate in the IETF and will stay abreast of any updates to the EPP standards.

EPP software interface and functionality

The Service Provider will provide all registrars with a free open-source EPP toolkit. It provides this software for use with both Microsoft Windows and Unix/Linux operating systems. This software, which includes all relevant templates and schema defined in the RFCs, is available on sourceforge.net and will be available through the registry operator's website.

The SRS EPP software complies with all relevant RFCs and includes the following functionality:

- EPP Greeting: A response to a successful connection returns a greeting to the client. Information exchanged can include: name of server, server date and time in UTC, server features, e.g., protocol versions supported, languages for the text response supported, and one or more elements which identify the objects that the server is capable of managing;
- Session management controls: <login> to establish a connection with a server, and <logout> to end a session;
- EPP Objects: Domain, Host and Contact for respective mapping functions;
- EPP Object Query Commands: Info, Check, and Transfer (query) commands to retrieve object information, and;
- EPP Object Transform Commands: five commands to transform objects: <create> to create an instance of an object, <delete> to remove an instance of an object, <renew> to extend the validity period of an object, <update> to change information associated with an object, and <transfer> to manage changes in client sponsorship of a known object.

Currently, 100% of the top domain name registrars in the world have software that has already been tested and certified to be compatible with the SRS registry. In total, over 375 registrars, representing over 95% of all registration volume worldwide, operate software that has been certified compatible with the SRS registry. The EPP Registrar Acceptance Criteria are available in attachment #25b, EPP OT&E Criteria.

Free EPP software support

The Service Provider analyzes and diagnoses registrar EPP activity log files as needed and is available to assist registrars who may require technical guidance regarding how to fix repetitive errors or exceptions caused by misconfigured client software.

Registrars are responsible for acquiring a TLS/SSL certificate from an approved certificate authority, as the registry-registrar communication channel requires mutual authentication; The Service Provider will acquire and maintain the server-side TLS/SSL certificate. The registrar is responsible for developing support for TLS/SSL in their client application. The Service Provider will provide free guidance for registrars unfamiliar with this requirement.

Registrar data synchronization

There are two methods available for registrars to synchronize their data with the registry:

- Automated synchronization: Registrars can, at any time, use the EPP <info> command to obtain definitive data from the registry for a known object, including domains, hosts (nameservers) and contacts.
- Personalized synchronization: A registrar may contact technical support and request a data file containing all domains (and associated host (nameserver) and contact information) registered by that registrar, within a specified time interval. The data will be formatted as a comma separated values (CSV) file and made available for download using a secure server.

EPP modifications

There are no unique EPP modifications planned for this TLD.

All ICANN TLDs must offer a Sunrise as part of a rights protection program. The system uses EPP extensions that allow registrars to submit trademark and other intellectual property rights (IPR) data to the registry. These extensions are:

- An <ipr:name> element that indicates the name of Registered Mark.
- An <ipr:number> element that indicates the registration number of the IPR.
- An <ipr:ccLocality> element that indicates the origin for which the IPR is established (a national or international trademark registry).
- An <ipr:entitlement> element that indicates whether the applicant holds the trademark as the original “OWNER”, “CO-OWNER” or “ASSIGNEE”.
- An <ipr:appDate> element that indicates the date the Registered Mark was applied for.
- An <ipr:regDate> element that indicates the date the Registered Mark was issued and registered.
- An <ipr:class> element that indicates the class of the registered mark.
- An <ipr:type> element that indicates the Sunrise phase the application applies for.

EPP resourcing plans

The Service Provider operates in a matrix structure, which allows its staff to be allocated to various critical functions in both a dedicated and a shared manner. With a team of specialists and generalists, the project management methodology allows efficient and effective use of our staff in a focused way.

108 team members directly contribute to the management and development of the EPP based registry systems. As previously noted, the Service Provider is an active member of IETF and has a long documented history developing and enhancing EPP. These contributors include 11 developers and 14 QA engineers focused on maintaining and enhancing EPP server side software. These engineers work directly with business staff to timely address existing needs and forecast registry/registrar needs to ensure the EPP software is effective today and into the future. A team of eight data analysts work with the EPP software system to ensure that the data flowing through EPP is securely and reliably stored in replicated database systems. In addition to the EPP developers, QA engineers, and data analysts, other EPP contributors include: Technical Analysts, the Network Operations Center and Data Services team members.