
Pension Benefit Guaranty Corporation (PBGC)

My PAA - 3rd Party Vendor Integration Schema Validator Web Service Interface Specification

Version 1.0

Revision History

Date	Version	Description
01/08/2004	1.0	Initial Version
3/2/2005	1.0	Updated the WSDL, the sample XML input and response

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1. Introduction

This document details the use and capabilities of the Schema Validator Web service. This specification is intended to be used by developers wanting to validate any Premium Filing XML data against the PBGC defined schema (XSD) using a Web service interface.

2. Using the Web Service Interface

2.1 Submitting a Request

1. The calling system will call the SchemaValidationService Validate method, passing the XML to be validated as a String parameter to the method call.
2. The result of the validation process will be returned as a "ValidationServiceResponse" type.
3. Contained within the ValidationServiceResponse there will be two entities - a "ValidationServiceReturnCode" type (an enumeration) which indicates either success or failure of the entire validation operation, and an "ArrayOfValidationError" type which may contain zero or more "ValidationError" types.
4. When an invalid XML string is submitted to the service, a "ValidationError" type is created and added to the ArrayOfValidationError. The ValidationError contains a message, severity, line number and character location which indicate the cause and location of the XML validation error.

2.2 Handling Errors

Errors occurring as a result of invalid Xml submitted to the SchemaValidationService are returned as described above in an "ArrayOfValidationError" type. Unexpected errors which may occur as a result of any other error condition will be returned as SOAP faults with a message describing the error.

3. Web Service Programming Interface

This section describes the interfaces provided by the SchemaValidationService Web service and details its methods and parameters.

3.1 Generic Interface

This Web service interface provides a single method for submitting XML documents for validation against a specified XML schema.

3.1.1 Validate Method

The method validates an incoming XML string against a pre-defined premium filing schema.

```
public ValidationServiceResponse Validate(string strXmlData );
```

3.1.1.1 Parameters

strXmlData

This is a string value that represents the XML to be validated by the service.

3.1.1.2 Return Value

The method returns a `ValidationServiceResponse` type containing a `ValidationServiceReturnCode` enumeration and an `ArrayOfValidationError` containing zero or more `ValidationError` types. The schema definition for the `ValidationServiceResponse` is as shown below:

```
<s:complexType name="ValidationServiceResponse">
  <s:sequence>
    <s:element minOccurs="1" maxOccurs="1" name="returnCode"
type="tns:ValidationServiceReturnCode" />
    <s:element minOccurs="0" maxOccurs="1" name="ValidationErrors" type="tns:ArrayOfValidationError"
/>
  </s:sequence>
</s:complexType>
<s:simpleType name="ValidationServiceReturnCode">
  <s:restriction base="s:string">
    <s:enumeration value="UNKNOWN" />
    <s:enumeration value="SUCCESS" />
    <s:enumeration value="FAILURE" />
  </s:restriction>
</s:simpleType>
<s:complexType name="ValidationError">
  <s:sequence>
    <s:element minOccurs="0" maxOccurs="1" name="Message" type="s:string" />
    <s:element minOccurs="1" maxOccurs="1" name="Severity" type="tns:ValidationErrorSeverity" />
    <s:element minOccurs="1" maxOccurs="1" name="Line" type="s:int" />
    <s:element minOccurs="1" maxOccurs="1" name="Character" type="s:int" />
  </s:sequence>
</s:complexType>
<s:simpleType name="ValidationErrorSeverity">
  <s:restriction base="s:string">
    <s:enumeration value="Error" />
    <s:enumeration value="Warning" />
  </s:restriction>
</s:simpleType>
```

3.1.1.3 Security

This is a public service.

4. Appendix C – WSDL File

The following sections contain the WSDL interface specification for the Schema Validator Web services.

4.1 Generic Request Service

```
<?xml version="1.0" encoding="utf-8"?>
<wsdl:definitions xmlns:http="http://schemas.xmlsoap.org/wsdl/http/"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/" xmlns:s="http://www.w3.org/2001/XMLSchema"
xmlns:soapenc="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:tns="http://www.pbgc.gov/common/webservices/SchemaValidationService"
xmlns:tm="http://microsoft.com/wsdl/mime/textMatching/" xmlns:mime="http://schemas.xmlsoap.org/wsdl/mime/"
targetNamespace="http://www.pbgc.gov/common/webservices/SchemaValidationService"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:types>
    <s:schema elementFormDefault="qualified"
targetNamespace="http://www.pbgc.gov/common/webservices/SchemaValidationService">
      <s:element name="Validate">
        <s:complexType>
          <s:sequence>
            <s:element minOccurs="0" maxOccurs="1" name="strXmlData" type="s:string" />
          </s:sequence>
        </s:complexType>
      </s:element>
      <s:element name="ValidateResponse">
        <s:complexType>
```

```

        <s:sequence>
            <s:element minOccurs="0" maxOccurs="1" name="ValidateResult"
type="tns:ValidationServiceResponse" />
        </s:sequence>
    </s:complexType>
</s:element>
<s:complexType name="ValidationServiceResponse">
    <s:sequence>
        <s:element minOccurs="1" maxOccurs="1" name="menumReturnCode"
type="tns:ValidationServiceReturnCode" />
        <s:element minOccurs="0" maxOccurs="1" name="ValidationErrors" type="tns:ArrayOfValidationError"
/>
    </s:sequence>
</s:complexType>
<s:simpleType name="ValidationServiceReturnCode">
    <s:restriction base="s:string">
        <s:enumeration value="UNKNOWN" />
        <s:enumeration value="SUCCESS" />
        <s:enumeration value="FAILURE" />
    </s:restriction>
</s:simpleType>
<s:complexType name="ArrayOfValidationError">
    <s:sequence>
        <s:element minOccurs="0" maxOccurs="unbounded" name="ValidationError" nillable="true"
type="tns:ValidationError" />
    </s:sequence>
</s:complexType>
<s:complexType name="ValidationError">
    <s:sequence>
        <s:element minOccurs="0" maxOccurs="1" name="Message" type="s:string" />
        <s:element minOccurs="1" maxOccurs="1" name="Severity" type="tns:ValidationErrorSeverity" />
        <s:element minOccurs="1" maxOccurs="1" name="Line" type="s:int" />
        <s:element minOccurs="1" maxOccurs="1" name="Character" type="s:int" />
    </s:sequence>
</s:complexType>
<s:simpleType name="ValidationErrorSeverity">
    <s:restriction base="s:string">
        <s:enumeration value="Error" />
        <s:enumeration value="Warning" />
    </s:restriction>
</s:simpleType>
</s:schema>
</wsdl:types>
<wsdl:message name="ValidateSoapIn">
    <wsdl:part name="parameters" element="tns:Validate" />
</wsdl:message>
<wsdl:message name="ValidateSoapOut">
    <wsdl:part name="parameters" element="tns:ValidateResponse" />
</wsdl:message>
<wsdl:portType name="SchemaValidationServiceSoap">
    <wsdl:operation name="Validate">
        <wsdl:input message="tns:ValidateSoapIn" />
        <wsdl:output message="tns:ValidateSoapOut" />
    </wsdl:operation>
</wsdl:portType>
<wsdl:binding name="SchemaValidationServiceSoap" type="tns:SchemaValidationServiceSoap">
    <soap:binding transport="http://schemas.xmlsoap.org/soap/http" style="document" />
    <wsdl:operation name="Validate">
        <soap:operation soapAction="http://www.pbgc.gov/common/webservices/SchemaValidationService/Validate"
style="document" />
        <wsdl:input>
            <soap:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
</wsdl:binding>
<wsdl:service name="SchemaValidationService">
    <documentation xmlns="http://schemas.xmlsoap.org/wsdl/" />
    <wsdl:port name="SchemaValidationServiceSoap" binding="tns:SchemaValidationServiceSoap">

```

```
<soap:address  
location="https://secure.pbgc.gov/common/1.2.1.0/webservices/schemavalidationservice.asmx" />  
</wsdl:port>  
</wsdl:service>  
</wsdl:definitions>
```

5. Appendix D – Example SOAP Messages

5.1 Schema Validator Service

The following section provides example SOAP messages for the Schema Validator Service.

5.1.1.1 SOAP

The following is a sample SOAP request and response. The **placeholders** shown need to be replaced with actual values. This example demonstrates the response that is returned for a request that does not match the schema (Input XML has an invalid EIN).

```
POST /common/1.3.0.0/webservices/schemavalidationservice.asmx HTTP/1.1
Host: localhost
Content-Type: text/xml; charset=utf-8
Content-Length: 2988
SOAPAction: "http://www.pbgc.gov/common/webservices/SchemaValidationService/Validate"
```

```
<?xml version="1.0" encoding="utf-16"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <Validate xmlns="http://www.pbgc.gov/common/webservices/SchemaValidationService">
      <strXmlData>
<Submission xmlns="http://www.pbgc.gov/plan_admin/efiling/Submission"
xmlns:f4="http://www.pbgc.gov/plan_admin/efiling/2004/Filing"
xmlns:f5="http://www.pbgc.gov/plan_admin/efiling/2005/Filing"
xmlns:st="http://www.pbgc.gov/plan_admin/efiling/SubmissionTypes"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://www.pbgc.gov/plan_admin/efiling/Submission
http://www.pbgc.gov/plan_admin/efiling/Submission.xsd">
      <Envelope>
        <PlanData>
          <PlanName>Shopmen&apos;s Local 527 Pension Fund</PlanName>
          <PlanYearBeginDate>2005-01-01</PlanYearBeginDate>
          <PlanYearEndDate>2005-12-31</PlanYearEndDate>
          <Sponsor>
            <st:Name>Sample Pension Fund</st:Name>
            <st:USAddress>
              <st:AddressLine1>Sample Address</st:AddressLine1>
              <st:City>City</st:City>
              <st:State>PA</st:State>
              <st:ZipCode>11111</st:ZipCode>
            </st:USAddress>
          </Sponsor>
          <Administrator>
            <st:Name>Sample Administrator</st:Name>
            <st:USAddress>
              <st:AddressLine1>Admin Address 1</st:AddressLine1>
              <st:City>Admin City</st:City>
              <st:State>VA</st:State>
              <st:ZipCode>11111</st:ZipCode>
            </st:USAddress>
          </Administrator>
          <PlanContact>
            <st:Name>Plan Contact Name</st:Name>
            <st:PhoneNumber>2135467897</st:PhoneNumber>
          </PlanContact>
          <EIN>11123456</EIN>
          <PreviousEIN>111234566</PreviousEIN>
          <PN>001</PN>
          <PreviousPN>001</PreviousPN>
          <PlanType>
```



```
                <MultiEmployer>X</MultiEmployer>
            </PlanType>
        </PlanData>
        <FilingData><Filing2005>
            <f5:EstimatedFilingData>
                <f5:ParticipantCount>1624</f5:ParticipantCount>
                <f5:PremiumAmount>4222.40</f5:PremiumAmount>
                <f5:FormCode>975384</f5:FormCode>
            </f5:EstimatedFilingData>
            <f5:ProviderApprovalNumber>1234</f5:ProviderApprovalNumber>
        </Filing2005>
    </FilingData>
</Envelope>
<ActuarySignDate>2005-01-17T12:30:00</ActuarySignDate>
<PlanAdminSignDate>2005-01-17T10:45:00</PlanAdminSignDate>
</Submission>
</strXmlData>
</Validate>
</soap:Body>
</soap:Envelope>
```

```
ResponseCode: 200 (OK)
Server:Microsoft-IIS/5.0
Date:Wed, 12 Jan 2005 20:10:25 GMT
X-Powered-By:ASP.NET
X-AspNet-Version:1.1.4322
Cache-Control:private, max-age=0
Content-Type:text/xml; charset=utf-8
Content-Length:805
```

```
<?xml version="1.0" encoding="utf-16"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <ValidateResponse xmlns="http://www.pbgc.gov/common/webservices/SchemaValidationService">
      <ValidateResult>
        <menumReturnCode>FAILURE</menumReturnCode>
        <ValidationErrors>
          <ValidationError>
            <Message>The 'http://www.pbgc.gov/plan_admin/efiling/Submission:EIN' element has an invalid
value according to its data type. An error occurred at , (30, 19).</Message>
            <Severity>Error</Severity>
            <Line>30</Line>
            <Character>19</Character>
          </ValidationError>
        </ValidationErrors>
      </ValidateResult>
    </ValidateResponse>
  </soap:Body>
</soap:Envelope>
```