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Extension Registry for the Extensible Provisioning Protocol

Abstract

The Extensible Provisioning Protocol (EPP) includes features to add functionality by extending the protocol. It does not, however, describe how those extensions are managed. This document describes a procedure for the registration and management of extensions to EPP, and it specifies a format for an IANA registry to record those extensions.

Status of This Memo

This document is not an Internet Standards Track specification; it is published for informational purposes.

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Information about the current status of this document, any errata, and how to provide feedback on it may be obtained at http://www.rfc-editor.org/info/rfc7451.

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1. Introduction

Domain name registries implement a variety of operational and business models. The differences in these models make it impossible to develop a "one size fits all" provisioning protocol; the Extensible Provisioning Protocol [RFC5730] was designed to focus on a minimal set of common functionality with built-in extension capabilities that allow new features to be specified on an "as needed" basis. Guidelines for extending EPP are documented in RFC 3735 [RFC3735].

RFCs 3735 and 5730 do not describe how extension development can be managed and coordinated. This has led to a situation in which server operators can develop different extensions to address similar needs, such as the provisioning of Value Added Tax (VAT) information. Clients then need to support multiple extensions that serve similar purposes, and interoperability suffers as a result.

An IANA registry can be used to help manage and coordinate the development of protocol extensions. This document describes an IANA registry that will be used to coordinate the development of EPP extensions.

2. Extension Specification and Registration Procedure

This section describes the format of an IANA registry and the procedures used to populate and manage registry entries.

2.1. Extension Specification

This registry uses the "Specification Required" policy described in RFC 5226 [RFC5226]. An English language version of the extension specification will be referenced from the registry, though non-English versions of the specification may also be provided. Note that Section 2.1 of RFC 3735 [RFC3735] provides specific guidelines for documenting EPP extensions.

Note that the "Specification Required" policy implies review by a "designated expert". Section 3 of RFC 5226 [RFC5226] describes the role of designated experts and the function they perform.

2.1.1. Designated Expert Evaluation Criteria

A high-level description of the role of the designated expert is described in Section 3.2 of RFC 5226 [RFC5226]. Specific guidelines for the appointment of designated experts and the evaluation of EPP extensions are provided here.

The IESG should appoint a small pool of individuals (perhaps 3 - 5) to serve as designated experts, as described in Section 3.2 of RFC 5226 [RFC5226]. The pool should have a single administrative chair who is appointed by the IESG. The designated experts should use the existing eppext mailing list (eppext@ietf.org) for public discussion of registration requests. This implies that the mailing list should remain open after the work of the EPPEXT working group has concluded.

Extensions should be evaluated for architectural soundness using the guidelines described in RFC 3735 [RFC3735], including the Security Considerations section of that document. Expert evaluation should explicitly include consideration of the privacy consequences of proposed extensions, and, at a minimum, ensure that any privacy considerations are fully documented in the relevant specification(s).

The results of the evaluation should be shared via email with the registrant and the eppext mailing list. Issues discovered during the evaluation can be corrected by the registrant, and those corrections can be submitted to the designated experts until the designated experts explicitly decide to accept or reject the registration request. The designated experts must make an explicit decision and that decision must be shared via email with the registrant and the

eppext mailing list. If the specification for an extension is an IETF Standards Track document, no review is required by the designated expert.

Designated experts should be permissive in their evaluation of requests to register extensions that have been implemented and deployed by at least one registry/registrar pair. This implies that it may indeed be possible to register multiple extensions that provide the same functionality. Requests to register extensions that have not been deployed should be evaluated with a goal of reducing functional duplication. A potential registrant who submits a request to register a new, un-deployed extension that includes similar functionality to an existing, registered extension should be made aware of the existing extension. The registrant should be asked to reconsider their request given the existence of a similar extension. Should they decline to do so, perceived similarity should not be a sufficient reason for rejection as long as all other requirements are met.

2.2. Registration Procedure

The registry contains information describing each registered extension. Registry entries are created and managed by sending forms to IANA that describe the extension and the operation to be performed on the registry entry.

2.2.1. Required Information

Name of Extension: A case-insensitive, ASCII text string that contains the name of the extension specification. Non-ASCII representations of the extension name can be included in the "Notes" described below.

Document Status: The document status ("Informational", "Standards Track", etc.) of the specification document. For documents that are not RFCs, this will always be "Informational".

Reference: A publicly available reference to the specification of this extension. This could be an RFC number or some other pointer to the document defining the extension.

Registrant Name and Email Address: The name and email address of the person that is responsible for managing the registry entry. If the registration is of an IETF Standards Track document, this can simply be listed as "IESG, <iesg@ietf.org>".

TLDs: A text string containing the top-level domain name (or domain names), including the preceding ".", for which the extension has been specified (e.g., ".org"). If there are multiple TLDs, they are given as a list of domain names separated by commas, (e.g. ".com", ".net"). Internationalized Domain Name (IDN) TLDs should be specified in A-label [RFC5890] format. If the extension is not associated with a specific top-level domain, the case-insensitive text string "Any" can be used to indicate that.

IPR Disclosure: A pointer to any Intellectual Property Rights (IPR) disclosure document(s) related to this extension, or "None" may be used if there are no such disclosures. This can be an IPR disclosure filed with the IETF in accordance with RFC 3979 [RFC3979] as updated by RFC 4879 [RFC4879] if the extension is part of an IETF Contribution, or it can be other IPR disclosure documents identifying the claimed intellectual property rights and terms of use for extensions that are not part of an IETF Contribution.

Status: Either "Active" or "Inactive". The "Active" status is used for extensions that are currently implemented and in use. The "Inactive" status is used for extensions that are not implemented or are otherwise not being used.

Notes: Either "None" or other text that describes optional notes to be included with the registered extension. If the Status value is "Inactive", text should be included to describe how and when this state was reached.

2.2.2. Registration Form

The required information must be formatted consistently using the following registration form. Form field names and values may appear on the same line.

```
-----BEGIN FORM-----
Name of Extension:
<text string> (quotes are optional)

Document Status: <document status>

Reference: <RFC number, URL, etc.>

Registrant Name and Email Address:
<registrant name>, <email address>

TLDs: "Any"|<one or more TLD text strings separated by commas>

IPR Disclosure: "None"|<URL>

Status: "Active"|"Inactive"

Notes: "None"|<optional text>
-----END FORM-----
```

Example form with RFC specification:

```
-----BEGIN FORM-----
Name of Extension:
"An Extension RFC for the Extensible Provisioning Protocol (EPP)"

Document Status:
Standards Track

Reference:
RFC XXXX

Registrant Name and Email Address:
IESG, <iesg@ietf.org>

TLDs: Any

IPR Disclosure: None

Status: Active

Notes: None
-----END FORM-----
```

Example form with non-RFC specification:

```
-----BEGIN FORM-----
Name of Extension:
"An Example Extension for the .example Top-Level Domain"

Document Status:
Informational

Reference:
http://www.example.com/html/example-epp-ext.txt

Registrant Name and Email Address:
John Doe, jdoe@example.com

TLDs: .example

IPR Disclosure:
http://www.example.com/ipr/example-epp-ext-ipr.html

Status: Active

Notes: None
-----END FORM-----
```

2.2.3. Registration Processing

Registrants should send each registration form to IANA with a single record for incorporation into the registry. Send the form via email to <iana@iana.org> or complete the online form found on the IANA web site. The subject line should indicate whether the enclosed form represents an insertion of a new record (indicated by the word "INSERT" in the subject line) or a replacement of an existing record (indicated by the word "MODIFY" in the subject line). At no time can a record be deleted from the registry. On receipt of the registration request, IANA will initiate review by the designated expert(s), who will evaluate the request using the criteria in Section 2.1.1 in consultation with the eppext mailing list.

2.2.4. Updating Registry Entries

When submitting changes to existing registry entries, include text in the "Notes" field of the registration form describing the change. Under normal circumstances, registry entries are only to be updated by the registrant. If the registrant becomes unavailable or otherwise unresponsive, the designated expert can submit a registration form to IANA to update the registrant information. Entries can change state from "Active" to "Inactive" and back again as long as state-change requests conform to the processing requirements identified in this document. In addition to entries that become "Inactive" due to a lack of implementation, entries for which a specification becomes consistently unavailable over time should be marked "Inactive" by the designated expert until the specification again becomes reliably available.

3. IANA Considerations

IANA has created the "Extensions for the Extensible Provisioning Protocol (EPP)" registry to manage EPP extensions. This registry has its own heading on IANA's protocol listings. The information to be registered and the procedures to be followed in populating the registry are described in Section 2.

Name of registry: Extensions for the Extensible Provisioning Protocol (EPP)

```
  Section at http://www.iana.org/protocols:
    Registry Title: Extensions for the Extensible Provisioning
                    Protocol (EPP)
    Registry Name: Extensions for the Extensible Provisioning
                   Protocol (EPP)
    Registration Procedure: Specification Required
    Reference: this document
```

Required information: See Section 2.2.1.

Review process: "Specification Required" as described in RFC 5226 [RFC5226].

Size, format, and syntax of registry entries: See Section 2.2.1.

Initial assignments and reservations:

```
-----BEGIN FORM-----
Name of Extension:
"Domain Registry Grace Period Mapping for the
Extensible Provisioning Protocol (EPP)"

Document Status:
Standards Track

Reference:
RFC 3915

Registrant Name and Email Address:
IESG, <iesg@ietf.org>

TLDs: Any

IPR Disclosure: None

Status: Active

Notes: None
-----END FORM-----
```

```
-----BEGIN FORM-----
Name of Extension:
"E.164 Number Mapping for the
Extensible Provisioning Protocol (EPP)"

Document Status:
Standards Track

Reference:
RFC 4114

Registrant Name and Email Address:
IESG, <iesg@ietf.org>

TLDs: Any

IPR Disclosure: None

Status: Active

Notes: None
-----END FORM-----

-----BEGIN FORM-----
Name of Extension:
"ENUM Validation Information Mapping for the
Extensible Provisioning Protocol"

Document Status:
Standards Track

Reference:
RFC 5076

Registrant Name and Email Address:
IESG, <iesg@ietf.org>

TLDs: Any

IPR Disclosure: None

Status: Active

Notes: None
-----END FORM-----
```

```
-----BEGIN FORM-----
Name of Extension:
"Domain Name System (DNS) Security Extensions Mapping for the
Extensible Provisioning Protocol (EPP)"

Document Status:
Standards Track

Reference:
RFC 5910

Registrant Name and Email Address:
IESG, <iesg@ietf.org>

TLDs: Any

IPR Disclosure: None

Status: Active

Notes: None
-----END FORM-----
```

In addition, the form used to populate and manage the registry will be added to the table of Protocol Registration Forms maintained by IANA.

4. Security Considerations

This document introduces no new security considerations to EPP. However, extensions should be evaluated according to the Security Considerations of RFC 3735 [RFC3735].

5. References

5.1. Normative References

[RFC3979] Bradner, S., "Intellectual Property Rights in IETF Technology", BCP 79, RFC 3979, March 2005, <http://www.rfc-editor.org/info/rfc3979>.

[RFC4879] Narten, T., "Clarification of the Third Party Disclosure Procedure in RFC 3979", BCP 79, RFC 4879, April 2007, <http://www.rfc-editor.org/info/rfc4879>.

[RFC5226] Narten, T. and H. Alvestrand, "Guidelines for Writing an IANA Considerations Section in RFCs", BCP 26, RFC 5226, May 2008, <http://www.rfc-editor.org/info/rfc5226>.

[RFC5730] Hollenbeck, S., "Extensible Provisioning Protocol (EPP)", STD 69, RFC 5730, August 2009, <http://www.rfc-editor.org/info/rfc5730>.

[RFC5890] Klensin, J., "Internationalized Domain Names for Applications (IDNA): Definitions and Document Framework", RFC 5890, August 2010, <http://www.rfc-editor.org/info/rfc5890>.

5.2. Informative References

[RFC3735] Hollenbeck, S., "Guidelines for Extending the Extensible Provisioning Protocol (EPP)", RFC 3735, March 2004, <http://www.rfc-editor.org/info/rfc3735>.

Acknowledgements

The information described in the registry is based on a suggestion posted to the provreg mailing list by Jay Daley in August 2013.

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