

Finance Mapping for the Extensible Provisioning Protocol (EPP)

Abstract

This document describes an Extensible Provisioning Protocol (EPP) mapping for retrieval of finance information of a client's account.

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Table of Contents

[1. Introduction](#)

[1.1. Conventions Used in This Document](#)

[2. Object Attributes](#)

[3. EPP Command Mapping](#)

[3.1. EPP Query Commands](#)

[3.1.1. EPP <info> Command](#)

[3.2. EPP Transform Commands](#)

[4. Formal Syntax](#)

[4.1. Finance Mapping Schema](#)

[5. Security Considerations](#)

[6. Normative References](#)

1. Introduction

This document describes a client finance mapping for version 1.0 of the Extensible Provisioning Protocol (EPP) [[STD69](#)]. This EPP finance mapping enables a client to retrieve financial information for their account.

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.

In examples, "C:" represents lines sent by a protocol client and "S:" represents lines returned by a protocol server. Indentation and white space in examples are provided only to illustrate element relationships and are not a REQUIRED feature of this protocol.

"finance-1.1" is used as an abbreviation for "urn:ietf:params:xml:ns:finance-1.1". The XML namespace prefix "finance" 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.

2. Object Attributes

This EPP finance mapping adds additional elements associated with the EPP core protocol specification [[RFC5730](#)]. Only those new elements are described here.

3. EPP Command Mapping

A detailed description of the EPP syntax and semantics can be found in the EPP core protocol specification [[RFC5730](#)].

3.1. EPP Query Commands

EPP provides four commands to retrieve object information: <check> to determine if an object can be provisioned within a repository, <info> to retrieve detailed information associated with an object, <poll> to discover and retrieve service messages queued by a server for individual clients, and <transfer> to retrieve object transfer status information [[RFC5730](#)]. This EPP finance mapping does not add any elements to the EPP <check>, <poll> or <transfer> commands or responses.

3.1.1. EPP <info> Command

The EPP <info> command is used to retrieve detailed information associated with a finance object.

In addition to the EPP command elements described in the EPP core protocol specification [[RFC5730](#)], the command MUST contain a <finance:info> element that describes the finance namespace and does not contain any child elements.

Example <info> command:

```
C:<?xml version="1.0" encoding="UTF-8"?>
C:<epp xmlns="urn:ietf:params:xml:ns:epp-1.0">
C: <command>
```

```

C:    <info>
C:      <finance:info xmlns:finance="urn:ietf:params:xml:ns:finance-1.1"/>
C:    </info>
C:    <clTRID>Epp.12345</clTRID>
C:  </command>
C:</epp>

```

When an <info> command has been processed successfully, the EPP <resData> element MUST contain a child <finance:infData> element that identifies the finance namespace with one or more of the following child element:

- <finance:wallet> This element contains a REQUIRED attribute “code” and indicates the wallet code identifier associated with the client’s account. It contains two child elements: <finance:balance> and <finance:threshold>.
 - <finance:balance> This element indicates the wallet balance of the client’s account at the time of the request.
 - <finance:threshold> This element is OPTIONAL. It contains a REQUIRED attribute “type” and indicates the threshold amount associated with the specific wallet code for a given type of threshold.

Example <info> response:

```

S:<?xml version="1.0" encoding="utf-8"?>
S:<epp 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:  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:     <finance:infData xmlns:finance="urn:ietf:params:xml:ns:finance-1.1">
S:       <finance:wallet code="identitydigital">
S:         <finance:balance>1996412.04</finance:balance>
S:         <finance:threshold type="final">0.00</finance:threshold>
S:         <finance:threshold type="restricted">500.00</finance:threshold>
S:         <finance:threshold type="notification">1000.00
S:         </finance:threshold>
S:       </finance:wallet>
S:     </finance:infData>
S:   </resData>
S:   <trID>
S:     <clTRID>Epp.12345</clTRID>
S:     <svTRID>e1ac343a751947dc85792e336baced6b</svTRID>
S:   </trID>

```

```
S: </response>
S:</epp>
```

3.2. EPP Transform Commands

EPP provides five 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. This EPP finance mapping does not add any elements to the EPP transform commands or responses.

4. Formal Syntax

One schema presented here is the EPP finance mapping schema. The formal syntax presented here is a complete schema representation of the object mapping suitable for automated validation of EPP XML instances. The BEGIN and END tags are not part of the schema; they are used to note the beginning and ending of the schema for URI registration purposes.

4.1. Finance Mapping Schema

BEGIN

```
<?xml version="1.0" encoding="utf-8"?>
<schema targetNamespace="urn:ietf:params:xml:ns:finance-1.1"
  xmlns:finance="urn:ietf:params:xml:ns:finance-1.1"
  xmlns="http://www.w3.org/2001/XMLSchema"
  xmlns:eppcom="urn:ietf:params:xml:ns:eppcom-1.0"
  elementFormDefault="qualified">

  <annotation>
    <documentation>
      Extensible Provisioning Protocol v1.0
      Mapping for account's wallet balance and thresholds.
    </documentation>
  </annotation>

  <!-- Child elements found in EPP commands. -->
  <element name="info"/>
```

```
<!-- Child response elements. -->
<element name="infData" type="finance:infRespType"/>

<complexType name="infRespType">
  <sequence>
    <element name="wallet" type="finance:walletRespType" minOccurs="0"
      maxOccurs="unbounded"/>
  </sequence>
</complexType>

<complexType name="walletRespType">
  <sequence>
    <element name="balance" type="decimal" minOccurs="1" maxOccurs="1"/>
    <element name="threshold" type="finance:thresholdType" minOccurs="0"
      maxOccurs="unbounded"/>
  </sequence>
  <attribute name="code" type="token" use="required"/>
</complexType>

<complexType name="thresholdType">
  <simpleContent>
    <extension base="decimal">
      <attribute name="type" type="token" use="required"/>
    </extension>
  </simpleContent>
</complexType>

</schema>
END
```

5. Security Considerations

The EPP finance mapping described in this document does not provide any security services beyond those described by EPP [\[RFC5730\]](#) and protocol layers used by EPP. The security considerations described in these other specifications apply to this specification as well.

6. Normative References

- [RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, DOI 10.17487/RFC2119, March 1997, <<https://www.rfc-editor.org/info/rfc2119>>.
- [RFC5730] Hollenbeck, S., "Extensible Provisioning Protocol (EPP)", STD 69, RFC 5730, DOI 10.17487/RFC5730, August 2009, <<https://www.rfc-editor.org/info/rfc5730>>.
- [RFC5731] Hollenbeck, S., "Extensible Provisioning Protocol (EPP) Domain Name Mapping", STD 69, RFC 5731, DOI 10.17487/RFC5731, August 2009, <<https://www.rfc-editor.org/info/rfc5731>>.
- [STD69] Internet Standard 69, <<https://www.rfc-editor.org/info/std69>>. At the time of writing, this STD comprises the following:
- Hollenbeck, S., "Extensible Provisioning Protocol (EPP)", STD 69, RFC 5730, DOI 10.17487/RFC5730, August 2009, <<https://www.rfc-editor.org/info/rfc5730>>.
 - Hollenbeck, S., "Extensible Provisioning Protocol (EPP) Domain Name Mapping", STD 69, RFC 5731, DOI 10.17487/RFC5731, August 2009, <<https://www.rfc-editor.org/info/rfc5731>>.
 - Hollenbeck, S., "Extensible Provisioning Protocol (EPP) Host Mapping", STD 69, RFC 5732, DOI 10.17487/RFC5732, August 2009, <<https://www.rfc-editor.org/info/rfc5732>>.
 - Hollenbeck, S., "Extensible Provisioning Protocol (EPP) Contact Mapping", STD 69, RFC 5733, DOI 10.17487/RFC5733, August 2009, <<https://www.rfc-editor.org/info/rfc5733>>.
 - Hollenbeck, S., "Extensible Provisioning Protocol (EPP) Transport over TCP", STD 69, RFC 5734, DOI 10.17487/RFC5734, August 2009, <<https://www.rfc-editor.org/info/rfc5734>>.