

SPPP Protocol

Session Peering Provisioning Protocol
draft-ietf-drinks-spprov-03

Status & Progress

- Document Text and Structure Cleaned Up
- Simplification & Clarification of Operation and Msg Data Structures
- Improvements to the Base Data Structures
- Improvement to the Response Code Structures
- Egress Route Group Assoc to Rte Rec
- Support for Open Numbering Plans
- Addition of *Many* Examples
- Deferred Items (data validation, bulk file)

Document Text and Structure Cleaned Up

- Introductory sections were:
 - Re-organized
 - Improved
 - Updated to reflect XSD changes
- All operation subsections were
 - Updated to reflect XSD changes
 - Improved
 - Made structurally consistent
- All sections were word-smithed

Simplification & Clarification of Operation and Msg Data Structures

- Protocol Layering

Layer		Example	
(5)	Data Objects	RteGrpType, etc.	
(4)	Operations	AddRteGrpRqstType, etc.	
(3)	Message	sPPPUpdateRequest,	
		sPPPUpdateResponse,	
		sPPPQueryRequest,	
		sPPPQueryResponse	
(2)	Message	HTTP, SOAP, None, etc.	
	Envelope		
(1)	Transport	TCP, TLS, BEEP, etc.	
	Protocol		

Simplification & Clarification of Operation and Msg Data Structures

- ```
<element name="spppUpdateRequest">
 <complexType>
 <sequence>
 <element name="clientTransId" type="spppb:TransIdType" minOccurs="0"/>
 <element name="minorVer" type="spppb:MinorVerType" minOccurs="0"/>
 <element name="rqst" type="spppb:BasicRqstType" maxOccurs="unbounded"/>
 </sequence>
 </complexType>
</element>
```
- ```
<element name="spppUpdateResponse">  
  <complexType>  
    <sequence>  
      <element name="clientTransId" type="spppb:TransIdType" minOccurs="0"/>  
      <element name="serverTransId" type="spppb:TransIdType"/>  
      <element name="overallResult" type="spppb:ResultCodeType"/>  
      <element name="rqstObjResult" type="spppb:RqstObjResultCodeType" minOccurs="0"  
        maxOccurs="unbounded"/>  
    </sequence>  
  </complexType>  
</element>
```

Simplification & Clarification of Operation and Msg Data Structures

- `<element name="spppQueryRequest">`
 `<complexType>`
 `<sequence>`
 `<element name="minorVer" type="spppb:MinorVerType" minOccurs="0"/>`
 `<element name="rqst" type="spppb:BasicQueryRqstType"/>`
 `</sequence>`
 `</complexType>`
`</element>`
- `<element name="spppQueryResponse">`
 `<complexType>`
 `<sequence>`
 `<element name="overallResult" type="spppb:ResultCodeType"/>`
 `<element name="resultSet" type="spppb:BasicObjectType" minOccurs="0" maxOccurs="unbounded"/>`
 `</sequence>`
 `</complexType>`
`</element>`

Simplification & Clarification of Operation and Msg Data Structures

- `<complexType name="BasicRqstType" abstract="true">`
 - `<sequence>`
 - `<element name="ext" type="spppb:ExtAnyType" minOccurs="0"/>`
 - `</sequence>`
 - `</complexType>`
- `<complexType name="AddRteGrpRqstType">`
 - `<complexContent>`
 - `<extension base="spppb:BasicRqstType">`
 - `<sequence>`
 - `<element name="rteGrp" type="spppb:RteGrpType"/>`
 - `</sequence>`
 - `</extension>`
 - `</complexContent>`
 - `</complexType>`

Simplification & Clarification of Operation and Msg Data Structures

- Overall Result Code contained in ResultCodeType

```
<complexType name="ResultCodeType">  
  <sequence>  
    <element name="code" type="int"/>  
    <element name="msg" type="string"/>  
  </sequence>  
</complexType>
```

- Specific object that failed and why it failed contained in RqstObjResultCodeType

```
<complexType name="RqstObjResultCodeType">  
  <complexContent>  
    <extension base="spppb:ResultCodeType">  
      <sequence>  
        <element name="rqstObj" type="spppb:BasicRqstType"/>  
      </sequence>  
    </extension>  
  </complexContent>  
</complexType>
```


Egress Route Group Assoc to Rte Rec

- New Approach
 - Egress Route objects now assoc directly with Ingress Route Rec objects.
- Prior Approach
 - Egress Route objects assoc with Ingress Route Groups objects.
 - Egress Route objects contained a “svcs” data element to allow applications to determine which Ingress Rte Recs to apply the Egress Route to.

Support for Open Numbering Plans

- TN Prefix Type

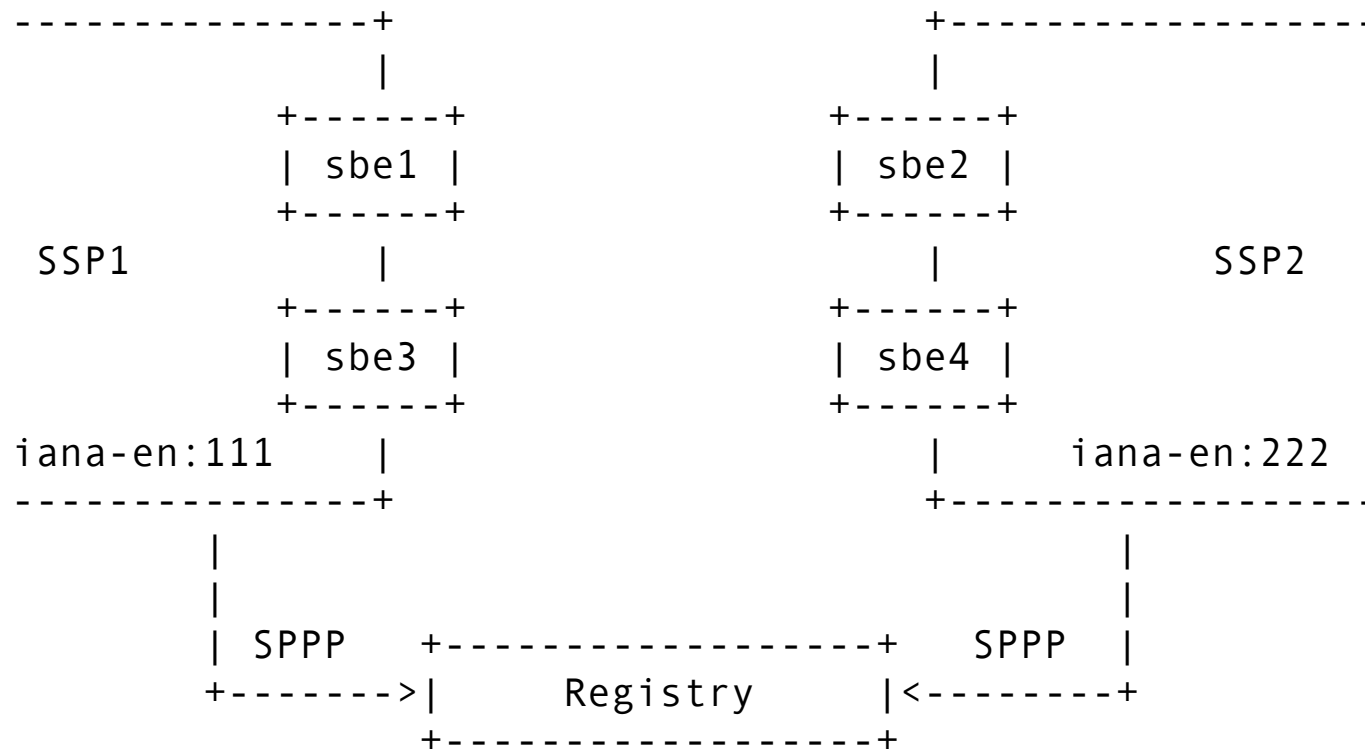
```
<complexType name="TNPType">
  <complexContent>
    <extension base="spppb:PubIdType">
      <sequence>
        <element name="tnPrefix" type="string"/>
        <element name="corInfo" type="spppb:CORInfoType" minOccurs="0"/>
      </sequence>
    </extension>
  </complexContent>
</complexType>
```

- TNRType w/ "prefix" attribute

```
<complexType name="TNRType">
  <complexContent>
    <extension base="spppb:PubIdType">
      <sequence>
        <element name="startTn" type="string"/>
        <element name="endTn" type="string"/>
        <element name="corInfo" type="spppb:CORInfoType" minOccurs="0"/>
      </sequence>
      <attribute name="prefix" type="boolean" default="false"> </attribute>
    </extension>
  </complexContent>
</complexType>
```

Addition of *Many* Examples

Examples -- Scenario



Examples – Add RteRecs

```
<spppUpdateRequest ... >
  <rqst ... xsi:type="ns1:AddRteRecRqstType">
    <rteRec xmlns:ns1=... xsi:type="ns1:NAPTRType">
      <rantId>iana-en:222</rantId> <rarId>iana-en:222</rarId>
      <ns1:rrName>RTE_SSP2_SBE2</ns1:rrName>
      <order>10</order> <flags>u</flags>
      <svcs>E2U+sip</svcs>
      <regx>
        <ere>^(.*)$</ere>
        <repl>sip:\1@sbe2.ssp2.example.com</repl>
      </regx>
    </rteRec>
  </rqst>
  <rqst ... xsi:type="ns1:AddRteRecRqstType">
    <rteRec xmlns:ns1=... xsi:type="ns1:URIType">
      <rantId>iana-en:222</rantId>
      <rarId>iana-en:222</rarId>
      <ns1:rrName>RTE_SSP2_SBE4</ns1:rrName>
      <ns1:ere>^(.*)$</ns1:ere>
      <ns1:uri>sip:\1;npdi@sbe4.ssp2.example.com</ns1:uri>
    </rteRec>
  </rqst>
</spppUpdateRequest>
```

Examples – Add RteGrp

```
<spppUpdateRequest... >
  <rqst ... xsi:type="ns1:AddRteGrpRqstType">
    <rteGrp>
      <rantId>iana-en:222</rantId> <rarId>iana-en:222</rarId>
      <rteGrpName>RTE_GRP_SSP2_1</rteGrpName>
      <ns1:rteRecRef>
        <ns1:rteRec>
          <ns1:rantId>iana-en:222</ns1:rantId> <ns1:name>RTE_SSP2_SBE2</ns1:name>
        </ns1:rteRec>
        <ns1:priority>100</ns1:priority>
      </ns1:rteRecRef>
      <ns1:rteRecRef>
        <ns1:rteRec>
          <ns1:rantId>iana-en:222</ns1:rantId> <ns1:name>RTE_SSP2_SBE4</ns1:name>
        </ns1:rteRec>
        <ns1:priority>101</ns1:priority>
      </ns1:rteRecRef>
      <dgName>DEST_GRP_SSP2_1</dgName>
      <isInSvc>true</isInSvc>
      <ns1:priority>10</ns1:priority>
    </rteGrp>
  </rqst>
</spppUpdateRequest>
```

Examples – Add Dest Grp

```
<spppUpdateRequest ....>  
  <rqst ... xsi:type="ns1:AddDestGrpRqstType">  
    <destGrp>  
      <ns1:rantId>iana-en:222</ns1:rantId>  
      <ns1:rarId>iana-en:222</ns1:rarId>  
      <dgName>DEST_GRP_SSP2_1</dgName>  
    </destGrp>  
  </rqst>  
</spppUpdateRequest>
```

Examples – Add PI into DG w/ COR Claim

```
<rqst xmlns:ns1=... xsi:type="ns1:AddPubldRqstType">
  <pi xmlns:ns1=... xsi:type="ns1:TNTType">
    <ns1:rantId>iana-en:222</ns1:rantId>
    <ns1:rarId>iana-en:222</ns1:rarId>
    <ns1:dgName>DEST_GRP_SSP2_1</ns1:dgName>
    <tn>+12025556666</tn>
    <ns1:corInfo>
      <ns1:corClaim>true</ns1:corClaim>
    </ns1:corInfo>
  </pi>
</rqst>
```

Examples – Open Num Plan

```
<spppUpdateRequest ...>
  <rqst ... xsi:type="ns1:AddPubIdRqstType">
    <pi ... xsi:type="ns1:TNRType" prefix="true">
      <rantId>iana-en:222</rantId>
      <rarId>iana-en:222</rarId>
      <ns1:dgName>DEST_GRP_SSP2_1</ns1:dgName>
      <startTn>+4312315566</startTn>
      <endTn>+4312315567</endTn>
    </pi>
  </rqst>
  <rqst ... xsi:type="ns1:AddPubIdRqstType">
    <pi ... xsi:type="ns1:TNPTType">
      <rantId>iana-en:222</rantId>
      <rarId>iana-en:222</rarId>
      <ns1:dgName>DEST_GRP_SSP2_2</ns1:dgName>
      <tnPrefix>+1202777</tnPrefix>
    </pi>
  </rqst>
</spppUpdateRequest>
```


Examples – Rte Grp Offer

```
<rqst ... xsi:type="ns1:AddRteGrpOfferRqstType">
  <rteGrpOffer>
    <rantId>iana-en:222</rantId>
    <rarId>iana-en:222</rarId>
    <rteGrpOfferKey>
      <rteGrpKey>
        <rantId>iana-en:222</rantId>
        <name>RTE_GRP_SSP2_1</name>
      </rteGrpKey>
      <offeredTo>iana-en:111</offeredTo>
    </rteGrpOfferKey>
  </rteGrpOffer>
</rqst>
```

Examples – Accept Rte Grp Offer

```
<spppUpdateRequest ...>
  <rqst ... xsi:type="ns1:AcceptRteGrpOfferRqstType">
    <rteGrpOfferKey>
      <rteGrpKey>
        <rantId>iana-en:222</rantId>
        <name>RTE_GRP_SSP2_1</name>
      </rteGrpKey>
      <offeredTo>iana-en:111</offeredTo>
    </rteGrpOfferKey>
  </rqst>
</spppUpdateRequest>
```

Deferred Items

- Bulk File version of the protocol
- Data validation rules and regular expressions