



**VERISIGN™**

# **EXTENSIBLE PROVISIONING PROTOCOL EXTENSION MAPPING: <IDN LANGUAGE TAG>**

**Version 1.1**

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# 1 Introduction

This document describes an IDN Language Tag mapping for version 1.0 of the Extensible Provisioning Protocol (EPP). This mapping, an extension of the domain name mapping described in [EPP-D], is specified using the Extensible Markup Language (XML) 1.0 as described in [XML] and XML Schema notation as described in [XMLS-1] and [XMLS-2].

[EPP] provides a complete description of EPP command and response structures. A thorough understanding of the base protocol specification is necessary to understand the mapping described in this document.

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

## 2 Object Attributes

This extension adds additional elements to the domain name mapping described in [EPP-D]. Only new element descriptions are described here.

### 2.1 Language Tag

A valid language tag is a required field for ALL IDN registrations. The valid language tag values are defined by [W3C-L].

## 3 EPP Command Mapping

A detailed description of the EPP syntax and semantics can be found in [EPP]. The command mappings described here are specifically for use in IDN registrations using a Language Tag via EPP.

### 3.1 EPP Query Commands

EPP provides three commands to retrieve object information: <check> to determine if an object is known to the server, <info> to retrieve detailed information associated with an object, and <transfer> to retrieve object transfer status information.

### **3.1.1 EPP <check> Command**

This extension does not add any elements to the EPP <check> command or <check> response described in [EPP-D].

### **3.1.2 EPP <info> Command**

This extension does not add any elements to the EPP <info> command described in [EPP-D].

### **3.1.3 EPP <transfer> Command**

This extension does not add any elements to the EPP <transfer> query command or <transfer> query response described in [EPP-D].



## 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.

### 3.2.1 EPP <create> Command

This extension defines additional elements for the EPP <create> command described in [EPP-D].

The EPP <create> command provides a transform operation that allows a client to create a domain object. In addition to the EPP command elements described in [EPP-D], the command MUST contain an <extension> element. The <extension> element MUST contain a child <idnLang:tag> element.

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
C:                    xmlns:domain="urn:ietf:params:xml:ns:domain-1.0"
C:                    xsi:schemaLocation="urn:ietf:params:xml:ns:domain-1.0 domain-1.0.xsd">
C:                        <domain:name>example.com</domain:name>
C:                        <domain:authInfo>
C:                            <domain:pw>2fooBAR</domain:pw>
C:                        </domain:authInfo>
C:                    </domain:create>
C:                </create>
C:            <extension>
C:                <idnLang:tag
C:                    xmlns:idnLang="http://www.verisign.com/epp/idnLang-1.0"
C:                    xsi:schemaLocation="http://www.verisign.com/epp/idnLang-1.0 idnLang-
C:                    1.0.xsd">en
C:                </idnLang:tag>
C:            </extension>
C:            <clTRID>ABC-12345</clTRID>
C:        </command>
C:    </epp>
```

When an <create> command has been processed successfully, the EPP <creData> element MUST contain child elements as described in [EPP-D].

### **3.2.2 EPP <delete> Command**

This extension does not add any elements to the EPP <delete> command or <delete> response described in [EPP-D].

### **3.2.3 EPP <renew> Command**

This extension does not add any elements to the EPP <renew> command described in [EPP-D].

### **3.2.4 EPP <transfer> Command**

This extension does not add any elements to the EPP <transfer> command described in [EPP-D].

### **3.2.5 EPP <update> Command**

This extension does not add any elements to the EPP <update> command or <update> response described in [EPP-D].

## 4 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. 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.

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

  <schema targetNamespace="http://www.verisign.com/epp/idnLang-1.0"
    xmlns:idnLang="http://www.verisign.com/epp/idnLang-1.0"
    xmlns="http://www.w3.org/2001/XMLSchema"
    elementFormDefault="qualified">

    <annotation>
      <documentation>
        Extensible Provisioning Protocol v1.0 domain name
        extension schema for IDN Lang Tag.
      </documentation>
    </annotation>

    <!--
    Child elements found in EPP commands.
    -->
    <element name="tag" type="language"/>

    <!--
    End of schema.
    -->
  </schema>
```

## 5 References

[EPP] IETF RFC 3730: S. Hollenbeck: "Extensible Provisioning Protocol (EPP)", March 2004.

[EPP-D] IETF RFC 3731: S. Hollenbeck: "Extensible Provisioning Protocol Domain Name Mapping", March 2004.

[IETF-XML] M. Mealling: "The IETF XML Registry".

[ISO8601] ISO 8601:1988 (E): "Data elements and interchange formats -Information interchange - Representation of dates and times - The International Organization for Standardization".

[RFC2119] S. Bradner: "Key Words for Use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, March 1997.

[XML] Editors T. Bray et al.: "Extensible Markup Language (XML) 1.0 (Second Edition)", W3C Recommendation 6 October 2000.

[XMLS-1] Editors H. Thompson et al.: "XML Schema Part 1: Structures", W3C Recommendation 2 May 2001.

[XMLS-2] Editors P. Biron, A. Malhotra: "XML Schema Part 2: Datatypes", W3C Recommendation 2 May 2001.

[X3C-L] XML Schema Part 2: Datatypes, W3C Recommendation 02 May 2001.  
<http://www.w3.org/TR/xmlschema-2/#language>