

Question 25 Tables and Graphics

The following are tables and graphics used in the response to Question 25.

| RFC | Description | Link | Compliance |
|------|---|---|------------|
| 5910 | Domain Name System (DNS) Security Extensions Mapping for the Extensible Provisioning Protocol (EPP) | http://tools.ietf.org/html/rfc5910 | Yes |
| 5730 | Extensible Provisioning Protocol (EPP) | http://tools.ietf.org/html/rfc5730 | Yes |
| 5731 | Extensible Provisioning Protocol (EPP) Domain Name Mapping | http://tools.ietf.org/html/rfc5731 | Yes |
| 5732 | Extensible Provisioning Protocol (EPP) Host Mapping | http://tools.ietf.org/html/rfc5732 | Yes |
| 5733 | Extensible Provisioning Protocol (EPP) Contact Mapping | http://tools.ietf.org/html/rfc5733 | Yes |
| 5734 | Extensible Provisioning Protocol (EPP) Transport over TCP | http://tools.ietf.org/html/rfc5734 | Yes |
| 3915 | Domain Registry Grace Period Mapping for the Extensible Provisioning Protocol (EPP) | http://www.ietf.org/rfc/rfc3915.txt | Yes |
| 3735 | Guidelines for Extending the Extensible Provisioning Protocol (EPP) | http://tools.ietf.org/html/rfc3735 | Yes |

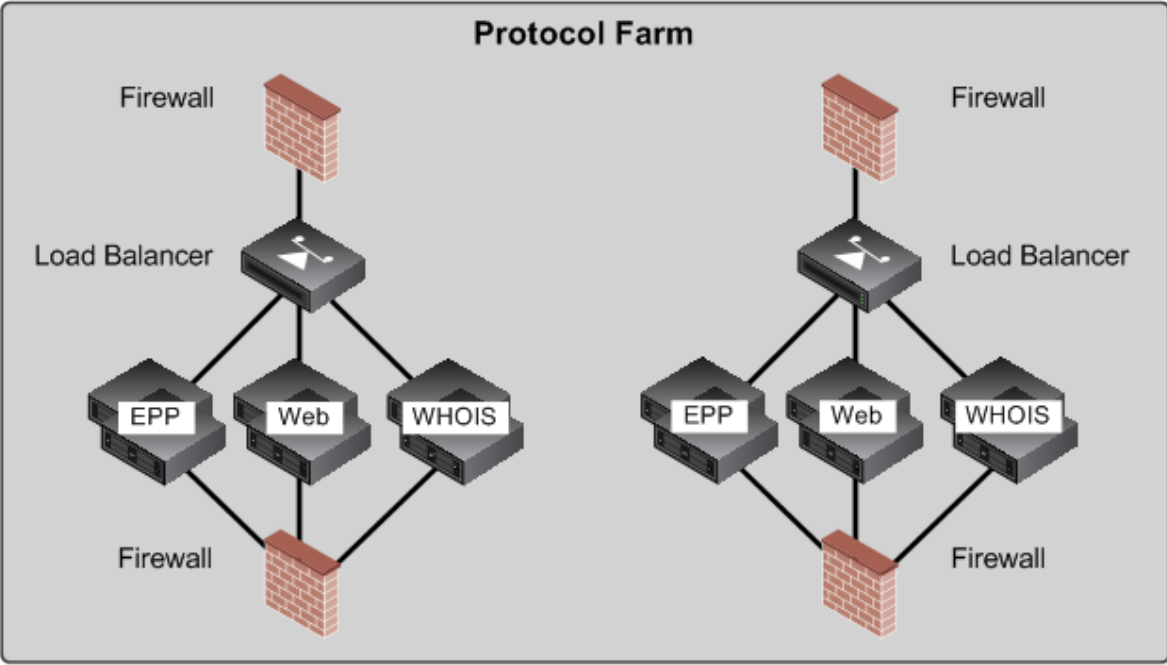
Table 25-1 The implementation is fully compliant with all EPP RFCs.

| Parameter | SLR – per month | Compliance |
|---------------------------|---|------------|
| EPP service availability | ≤ 864 min of downtime (~ 98%) | Yes |
| EPP query-command RTT | ≤ 2000 ms, for at least 90% of the commands | Yes |
| EPP session-command RTT | ≤ 4000 ms, for at least 90% of the commands | Yes |
| EPP transform-command RTT | ≤ 4000 ms, for at least 90% of the commands | Yes |

Table 25-2 The EPP implementation meets all the registry performance requirements of Specification 10.

| Extension Name | Usage |
|-------------------------|--|
| UIN | Authentication token |
| DelegatedManager | Identifies that a contact is a delegated manager |
| SecondaryPhone | Additional contact field |
| SecondaryPhoneExtension | Additional contact field |
| SecondaryEmail | Additional contact field |
| Pager | Additional contact fields |
| Title | Additional contact fields |
| AppPurpose | Additional data about the intended use of the domain |
| NexusCategory | Additional data about the registrant of a domain |
| WhoisType | For WHOIS privacy control |
| Publish | For WHOIS privacy control |
| ReservationDomain | Used for backorder service |
| PromoCode | Promotion code for domain |
| ResellerName | Reseller data |
| ResellerUrl | Reseller data |
| ResellerPhone | Reseller data |
| ReservationDate | Reseller data |
| ReservationPlaced | Reseller data |
| ReservationRegistrar | Reseller data |
| RestoreReasonCode | For RGP restore |
| RestoreComment | For RGP restore |
| TrueData | For RGP restore |
| ValidUse | For RGP restore |
| IDNLang | For IDN registration |

Table 25-3 EPP Extensions



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Figure 25-1 Protocol Farm

EPP Schema

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

<schema targetNamespace="urn:ietf:params:xml:ns:contact-1.0"
  xmlns:contact="urn:ietf:params:xml:ns:contact-1.0"
  xmlns:epp="urn:ietf:params:xml:ns:epp-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"/>
  <import namespace="urn:ietf:params:xml:ns:epp-1.0"
    schemaLocation="epp-1.0.xsd"/>

  <annotation>
    <documentation>
      Extensible Provisioning Protocol v1.0
      contact provisioning schema.
    </documentation>
  </annotation>

<!--
Child elements found in EPP commands.
-->
  <element name="check" type="contact:mIDType"/>
  <element name="create" type="contact:createType"/>
  <element name="delete" type="contact:sIDType"/>
  <element name="info" type="contact:authIDType"/>
  <element name="transfer" type="contact:authIDType"/>
  <element name="update" type="contact:updateType"/>

<!--
Utility types.
-->
  <simpleType name="ccType">
    <restriction base="token">
      <length value="2"/>
    </restriction>
  </simpleType>

  <complexType name="e164Type">
    <simpleContent>
      <extension base="contact:e164StringType">
        <attribute name="x" type="token"/>
      </extension>
    </simpleContent>
  </complexType>
```

```

<simpleType name="e164StringType">
  <restriction base="token">
    <pattern value="(\+[0-9]{1,3}\.[0-9]{1,14})?"/>
    <maxLength value="17"/>
  </restriction>
</simpleType>

<simpleType name="pcType">
  <restriction base="token">
    <maxLength value="16"/>
  </restriction>
</simpleType>

<simpleType name="postalLineType">
  <restriction base="normalizedString">
    <minLength value="1"/>
    <maxLength value="255"/>
  </restriction>
</simpleType>

<simpleType name="optPostalLineType">
  <restriction base="normalizedString">
    <maxLength value="255"/>
  </restriction>
</simpleType>

<!--
Child elements of the <create> command.
-->
<complexType name="createType">
  <sequence>
    <element name="id" type="eppcom:clIDType"/>
    <element name="postalInfo" type="contact:postalInfoType"
      maxOccurs="2"/>
    <element name="voice" type="contact:e164Type"
      minOccurs="0"/>
    <element name="fax" type="contact:e164Type"
      minOccurs="0"/>
    <element name="email" type="eppcom:minTokenType"/>
    <element name="authInfo" type="contact:authInfoType"/>
    <element name="disclose" type="contact:discloseType"
      minOccurs="0"/>
  </sequence>
</complexType>

<complexType name="postalInfoType">
  <sequence>
    <element name="name" type="contact:postalLineType"/>
    <element name="org" type="contact:optPostalLineType"
      minOccurs="0"/>
    <element name="addr" type="contact:addrType"/>
  </sequence>
  <attribute name="type" type="contact:postalInfoEnumType"
    use="required"/>
</complexType>

<simpleType name="postalInfoEnumType">

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    <restriction base="token">
      <enumeration value="loc"/>
      <enumeration value="int"/>
    </restriction>
  </simpleType>

  <complexType name="addrType">
    <sequence>
      <element name="street" type="contact:optPostalLineType"
        minOccurs="0" maxOccurs="3"/>
      <element name="city" type="contact:postalLineType"/>
      <element name="sp" type="contact:optPostalLineType"
        minOccurs="0"/>
      <element name="pc" type="contact:pcType"
        minOccurs="0"/>
      <element name="cc" type="contact:ccType"/>
    </sequence>
  </complexType>

  <complexType name="authInfoType">
    <choice>
      <element name="pw" type="eppcom:pwAuthInfoType"/>
      <element name="ext" type="eppcom:extAuthInfoType"/>
    </choice>
  </complexType>

  <complexType name="discloseType">
    <sequence>
      <element name="name" type="contact:intLocType"
        minOccurs="0" maxOccurs="2"/>
      <element name="org" type="contact:intLocType"
        minOccurs="0" maxOccurs="2"/>
      <element name="addr" type="contact:intLocType"
        minOccurs="0" maxOccurs="2"/>
      <element name="voice" minOccurs="0"/>
      <element name="fax" minOccurs="0"/>
      <element name="email" minOccurs="0"/>
    </sequence>
    <attribute name="flag" type="boolean" use="required"/>
  </complexType>

  <complexType name="intLocType">
    <attribute name="type" type="contact:postalInfoEnumType"
      use="required"/>
  </complexType>

  <!--
Child element of commands that require only an identifier.
-->
  <complexType name="sIDType">
    <sequence>
      <element name="id" type="eppcom:clIDType"/>
    </sequence>
  </complexType>

  <!--
Child element of commands that accept multiple identifiers.

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```

-->
  <complexType name="mIDType">
    <sequence>
      <element name="id" type="eppcom:clIDType"
        maxOccurs="unbounded"/>
    </sequence>
  </complexType>

<!--
Child elements of the <info> and <transfer> commands.
-->
  <complexType name="authIDType">
    <sequence>
      <element name="id" type="eppcom:clIDType"/>
      <element name="authInfo" type="contact:authInfoType"
        minOccurs="0"/>
    </sequence>
  </complexType>

<!--
Child elements of the <update> command.
-->
  <complexType name="updateType">
    <sequence>
      <element name="id" type="eppcom:clIDType"/>
      <element name="add" type="contact:addRemType"
        minOccurs="0"/>
      <element name="rem" type="contact:addRemType"
        minOccurs="0"/>
      <element name="chg" type="contact:chgType"
        minOccurs="0"/>
    </sequence>
  </complexType>

<!--
Data elements that can be added or removed.
-->
  <complexType name="addRemType">
    <sequence>
      <element name="status" type="contact:statusType"
        maxOccurs="7"/>
    </sequence>
  </complexType>

<!--
Data elements that can be changed.
-->
  <complexType name="chgType">
    <sequence>
      <element name="postalInfo" type="contact:chgPostalInfoType"
        minOccurs="0" maxOccurs="2"/>
      <element name="voice" type="contact:e164Type"
        minOccurs="0"/>
      <element name="fax" type="contact:e164Type"
        minOccurs="0"/>
      <element name="email" type="eppcom:minTokenType"
        minOccurs="0"/>

```

```

        <element name="authInfo" type="contact:authInfoType"
            minOccurs="0"/>
        <element name="disclose" type="contact:discloseType"
            minOccurs="0"/>
    </sequence>
</complexType>

<complexType name="chgPostalInfoType">
    <sequence>
        <element name="name" type="contact:postalLineType"
            minOccurs="0"/>
        <element name="org" type="contact:optPostalLineType"
            minOccurs="0"/>
        <element name="addr" type="contact:addrType"
            minOccurs="0"/>
    </sequence>
    <attribute name="type" type="contact:postalInfoEnumType"
        use="required"/>
</complexType>

<!--
Child response elements.
-->
    <element name="chkData" type="contact:chkDataType"/>
    <element name="creData" type="contact:creDataType"/>
    <element name="infData" type="contact:infDataType"/>
    <element name="panData" type="contact:panDataType"/>
    <element name="trnData" type="contact:trnDataType"/>

<!--
<check> response elements.
-->
    <complexType name="chkDataType">
        <sequence>
            <element name="cd" type="contact:checkType"
                maxOccurs="unbounded"/>
        </sequence>
    </complexType>

    <complexType name="checkType">
        <sequence>
            <element name="id" type="contact:checkIDType"/>
            <element name="reason" type="eppcom:reasonType"
                minOccurs="0"/>
        </sequence>
    </complexType>

    <complexType name="checkIDType">
        <simpleContent>
            <extension base="eppcom:clIDType">
                <attribute name="avail" type="boolean"
                    use="required"/>
            </extension>
        </simpleContent>
    </complexType>

<!--

```



```

<create> response elements.
-->
  <complexType name="creDataType">
    <sequence>
      <element name="id" type="eppcom:clIDType"/>
      <element name="crDate" type="dateTime"/>
    </sequence>
  </complexType>

<!--
<info> response elements.
-->
  <complexType name="infDataType">
    <sequence>
      <element name="id" type="eppcom:clIDType"/>
      <element name="roid" type="eppcom:roidType"/>
      <element name="status" type="contact:statusType"
        maxOccurs="7"/>
      <element name="postalInfo" type="contact:postalInfoType"
        maxOccurs="2"/>
      <element name="voice" type="contact:e164Type"
        minOccurs="0"/>
      <element name="fax" type="contact:e164Type"
        minOccurs="0"/>
      <element name="email" type="eppcom:minTokenType"/>
      <element name="clID" type="eppcom:clIDType"/>
      <element name="crID" type="eppcom:clIDType"/>
      <element name="crDate" type="dateTime"/>
      <element name="upID" type="eppcom:clIDType"
        minOccurs="0"/>
      <element name="upDate" type="dateTime"
        minOccurs="0"/>
      <element name="trDate" type="dateTime"
        minOccurs="0"/>
      <element name="authInfo" type="contact:authInfoType"
        minOccurs="0"/>
      <element name="disclose" type="contact:discloseType"
        minOccurs="0"/>
    </sequence>
  </complexType>

<!--
Status is a combination of attributes and an optional human-readable
message that may be expressed in languages other than English.
-->
  <complexType name="statusType">
    <simpleContent>
      <extension base="normalizedString">
        <attribute name="s" type="contact:statusValueType"
          use="required"/>
        <attribute name="lang" type="language"
          default="en"/>
      </extension>
    </simpleContent>
  </complexType>

  <simpleType name="statusValueType">

```

```

    <restriction base="token">
      <enumeration value="clientDeleteProhibited"/>
      <enumeration value="clientTransferProhibited"/>
      <enumeration value="clientUpdateProhibited"/>
      <enumeration value="linked"/>
      <enumeration value="ok"/>
      <enumeration value="pendingCreate"/>
      <enumeration value="pendingDelete"/>
      <enumeration value="pendingTransfer"/>
      <enumeration value="pendingUpdate"/>
      <enumeration value="serverDeleteProhibited"/>
      <enumeration value="serverTransferProhibited"/>
      <enumeration value="serverUpdateProhibited"/>
    </restriction>
  </simpleType>

<!--
Pending action notification response elements.
-->
  <complexType name="panDataType">
    <sequence>
      <element name="id" type="contact:paCLIDType"/>
      <element name="paTRID" type="epp:trIDType"/>
      <element name="paDate" type="dateTime"/>
    </sequence>
  </complexType>

  <complexType name="paCLIDType">
    <simpleContent>
      <extension base="eppcom:clIDType">
        <attribute name="paResult" type="boolean"
          use="required"/>
      </extension>
    </simpleContent>
  </complexType>

<!--
<transfer> response elements.
-->
  <complexType name="trnDataType">
    <sequence>
      <element name="id" type="eppcom:clIDType"/>
      <element name="trStatus" type="eppcom:trStatusType"/>
      <element name="reID" type="eppcom:clIDType"/>
      <element name="reDate" type="dateTime"/>
      <element name="acID" type="eppcom:clIDType"/>
      <element name="acDate" type="dateTime"/>
    </sequence>
  </complexType>

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

```

```

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

<schema targetNamespace="urn:ietf:params:xml:ns:domain-1.0"
  xmlns:domain="urn:ietf:params:xml:ns:domain-1.0"
  xmlns:host="urn:ietf:params:xml:ns:host-1.0"
  xmlns:epp="urn:ietf:params:xml:ns:epp-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"/>
  <import namespace="urn:ietf:params:xml:ns:epp-1.0"
    schemaLocation="epp-1.0.xsd"/>
  <import namespace="urn:ietf:params:xml:ns:host-1.0"
    schemaLocation="host-1.0.xsd"/>

  <annotation>
    <documentation>
      Extensible Provisioning Protocol v1.0
      domain provisioning schema.
    </documentation>
  </annotation>

<!--
Child elements found in EPP commands.
-->
  <element name="check" type="domain:mNameType"/>
  <element name="create" type="domain:createType"/>
  <element name="delete" type="domain:sNameType"/>
  <element name="info" type="domain:infoType"/>
  <element name="renew" type="domain:renewType"/>
  <element name="transfer" type="domain:transferType"/>
  <element name="update" type="domain:updateType"/>

<!--
Child elements of the <create> command.
-->
  <complexType name="createType">
    <sequence>
      <element name="name" type="eppcom:labelType"/>
      <element name="period" type="domain:periodType"
        minOccurs="0"/>
      <element name="ns" type="domain:nsType"
        minOccurs="0"/>
      <element name="registrant" type="eppcom:clIDType"
        minOccurs="0"/>
      <element name="contact" type="domain:contactType"
        minOccurs="0" maxOccurs="unbounded"/>
      <element name="authInfo" type="domain:authInfoType"/>
    </sequence>
  </complexType>

```

```

<complexType name="periodType">
  <simpleContent>
    <extension base="domain:pLimitType">
      <attribute name="unit" type="domain:pUnitType"
        use="required"/>
    </extension>
  </simpleContent>
</complexType>

<simpleType name="pLimitType">
  <restriction base="unsignedShort">
    <minInclusive value="1"/>
    <maxInclusive value="99"/>
  </restriction>
</simpleType>

<simpleType name="pUnitType">
  <restriction base="token">
    <enumeration value="y"/>
    <enumeration value="m"/>
  </restriction>
</simpleType>

<complexType name="nsType">
  <choice>
    <element name="hostObj" type="eppcom:labelType"
      maxOccurs="unbounded"/>
    <element name="hostAttr" type="domain:hostAttrType"
      maxOccurs="unbounded"/>
  </choice>
</complexType>
<!--
Name servers are either host objects or attributes.
-->

<complexType name="hostAttrType">
  <sequence>
    <element name="hostName" type="eppcom:labelType"/>
    <element name="hostAddr" type="host:addrType"
      minOccurs="0" maxOccurs="unbounded"/>
  </sequence>
</complexType>
<!--
If attributes, addresses are optional and follow the
structure defined in the host mapping.
-->

<complexType name="contactType">
  <simpleContent>
    <extension base="eppcom:clIDType">
      <attribute name="type" type="domain:contactAttrType"/>
    </extension>
  </simpleContent>
</complexType>

<simpleType name="contactAttrType">
  <restriction base="token">

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        <enumeration value="admin"/>
        <enumeration value="billing"/>
        <enumeration value="tech"/>
    </restriction>
</simpleType>

<complexType name="authInfoType">
    <choice>
        <element name="pw" type="eppcom:pwAuthInfoType"/>
        <element name="ext" type="eppcom:extAuthInfoType"/>
    </choice>
</complexType>

<!--
Child element of commands that require a single name.
-->
<complexType name="sNameType">
    <sequence>
        <element name="name" type="eppcom:labelType"/>
    </sequence>
</complexType>

<!--
Child element of commands that accept multiple names.
-->
<complexType name="mNameType">
    <sequence>
        <element name="name" type="eppcom:labelType"
            maxOccurs="unbounded"/>
    </sequence>
</complexType>

<!--
Child elements of the <info> command.
-->
<complexType name="infoType">
    <sequence>
        <element name="name" type="domain:infoNameType"/>
        <element name="authInfo" type="domain:authInfoType"
            minOccurs="0"/>
    </sequence>
</complexType>

<complexType name="infoNameType">
    <simpleContent>
        <extension base = "eppcom:labelType">
            <attribute name="hosts" type="domain:hostsType"
                default="all"/>
        </extension>
    </simpleContent>
</complexType>

<simpleType name="hostsType">
    <restriction base="token">
        <enumeration value="all"/>
        <enumeration value="del"/>
        <enumeration value="none"/>
    </restriction>
</simpleType>

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        <enumeration value="sub"/>
    </restriction>
</simpleType>

<!--
Child elements of the <renew> command.
-->
<complexType name="renewType">
    <sequence>
        <element name="name" type="eppcom:labelType"/>
        <element name="curExpDate" type="date"/>
        <element name="period" type="domain:periodType"
            minOccurs="0"/>
    </sequence>
</complexType>

<!--
Child elements of the <transfer> command.
-->
<complexType name="transferType">
    <sequence>
        <element name="name" type="eppcom:labelType"/>
        <element name="period" type="domain:periodType"
            minOccurs="0"/>
        <element name="authInfo" type="domain:authInfoType"
            minOccurs="0"/>
    </sequence>
</complexType>

<!--
Child elements of the <update> command.
-->
<complexType name="updateType">
    <sequence>
        <element name="name" type="eppcom:labelType"/>
        <element name="add" type="domain:addRemType"
            minOccurs="0"/>
        <element name="rem" type="domain:addRemType"
            minOccurs="0"/>
        <element name="chg" type="domain:chgType"
            minOccurs="0"/>
    </sequence>
</complexType>

<!--
Data elements that can be added or removed.
-->
<complexType name="addRemType">
    <sequence>
        <element name="ns" type="domain:nsType"
            minOccurs="0"/>
        <element name="contact" type="domain:contactType"
            minOccurs="0" maxOccurs="unbounded"/>
        <element name="status" type="domain:statusType"
            minOccurs="0" maxOccurs="11"/>
    </sequence>
</complexType>

```

```

<!--
Data elements that can be changed.
-->
<complexType name="chgType">
  <sequence>
    <element name="registrant" type="domain:clIDChgType"
      minOccurs="0"/>
    <element name="authInfo" type="domain:authInfoChgType"
      minOccurs="0"/>
  </sequence>
</complexType>

<!--
Allow the registrant value to be nullified by changing the
minLength restriction to "0".
-->
<simpleType name="clIDChgType">
  <restriction base="token">
    <minLength value="0"/>
    <maxLength value="16"/>
  </restriction>
</simpleType>

<!--
Allow the authInfo value to be nullified by including an
empty element within the choice.
-->
<complexType name="authInfoChgType">
  <choice>
    <element name="pw" type="eppcom:pwAuthInfoType"/>
    <element name="ext" type="eppcom:extAuthInfoType"/>
    <element name="null"/>
  </choice>
</complexType>

<!--
Child response elements.
-->
<element name="chkData" type="domain:chkDataType"/>
<element name="creData" type="domain:creDataType"/>
<element name="infData" type="domain:infDataType"/>
<element name="panData" type="domain:panDataType"/>
<element name="renData" type="domain:renDataType"/>
<element name="trnData" type="domain:trnDataType"/>

<!--
<check> response elements.
-->
<complexType name="chkDataType">
  <sequence>
    <element name="cd" type="domain:checkType"
      maxOccurs="unbounded"/>
  </sequence>
</complexType>

<complexType name="checkType">

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    <sequence>
      <element name="name" type="domain:checkNameType"/>
      <element name="reason" type="eppcom:reasonType"
        minOccurs="0"/>
    </sequence>
  </complexType>

  <complexType name="checkNameType">
    <simpleContent>
      <extension base="eppcom:labelType">
        <attribute name="avail" type="boolean"
          use="required"/>
      </extension>
    </simpleContent>
  </complexType>

  <!--
  <create> response elements.
  -->
  <complexType name="creDataType">
    <sequence>
      <element name="name" type="eppcom:labelType"/>
      <element name="crDate" type="dateTime"/>
      <element name="exDate" type="dateTime"
        minOccurs="0"/>
    </sequence>
  </complexType>

  <!--
  <info> response elements.
  -->
  <complexType name="infDataType">
    <sequence>
      <element name="name" type="eppcom:labelType"/>
      <element name="roid" type="eppcom:roidType"/>
      <element name="status" type="domain:statusType"
        minOccurs="0" maxOccurs="11"/>
      <element name="registrant" type="eppcom:clIDType"
        minOccurs="0"/>
      <element name="contact" type="domain:contactType"
        minOccurs="0" maxOccurs="unbounded"/>
      <element name="ns" type="domain:nsType"
        minOccurs="0"/>
      <element name="host" type="eppcom:labelType"
        minOccurs="0" maxOccurs="unbounded"/>
      <element name="clID" type="eppcom:clIDType"/>
      <element name="crID" type="eppcom:clIDType"
        minOccurs="0"/>
      <element name="crDate" type="dateTime"
        minOccurs="0"/>
      <element name="upID" type="eppcom:clIDType"
        minOccurs="0"/>
      <element name="upDate" type="dateTime"
        minOccurs="0"/>
      <element name="exDate" type="dateTime"
        minOccurs="0"/>
      <element name="trDate" type="dateTime"

```



```

        minOccurs="0"/>
        <element name="authInfo" type="domain:authInfoType"
            minOccurs="0"/>
    </sequence>
</complexType>

<!--
Status is a combination of attributes and an optional human-readable
message that may be expressed in languages other than English.
-->
<complexType name="statusType">
    <simpleContent>
        <extension base="normalizedString">
            <attribute name="s" type="domain:statusValueType"
                use="required"/>
            <attribute name="lang" type="language"
                default="en"/>
        </extension>
    </simpleContent>
</complexType>

<simpleType name="statusValueType">
    <restriction base="token">
        <enumeration value="clientDeleteProhibited"/>
        <enumeration value="clientHold"/>
        <enumeration value="clientRenewProhibited"/>
        <enumeration value="clientTransferProhibited"/>
        <enumeration value="clientUpdateProhibited"/>
        <enumeration value="inactive"/>
        <enumeration value="ok"/>
        <enumeration value="pendingCreate"/>
        <enumeration value="pendingDelete"/>
        <enumeration value="pendingRenew"/>
        <enumeration value="pendingTransfer"/>
        <enumeration value="pendingUpdate"/>
        <enumeration value="serverDeleteProhibited"/>
        <enumeration value="serverHold"/>
        <enumeration value="serverRenewProhibited"/>
        <enumeration value="serverTransferProhibited"/>
        <enumeration value="serverUpdateProhibited"/>
    </restriction>
</simpleType>

<!--
Pending action notification response elements.
-->
<complexType name="panDataType">
    <sequence>
        <element name="name" type="domain:paNameType"/>
        <element name="paTRID" type="epp:trIDType"/>
        <element name="paDate" type="dateTime"/>
    </sequence>
</complexType>

<complexType name="paNameType">
    <simpleContent>
        <extension base="eppcom:labelType">

```

```

        <attribute name="paResult" type="boolean"
            use="required"/>
    </extension>
</simpleContent>
</complexType>

<!--
<renew> response elements.
-->
<complexType name="renDataType">
    <sequence>
        <element name="name" type="eppcom:labelType"/>
        <element name="exDate" type="dateTime"
            minOccurs="0"/>
    </sequence>
</complexType>

<!--
<transfer> response elements.
-->
<complexType name="trnDataType">
    <sequence>
        <element name="name" type="eppcom:labelType"/>
        <element name="trStatus" type="eppcom:trStatusType"/>
        <element name="reID" type="eppcom:clIDType"/>
        <element name="reDate" type="dateTime"/>
        <element name="acID" type="eppcom:clIDType"/>
        <element name="acDate" type="dateTime"/>
        <element name="exDate" type="dateTime"
            minOccurs="0"/>
    </sequence>
</complexType>

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

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

<schema targetNamespace="urn:ietf:params:xml:ns:epp-1.0"
    xmlns:epp="urn:ietf:params:xml:ns:epp-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 schema.
    </documentation>
</annotation>

<!--
Every EPP XML instance must begin with this element.
-->
    <element name="epp" type="epp:eppType"/>

<!--
An EPP XML instance must contain a greeting, hello, command,
response, or extension.
-->
    <complexType name="eppType">
        <choice>
            <element name="greeting" type="epp:greetingType"/>
            <element name="hello"/>
            <element name="command" type="epp:commandType"/>
            <element name="response" type="epp:responseType"/>
            <element name="extension" type="epp:extAnyType"/>
        </choice>
    </complexType>

<!--
A greeting is sent by a server in response to a client connection
or <hello>.
-->
    <complexType name="greetingType">
        <sequence>
            <element name="svID" type="epp:sIDType"/>
            <element name="svDate" type="dateTime"/>
            <element name="svcMenu" type="epp:svcMenuType"/>
            <element name="dcp" type="epp:dcpType"/>
        </sequence>
    </complexType>

<!--
Server IDs are strings with minimum and maximum length restrictions.
-->
    <simpleType name="sIDType">
        <restriction base="normalizedString">
            <minLength value="3"/>
            <maxLength value="64"/>
        </restriction>
    </simpleType>

<!--
A server greeting identifies available object services.
-->
    <complexType name="svcMenuType">
        <sequence>
            <element name="version" type="epp:versionType"
                maxOccurs="unbounded"/>
            <element name="lang" type="language"
                maxOccurs="unbounded"/>
            <element name="objURI" type="anyURI"
                maxOccurs="unbounded"/>
        </sequence>
    </complexType>

```

```

        <element name="svcExtension" type="epp:extURIType"
            minOccurs="0"/>
    </sequence>
</complexType>

<!--
Data Collection Policy types.
-->
<complexType name="dcpType">
    <sequence>
        <element name="access" type="epp:dcpAccessType"/>
        <element name="statement" type="epp:dcpStatementType"
            maxOccurs="unbounded"/>
        <element name="expiry" type="epp:dcpExpiryType"
            minOccurs="0"/>
    </sequence>
</complexType>

<complexType name="dcpAccessType">
    <choice>
        <element name="all"/>
        <element name="none"/>
        <element name="null"/>
        <element name="other"/>
        <element name="personal"/>
        <element name="personalAndOther"/>
    </choice>
</complexType>

<complexType name="dcpStatementType">
    <sequence>
        <element name="purpose" type="epp:dcpPurposeType"/>
        <element name="recipient" type="epp:dcpRecipientType"/>
        <element name="retention" type="epp:dcpRetentionType"/>
    </sequence>
</complexType>

<complexType name="dcpPurposeType">
    <sequence>
        <element name="admin"
            minOccurs="0"/>
        <element name="contact"
            minOccurs="0"/>
        <element name="other"
            minOccurs="0"/>
        <element name="prov"
            minOccurs="0"/>
    </sequence>
</complexType>

<complexType name="dcpRecipientType">
    <sequence>
        <element name="other"
            minOccurs="0"/>
        <element name="ours" type="epp:dcpOursType"
            minOccurs="0" maxOccurs="unbounded"/>
        <element name="public"

```

```

        minOccurs="0"/>
        <element name="same"
        minOccurs="0"/>
        <element name="unrelated"
        minOccurs="0"/>
    </sequence>
</complexType>

<complexType name="dcpOursType">
    <sequence>
        <element name="recDesc" type="epp:dcpRecDescType"
        minOccurs="0"/>
    </sequence>
</complexType>

<simpleType name="dcpRecDescType">
    <restriction base="token">
        <minLength value="1"/>
        <maxLength value="255"/>
    </restriction>
</simpleType>

<complexType name="dcpRetentionType">
    <choice>
        <element name="business"/>
        <element name="indefinite"/>
        <element name="legal"/>
        <element name="none"/>
        <element name="stated"/>
    </choice>
</complexType>

<complexType name="dcpExpiryType">
    <choice>
        <element name="absolute" type="dateTime"/>
        <element name="relative" type="duration"/>
    </choice>
</complexType>

<!--
Extension framework types.
-->
<complexType name="extAnyType">
    <sequence>
        <any namespace="##other"
        maxOccurs="unbounded"/>
    </sequence>
</complexType>

<complexType name="extURIType">
    <sequence>
        <element name="extURI" type="anyURI"
        maxOccurs="unbounded"/>
    </sequence>
</complexType>

<!--

```

An EPP version number is a dotted pair of decimal numbers.

```
-->
<simpleType name="versionType">
  <restriction base="token">
    <pattern value="[1-9]+\.[0-9]+"/>
    <enumeration value="1.0"/>
  </restriction>
</simpleType>
```

<!--

Command types.

```
-->
<complexType name="commandType">
  <sequence>
    <choice>
      <element name="check" type="epp:readWriteType"/>
      <element name="create" type="epp:readWriteType"/>
      <element name="delete" type="epp:readWriteType"/>
      <element name="info" type="epp:readWriteType"/>
      <element name="login" type="epp:loginType"/>
      <element name="logout"/>
      <element name="poll" type="epp:pollType"/>
      <element name="renew" type="epp:readWriteType"/>
      <element name="transfer" type="epp:transferType"/>
      <element name="update" type="epp:readWriteType"/>
    </choice>
    <element name="extension" type="epp:extAnyType"
      minOccurs="0"/>
    <element name="clTRID" type="epp:trIDStringType"
      minOccurs="0"/>
  </sequence>
</complexType>
```

<!--

The <login> command.

```
-->
<complexType name="loginType">
  <sequence>
    <element name="clID" type="eppcom:clIDType"/>
    <element name="pw" type="epp:pwType"/>
    <element name="newPW" type="epp:pwType"
      minOccurs="0"/>
    <element name="options" type="epp:credsOptionsType"/>
    <element name="svcs" type="epp:loginSvcType"/>
  </sequence>
</complexType>
```

```
<complexType name="credsOptionsType">
  <sequence>
    <element name="version" type="epp:versionType"/>
    <element name="lang" type="language"/>
  </sequence>
</complexType>
```

```
<simpleType name="pwType">
  <restriction base="token">
    <minLength value="6"/>
  </restriction>
</simpleType>
```

```

    <maxLength value="16"/>
  </restriction>
</simpleType>

<complexType name="loginSvcType">
  <sequence>
    <element name="objURI" type="anyURI"
      maxOccurs="unbounded"/>
    <element name="svcExtension" type="epp:extURIType"
      minOccurs="0"/>
  </sequence>
</complexType>

<!--
The <poll> command.
-->
<complexType name="pollType">
  <attribute name="op" type="epp:pollOpType"
    use="required"/>
  <attribute name="msgID" type="token"/>
</complexType>

<simpleType name="pollOpType">
  <restriction base="token">
    <enumeration value="ack"/>
    <enumeration value="req"/>
  </restriction>
</simpleType>

<!--
The <transfer> command. This is object-specific, and uses attributes
to identify the requested operation.
-->
<complexType name="transferType">
  <sequence>
    <any namespace="##other"/>
  </sequence>
  <attribute name="op" type="epp:transferOpType"
    use="required"/>
</complexType>

<simpleType name="transferOpType">
  <restriction base="token">
    <enumeration value="approve"/>
    <enumeration value="cancel"/>
    <enumeration value="query"/>
    <enumeration value="reject"/>
    <enumeration value="request"/>
  </restriction>
</simpleType>

<!--
All other object-centric commands. EPP doesn't specify the syntax or
semantics of object-centric command elements. The elements MUST be
described in detail in another schema specific to the object.
-->
<complexType name="readWriteType">

```

```

    <sequence>
      <any namespace="##other"/>
    </sequence>
  </complexType>

  <complexType name="trIDType">
    <sequence>
      <element name="clTRID" type="epp:trIDStringType"
        minOccurs="0"/>
      <element name="svTRID" type="epp:trIDStringType"/>
    </sequence>
  </complexType>

  <simpleType name="trIDStringType">
    <restriction base="token">
      <minLength value="3"/>
      <maxLength value="64"/>
    </restriction>
  </simpleType>

  <!--
Response types.
-->
  <complexType name="responseType">
    <sequence>
      <element name="result" type="epp:resultType"
        maxOccurs="unbounded"/>
      <element name="msgQ" type="epp:msgQType"
        minOccurs="0"/>
      <element name="resData" type="epp:extAnyType"
        minOccurs="0"/>
      <element name="extension" type="epp:extAnyType"
        minOccurs="0"/>
      <element name="trID" type="epp:trIDType"/>
    </sequence>
  </complexType>

  <complexType name="resultType">
    <sequence>
      <element name="msg" type="epp:msgType"/>
      <choice minOccurs="0" maxOccurs="unbounded">
        <element name="value" type="epp:errValueType"/>
        <element name="extValue" type="epp:extErrValueType"/>
      </choice>
    </sequence>
    <attribute name="code" type="epp:resultCodeType"
      use="required"/>
  </complexType>

  <complexType name="errValueType" mixed="true">
    <sequence>
      <any namespace="##any" processContents="skip"/>
    </sequence>
    <anyAttribute namespace="##any" processContents="skip"/>
  </complexType>

  <complexType name="extErrValueType">

```



```

    <sequence>
      <element name="value" type="epp:errValueType"/>
      <element name="reason" type="epp:msgType"/>
    </sequence>
  </complexType>

  <complexType name="msgQType">
    <sequence>
      <element name="qDate" type="dateTime"
        minOccurs="0"/>
      <element name="msg" type="epp:mixedMsgType"
        minOccurs="0"/>
    </sequence>
    <attribute name="count" type="unsignedLong"
      use="required"/>
    <attribute name="id" type="eppcom:minTokenType"
      use="required"/>
  </complexType>

  <complexType name="mixedMsgType" mixed="true">
    <sequence>
      <any processContents="skip"
        minOccurs="0" maxOccurs="unbounded"/>
    </sequence>
    <attribute name="lang" type="language"
      default="en"/>
  </complexType>

<!--
Human-readable text may be expressed in languages other than English.
-->
  <complexType name="msgType">
    <simpleContent>
      <extension base="normalizedString">
        <attribute name="lang" type="language"
          default="en"/>
      </extension>
    </simpleContent>
  </complexType>

<!--
EPP result codes.
-->
  <simpleType name="resultCodeType">
    <restriction base="unsignedShort">
      <enumeration value="1000"/>
      <enumeration value="1001"/>
      <enumeration value="1300"/>
      <enumeration value="1301"/>
      <enumeration value="1500"/>
      <enumeration value="2000"/>
      <enumeration value="2001"/>
      <enumeration value="2002"/>
      <enumeration value="2003"/>
      <enumeration value="2004"/>
      <enumeration value="2005"/>
      <enumeration value="2100"/>
    </restriction>
  </simpleType>

```

```

        <enumeration value="2101"/>
        <enumeration value="2102"/>
        <enumeration value="2103"/>
        <enumeration value="2104"/>
        <enumeration value="2105"/>
        <enumeration value="2106"/>
        <enumeration value="2200"/>
        <enumeration value="2201"/>
        <enumeration value="2202"/>
        <enumeration value="2300"/>
        <enumeration value="2301"/>
        <enumeration value="2302"/>
        <enumeration value="2303"/>
        <enumeration value="2304"/>
        <enumeration value="2305"/>
        <enumeration value="2306"/>
        <enumeration value="2307"/>
        <enumeration value="2308"/>
        <enumeration value="2400"/>
        <enumeration value="2500"/>
        <enumeration value="2501"/>
        <enumeration value="2502"/>
    </restriction>
</simpleType>

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

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

<schema targetNamespace="urn:ietf:params:xml:ns:eppcom-1.0"
        xmlns:eppcom="urn:ietf:params:xml:ns:eppcom-1.0"
        xmlns="http://www.w3.org/2001/XMLSchema"
        elementFormDefault="qualified">

    <annotation>
        <documentation>
            Extensible Provisioning Protocol v1.0
            shared structures schema.
        </documentation>
    </annotation>

<!--
Object authorization information types.
-->
    <complexType name="pwAuthInfoType">
        <simpleContent>
            <extension base="normalizedString">
                <attribute name="roid" type="eppcom:roidType"/>
            </extension>
        </simpleContent>
    </complexType>

```

```

<complexType name="extAuthInfoType">
  <sequence>
    <any namespace="##other"/>
  </sequence>
</complexType>

<!--
<check> response types.
-->
<complexType name="reasonType">
  <simpleContent>
    <extension base="eppcom:reasonBaseType">
      <attribute name="lang" type="language"/>
    </extension>
  </simpleContent>
</complexType>

<simpleType name="reasonBaseType">
  <restriction base="token">
    <minLength value="1"/>
    <maxLength value="32"/>
  </restriction>
</simpleType>

<!--
Abstract client and object identifier type.
-->
<simpleType name="clIDType">
  <restriction base="token">
    <minLength value="3"/>
    <maxLength value="16"/>
  </restriction>
</simpleType>

<!--
DNS label type.
-->
<simpleType name="labelType">
  <restriction base="token">
    <minLength value="1"/>
    <maxLength value="255"/>
  </restriction>
</simpleType>

<!--
Non-empty token type.
-->
<simpleType name="minTokenType">
  <restriction base="token">
    <minLength value="1"/>
  </restriction>
</simpleType>

<!--
Repository Object Identifier type.
-->

```

```

<simpleType name="roidType">
  <restriction base="token">
    <pattern value="(\w|_){1,80}-\w{1,8}"/>
  </restriction>
</simpleType>

<!--
Transfer status identifiers.
-->
<simpleType name="trStatusType">
  <restriction base="token">
    <enumeration value="clientApproved"/>
    <enumeration value="clientCancelled"/>
    <enumeration value="clientRejected"/>
    <enumeration value="pending"/>
    <enumeration value="serverApproved"/>
    <enumeration value="serverCancelled"/>
  </restriction>
</simpleType>

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

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

<schema targetNamespace="urn:ietf:params:xml:ns:host-1.0"
  xmlns:host="urn:ietf:params:xml:ns:host-1.0"
  xmlns:epp="urn:ietf:params:xml:ns:epp-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"/>
  <import namespace="urn:ietf:params:xml:ns:epp-1.0"
    schemaLocation="epp-1.0.xsd"/>

  <annotation>
    <documentation>
      Extensible Provisioning Protocol v1.0
      host provisioning schema.
    </documentation>
  </annotation>

  <!--
  Child elements found in EPP commands.
  -->
  <element name="check" type="host:mNameType"/>
  <element name="create" type="host:createType"/>

```

```

<element name="delete" type="host:sNameType"/>
<element name="info" type="host:sNameType"/>
<element name="update" type="host:updateType"/>

<!--
Child elements of the <create> command.
-->
<complexType name="createType">
  <sequence>
    <element name="name" type="eppcom:labelType"/>
    <element name="addr" type="host:addrType"
      minOccurs="0" maxOccurs="unbounded"/>
  </sequence>
</complexType>

<complexType name="addrType">
  <simpleContent>
    <extension base="host:addrStringType">
      <attribute name="ip" type="host:ipType"
        default="v4"/>
    </extension>
  </simpleContent>
</complexType>

<simpleType name="addrStringType">
  <restriction base="token">
    <minLength value="3"/>
    <maxLength value="45"/>
  </restriction>
</simpleType>

<simpleType name="ipType">
  <restriction base="token">
    <enumeration value="v4"/>
    <enumeration value="v6"/>
  </restriction>
</simpleType>

<!--
Child elements of the <delete> and <info> commands.
-->
<complexType name="sNameType">
  <sequence>
    <element name="name" type="eppcom:labelType"/>
  </sequence>
</complexType>

<!--
Child element of commands that accept multiple names.
-->
<complexType name="mNameType">
  <sequence>
    <element name="name" type="eppcom:labelType"
      maxOccurs="unbounded"/>
  </sequence>
</complexType>

```

```

<!--
Child elements of the <update> command.
-->
<complexType name="updateType">
  <sequence>
    <element name="name" type="eppcom:labelType"/>
    <element name="add" type="host:addRemType"
      minOccurs="0"/>
    <element name="rem" type="host:addRemType"
      minOccurs="0"/>
    <element name="chg" type="host:chgType"
      minOccurs="0"/>
  </sequence>
</complexType>

<!--
Data elements that can be added or removed.
-->
<complexType name="addRemType">
  <sequence>
    <element name="addr" type="host:addrType"
      minOccurs="0" maxOccurs="unbounded"/>
    <element name="status" type="host:statusType"
      minOccurs="0" maxOccurs="7"/>
  </sequence>
</complexType>

<!--
Data elements that can be changed.
-->
<complexType name="chgType">
  <sequence>
    <element name="name" type="eppcom:labelType"/>
  </sequence>
</complexType>

<!--
Child response elements.
-->
<element name="chkData" type="host:chkDataType"/>
<element name="creData" type="host:creDataType"/>
<element name="infData" type="host:infDataType"/>
<element name="panData" type="host:panDataType"/>

<!--
<check> response elements.
-->
<complexType name="chkDataType">
  <sequence>
    <element name="cd" type="host:checkType"
      maxOccurs="unbounded"/>
  </sequence>
</complexType>

<complexType name="checkType">
  <sequence>
    <element name="name" type="host:checkNameType"/>

```

```

        <element name="reason" type="eppcom:reasonType"
            minOccurs="0"/>
    </sequence>
</complexType>

<complexType name="checkNameType">
    <simpleContent>
        <extension base="eppcom:labelType">
            <attribute name="avail" type="boolean"
                use="required"/>
        </extension>
    </simpleContent>
</complexType>

<!--
<create> response elements.
-->
<complexType name="creDataType">
    <sequence>
        <element name="name" type="eppcom:labelType"/>
        <element name="crDate" type="dateTime"/>
    </sequence>
</complexType>

<!--
<info> response elements.
-->
<complexType name="infDataType">
    <sequence>
        <element name="name" type="eppcom:labelType"/>
        <element name="roid" type="eppcom:roidType"/>
        <element name="status" type="host:statusType"
            minOccurs="7"/>
        <element name="addr" type="host:addrType"
            minOccurs="0" maxOccurs="unbounded"/>
        <element name="clID" type="eppcom:clIDType"/>
        <element name="crID" type="eppcom:clIDType"/>
        <element name="crDate" type="dateTime"/>
        <element name="upID" type="eppcom:clIDType"
            minOccurs="0"/>
        <element name="upDate" type="dateTime"
            minOccurs="0"/>
        <element name="trDate" type="dateTime"
            minOccurs="0"/>
    </sequence>
</complexType>

<!--
Status is a combination of attributes and an optional human-readable
message that may be expressed in languages other than English.
-->
<complexType name="statusType">
    <simpleContent>
        <extension base="normalizedString">
            <attribute name="s" type="host:statusValueType"
                use="required"/>
            <attribute name="lang" type="language"

```

```

        default="en"/>
    </extension>
</simpleContent>
</complexType>

<simpleType name="statusValueType">
    <restriction base="token">
        <enumeration value="clientDeleteProhibited"/>
        <enumeration value="clientUpdateProhibited"/>
        <enumeration value="linked"/>
        <enumeration value="ok"/>
        <enumeration value="pendingCreate"/>
        <enumeration value="pendingDelete"/>
        <enumeration value="pendingTransfer"/>
        <enumeration value="pendingUpdate"/>
        <enumeration value="serverDeleteProhibited"/>
        <enumeration value="serverUpdateProhibited"/>
    </restriction>
</simpleType>

<!--
Pending action notification response elements.
-->
<complexType name="panDataType">
    <sequence>
        <element name="name" type="host:paNameType"/>
        <element name="paTRID" type="epp:trIDType"/>
        <element name="paDate" type="dateTime"/>
    </sequence>
</complexType>

<complexType name="paNameType">
    <simpleContent>
        <extension base="eppcom:labelType">
            <attribute name="paResult" type="boolean"
                use="required"/>
        </extension>
    </simpleContent>
</complexType>

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

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

<schema targetNamespace="urn:ietf:params:xml:ns:neulevel-1.0"
    xmlns:neulevel="urn:ietf:params:xml:ns:neulevel-1.0"
    xmlns="http://www.w3.org/2001/XMLSchema"
    elementFormDefault="qualified">

    <annotation>
        <documentation>

```



```

        Extensible Provisioning Protocol v1.0
        NeuLevel extension schema.
    </documentation>
</annotation>

<!--
NeuLevel extension type.
-->
    <element name="extension" type="neulevel:neulevelExtensionType"/>

    <complexType name="neulevelExtensionType">
        <sequence>
            <element name="unspec" type="neulevel:neulevelUnspecType" minOccurs="0"/>
                <element name="genericNVPairs"
type="neulevel:neulevelNVPairType" minOccurs="0"/>
            </sequence>
        </complexType>

<!--
NeuLevel extension type: string for name/value (for EPP-04 compatibility)
-->

    <simpleType name="neulevelUnspecType">
        <restriction base="normalizedString">
            </restriction>
        </simpleType>

    <complexType name="neulevelNVPairType">
        <sequence>
            <element name="NVTuple" type="neulevel:NVType" minOccurs="0"
maxOccurs="unbounded"/>
        </sequence>
    </complexType>

    <complexType name="NVType">
        <simpleContent>
            <extension base="string">
                <attribute name="name" type="string" use="required"/>
            </extension>
        </simpleContent>
    </complexType>

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

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

<schema targetNamespace="urn:ietf:params:xml:ns:neustar-1.0"
    xmlns:neustar="urn:ietf:params:xml:ns:neustar-1.0"
    xmlns:epp="urn:ietf:params:xml:ns:epp-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"/>
    <import namespace="urn:ietf:params:xml:ns:epp-1.0"
        schemaLocation="epp-1.0.xsd"/>
    <import namespace="urn:ietf:params:xml:ns:host-1.0"
        schemaLocation="host-1.0.xsd"/>

    <annotation>
        <documentation>
            Extensible Provisioning Protocol v1.0
            NeuStar-specific schema.
        </documentation>
    </annotation>

    <element name="trnData" type="neustar:trnDataType"/>

<!--
poll response elements for transactions.
-->
    <complexType name="trnDataType">
        <sequence>
            <element name="objId" type="eppcom:labelType"/>
            <element name="objType" type="neustar:objTypeType"/>
            <element name="operation" type="neustar:operationType"/>
            <element name="trnDate" type="dateTime"/>
        </sequence>
    </complexType>

    <simpleType name="objTypeType">
        <restriction base="token">
            <enumeration value="domain"/>
            <enumeration value="contact"/>
            <enumeration value="nameserver"/>
        </restriction>
    </simpleType>

    <simpleType name="operationType">
        <restriction base="token">
            <enumeration value="add"/>
            <enumeration value="delete"/>
            <enumeration value="update"/>
            <enumeration value="renew"/>
            <enumeration value="transfer"/>
        </restriction>
    </simpleType>

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

```

```

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

<schema targetNamespace="http://custom/obj1ext-1.0"
  xmlns:obj1ext="http://custom/obj1ext-1.0"
  xmlns:epp="urn:iana:xml:ns:epp-1.0"
  xmlns:eppcom="urn:iana:xml:ns:eppcom-1.0"
  xmlns="http://www.w3.org/2001/XMLSchema"
  elementFormDefault="qualified">

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

  <annotation>
    <documentation>
      Extensible Provisioning Protocol v1.0
      example unspecified extension provisioning schema.
    </documentation>
  </annotation>

<!--
Types used within an EPP greeting.
-->
  <element name="svc"/>

<!--
Define custom elements and types here.
-->

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

```

```

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

  <schema targetNamespace="urn:ietf:params:xml:ns:secDNS-1.0"
    xmlns:secDNS="urn:ietf:params:xml:ns:secDNS-1.0"
    xmlns="http://www.w3.org/2001/XMLSchema"
    elementFormDefault="qualified">

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

```

```
<annotation>
  <documentation>
    Extensible Provisioning Protocol v1.0
    domain name extension schema for provisioning
    DNS security (DNSSEC) extensions.
  </documentation>
</annotation>
```

```
<!--
```

```
Child elements found in EPP commands.
```

```
-->
```

```
  <element name="create" type="secDNS:dsType"/>
  <element name="update" type="secDNS:updateType"/>
```

```
<!--
```

```
Child elements of the <create> command.
```

```
-->
```

```
  <complexType name="dsType">
    <sequence>
      <element name="dsData" type="secDNS:dsDataType"
        maxOccurs="unbounded"/>
    </sequence>
  </complexType>
```

```
  <complexType name="dsDataType">
    <sequence>
      <element name="keyTag" type="unsignedShort"/>
      <element name="alg" type="unsignedByte"/>
      <element name="digestType" type="unsignedByte"/>
      <element name="digest" type="hexBinary"/>
      <element name="maxSigLife" type="secDNS:maxSigLifeType"
        minOccurs="0"/>
      <element name="keyData" type="secDNS:keyDataType"
        minOccurs="0"/>
    </sequence>
  </complexType>
```

```
  <simpleType name="maxSigLifeType">
    <restriction base="int">
      <minInclusive value="1"/>
    </restriction>
  </simpleType>
```

```
  <complexType name="keyDataType">
    <sequence>
      <element name="flags" type="unsignedShort"/>
      <element name="protocol" type="unsignedByte"/>
      <element name="alg" type="unsignedByte"/>
      <element name="pubKey" type="secDNS:keyType"/>
    </sequence>
  </complexType>
```

```
  <simpleType name="keyType">
    <restriction base="base64Binary">
      <minLength value="1"/>
    </restriction>
  </simpleType>
```

```

<!--
Child elements of the <update> command.
-->
  <complexType name="updateType">
    <choice>
      <element name="add" type="secDNS:dsType"/>
      <element name="chg" type="secDNS:dsType"/>
      <element name="rem" type="secDNS:remType"/>
    </choice>
    <attribute name="urgent" type="boolean" default="false"/>
  </complexType>

  <complexType name="remType">
    <sequence>
      <element name="keyTag" type="unsignedShort"
        maxOccurs="unbounded"/>
    </sequence>
  </complexType>

<!--
Child response elements.
-->
  <element name="infData" type="secDNS:dsType"/>

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

```

```

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

```

```

<schema targetNamespace="urn:ietf:params:xml:ns:svcsub-1.0"
  xmlns:svcsub="urn:ietf:params:xml:ns:svcsub-1.0"
  xmlns:epp="urn:ietf:params:xml:ns:epp-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"/>
  <import namespace="urn:ietf:params:xml:ns:epp-1.0"
    schemaLocation="epp-1.0.xsd"/>

```

```

<annotation>
  <documentation>
    Extensible Provisioning Protocol v1.0
    service subscription provisioning schema.
  </documentation>
</annotation>

```

```

<!--
Child elements found in EPP commands.
-->
  <element name="check" type="svcsub:mNameType"/>
  <element name="create" type="svcsub:createType"/>
  <element name="delete" type="svcsub:sNameType"/>
  <element name="info" type="svcsub:sNameType"/>
  <element name="renew" type="svcsub:renewType"/>
  <element name="transfer" type="svcsub:transferType"/>
  <element name="update" type="svcsub:updateType"/>

<!--
Child elements of the <create> command.
-->
  <complexType name="createType">
    <sequence>
      <element name="id" type="svcsub:subIDType"/>
      <element name="service" type="svcsub:svcIDType"/>
      <element name="param" type="svcsub:svcParamType"
        minOccurs="0" maxOccurs="unbounded"/>
      <element name="period" type="svcsub:periodType"
        minOccurs="0"/>
      <element name="registrant" type="eppcom:clIDType"
        minOccurs="0"/>
      <element name="contact" type="svcsub:contactType"
        minOccurs="0" maxOccurs="unbounded"/>
      <element name="authInfo" type="svcsub:authInfoType"
        minOccurs="0"/>
    </sequence>
  </complexType>

  <complexType name="periodType">
    <simpleContent>
      <extension base="svcsub:pLimitType">
        <attribute name="unit" type="svcsub:pUnitType"
          use="required"/>
      </extension>
    </simpleContent>
  </complexType>

  <simpleType name="pLimitType">
    <restriction base="unsignedShort">
      <minInclusive value="1"/>
      <maxInclusive value="99"/>
    </restriction>
  </simpleType>

  <simpleType name="pUnitType">
    <restriction base="token">
      <enumeration value="y"/>
      <enumeration value="m"/>
    </restriction>
  </simpleType>

  <complexType name="contactType">
    <simpleContent>
      <extension base="eppcom:clIDType">

```

```

        <attribute name="type" type="svcsub:contactAttrType"
            use="optional"/>
    </extension>
</simpleContent>
</complexType>

<simpleType name="contactAttrType">
    <restriction base="token">
        <enumeration value="admin"/>
        <enumeration value="billing"/>
        <enumeration value="tech"/>
        <enumeration value="primary"/>
        <enumeration value="secondary"/>
        <enumeration value="bizlock"/>
        <!--minLength value="3"/>
        <maxLength value="64"/-->
    </restriction>
</simpleType>

<complexType name="authInfoType">
    <choice>
        <element name="pw" type="eppcom:pwAuthInfoType"/>
        <element name="ext" type="eppcom:extAuthInfoType"/>
    </choice>
</complexType>

<simpleType name="subIDType">
    <restriction base="token">
        <minLength value="3"/>
        <maxLength value="64"/>
    </restriction>
</simpleType>

<simpleType name="svcIDType">
    <restriction base="token">
        <minLength value="3"/>
        <maxLength value="64"/>
    </restriction>
</simpleType>

<complexType name="svcParamType">
    <simpleContent>
        <extension base="token">
            <attribute name="name" type="svcsub:svcParamAttrType"
                use="required"/>
        </extension>
    </simpleContent>
</complexType>

<simpleType name="svcParamAttrType">
    <restriction base="token">
    </restriction>
</simpleType>

<simpleType name="userIDType">
    <restriction base="token">
        <minLength value="3"/>
    </restriction>
</simpleType>

```

```

        <maxLength value="64"/>
    </restriction>
</simpleType>

<!--
Child element of commands that require a single name.
-->
<complexType name="sNameType">
    <sequence>
        <element name="id" type="svcs:subIDType"/>
        <element name="service" type="svcs:svcIDType"
            minOccurs="0"/>
        <element name="userid" type="svcs:userIDType"
            minOccurs="0"/>
        <element name="authInfo" type="svcs:authInfoType"
            minOccurs="0"/>
    </sequence>
</complexType>

<!--
Child element of commands that accept multiple names.
-->
<complexType name="mNameType">
    <sequence>
        <element name="service" type="svcs:svcIDType"
            minOccurs="0"/>
        <element name="id" type="svcs:subIDType"
            maxOccurs="unbounded"/>
    </sequence>
</complexType>

<!--
Child elements of the <renew> command.
-->
<complexType name="renewType">
    <sequence>
        <element name="id" type="svcs:subIDType"/>
        <element name="service" type="svcs:svcIDType"
            minOccurs="0"/>
        <element name="curExpDate" type="date"/>
        <element name="period" type="svcs:periodType"
            minOccurs="0"/>
        <element name="userid" type="svcs:userIDType"
            minOccurs="0"/>
        <element name="authInfo" type="svcs:authInfoType"
            minOccurs="0"/>
    </sequence>
</complexType>

<!--
Child elements of the <transfer> command.
-->
<complexType name="transferType">
    <sequence>
        <element name="id" type="svcs:subIDType"/>
        <element name="service" type="svcs:svcIDType"
            minOccurs="0"/>
    </sequence>
</complexType>

```



```

        <element name="period" type="svcsub:periodType"
            minOccurs="0"/>
        <element name="userid" type="svcsub:userIDType"
            minOccurs="0"/>
        <element name="authInfo" type="svcsub:authInfoType"
            minOccurs="0"/>
    </sequence>
</complexType>

<!--
Child elements of the <update> command.
-->
<complexType name="updateType">
    <sequence>
        <element name="id" type="svcsub:subIDType"/>
        <element name="service" type="svcsub:svcIDType"
            minOccurs="0"/>
        <choice minOccurs="1" maxOccurs="3">
            <element name="add" type="svcsub:addRemType"
                minOccurs="0"/>
            <element name="rem" type="svcsub:addRemType"
                minOccurs="0"/>
            <element name="chg" type="svcsub:chgType"
                minOccurs="0"/>
        </choice>
        <element name="userid" type="svcsub:userIDType"
            minOccurs="0"/>
        <element name="authInfo" type="svcsub:authInfoType"
            minOccurs="0"/>
    </sequence>
</complexType>

<!--
Data elements that can be added or removed.
-->
<complexType name="addRemType">
    <choice minOccurs="1" maxOccurs="3">
        <element name="param" type="svcsub:svcParamType"
            minOccurs="0" maxOccurs="unbounded"/>
        <element name="contact" type="svcsub:contactType"
            minOccurs="0" maxOccurs="unbounded"/>
        <element name="status" type="svcsub:statusType"
            minOccurs="0" maxOccurs="14"/>
    </choice>
</complexType>

<!--
Data elements that can be changed.
-->
<complexType name="chgType">
    <sequence>
        <element name="registrant" type="eppcom:clIDType"
            minOccurs="0"/>
        <element name="authInfo" type="svcsub:authInfoType"
            minOccurs="0"/>
    </sequence>
</complexType>

```

```

<!--
Child response elements.
-->
  <element name="chkData" type="svcsub:chkDataType"/>
  <element name="creData" type="svcsub:creDataType"/>
  <element name="infData" type="svcsub:infDataType"/>
  <element name="panData" type="svcsub:panDataType"/>
  <element name="renData" type="svcsub:renDataType"/>
  <element name="trnData" type="svcsub:trnDataType"/>

<!--
<check> response elements.
-->
  <complexType name="chkDataType">
    <sequence>
      <element name="service" type="svcsub:svcIDType"
        minOccurs="0"/>
      <element name="cd" type="svcsub:checkType"
        maxOccurs="unbounded"/>
    </sequence>
  </complexType>

  <complexType name="checkType">
    <sequence>
      <element name="id" type="svcsub:checkIDType"/>
      <element name="reason" type="eppcom:reasonType"
        minOccurs="0"/>
    </sequence>
  </complexType>

  <complexType name="checkIDType">
    <simpleContent>
      <extension base="eppcom:clIDType">
        <attribute name="avail" type="boolean"
          use="required"/>
      </extension>
    </simpleContent>
  </complexType>

<!--
<create> and <renew> response elements.
-->
  <complexType name="creDataType">
    <sequence>
      <element name="id" type="svcsub:subIDType"/>
      <element name="service" type="svcsub:svcIDType"
        minOccurs="0"/>
      <element name="crDate" type="dateTime"/>
      <element name="exDate" type="dateTime"
        minOccurs="0"/>
    </sequence>
  </complexType>

<!--
<info> response elements.
-->

```

```

<complexType name="infDataType">
  <sequence>
    <element name="id" type="svcs:subIDType"/>
    <element name="roid" type="eppcom:roidType"/>
    <element name="status" type="svcs:statusType"
      maxOccurs="14"/>
    <element name="registrant" type="svcs:contactType"
      minOccurs="0"/>
    <element name="contact" type="svcs:contactType"
      minOccurs="0" maxOccurs="unbounded"/>
    <element name="service" type="svcs:svcIDType"/>
    <element name="param" type="svcs:svcParamType"
      minOccurs="0" maxOccurs="unbounded"/>
    <element name="clID" type="eppcom:clIDType"/>
    <element name="crID" type="eppcom:clIDType"/>
    <element name="crDate" type="dateTime"/>
    <element name="upID" type="eppcom:clIDType"
      minOccurs="0"/>
    <element name="upDate" type="dateTime"
      minOccurs="0"/>
    <element name="exDate" type="dateTime"
      minOccurs="0"/>
    <element name="trDate" type="dateTime"
      minOccurs="0"/>
    <element name="authInfo" type="svcs:authInfoType"
      minOccurs="0"/>
  </sequence>
</complexType>

```

```
<!--
```

Status is a combination of attributes and an optional human-readable message that may be expressed in languages other than English.

```
-->
```

```

<complexType name="statusType">
  <simpleContent>
    <extension base="normalizedString">
      <attribute name="s" type="svcs:statusValueType"
        use="required"/>
      <attribute name="lang" type="language"
        use="optional" default="en"/>
    </extension>
  </simpleContent>
</complexType>

```

```

<simpleType name="statusValueType">
  <restriction base="token">
    <enumeration value="clientDeleteProhibited"/>
    <enumeration value="clientSuspended"/>
    <enumeration value="clientRenewProhibited"/>
    <enumeration value="clientTransferProhibited"/>
    <enumeration value="clientUpdateProhibited"/>
    <enumeration value="inactive"/>
    <enumeration value="ok"/>
    <enumeration value="pendingDelete"/>
    <enumeration value="pendingTransfer"/>
    <enumeration value="pendingVerification"/>
    <enumeration value="serverDeleteProhibited"/>
  </restriction>
</simpleType>

```

```

        <enumeration value="serverSuspended"/>
        <enumeration value="serverRenewProhibited"/>
        <enumeration value="serverTransferProhibited"/>
        <enumeration value="serverUpdateProhibited"/>
    </restriction>
</simpleType>

<!--
Pending action notification response elements.
-->
<complexType name="panDataType">
    <sequence>
        <element name="id" type="svcs:paSubIDType"/>
        <element name="service" type="svcs:svcIDType"
            minOccurs="0"/>
        <element name="paTRID" type="epp:trIDType"/>
        <element name="paDate" type="dateTime"/>
    </sequence>
</complexType>

<complexType name="paSubIDType">
    <simpleContent>
        <extension base="svcs:subIDType">
            <attribute name="paResult" type="boolean"
                use="required"/>
        </extension>
    </simpleContent>
</complexType>

<!--
<renew> response elements.
-->
<complexType name="renDataType">
    <sequence>
        <element name="id" type="svcs:subIDType"/>
        <element name="service" type="svcs:svcIDType"
            minOccurs="0"/>
        <element name="exDate" type="dateTime"
            minOccurs="0"/>
    </sequence>
</complexType>

<!--
<transfer> response elements.
-->
<complexType name="trnDataType">
    <sequence>
        <element name="id" type="svcs:subIDType"/>
        <element name="service" type="svcs:svcIDType"
            minOccurs="0"/>
        <element name="trStatus" type="eppcom:trStatusType"/>
        <element name="reID" type="eppcom:clIDType"/>
        <element name="reDate" type="dateTime"/>
        <element name="acID" type="eppcom:clIDType"/>
        <element name="acDate" type="dateTime"/>
        <element name="exDate" type="dateTime"
            minOccurs="0"/>
    </sequence>
</complexType>

```

```
</sequence>  
</complexType>
```

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