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Auxiliary Contact Extension for the Extensible Provisioning Protocol
(EPP)
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Abstract

This document describes an Extensible Provisioning Protocol (EPP) extension mapping for auxiliary contact associations.

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1. Introduction

This document describes a general purpose framework whereby an EPP client can provide an EPP server with an additional contact information associated with domain names.

1.1. Conventions Used in This Document

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in RFC 2119 [RFC2119].

XML is case sensitive. Unless stated otherwise, XML specifications and examples provided in this document MUST be interpreted in the character case presented in order to develop a conforming implementation.

"auxcontact" is used as an abbreviation for "urn:ietf:params:xml:ns:auxcontact-0.1". The XML namespace prefix "auxcontact" is used, but implementations MUST NOT depend on it and instead employ a proper namespace-aware XML parser and serializer to interpret and output the XML documents.

(Note to RFC Editor: remove the following paragraph before publication as an RFC.)

The XML namespace prefix above contains a version number, specifically "0.1". This version number will increment with successive versions of this document, and will reach 1.0 if and when this document is published as an RFC. This permits clients to distinguish which version of the extension a server has implemented.

2. Extension Elements

This document defines a new element, <auxcontact:contact>. This element is identical to the <domain:contact> element described in [RFC5731], with the exception that the "type" attribute can take any value.

The semantics of the "type" attribute are a matter of mutual agreement between client and server and are not discussed in this document.

3. EPP Command Mapping

A detailed description of the EPP syntax and semantics can be found

in [RFC5730].

3.1. EPP Query Commands

This extension does not add any elements to the EPP <poll> or <check> commands or responses.

3.1.1. EPP <info> Command

This extension defines additional elements for the EPP <info> command.

When a server receives an <info> command for a domain for which auxiliary contact objects have been stored, it MAY (depending on server policy) include a <auxcontact:infData> element in the <extension> element of the response. This element MUST include one or more <auxcontact:contact> elements.

Example <info> response:

```

S: <?xml version="1.0" encoding="utf-8" standalone="no"?>
S: <epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
S:   <response>
S:     <result code="1000">
S:       <msg>Command completed successfully</msg>
S:     </result>
S:     <resData>
S:       <domain:infData
S:         xmlns:domain="urn:ietf:params:xml:ns:domain-1.0">
S:         <domain:name>example.com</domain:name>
S:         <domain:roid>EXAMPLE1-REP</domain:roid>
S:         <domain:status s="ok" />
S:         <domain:registrant>jd1234</domain:registrant>
S:         <domain:contact type="admin">sh8013</domain:contact>
S:         <domain:contact type="tech">sh8013</domain:contact>
S:         <domain:ns>
S:           <domain:hostObj>ns1.example.com</domain:hostObj>
S:           <domain:hostObj>ns1.example.net</domain:hostObj>
S:         </domain:ns>
S:         <domain:clID>ClientX</domain:clID>
S:         <domain:crID>ClientY</domain:crID>
S:         <domain:crDate>1999-04-03T22:00:00.0Z</domain:crDate>
S:         <domain:upID>ClientX</domain:upID>
S:         <domain:upDate>1999-12-03T09:00:00.0Z</domain:upDate>
S:         <domain:exDate>2005-04-03T22:00:00.0Z</domain:exDate>
S:         <domain:trDate>2000-04-08T09:00:00.0Z</domain:trDate>
S:         <domain:authInfo>
S:           <domain:pw>2fooBAR</domain:pw>
S:         </domain:authInfo>
S:       </domain:infData>
S:     </resData>
S:     <extension>
S:       <auxcontact:infData
S:         xmlns:auxcontact="urn:ietf:params:xml:ns:auxcontact-0.1">
S:         <auxcontact:contact type="abuse">
S:           sh8013</auxcontact:contact>
S:         <auxcontact:contact type="dns-operator">
S:           ClientZ</auxcontact:contact>
S:       </auxcontact:infData>
S:     </extension>
S:     <trID>
S:       <clTRID>ABC-12345</clTRID>
S:       <svTRID>54322-XYZ</svTRID>
S:     </trID>
S:   </response>
S: </epp>

```

3.2. EPP Transform Commands

This extension does not add elements to the EPP <delete>, <renew> or <transfer> commands and responses.

3.2.1. EPP <create> Command

This extension adds elements to the EPP <create> command. No additional elements are defined for the EPP <create> response.

When submitting a <create> command to the server, the client MAY include in the <extension> element a <auxcontact:create> element.

This element MUST include a one or more <auxcontact:contact> elements.

Example <create> command:

```
C: <?xml version="1.0" encoding="utf-8" standalone="no"?>
C: <epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
C:   <command>
C:     <create>
C:       <domain:create
C:         xmlns:domain="urn:ietf:params:xml:ns:domain-1.0">
C:         <domain:name>example.com</domain:name>
C:         <domain:period unit="y">2</domain:period>
C:         <domain:ns>
C:           <domain:hostObj>ns1.example.net</domain:hostObj>
C:           <domain:hostObj>ns2.example.net</domain:hostObj>
C:         </domain:ns>
C:         <domain:registrant>jd1234</domain:registrant>
C:         <domain:contact type="admin">sh8013</domain:contact>
C:         <domain:contact type="tech">sh8013</domain:contact>
C:         <domain:authInfo>
C:           <domain:pw>2fooBAR</domain:pw>
C:         </domain:authInfo>
C:       </domain:create>
C:     </create>
C:     <extension>
C:       <auxcontact:create
C:         xmlns:auxcontact="urn:ietf:params:xml:ns:auxcontact-0.1">
C:         <auxcontact:contact type="abuse">
C:           sh8013</auxcontact:contact>
C:         <auxcontact:contact type="dns-operator">
C:           ClientZ</auxcontact:contact>
C:       </auxcontact:create>
C:     </extension>
C:     <clTRID>ABC-12345</clTRID>
C:   </command>
C: </epp>
```

3.2.2. EPP <update> Command

This extension adds elements to the EPP <update> command. No additional elements are defined for the EPP <update> response.

When submitting an <update> command to the server, the client MAY include in the <extension> element a <auxcontact:update> element.

The <auxcontact:update> element contains the following child elements:

- an OPTIONAL <auxcontact:rem> element, containing zero or more <auxcontact:contact> elements, that are to be removed from the domain;

an OPTIONAL <auxcontact:add> element, containing zero or more <auxcontact:contact> elements, that are to be added to the domain.

Example <update> command:

```
C: <?xml version="1.0" encoding="utf-8" standalone="no"?>
C: <epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
C:   <command>
C:     <update>
C:       <domain:update
C:         xmlns:domain="urn:ietf:params:xml:ns:domain-1.0">
C:         <domain:name>example.com</domain:name>
C:       </domain:update>
C:     </update>
C:   <extension>
C:     <auxcontact:update
C:       xmlns:auxcontact="urn:ietf:params:xml:ns:auxcontact-0.1">
C:       <auxcontact:rem>
C:         <auxcontact:contact
C:           type="dns-operator">ClientZ</auxcontact:contact>
C:       </auxcontact:rem>
C:       <auxcontact:add>
C:         <auxcontact:contact
C:           type="dns-operator">ClientXYZ</auxcontact:contact>
C:       </auxcontact:add>
C:     </auxcontact:update>
C:   </extension>
C:   <clTRID>ABC-12345</clTRID>
C: </command>
C: </epp>
```

3.3. Formal Syntax

An EPP object mapping is specified in XML Schema notation. The formal syntax presented here is a complete schema representation of the object mapping suitable for automated validation of EPP XML instances.

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BEGIN

```
<?xml version="1.0" encoding="utf-8"?>
<schema xmlns="http://www.w3.org/2001/XMLSchema"
  xmlns:auxcontact="urn:ietf:params:xml:ns:auxcontact-0.1"
  xmlns:eppcom="urn:ietf:params:xml:ns:eppcom-1.0"
  xmlns:domain="urn:ietf:params:xml:ns:domain-1.0"
  targetNamespace="urn:ietf:params:xml:ns:auxcontact-0.1"
  elementFormDefault="qualified">

  <import namespace="urn:ietf:params:xml:ns:eppcom-1.0" />
  <import namespace="urn:ietf:params:xml:ns:domain-1.0" />

  <annotation>
    <documentation>Extensible Provisioning Protocol
      v1.0 domain name extension schema for
      auxiliary contacts.</documentation>
  </annotation>

  <!--
    just like the domain:contactType except the "type" attribute
    can contain arbitrary tokens
  -->
  <complexType name="contactType">
    <simpleContent>
      <extension base="eppcom:clIDType">
        <attribute name="type" type="eppcom:minTokenType" />
      </extension>
    </simpleContent>
  </complexType>
</schema>
```

```
        </extension>
    </simpleContent>
</complexType>

<!--
Child elements found in EPP commands and responses
-->
<element name="infData" type="auxcontact:infDataType" />
<element name="create" type="auxcontact:createType" />
<element name="update" type="auxcontact:updateType" />

<!--
server <info> result
-->
<complexType name="infDataType">
  <sequence>
    <element name="contact" type="auxcontact:contactType"
      minOccurs="0" maxOccurs="unbounded" />
  </sequence>
</complexType>

<!--
<create> command
-->
<complexType name="createType">
  <sequence>
    <element name="contact" type="auxcontact:contactType"
      minOccurs="0" maxOccurs="unbounded" />
  </sequence>
</complexType>

<!--
<update> command
-->
<complexType name="updateType">
  <sequence>
    <element name="rem" type="auxcontact:addRemType"
      minOccurs="0" maxOccurs="1" />
    <element name="add" type="auxcontact:addRemType"
      minOccurs="0" maxOccurs="1" />
  </sequence>
</complexType>

<!--
<add> and <rem> elements in <update> commands
-->
<complexType name="addRemType">
  <sequence>
```

```
        <element name="contact"
          type="auxcontact:contactType"
          minOccurs="0"
          maxOccurs="unbounded" />
      </sequence>
</complexType>

</schema>

END
```

4. Security Considerations

The mapping extensions described in this document do not provide any security services beyond those described by EPP [RFC5730], the EPP domain name mapping [RFC5731], and protocol layers used by EPP. The security considerations described in these other specifications apply to this specification as well.

5. IANA Considerations

5.1. XML Namespace

This document uses URNs to describe XML namespaces and XML schemas conforming to a registry mechanism described in [RFC3688]. The following URI assignment is requested of the IANA:

URI: urn:ietf:params:xml:ns:auxcontact-0.1

Registrant Contact: See the "Author's Address" section of this document.

XML: See the "Formal Syntax" section of this document.

5.2. EPP Extension Registry

The EPP extension described in this document should be registered by the IANA in the EPP Extension Registry described in [RFC7451]. The details of the registration are as follows:

Name of Extension: EPP Fee Extension

Document status: Experimental

Reference: (insert reference to RFC version of this document)

Registrant Name and Email Address: See the "Author's Address" section of this document.

TLDs: any

IPR Disclosure: none

Status: active

Notes: none

6. Normative References

- [RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, March 1997.
- [RFC3688] Mealling, M., "The IETF XML Registry", BCP 81, RFC 3688, January 2004.
- [RFC5730] Hollenbeck, S., "Extensible Provisioning Protocol (EPP)", STD 69, RFC 5730, August 2009.
- [RFC5731] Hollenbeck, S., "Extensible Provisioning Protocol (EPP) Domain Name Mapping", STD 69, RFC 5731, August 2009.
- [RFC7451] Hollenbeck, S., "Extension Registry for the Extensible Provisioning Protocol", RFC 7451, February 2015.

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