SAMLINK

WEB SERVICES INTERFACE

SAMLINK'S TECHNICAL INTERFACE DESCRIPTION FOR SOFTWARE COMPANIES

7.June.2018

SAMLINK

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1   SOAP frame

In the WS channel, we only receive SEPA material in SOAP messages. The WS-Security element in the SOAP message heading must have a signature.

2   Payment material compression

Samlink's system solution is compatible with material compression according to RFC 1952.
In that case, the value of the CompressionMethod field is "GZIP" and the Compression element is "true". We recommend that the material is retrieved compressed. The maximum material size is 50 MB.

3   Payment material encryption

Payment material's separate encryption is not supported (the EncryptionMethod and Encryption elements).

4   Supported operations

Supported
- uploadFile
- downloadFileList
- downloadFile
- deleteFile

Not supported
- getUserInfo
  - returns error code 05, (getUserInfo not supported)

5   Application Request Header

Application Request has elements, the use of which is specified below.

5.1   SenderId

The identifier of the sender of the material, that is, the WS user ID. This has been handed over to the company upon signing the contract.

5.2   RequestId

The identifier of the material delivery. Materials arriving during the same day must have unique values. If the value has been used previously, the message is rejected due to being a duplicate.

5.3   Timestamp

The time stamp indicating when Application Request Header has been created.

5.4   Language

- Finnish: FI
- Swedish: SV
- English: EN

5.5   UserAgent

5.6   ReceiverId

Not in use

6   Using the elements of the Application Request message

6.1   CustomerId

The identifier (WS user ID) of the party who has created the material. This has been handed over to the company upon signing the contract.

6.2   Command

The value must match the SOAP operation.

6.3   Timestamp

The time stamp when the Application Request has been created

6.4   StartDate

Element value is read only for the following operations: DownloadFileList.

6.5   EndDate

Element value is read only for the following operations: DownloadFileList.

6.6   Status

Element value is read for the following operations: DownloadFileList.
We support the codes NEW, DLD, ALL.

6.7   ServiceId

Not in use

6.8   Environment

We support: PRODUCTION and TEST
The test environment uses production identification codes.

The "TEST" value is only used in "UploadFile" operations where the material undergoes a formal check, but the materials do not go to payment.

6.9   FileReferences/FileReference

Element value is read for the following operations: DownloadFile and DeleteFile.
For feedback only. Max. 50 FileReference elements allowed in one message.

6.10   UserFileName

Element value is read only for the following operations: UploadFile

6.11   TargetId

Supported according to the definition.

6.12   ExecutionSerial

Not in use

6.13   Encryption

Not in use

6.14   EncryptionMethod

Not in use

6.15   Compression

Supported, the value is either true or false.

6.16   CompressionMethod

If in use, the value is "GZIP"

6.17   AmountTotal

Element value is read only for the following operations: UploadFile.If the element exists and if File-Type is XL, we will compare the field value with the payment material sum. If FileType is XL, we will return the correct value in this field in the response, even if the client would not have calculated it.

6.18   TransactionCount

Element value is read only for the following operations: UploadFile.For payment material, we will compare the value of this element with the payment material sum. If the payment material is pain.001.001.02 or pain.001.001.03, we will return the correct value in this field in the response, even if the customer application would not have calculated it.

6.19 SoftwareId

Information on the software and its version, sent by the customer application.

6.20 CustomerExtension

Not in use

6.21 FileType

Element value is read only for the following operations: UploadFile, DownloadFile and Download-FileList. Complete list of accepted file types are in Web Services – service description.

6.22 Content

Element value is read only for the following operations: UploadFile

6.23 Signature

All messages must be signed.

7   Application Response elements

7.1   CustomerId

The customer's service identifier.

7.2   Timestamp

The time stamp, on the basis of which the material can be identified as outdated. (In the implementation phase, we will find out the suitable value).

7.3   ResponseCode

Code	Explanation
00	OK
05	UNKNOWN APPLICATION REQUEST
12	THE FORMAL CHECK-UP OF THE MATERIAL FAILED
21	DEFECTIVE PACKAGING OF MATERIAL
25	MATERIAL NOT ALLOWED
26	TECHNICAL ERROR
27	MATERIAL CANNOT BE REMOVED
30	IDENTIFICATION FAILED
32	DUPLICATE DELIVERY

7.4   ResponseText

See above

7.5   ExecutionSerial

Not in use

7.6   Encrypted

Not in use

7.7   EncryptionMethod

Not in use

7.8   Compressed

We support compression according to the definition

7.9   CompressionMethod

We support this according to RFC 1952

7.10 AmountTotal

See the explanation for request

7.11 TransactionCount

See the explanation for request

7.12 CustomerExtension

Not in use

7.13 FileDescriptors

We will only return the element for: DownloadFileList

7.13.1 FileDescriptor

We will only return the element for: DownloadFileList
- FileReference (always)
- TargetId (always)
- ServiceId (not in use)
- ServiceIdOwnerName (not in use)
- UserFileName (always)
- ParentFileReference (if it is feedback)

- FileType (always)
- FileTimestamp (always)
- Status (always)
- AmountTotal (always)
- TransactionCount (always)
- LastDownloadTimestamp (given to feedback if not empty)
- ForwardedTimestamp (returned to material if not empty)
- Confirmable (not in use)
- Deletable (not in use)
- SubStatusCode (not in use)
- SubStatusText (not in use)
- MissingTransactions (not in use)
- SubType (not in use)
- FeedbackFileAttributes (not in use)

7.14 UserFileTypes

We do not support the GetUserInfo operation, and therefore will not return the UserFi-leTypes element.

7.15 Content

We will only return the element for: DownloadFile
If the customer search requests several files, the content of the files are one after the ot-her within Content.

7.16 Signature

We will sign all responses

8   Example messages

8.1   SOAP query (uploadFile)

```xml
<soapenv:Envelope xmlns:cor="http://bxd.fi/CorporateFileService" xmlns:mod="http://model.bxd.fi"
    xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/">
  <soapenv:Header>
    <wsse:Security soapenv:mustUnderstand="1"
        xmlns:wsse="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd">
      <wsu:Timestamp wsu:Id="Timestamp-18"
          xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd">
        <wsu:Created>2009-10-01T06:06:04Z</wsu:Created>
        <wsu:Expires>2009-10-01T06:07:04Z</wsu:Expires>
      </wsu:Timestamp>
      <wsse:BinarySecurityToken
          EncodingType="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-soap-message-security-1.0#Base64Binary"
          ValueType="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-x509-token-profile-1.0#X509v3"
          wsu:Id="CertId-F7FBE81F5BE55E909412590680135 4825"
          xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd"
          >MIIF8TCCA9mgA...rI0sNVVwzI50mt0SzYg==</wsse:BinarySecurityToken>
      <ds:Signature Id="Signature-17" xmlns:ds="http://www.w3.org/2000/09/xmldsig#">
        <ds:SignedInfo>
          <ds:CanonicalizationMethod Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          <ds:SignatureMethod Algorithm="http://www.w3.org/2000/09/xmldsig#rsa-sha1"/>
          <ds:Reference URI="#Body-564863ec-e66f-4e75-9cff-6759f476fa77">
            <ds:Transforms>
              <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
            </ds:Transforms>
            <ds:DigestMethod Algorithm="http://www.w3.org/2000/09/xmldsig#sha1"/>
            <ds:DigestValue>X73IxdQISeY6ui+graEww2nLetg=</ds:DigestValue>
          </ds:Reference>
        </ds:SignedInfo>
        <ds:SignatureValue>eF8SoDwNG...GyCA==</ds:SignatureValue>
        <ds:KeyInfo Id="KeyId-F7FBE81F5BE55E909412590680135 4826">
          <wsse:SecurityTokenReference wsu:Id="STRId-F7FBE81F5BE55E909412590680135 4827"
              xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd">
            <wsse:Reference URI="#CertId-F7FBE81F5BE55E909412590680135 4825"
                ValueType="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-x509-token-profile-1.0#X509v3"
            />
          </wsse:SecurityTokenReference>
        </ds:KeyInfo>
      </ds:Signature>
    </wsse:Security>
  </soapenv:Header>
  <soapenv:Body wsu:Id="Body-564863ec-e66f-4e75-9cff-6759f476fa77"
      xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd">
    <cor:uploadFilein>
      <mod:RequestHeader>
        <mod:SenderId>99471123</mod:SenderId>
        <mod:RequestId>1254373564698</mod:RequestId>
        <mod:Timestamp>2009-10-01T08:06:04+03:00</mod:Timestamp>
        <mod:Language>FI</mod:Language>
        <mod:UserAgent>TESTER v1.0</mod:UserAgent>
        <mod:ReceiverId>SAMLINK</mod:ReceiverId>
      </mod:RequestHeader>
      <mod:ApplicationRequest>PEFwcGxpY2...SZXF1ZXN0Pg==</mod:ApplicationRequest>
    </cor:uploadFilein>
  </soapenv:Body>
</soapenv:Envelope>
```

8.2   Application Request UploadFile

```xml
<?xml version="1.0" encoding="UTF-8"?>
<ApplicationRequest xmlns="http://bxd.fi/xmldata/"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xsi:schemaLocation="http://bxd.fi/xmldata/">
    <CustomerId>99471123</CustomerId>
    <Command>UploadFile</Command>
    <Timestamp>2009-09-23T16:57:41+03:00</Timestamp>
    <Environment>PRODUCTION</Environment>
    <TargetId>NONE</TargetId>
    <ExecutionSerial>123456789</ExecutionSerial>
    <Compression>false</Compression>
    <SoftwareId>Tester v1.0</SoftwareId>
    <FileType>XL</FileType>
    <Content>PD94bWw...LORvY3VtZW50Pg==</Content>
    <Signature xmlns="http://www.w3.org/2000/09/xmldsig#">
        <SignedInfo>
            <CanonicalizationMethod Algorithm="http://www.w3.org/TR/2001/REC-xml-c14n-20010315"/>
            <SignatureMethod Algorithm="http://www.w3.org/2000/09/xmldsig#rsa-sha1"/>
            <Reference URI="">
                <Transforms>
                    <Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-signature"/>
                    <Transform Algorithm="http://www.w3.org/TR/2001/REC-xml-c14n-20010315"/>
                </Transforms>
                <DigestMethod Algorithm="http://www.w3.org/2000/09/xmldsig#sha1"/>
                <DigestValue>nhUuKYDobDqKF5BZjsHL4te51VQ=</DigestValue>
            </Reference>
        </SignedInfo>
        <SignatureValue>e/wzKE8ASU..DL2bhkBzBelLdegg==</SignatureValue>
        <KeyInfo>
            <X509Data>
                <X509Certificate>MIIF8TCCA9m..trIOsNWwzI50mtOSzYg==</X509Certificate>
                <X509IssuerSerial>
                    <X509IssuerName>CN=Samlink System Test Customer CA, O=Samlink,
                        C=FI</X509IssuerName>
                    <X509SerialNumber>5323376610242154343395763290704633846 7</X509SerialNumber>
                </X509IssuerSerial>
            </X509Data>
        </KeyInfo>
    </Signature>
</ApplicationRequest>
```

8.3   Application Reques DownloadFileList

```xml
<?xml version="1.0" encoding="UTF-8"?>
<ApplicationRequest xmlns="http://bxd.fi/xmldata/"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xsi:schemaLocation="http://bxd.fi/xmldata/">
    <CustomerId>99471123</CustomerId>
    <Command>DownloadFileList</Command>
    <Timestamp>2009-10-01T08:06:04+03:00</Timestamp>
    <Environment>PRODUCTION</Environment>
    <TargetId>NONE</TargetId>
    <ExecutionSerial>123456789</ExecutionSerial>
    <Compression>false</Compression>
    <SoftwareId>DataPower Test Client</SoftwareId>
    <FileType>XP</FileType>
    <Signature xmlns="http://www.w3.org/2000/09/xmldsig#">
        <SignedInfo>
            <CanonicalizationMethod Algorithm="http://www.w3.org/TR/2001/REC-xml-c14n-20010315"/>
            <SignatureMethod Algorithm="http://www.w3.org/2000/09/xmldsig#rsa-sha1"/>
            <Reference URI="">
                <Transforms>
                    <Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-signature"/>
                    <Transform Algorithm="http://www.w3.org/TR/2001/REC-xml-c14n-20010315"/>
                </Transforms>
                <DigestMethod Algorithm="http://www.w3.org/2000/09/xmldsig#sha1"/>
                <DigestValue>nhUuKYDobDqKF5BZjsHL4te51VQ=</DigestValue>
            </Reference>
        </SignedInfo>
        <SignatureValue>e/wzKE8ASU..DL2bhkBzBelLdegg==</SignatureValue>
        <KeyInfo>
            <X509Data>
                <X509Certificate>MIIF8TCCA9m..trIOsNWwzI50mt0SzYg==</X509Certificate>
                <X509IssuerSerial>
                    <X509IssuerName>CN=Samlink System Test Customer CA, O=Samlink,
                        C=FI</X509IssuerName>
                    <X509SerialNumber>53233766102421543433957632907046338467</X509SerialNumber>
                </X509IssuerSerial>
            </X509Data>
        </KeyInfo>
    </Signature>
</ApplicationRequest>
```

8.4   Application Request DonwloadFile

```xml
<?xml version="1.0" encoding="UTF-8"?>
<ApplicationRequest xmlns="http://bxd.fi/xmldata/"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xsi:schemaLocation="http://bxd.fi/xmldata/">
    <CustomerId>99471123</CustomerId>
    <Command>DownloadFile</Command>
    <Timestamp>2009-05-04T18:13:51.0Z</Timestamp>
    <Environment>PRODUCTION</Environment>
    <FileReferences>
        <FileReference>327464231</FileReference>
        <FileReference>873264212</FileReference>
    </FileReferences>
    <Encryption>false</Encryption>
    <Compression>false</Compression>
    <SoftwareId>Tester v1.0</SoftwareId>
    <Signature xmlns="http://www.w3.org/2000/09/xmldsig#">
        <SignedInfo>
            <CanonicalizationMethod Algorithm="http://www.w3.org/TR/2001/REC-xml-c14n-20010315"/>
            <SignatureMethod Algorithm="http://www.w3.org/2000/09/xmldsig#rsa-sha1"/>
            <Reference URI="">
                <Transforms>
                    <Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-signature"/>
                    <Transform Algorithm="http://www.w3.org/TR/2001/REC-xml-c14n-20010315"/>
                </Transforms>
                <DigestMethod Algorithm="http://www.w3.org/2000/09/xmldsig#sha1"/>
                <DigestValue>nhUuKYDobDqKF5BZjsHL4te51VQ=</DigestValue>
            </Reference>
        </SignedInfo>
        <SignatureValue>e/wzKE8ASU..DL2bhkBzBelLdegg==</SignatureValue>
        <KeyInfo>
            <X509Data>
                <X509Certificate>MIIF8TCCA9m..trIOsNWwzI50mtOSzYg==</X509Certificate>
                <X509IssuerSerial>
                    <X509IssuerName>CN=Samlink System Test Customer CA, O=Samlink,
                        C=FI</X509IssuerName>
                    <X509SerialNumber>532337661024215434339576329070463384657</X509SerialNumber>
                </X509IssuerSerial>
            </X509Data>
        </KeyInfo>
    </Signature>
</ApplicationRequest>
```