Internet Council of Registrars

Auction EPP Extension

for the CORE Registration System

CORE Association

Internet Council of Registrars

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1. Extension for Auction Information

The CORE Registration System supports a proprietary EPP extension for submitting special data needed for auctions as they occur after launch phases (e.g. Sunrise and Landrush).

1.1 Introduction

This document describes an extension mapping for version 1.0 of the Extensible Provisioning Protocol (EPP) described in RFC 5730. This mapping is an extension of the domain name mapping described in RFC 5731. It is specified using the Extensible Markup Language (XML) and XML Schema notation.

This extension serves the purpose of supplying and querying information for special phases, usually at the beginning of registry operation. A typical use case is a "Sunrise" phase during which trademark holders have a prerogative to register a domain name related to their trademark.

Registries usually allow multiple applications for a particular domain name during launch phases. This extension helps to resolve such situations by means of an auction in an automated way. This is not a normal auction, however, insofar as every application has a "bid" associated with it. Bids cannot be modified after the phase the application belongs to has ended. Among all valid applications for a given domain name, the one with the highest bid wins the auction.

1.2 Object Attributes

This extension for auctions adds additional elements to the EPP domain name mapping. Only new element descriptions are documented here.

This extension allows the provisioning of auction information in the form of bids. A bid can be made when applying for a domain name. In case there is more than one valid application, an auction mechanism is used as a tie-breaker. The highest bid submitted for the domain name in question will win the auction.

1.2.1 Bid

The <auction:bid> element is used to set and inform about a bid for a domain name. Its content is the amount of money the applicant is willing to pay for the domain name in case of an auction. The currency is given in the required currency attribute, specified by the corresponding ISO 4217 currency code.

Note that the amount is given as a non-negative number. This allows to submit a bid of zero in case the applicant is not interested in an auction at all.

1.3 EPP Command Mapping

This section deals with the specific command mappings for the EPP extension for auctions.

1.3.1 EPP Query Commands

There are four EPP commands to retrieve object information: <check> to find out whether an object is known to the server, <info> to ask for detailed information associated with an object, <poll> to discover and retrieve queued service messages for individual clients and <transfer> to get transfer status information for an object.

1.3.1.1 EPP <check> Command

This extension does not add any elements to the EPP <check> command or to the <check> response described in the EPP domain mapping (s. RFC 5731).

1.3.1.2 EPP <info> Command

This extension does not add any elements to the EPP <info> command described in the EPP domain mapping. Additional elements are defined for the <info> response.

When an <info> command has been processed successfully, the EPP <extension> element in the response, if present, contains a child <auction:infData> element that identifies the registry auction namespace and the location of the registry auction schema. The <auction:infData> element contains an <auction:bid> element, which informs about the amount and currency of the currently set bid as described above.

An example of an <info> response can be found in the "Examples" section below. The included example simply retrieves the current bid for the given domain name.

1.3.1.3 EPP <poll> Command

This extension does not add any elements to the EPP <poll> command or to the <poll> response described in the EPP domain mapping (s. RFC 5731).

1.3.1.4 EPP <transfer> Command

This extension does not add any elements to the EPP <transfer> command or to the <transfer> response described in the EPP domain mapping (s. RFC 5731).

1.3.2 EPP Transform Commands

There are five EPP commands to transform objects: <create> to create an instance of an object, <delete> to delete an instance of an object, <renew> to extend the validity period of an object, <transfer> to manage object sponsorship changes and <update> to change information associated with an object.

1.3.2.1 EPP <create> Command

This extension defines additional elements to extend the EPP <create> command described in the EPP domain mapping for auction processing. No additional elements are defined for the <create> response.

The EPP <extension> element of the <create> command contains a child <auction:create> element to indicate that auction information should be submitted. It identifies the registry auction namespace and the location of the registry auction schema. The <auction:create> element must contain an <auction:bid> element, which specifies the amount and currency as described above.

An example of a <create> command can be found in the "Examples" section below. The included example sets the bid when applying for the given domain name to the specified amount.

1.3.2.2 EPP <delete> Command

This extension does not add any elements to the EPP <delete> command or to the <delete> response described in the EPP domain mapping (s. RFC 5731).

1.3.2.3 EPP <renew> Command

This extension does not add any elements to the EPP <renew> command or to the <renew> response described in the EPP domain mapping (s. RFC 5731).

1.3.2.4 EPP <transfer> Command

This extension does not add any elements to the EPP <transfer> command or to the <transfer> response described in the EPP domain mapping (s. RFC 5731).

1.3.2.5 EPP <update> Command

This extension defines additional elements to extend the EPP <update> command described in the EPP domain mapping for auction processing. No additional elements are defined for the <update> response.

The EPP <extension> element of the <update> command contains a child <auction:update> element to indicate that auction information should be updated. It identifies the registry auction namespace and the location of the registry auc-

tion schema. The <auction:update> element must contain an <auction:bid> element, which specifies the new amount and currency as described above.

Whether all modifications of bids are allowed, only certain ones (e.g. only increases) or none at all depends on the auction policy configured for the CORE Registration System, which is described elsewhere.

An example of an <update> command can be found in the "Examples" section below. The included example modifies the bid for the given domain name.

1.4 Formal Syntax (Schema Definition)

```
<?xml version="1.0" encoding="UTF-8"?>

<schema targetNamespace="http://xmlns.corenic.net/epp/auction-1.0"
    xmlns:auction="http://xmlns.corenic.net/epp/auction-1.0"
    xmlns="http://www.w3.org/2001/XMLSchema"
    elementFormDefault="qualified"
    attributeFormDefault="unqualified">

  <annotation>
    <documentation>
      Extensible Provisioning Protocol v1.0
      domain name extension schema for auction
      data processing.
    </documentation>
  </annotation>


  <!-- child elements found in EPP commands -->

  <element name="create" type="auction:requestType"/>
  <element name="update" type="auction:requestType"/>

  <!-- child elements of the transform commands -->
  <complexType name="requestType">
    <sequence>
      <element name="bid" type="auction:bidType"/>
    </sequence>
  </complexType>


  <!-- child response elements -->

  <element name="infData" type="auction:infDataType"/>

  <!-- response elements -->
  <complexType name="infDataType">
    <sequence>
      <element name="bid" type="auction:bidType"/>
    </sequence>
  </complexType>


  <!-- common types -->

  <simpleType name="nonNegAmount">
    <restriction base="decimal">
      <minInclusive value="0"/>
      <fractionDigits value="2"/>
    </restriction>
  </simpleType>

  <!-- a currency specified by its ISO 4217 country code -->
  <simpleType name="currencyType">
    <restriction base="token">
```

```
      <length value="3"/>
    </restriction>
  </simpleType>

  <!-- a bid -->
  <complexType name="bidType">
    <simpleContent>
      <extension base="auction:nonNegAmount">
        <attribute name="currency" type="auction:currencyType" use="required"/>
      </extension>
    </simpleContent>
  </complexType>

</schema>
```

1.5 Examples

In the following examples, "C:" represents lines sent by an EPP client and "S:" represents lines returned by the EPP server.

1.5.1 EPP <info> Command

1.5.1.1 Example <info> response with a bid:

```
S:<?xml version='1.0' encoding='UTF-8'?>
S:<epp xmlns='urn:ietf:params:xml:ns:epp-1.0'
S:    xmlns:xsi='http://www.w3.org/2001/XMLSchema-instance'
S:    xsi:schemaLocation='urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd'>
S:  <response>
S:    <result code='1000'>
S:      <msg lang='en-US'>Command completed successfully</msg>
S:    </result>
S:    <resData>
S:      <domain:infData xmlns:domain='urn:ietf:params:xml:ns:domain-1.0'
S:          xsi:schemaLocation='urn:ietf:params:xml:ns:domain-1.0
S:          domain-1.0.xsd'>
S:        <domain:name>example.tld</domain:name>
S:        <domain:roid>D123456789-COM</domain:roid>
S:        <domain:status s='active'/>
S:        <domain:registrant>abc123</domain:registrant>
S:        <domain:contact type='admin'>def456</domain:contact>
S:        <domain:contacttype='tech'>ghi789</domain:contact>
S:        <domain:ns>
S:          <domain:hostObj>ns1.example.net</domain:hostObj>
S:          <domain:hostObj>ns2.example.net</domain:hostObj>
S:        </domain:ns>
S:        <domain:clID>registrar</domain:clID>
S:        <domain:crID>registrar</domain:crID>
S:        <domain:crDate>2010-09-08T07:06:05.0Z</domain:crDate>
S:        <domain:exDate>2012-09-08T23:59:59.0Z</domain:exDate>
S:        <domain:authInfo>
S:          <domain:pw>secret</domain:pw>
S:        </domain:authInfo>
S:      </domain:infData>
S:    </resData>
S:    <extension>
S:      <auction:infData
S:          xmlns:auction="http://xmlns.corenic.net/epp/auction-1.0"
S:          xsi:schemaLocation="http://xmlns.corenic.net/epp/auction-1.0
```

```
S:          auction-1.0.xsd">
S:        <auction:bid currency="EUR">10000.00</auction:bid>
S:      </auction:infData>
S:    </extension>
S:    <trID>
S:      <clTRID>abc-00042</clTRID>
S:      <svTRID>ZYX-99958</svTRID>
S:    </trID>
S:  </response>
S:</epp>
```

1.5.2 EPP <create> Command

1.5.2.1 Example <create> command:

```
C:<?xml version="1.0" encoding="UTF-8"?>
C:<epp xmlns="urn:ietf:params:xml:ns:epp-1.0"
C:    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
C:    xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
C:  <command>
C:    <create>
C:      <domain:create xmlns:domain="urn:ietf:params:xml:ns:domain-1.0"
C:          xsi:schemaLocation="urn:ietf:params:xml:ns:domain-1.0
C:          domain-1.0.xsd">
C:        <domain:name>example.tld</domain:name>
C:        <domain:period unit="y">1</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>abc123</domain:registrant>
C:        <domain:contact type="admin">def456</domain:contact>
C:        <domain:contact type="tech">ghi789</domain:contact>
C:        <domain:authInfo>
C:          <domain:pw>secret42</domain:pw>
C:        </domain:authInfo>
C:      </domain:create>
C:    </create>
C:    <extension>
C:      <auction:create
C:          xmlns:auction="http://xmlns.corenic.net/epp/auction-1.0"
C:          xsi:schemaLocation="http://xmlns.corenic.net/epp/auction-1.0
C:          auction-1.0.xsd">
C:        <auction:bid currency="EUR">5000.00</auction:bid>
C:      </auction:create>
C:    </extension>
C:    <clTRID>abc-00042</clTRID>
C:  </command>
C:</epp>
```

1.5.3 EPP <update> Command

1.5.3.1 Example <update> command:

```
C:<?xml version="1.0" encoding="UTF-8"?>
C:<epp xmlns="urn:ietf:params:xml:ns:epp-1.0"
C:    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
C:    xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
```

```
C:  <command>
C:    <update>
C:      <domain:update xmlns:domain="urn:ietf:params:xml:ns:domain-1.0"
C:          xsi:schemaLocation="urn:ietf:params:xml:ns:domain-1.0
C:          domain-1.0.xsd">
C:        <domain:name>example.tld</domain:name>
C:        <domain:add>
C:          <domain:ns>
C:            <domain:hostObj>ns3.example.net</domain:hostObj>
C:          </domain:ns>
C:        </domain:add>
C:        <domain:rem>
C:          <domain:ns>
C:            <domain:hostObj>ns1.example.net</domain:hostObj>
C:          </domain:ns>
C:        </domain:rem>
C:      </domain:update>
C:    </update>
C:    <extension>
C:      <auction:update
C:          xmlns:auction="http://xmlns.corenic.net/epp/auction-1.0"
C:          xsi:schemaLocation="http://xmlns.corenic.net/epp/auction-1.0
C:          auction-1.0.xsd">
C:        <auction:bid currency="EUR">7500.00</auction:bid>
C:      </auction:update>
C:    </extension>
C:    <clTRID>abc-00042</clTRID>
C:  </command>
C:</epp>
```