



# **EXTENSIBLE PROVISIONING PROTOCOL EXTENSION MAPPING: <JOBS CONTACT>**

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# 1 Introduction

This document describes a DotJobs contact extension for version 1.0 of the Extensible Provisioning Protocol (EPP). This mapping, an extension of the contact mapping described in [EPP-C], 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 contact mapping described in [EPP-C].

An EPP JobsContact extension object has attributes and associated values that can be viewed and modified by the sponsoring client or the server. This section describes each attribute type in detail. The formal syntax for the attribute values described here can be found in the “Formal Syntax” section of this document and in the appropriate normative references.

### 2.1 Title

Contact title is represented using character strings. These strings have a specified minimum length and a specified maximum length. This attribute defines the title of the contact in the organization.

### 2.2 Website

Contact website is represented using character strings. These strings have a specified minimum length and a specified maximum length. This attribute specifies the website information associated with the contact.

### 2.3 Industry Type

Contact industry type is represented using character strings. These strings have a specified minimum length and a specified maximum length. This attribute defines the industry type the contact belongs to.

### 2.4 Admin Type

Every contact defines whether it is of administrative type or not. It has different values such as: “Yes” or “No”. No other values are permitted. If the contact is of administrative type then “Yes” value is provided, else “No” should be provided.

## **2.5 Association Member**

Every contact registered may belong to the HR Association. This attribute defines whether membership status. The different values that this field can hold are “Yes” or “No”. If the contact is a member of the HR association “Yes” will be provided, else “No” should be provided.

## 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 with the Jobs Contact Extension.

### 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-C].

### 3.1.2 EPP <info> Command

This extension does not add any elements to the EPP <info> command.

When an <info> command has been processed successfully, the EPP <infData> element MUST contain child elements as described in [EPP-C]. In addition to the EPP response element described in [EPP-C], the response MUST contain an <extension> element with a <jobsContact:infData> child element. The <jobsContact:infData> element contains the following child elements:

- An **OPTIONAL** <jobsContact:title> element that contains title of the contact.
- A <jobsContact:website> element that contains website information of the contact.
- An **OPTIONAL** <jobsContact:industryType> element that contains the industry type of the organization associated with the contact.
- A <jobsContact:isAdminContact> element that specifies whether the registering contact is an administrative contact.
- An **OPTIONAL** <jobsContact:isAssociationMember> element that specifies whether the contact is member of HR Association.

Example <info> response:

```
S: <?xml version="1.0" encoding="UTF-8"?>
S: <epp xmlns="urn:ietf:params:xml:ns:epp-1.0"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
S:   <response>
S:     <result code="1000">
S:       <msg>Command completed successfully</msg>
S:     </result>
S:     <resData>
S:       <contact:infData
        xmlns:contact="urn:ietf:params:xml:ns:contact-1.0"
        xsi:schemaLocation="urn:ietf:params:xml:ns:contact-1.0
        contact-1.0.xsd">
S:         <contact:id>sh8013</contact:id>
S:         <contact:roid>SH8013-VRSN</contact:roid>
S:         <contact:status s="linked"/>
S:         <contact:status s="clientUpdateProhibited"/>
S:         <contact:postalInfo type="loc">
S:           <contact:name>John Doe</contact:name>
S:           <contact:org>Example Inc.</contact:org>
S:           <contact:addr>
S:             <contact:street>123 Example Dr.</contact:street>
S:             <contact:street>Suite 100</contact:street>
S:             <contact:city>Dulles</contact:city>
S:             <contact:sp>VA</contact:sp>
S:             <contact:pc>20166-6503</contact:pc>
S:             <contact:cc>US</contact:cc>
S:           </contact:addr>
S:         </contact:postalInfo>
S:         <contact:postalInfo type="int">
S:           <contact:name>i15d John Doe</contact:name>
S:           <contact:org>i15d Example Inc.</contact:org>
S:           <contact:addr>
S:             <contact:street>i15d 123 Example Dr.</contact:street>
S:             <contact:street>i15d Suite 100</contact:street>
```



```

S:          <contact:city>Dulles</contact:city>
S:          <contact:sp>VA</contact:sp>
S:          <contact:pc>20166-6503</contact:pc>
S:          <contact:cc>US</contact:cc>
S:          </contact:addr>
S:        </contact:postalInfo>
S:        <contact:voice>+1.7035555555</contact:voice>
S:        <contact:fax>+1.7035555556</contact:fax>
S:        <contact:email>jdoe@example.com</contact:email>
S:        <contact:clID>ClientY</contact:clID>
S:        <contact:crID>ClientX</contact:crID>
S:        <contact:crDate>2007-06-19T00:38:11.0304Z</contact:crDate>
S:        <contact:authInfo>
S:          <contact:pw>2fooBAR</contact:pw>
S:        </contact:authInfo>
S:        <contact:disclose flag="1">
S:          <contact:name type="int"/>
S:          <contact:org type="loc"/>
S:          <contact:org type="int"/>
S:          <contact:addr type="loc"/>
S:          <contact:addr type="int"/>
S:          <contact:voice/>
S:          <contact:fax/>
S:          <contact:email/>
S:        </contact:disclose>
S:      </contact:infData>
S:    </resData>
S:    <extension>
S:      <jobsContact:infData
S:        xmlns:jobsContact="http://www.verisign.com/epp/dotJobs-1.0"
S:        xsi:schemaLocation="http://www.verisign.com/epp/dotJobs-1.0 dotJobs-
S:        1.0.xsd">
S:        <jobsContact:title>Info-title</jobsContact:title>
S:        <jobsContact:website>whois.example.com</jobsContact:website>
S:        <jobsContact:industryType>IT</jobsContact:industryType>
S:        <jobsContact:isAdminContact>Yes</jobsContact:isAdminContact>
S:        <jobsContact:isAssociationMember>Yes
S:          </jobsContact:isAssociationMember>
S:        </jobsContact:infData>
S:      </extension>
S:    <trID>
S:      <clTRID>144</clTRID>
S:      <svTRID>54321-XYZ</svTRID>
S:    </trID>
S:  </response>
S: </epp>

```

### **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-C].

## 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

The EPP `<create>` command provides a transform operation that allows a client to create a contact object with dotJobs extension elements. In addition to the standard EPP command elements, the `<create>` command **MUST** contain a `<contact:create>` element and dotJobs extension element that identifies the contact namespace and the location of the contact schema. The `<jobsContact:create>` element contains the following child elements:

- An **OPTIONAL** `<jobsContact:title>` element that contains title of the contact.
- A `<jobsContact:website>` element that contains website information of the contact.
- An **OPTIONAL** `<jobsContact:industryType>` element that contains the industry type of the organization associated with the contact.
- A `<jobsContact:isAdminContact>` element that specifies whether the registering contact is an administrative contact.
- An **OPTIONAL** `<jobsContact:isAssociationMember>` element that specifies whether the contact is member of HR Association.

```
C: <?xml version="1.0" encoding="UTF-8" standalone="no"?>
C: <epp xmlns="urn:ietf:params:xml:ns:epp-1.0"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
C:   <command>
C:     <create>
C:       <contact:create
          xmlns:contact="urn:ietf:params:xml:ns:contact-1.0"
          xsi:schemaLocation="urn:ietf:params:xml:ns:contact-1.0
            contact-1.0.xsd">
C:         <contact:id>8013</contact:id>
C:         <contact:postalInfo type="loc">
C:           <contact:name>John Doe</contact:name>
C:           <contact:org>Example Inc.</contact:org>
C:           <contact:addr>
C:             <contact:street>123 Example Dr.</contact:street>
C:             <contact:street>Suite 100</contact:street>
C:             <contact:city>Dulles</contact:city>
C:             <contact:sp>VA</contact:sp>
C:             <contact:pc>20166-6503</contact:pc>
C:             <contact:cc>US</contact:cc>
C:           </contact:addr>
C:         </contact:postalInfo>
C:         <contact:voice x="1234">+1.7035555555</contact:voice>
C:         <contact:fax>+1.7035555556</contact:fax>
C:         <contact:email>jdoe@example.com</contact:email>
C:         <contact:authInfo>
C:           <contact:pw>2fooBAR</contact:pw>
C:         </contact:authInfo>
C:         <contact:disclose flag="0">
C:           <contact:voice/>
```

```

C:      <contact:email/>
C:      </contact:disclose>
C:      </contact:create>
C:      </create>
C:      <extension>
C:      <namestoreExt:namestoreExt
        xmlns:namestoreExt="http://www.verisign-grs.com/epp/namestoreExt-1.1"
        xsi:schemaLocation="http://www.verisign-grs.com/epp/namestoreExt-1.1
        namestoreExt-1.1.xsd">
C:      <namestoreExt:subProduct>dotJOBS</namestoreExt:subProduct>
C:      </namestoreExt:namestoreExt>
C:      <jobsContact:create
        xmlns:jobsContact="http://www.verisign.com/epp/jobsContact-1.0"
        xsi:schemaLocation="http://www.verisign.com/epp/jobsContact-1.0
        jobsContact-1.0.xsd">
C:      <jobsContact:title>SE</jobsContact:title>
C:      <jobsContact:website>www.verisign.com</jobsContact:website>
C:      <jobsContact:industryType>IT</jobsContact:industryType>
C:      <jobsContact:isAdminContact>Yes</jobsContact:isAdminContact>
C:      <jobsContact:isAssociationMember>Yes</jobsContact:isAssociationMember>
C:      </jobsContact:create>
C:      </extension>
C:      <clTRID>ABC-12345</clTRID>
C:    </command>
C:  </epp>

```

This extension does not add any elements to the EPP <create> response described in [EPP-C].

### 3.2.2 EPP <delete> Command

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

### 3.2.3 EPP <renew> Command

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

### 3.2.4 EPP <transfer> Command

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

### 3.2.5 EPP <update> Command

The EPP <update> command provides a transform operation that allows a client to modify the attributes of a contact object. In addition to the standard EPP command elements, the <update> command **MUST** contain a <contact:update> element that identifies the contact namespace and the location of the contact schema. The <contact:update> element **MAY** contain the following dotJobs specific extension elements:

- An **OPTIONAL** <jobsContact:title> element that contains title of the contact.
- An **OPTIONAL** <jobsContact:website> element that contains website of the contact.
- An **OPTIONAL** <jobsContact:industryType> element that contains the industry type of the organization associated with the contact.
- A **OPTIONAL** <jobsContact:isAdminContact> element that specifies whether the contact is an administrative contact.
- An **OPTIONAL** <jobsContact:isAssociationMember> element that specifies whether the contact is member of HR Association.

```
C: <?xml version="1.0" encoding="UTF-8" standalone="no"?>
C: <epp xmlns="urn:ietf:params:xml:ns:epp-1.0"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xsi:schemaLocation="urn:ietf:params:xml:ns:epp-1.0 epp-1.0.xsd">
C:   <command>
C:     <update>
C:       <contact:update
        xmlns:contact="urn:ietf:params:xml:ns:contact-1.0"
        xsi:schemaLocation="urn:ietf:params:xml:ns:contact-1.0
        contact-1.0.xsd">
C:         <contact:id>8200</contact:id>
C:         <contact:add>
C:           <contact:status s="clientDeleteProhibited"/>
C:         </contact:add>
C:         <contact:chg>
C:           <contact:postalInfo type="loc">
C:             <contact:name>John Franc</contact:name>
C:             <contact:org/>
C:             <contact:addr>
C:               <contact:street>1245 Example Dr.</contact:street>
C:               <contact:street>Suite 200</contact:street>
C:               <contact:city>Dulles</contact:city>
C:               <contact:sp>VA</contact:sp>
C:               <contact:pc>20166-6503</contact:pc>
C:               <contact:cc>US</contact:cc>
C:             </contact:addr>
C:           </contact:postalInfo>
C:           <contact:voice>+1.7034444444</contact:voice>
C:           <contact:fax/>
C:           <contact:authInfo>
C:             <contact:pw>2fooBAR</contact:pw>
C:           </contact:authInfo>
C:           <contact:disclose flag="1">
```

```

C:          <contact:voice/>
C:          <contact:email/>
C:        </contact:disclose>
C:      </contact:chg>
C:    </contact:update>
C:  </update>
C: <extension>
C:   <namestoreExt:namestoreExt
      xmlns:namestoreExt="http://www.verisign-grs.com/epp/namestoreExt-1.1"
      xsi:schemaLocation="http://www.verisign-grs.com/epp/namestoreExt-1.1
namestoreExt-1.1.xsd">
C:     <namestoreExt:subProduct>dotJOBS</namestoreExt:subProduct>
C:   </namestoreExt:namestoreExt>
C:   <jobsContact:update
      xmlns:jobsContact="http://www.verisign.com/epp/jobsContact-1.0"
      xsi:schemaLocation="http://www.verisign.com/epp/jobsContact-1.0
jobsContact-1.0.xsd">
C:     <jobsContact:title>SE</jobsContact:title>
C:     <jobsContact:website>www.verisign.com</jobsContact:website>
C:     <jobsContact:industryType>IT</jobsContact:industryType>
C:     <jobsContact:isAdminContact>Yes</jobsContact:isAdminContact>
C:     <jobsContact:isAssociationMember>Yes
      </jobsContact:isAssociationMember>
C:   </jobsContact:update>
C: </extension>
C:   <clTRID>ABC-12345</clTRID>
C: </command>
C: </epp>

```

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

## 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/jobsContact-1.0"
  xmlns:jobsContact="http://www.verisign.com/epp/jobsContact-1.0"
  xmlns:eppcom="urn:ietf:params:xml:ns:eppcom-1.0"
  xmlns="http://www.w3.org/2001/XMLSchema"
  elementFormDefault="qualified">

  <!--
    Import common element types.
  -->
  <import namespace="urn:ietf:params:xml:ns:eppcom-1.0"
    schemaLocation="eppcom-1.0.xsd"/>

  <annotation>
    <documentation>
      Extensible Provisioning Protocol v1.0
      extension schema for dotJobs Contact
    </documentation>
  </annotation>

  <!--
    Child elements found in Extension commands.
  -->

  <element name="create" type="jobsContact:createType"/>
  <element name="update" type="jobsContact:updateType"/>

  <!--
    Child response elements in extension.
  -->
  <element name="infData" type="jobsContact:infDataType"/>

  <!--
    Child elements of the <create> command extension.
  -->
  <complexType name="createType">
    <sequence>
      <element name="title" type="jobsContact:optType" minOccurs="0"/>
      <element name="website" type="jobsContact:labelType"/>
      <element name="industryType" type="jobsContact:optType" minOccurs="0"/>
      <element name="isAdminContact" type="jobsContact:booleanType"/>
      <element name="isAssociationMember" type="jobsContact:booleanType"
minOccurs="0"/>
    </sequence>
  </complexType>

  <!--
    Child elements of the <update> command extension.
  -->
  <complexType name="updateType">
```

```

        <sequence>
            <element name="title" type="jobsContact:optType" minOccurs="0"/>
            <element name="website" type="jobsContact:labelType" minOccurs="0"/>
            <element name="industryType" type="jobsContact:optType" minOccurs="0"/>
            <element name="isAdminContact" type="jobsContact:booleanType"
minOccurs="0"/>
            <element name="isAssociationMember" type="jobsContact:booleanType"
minOccurs="0"/>
        </sequence>
    </complexType>

    <!--
        Child elements of the <info> response extension.
    -->

    <complexType name="infDataType">
        <sequence>
            <element name="title" type="jobsContact:optType" minOccurs="0"/>
            <element name="website" type="jobsContact:labelType"/>
            <element name="industryType" type="jobsContact:optType" minOccurs="0"/>
            <element name="isAdminContact" type="jobsContact:booleanType"/>
            <element name="isAssociationMember" type="jobsContact:booleanType"
minOccurs="0"/>
        </sequence>
    </complexType>

    <simpleType name="booleanType">
        <restriction base="token">
            <enumeration value="Yes"/>
            <enumeration value="No"/>
        </restriction>
    </simpleType>

    <simpleType name="optType">
        <restriction base="normalizedString">
            <maxLength value="128"/>
        </restriction>
    </simpleType>

    <simpleType name="labelType">
        <restriction base="normalizedString">
            <maxLength value="256"/>
        </restriction>
    </simpleType>

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

```



## 5 References

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

[EPP-C] IETF RFC 3733: S. Hollenbeck: "Extensible Provisioning Protocol Contact Mapping", March 2004.

[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.