New York Health Benefit Exchange

Detailed Blueprint Summary for
9.7.1 Interim System Design Document
October 26, 2012

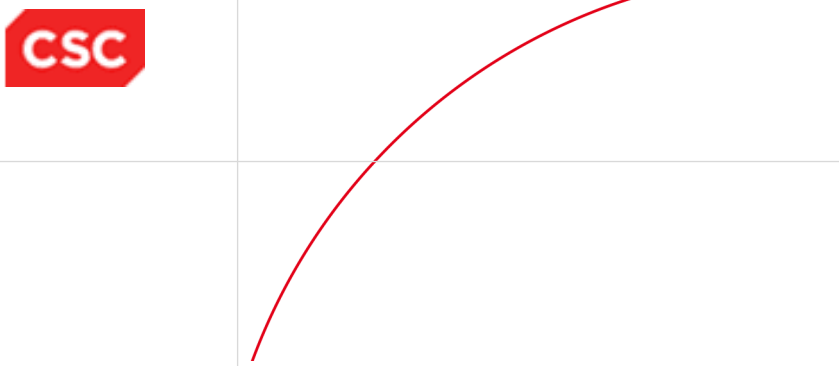
New York State Department of Health

9.7.1 System Design Document NY –HX Project

CSC

Interim System Design Artifacts

Release PRELIMINARY
Date Submitted: October 19, 2012



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Revision History

Version	Date	Change Implemented By	Change Approved By
1.0	10/18/2012	L. Powell / K. Venkata / L. Hartmark	

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1 Introduction

This document contains Plan Management design artifacts which will be included in the final System Design Document delivered at the end of the release.

This does not yet include the overall System Design for NY-HX

2 Plan Management Entity Relationship Diagram

The entity relationship diagram below depicts the data tables that store plan data and their relationships.

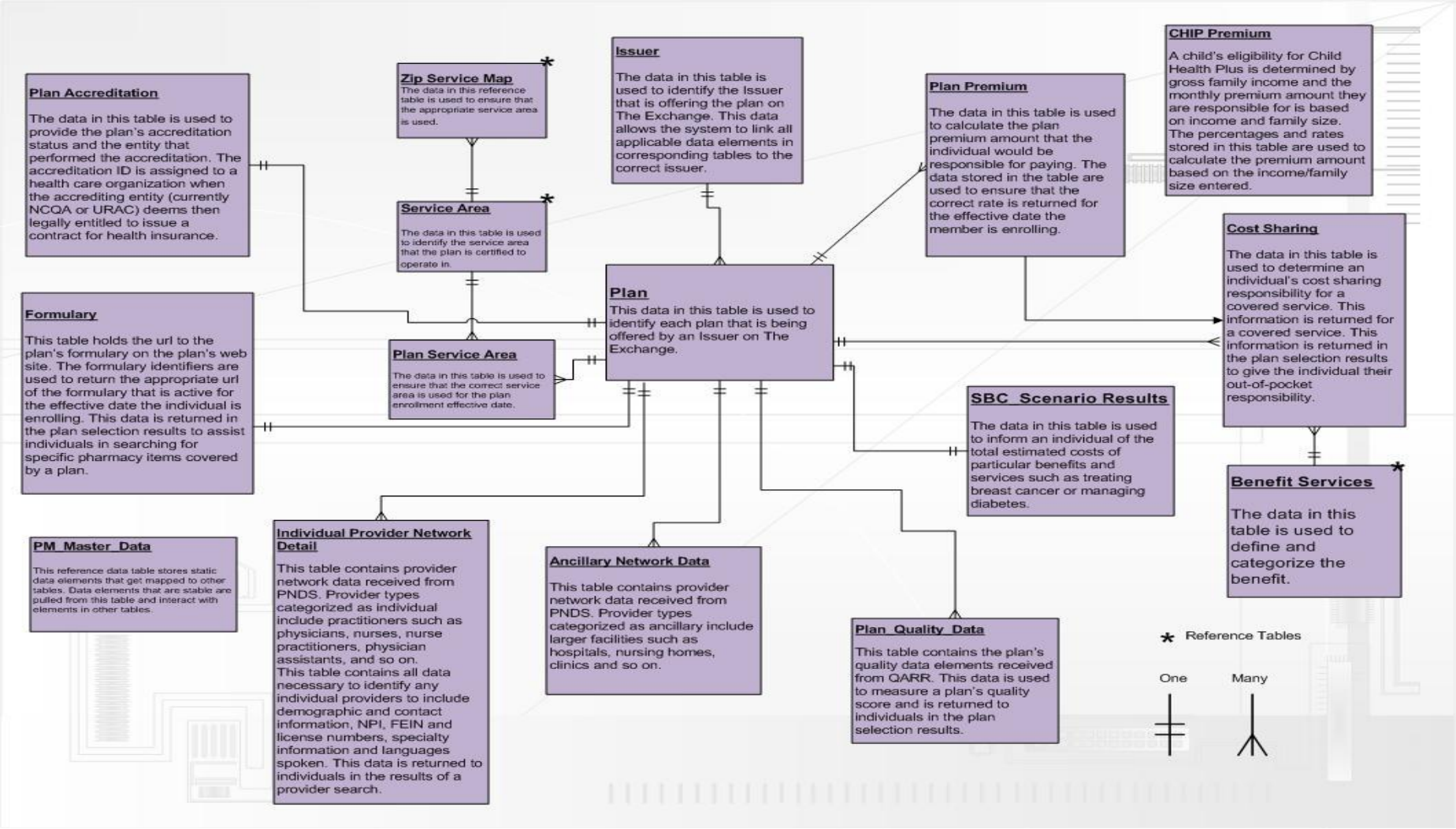
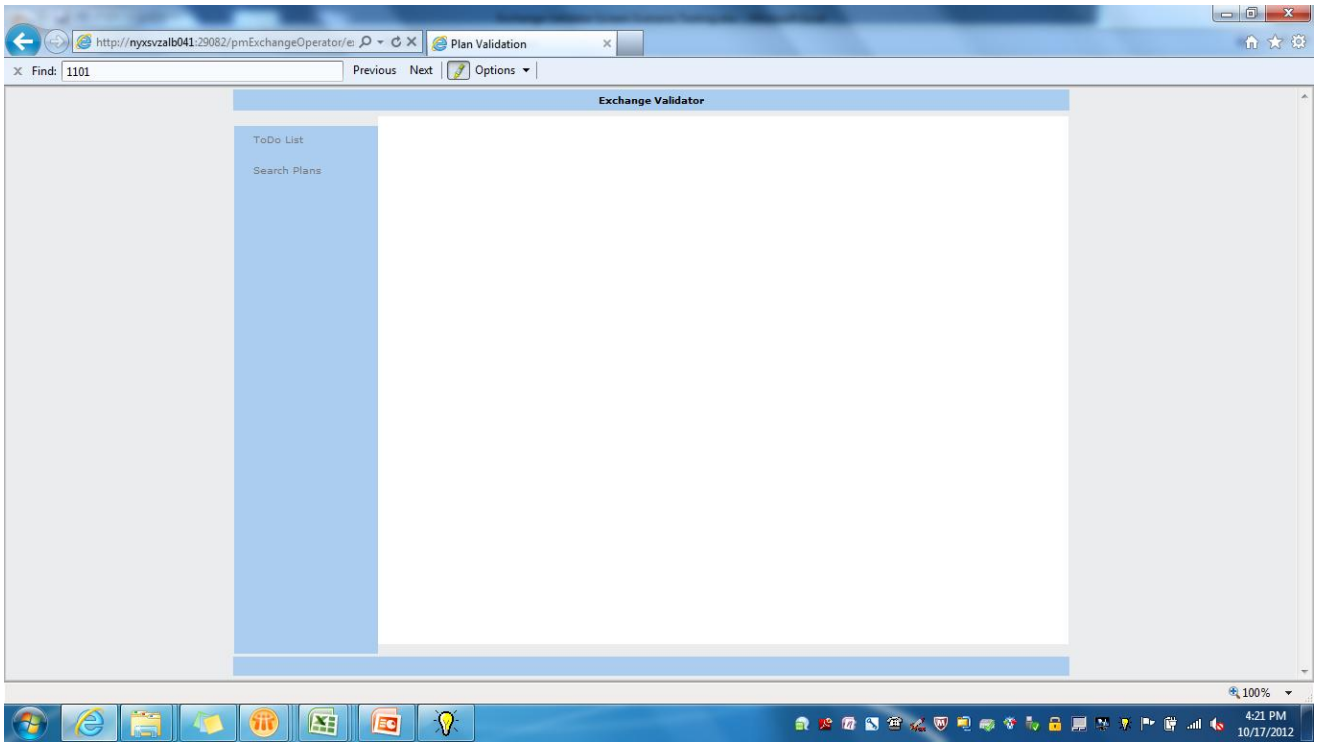


Figure 1: Plan Management ERD

3 Validation Screen Shots

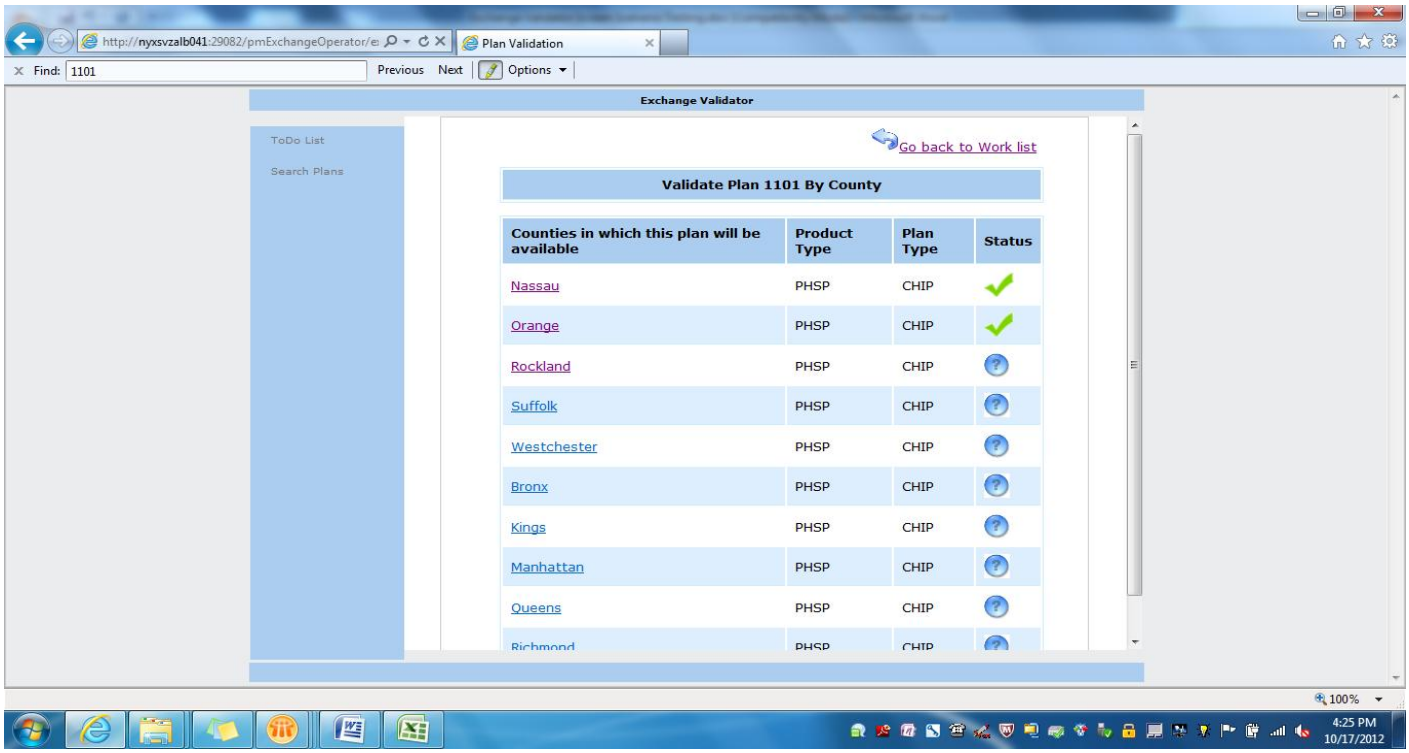
<u>Scenario 1:</u> PM_R1_SP8_TC040_Verify that Exchange Validator can search for providers available in a county

Step 1: Enter the URL
Expected Result: The portal opens

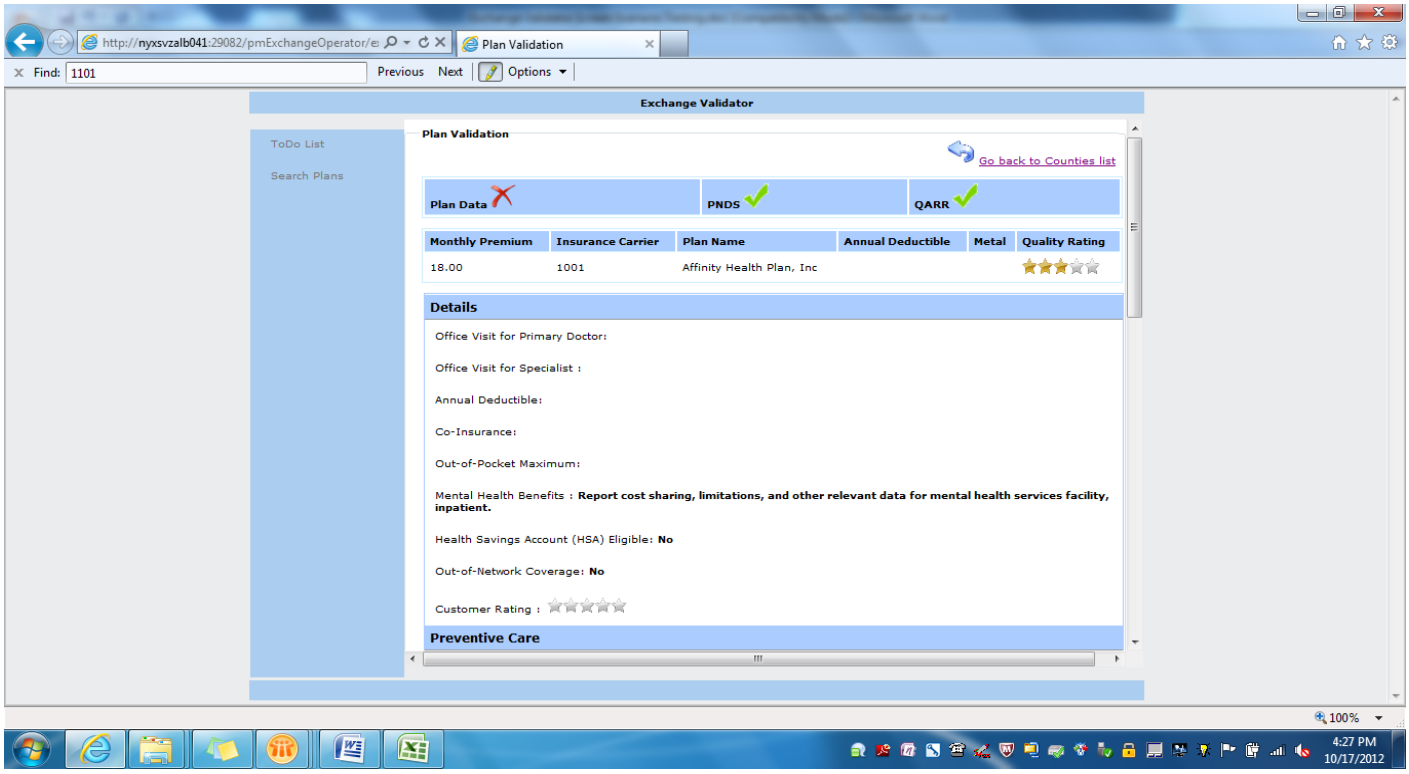


Step 2: Click "To Do List"
Expected Result: The "To Do List" window opens with list of work items plans pending approval or rejection.

Step 3: Click a work item (Click Plan_Id: 1101; Affinity Health Plan, Inc.)
Expected Result: "Validate Plan 1101 By County" window opens that displays the list of counties where Affinity Health Plan is available



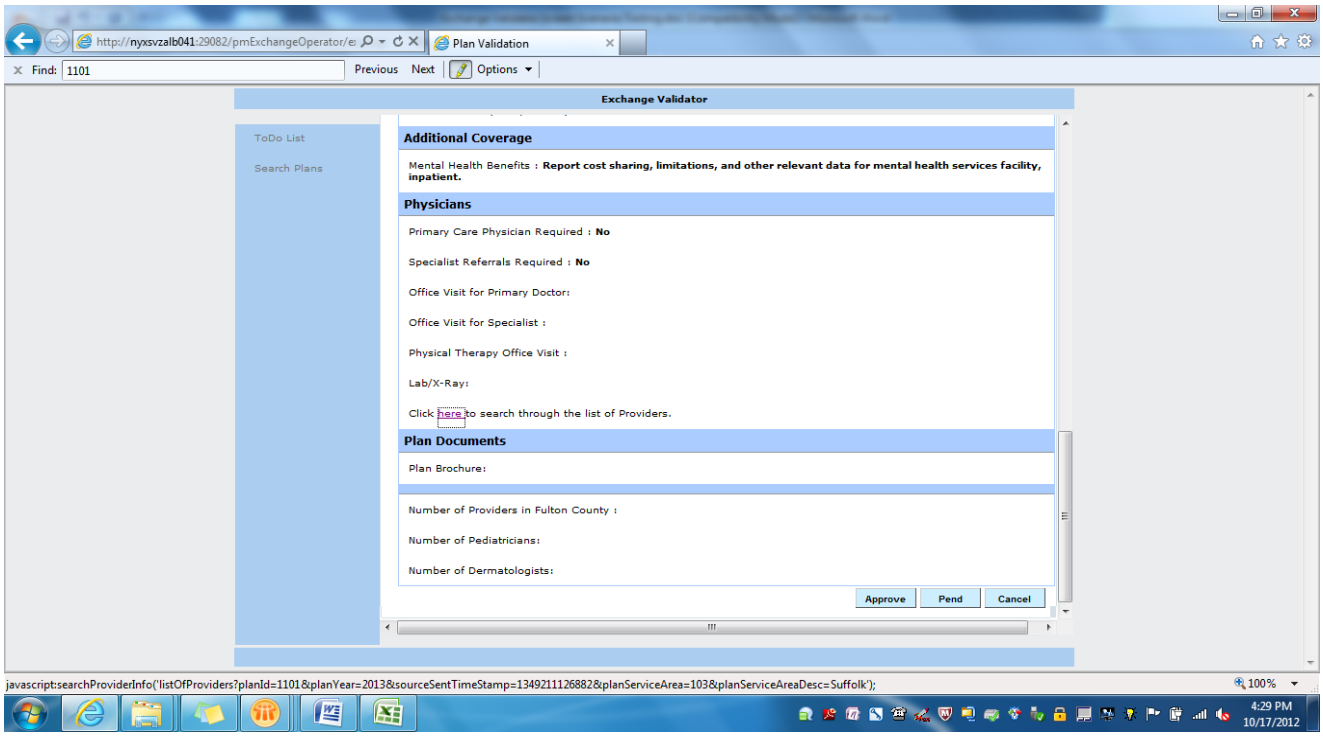
Step 4: Click County: Suffolk
Expected Result: "Plan Validation" window opens that displays the entire details of Affinity Health Plan in county "Suffolk"

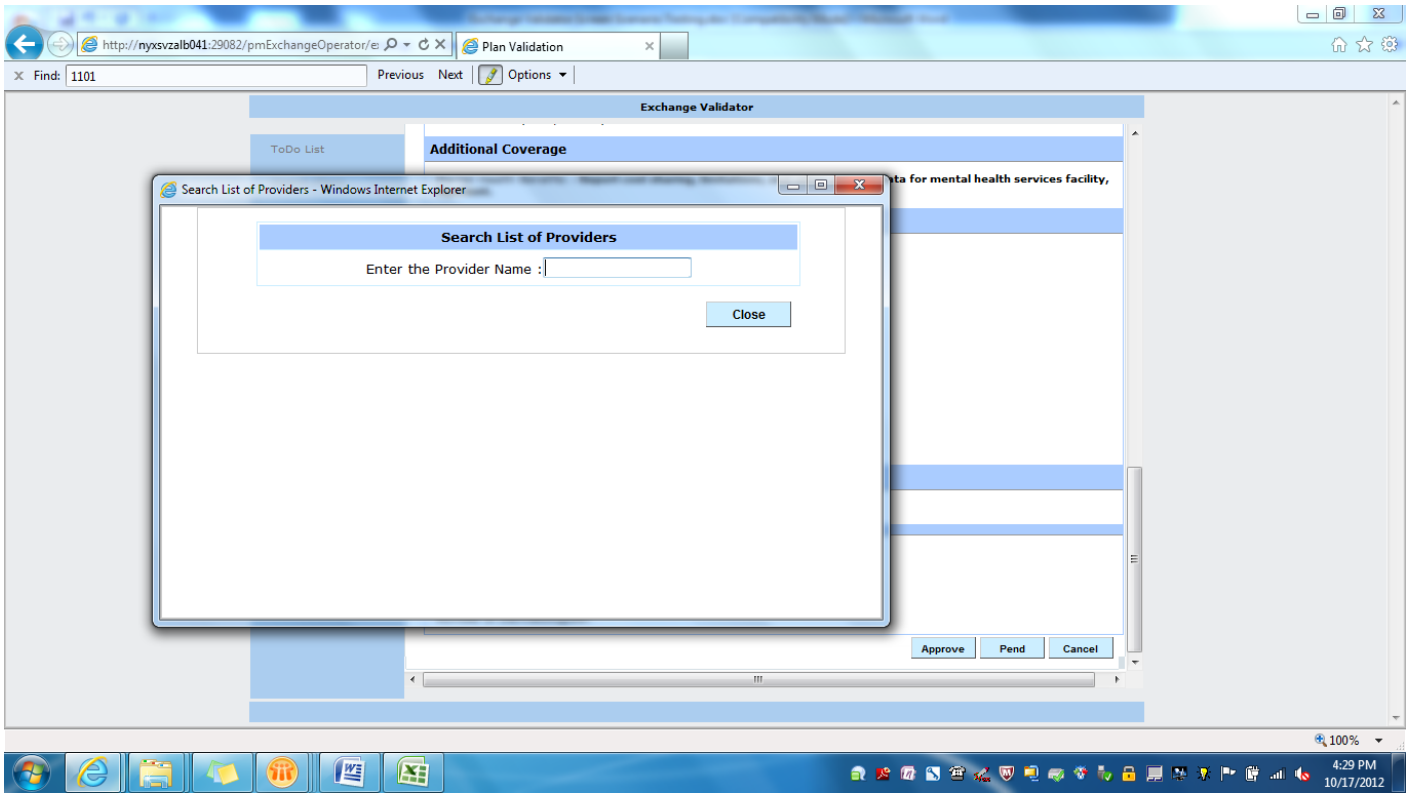


Step 5: In "Physician" section; Click on "Click here to search through the list of Providers"

Note: 'here' is the hyperlink

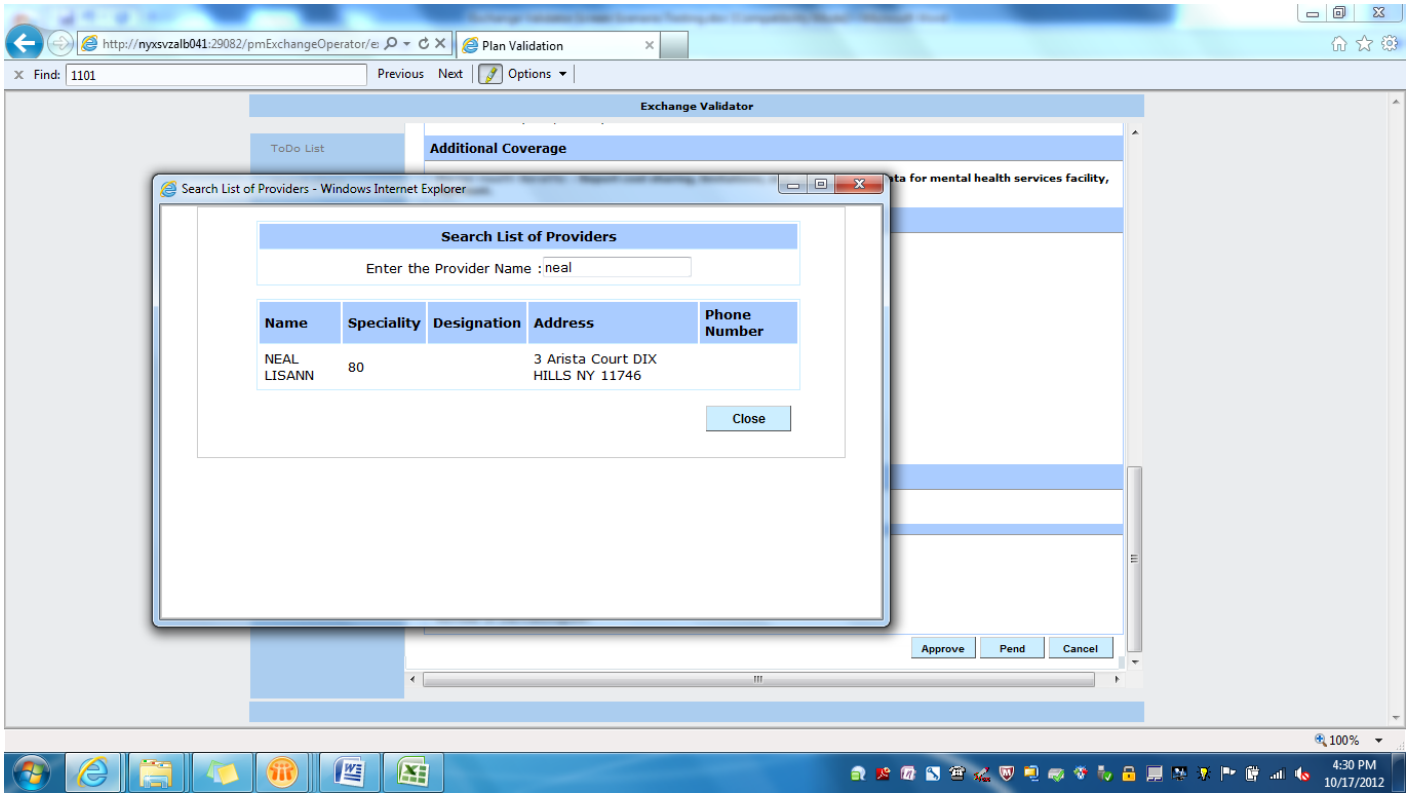
Expected Result: A "Search List of Providers" window opens



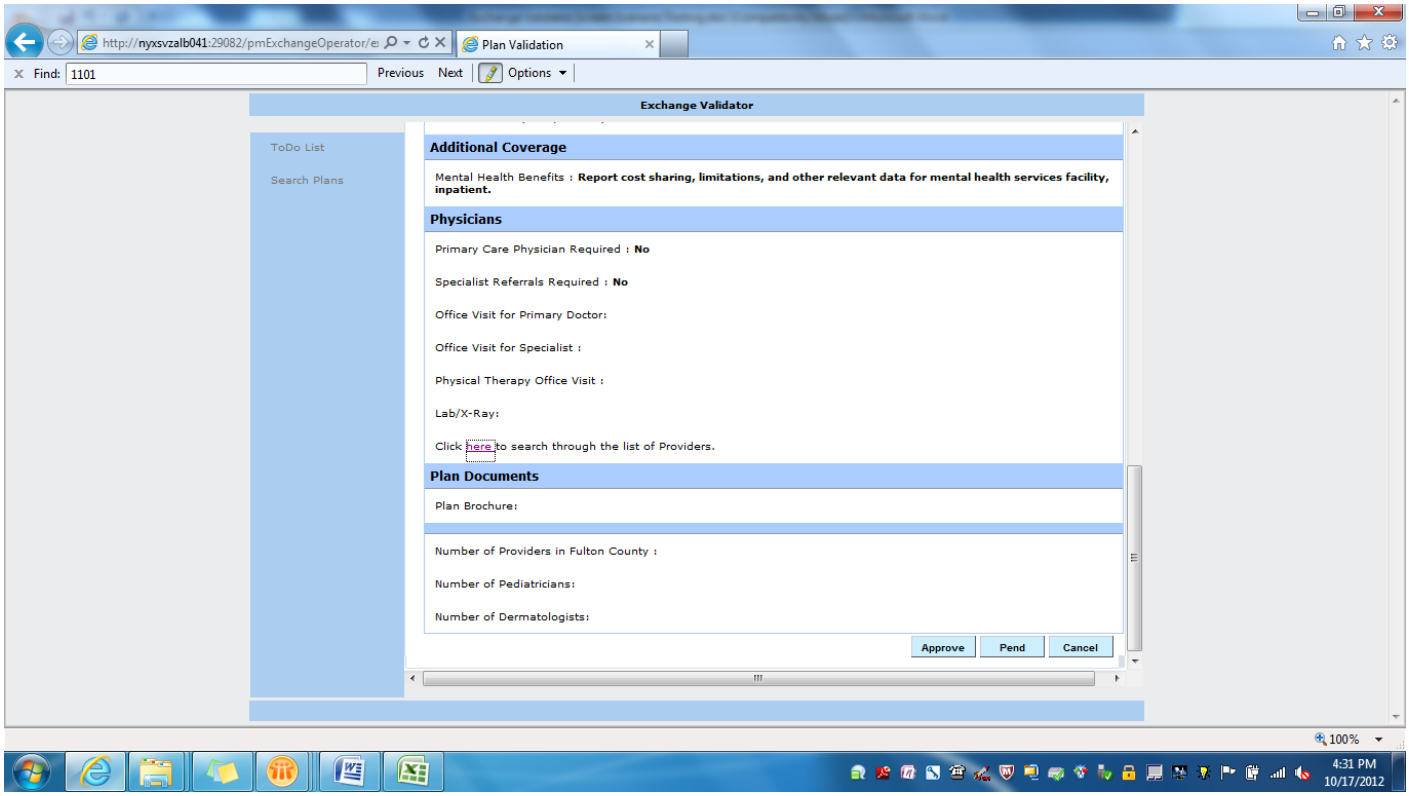


Step 6: Enter Physician name "Neal Lisann" in 'Enter the Provider Name' field and hit 'Enter' key

Expected Result: The search will list the physician in result table.



Step 7: Click 'Close' button
Expected Result: The search window closes and user is taken back to Plan details window.



4 CHIP, MMC & BHP Excel Template

Table 1: CHIP, MMC & BHP Excel Template

Column Heading	Sample Data
Issuer ID	I001
Company Legal Name	Affinity Health Plan, Inc
FEIN	133330672
Issuer Address 1	2500 Halsey Street
Issuer Address 2	
Issuer Address 3	
Issuer City	Bronx
State	NY
Zip Code	10461
Issuer Phone	(718)794-7700
Issuer Phone Extension	1234
State ID Number	2010186
Consumer-Facing Web Site URL	https://www.affinityplan.org/
Plan ID	1101
Plan Marketing Name	Affinity Health Plan, Inc
Plan_Year	2013
Product Type (HMO/PPO/PSO/EPO)	PHSP
Plan Type (CHIP/MDCD/BHP/QHP)	MDCD
Plan Status (Active/Suspend/Decertify)	Active
URL for Summary of Benefits and Coverage	https://www.affinityplan.org/
Plan Enrollment Open Date	1/1/2013
Plan Enrollment Close Date	12/31/2013
Plan Effective Start Date	1/1/2013
Plan Effective End Date	12/31/2013
"Plan Level Combined MOOP for Additional Benefits Above EHBs"	
Plan Description	Affinity Health Plan is an independent, not-for-profit managed care company dedicated to serving the needs of low- and moderate-income residents of the New York area.

Column Heading	Sample Data
Plan Area (County)	Bronx
Customer Service Phone	866-247-5678
Customer Service Phone Ext	
"Customer Service Toll Free Number"	866-247-5678
Customer Service TTY	
Customer Service URL	member@affinityplan.org
Plan Contact First Name	Ms. Maura Bluestone
Plan Contact Last Name	Ms. Maura Bluestone
Plan Contact Title	President & CEO
Plan Contact Address	2500 Halsey Street
Plan Contact City	Bronx
Plan Contact State	NY
Plan Contact Zip	10461
Plan Contact Email	
Plan Contact Phone Number	(718)794-7700
Plan Contact Phone Extension	
Plan Contact Fax	
"Accreditation Organization ID / Application Number"	222
Name of Accrediting Entity	NCQA
Issuer Accreditation	A
Accredited Product (HMO/POS/PPO/EPO)	PPO
Accreditation Sub ID	
Rate / Premium	
Rate Effective Date	
Rate Expiration Date	
Formulary ID	F001
Formulary Name	United States Pharmacopeia
Formulary Model	M1
Formulary URL	https://www.affinityplan.org/
Provider URL	https://www.affinityplan.org/

5 QARR File Formats

Table 2: QARR File Formats

CODE_NAME	CODE_VALUE	Label
MEASURE	RATEHP	Rating of Health Plan
MEASURE	RATEPCP	Rating of Doctor
MEASURE	CARENEED	Getting Care Needed
MEASURE	IM_COMBO3	Immunization
MEASURE	WEIGHT_BMI	BMI Assessment
MEASURE	URI	Appropriate Treatment for URI
MEASURE	PHARYNGITIS	Appropriate Testing for Pharyngitis
MEASURE	PRENATAL	Timeliness of Prenatal Care
MEASURE	POSTPARTUM	PostpartumCare
MEASURE	MAMMO	Breast Cancer Screening
MEASURE	CERVICAL	Cervical Cancer Screening
MEASURE	COLORECTAL	Colorectal Cancer screening
MEASURE	ADULTFLU	Flu shots for Adults
MEASURE	ADV_SMOKE	Advising Smokers to Quit
MEASURE	CHOL_LEVEL_LT100	Cholesterol Management - LDL-C below 100
MEASURE	HBPRESSURE	Controlling High Blood Pressure
MEASURE	DIABETESEYE	Diabetes Care Eye Exam

CODE_NAME	CODE_VALUE	Label
MEASURE	SPIROMETRY	Spirometry Testing for COPD
MEASURE	ASTHMA_5_64	Use of Appropriate Asthma Medications
MEASURE	AMBFU_7DAY	Follow up After Hospitalization for Mental Illness - 7 days
LEVSIG	1	Below Statewide Average
LEVSIG	2	Not Significantly Different
LEVSIG	3	Above Statewide Average
RATE	SS	Sample Size too small to report
RATE	NV	Plan Submitted Invalid Data
DOMAIN	Satisfaction	Satisfaction
DOMAIN	Children	Children
DOMAIN	Pregnancy	Pregnancy
DOMAIN	Adults	Adults
DOMAIN	Health_Conditions	Health Conditions
SCORE	1	Below Average
SCORE	2	Average
SCORE	3	Above Average

6 Quality Data Elements

Table 3: Quality Data Elements

Column Heading	Sample Data
PLANID	1050178
PLANNAME	HIP (EmblemHealth)
PRODUCT	CHPLUS
YEAR	2011
RATING	3
DOMAIN	Children
SCORE	2
MEASURE	IM_COMBO3
RATE	72
LEVSIG	2

7 PNDS Data Elements

Provider Data	Ancillary Data
Plan_ID	Plan_ID
Plan_Year	Plan_Year
Last_Name	Site_Name
First_Name	Room_Or_Suite
National_Provider_Identifier	Street_Address
License_Number	Town_City
Site_Name	State
Room_Or_Suite	Service_Area_Code
Street_Address	Zip_Code
Town_City	Zip_Extension
State	Designated_Service_Code
Service_Area_Code	National_Provider_Identifier
Zip_Code	License_Number
Zip_Extension	Permanent_Facility_Identifier
Wheel_Chair_Accessibility	Area_Code
Primary_Designation	Phone_Number
Primary_Speciality	Service_1
Secondary_Speciality	Service_2
BoardStatus_Primary_Speciality	Service_3
BoardStatus_Secondary_Speciality	Service_4
Gender	Service_5
Medicaid_Panel_Status	Service_6
Medicare_Panel_Status	Service_7

Provider Data	Ancillary Data
CHP_Panel_Status	Service_8
FHP_Panel_Status	Service_9
BHP_Panel_Status	Service_10
HA_Operating_Certificate_1	Service_11
HA_Permanent_Facility_Identifier_1	Service_12
HA_Operating_Certificate_2	Service_13
HA_Permanent_Facility_Identifier_2	Service_14
HA_Operating_Certificate_3	Service_15
HA_Permanent_Facility_Identifier_3	Service_16
Facility_Operating_Certificate	Service_17
Permanent_Facility_Identifier	Service_18
Total_Office_Hours	Service_19
After_Hours_Ind	Service_20
Language1	Service_21
Language2	Service_22
Language3	Service_23
Language4	Service_24
Language5	Service_25
Language6	Geo-Axis Codes
Language7	
Area_Code	
Phone	
Provider_Email	
Federal_Employee_Identification_Number	
Geo-Axis Codes	

8 SERFF & WSDL XSD

8.1 Plan Management API

8.1.1 PM Common XSD

```
<?xml version="1.0" encoding="UTF-8"?>
<!--
	This file contains common definitions between the exchange and the SERFF API
implementations for the model elements.

	Copyright 2012 National Association of Insurance Commissioners
 -->
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"
targetNamespace="http://www.serff.com/planManagementApi/common/model/pm"
	 elementFormDefault="qualified"
	 xmlns:tns="http://www.serff.com/planManagementApi/common/model/pm">

	<xs:simpleType name="PlanIdentifier">
		<xs:restriction base="xs:string">
			<xs:maxLength value="50"/>
		</xs:restriction>
	</xs:simpleType>
	<xs:element name="exchangePlanId" type="tns:PlanIdentifier"/>
	<xs:element name="insurerPlanId" type="tns:PlanIdentifier" nillable="true" />
	<xs:element name="statePlanId" type="tns:PlanIdentifier" nillable="true" />

	<xs:simpleType name="PlanStatus">
		<xs:restriction base="xs:string">
			<xs:enumeration value="Received"/>
			<xs:enumeration value="Updated"/>
			<xs:enumeration value="DoesNotExist"/>
		</xs:restriction>
	</xs:simpleType>
	<xs:element name="planStatus" type="tns:PlanStatus"/>

	<xs:complexType name="XmlFragment">
		<xs:sequence>
			<xs:any minOccurs="0" />
		</xs:sequence>
	</xs:complexType>

</xs:schema>
```

8.1.2 Service Common XSD

```
<?xml version="1.0" encoding="UTF-8"?>
<!--
	This file contains common definitions between the exchange and SERFF API
implementations for the service elements.

	Copyright 2012 National Association of Insurance Commissioners
 -->
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"
targetNamespace="http://www.serff.com/planManagementApi/common/model/service"
	 elementFormDefault="qualified"
	 xmlns:tns="http://www.serff.com/planManagementApi/common/model/service">

	<xs:complexType name="ErrorMessage">
		<xs:sequence>
			<xs:element name="code" type="xs:string"/>
			<xs:element name="message" type="xs:string"/>
		</xs:sequence>
	</xs:complexType>

	<xs:complexType name="ErrorMessageGroup">
		<xs:sequence>
			<xs:element name="message" type="tns:ErrorMessage" minOccurs="0"
maxOccurs="unbounded"/>
		</xs:sequence>
	</xs:complexType>

	<xs:complexType name="BasicResponse">
		<xs:sequence>
			<xs:element name="successful" type="xs:boolean"/>
			<xs:element name="errorGroup" type="tns:ErrorMessageGroup" nillable="true"/>
		</xs:sequence>
	</xs:complexType>

</xs:schema>
```

8.1.3 Data Template XSD

```
<?xml version="1.0" encoding="UTF-8"?>
<!--
	This file contains the definition of a data template.

	Please note the following.

	A data template is sent as base 64 encoded binary data. We anticipate switching to MTOM in the
future.

	Copyright 2012 National Association of Insurance Commissioners
 -->
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"
targetNamespace="http://www.serff.com/planManagementApi/exchange/model/pm"
	elementFormDefault="qualified"
	xmlns:tns="http://www.serff.com/planManagementApi/exchange/model/pm"
	xmlns:common="http://www.serff.com/planManagementApi/common/model/pm">

	<xs:import namespace="http://www.serff.com/planManagementApi/common/model/pm"
schemaLocation="../common/pm-common.xsd"/>

	<xs:complexType name="DataTemplate">
		<xs:sequence>
			<xs:element name="dataTemplateId" type="xs:string" />
			<xs:element name="dataTemplateType" type="xs:string" />
			<xs:element name="data" type="xs:base64Binary"/>
		</xs:sequence>
	</xs:complexType>

	<xs:complexType name="DataTemplates">
		<xs:sequence>
			<xs:element name="dataTemplate" type="tns:DataTemplate" minOccurs="0"
maxOccurs="unbounded"/>
		</xs:sequence>
	</xs:complexType>

	<xs:complexType name="XmlDataTemplate">
		<xs:sequence>
			<xs:element name="dataTemplateId" type="xs:string" />
			<xs:element name="dataTemplateType" type="xs:string" />
			<xs:element name="data" type="common:XmlFragment"/>
		</xs:sequence>
	</xs:complexType>

</xs:schema>
```

8.1.4 Exchange WSDL

```
<?xml version="1.0" encoding="UTF-8"?>
<!--
	This file contains the initial Web Service definition for the service implemented by a state-based exchange. NAIC is a client of this service.

	Please note the following:

	For Authentication, we intend to use client-side certificates or username/password depending on the security policies set by HHS.
	This file doesn't contain the complete list of operations yet.

	Copyright 2012 National Association of Insurance Commissioners
 -->
 <wsdl:definitions xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
	xmlns:http="http://schemas.xmlsoap.org/wsdl/http/"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
	xmlns:soapenc="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:mime="http://schemas.xmlsoap.org/wsdl/mime/"
	xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
	xmlns:service="http://www.serff.com/planManagementApi/exchange/model/service"
	xmlns:pm="http://www.serff.com/planManagementApi/exchange/model/pm"
	xmlns:cpm="http://www.serff.com/planManagementApi/common/model/pm"
	xmlns:cserv="http://www.serff.com/planManagementApi/common/model/service"
	xmlns:tns="http://www.serff.com/planManagementApi/exchange/service"
	targetNamespace="http://www.serff.com/planManagementApi/exchange/service">

	<wsdl:types>
		<xs:schema elementFormDefault="qualified"
```

8.1.5 Insurer XSD

```
<?xml version="1.0" encoding="UTF-8"?>
<!--
	This file contains the Insurer and related types.

	Copyright 2012 National Association of Insurance Commissioners
 -->
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"
targetNamespace="http://www.serff.com/planManagementApi/exchange/model/pm"
	xmlns:tns="http://www.serff.com/planManagementApi/exchange/model/pm"
elementFormDefault="qualified">

	<xs:complexType name="Insurer">
		<xs:sequence>
			<xs:element name="insurerId" type="xs:string"/>
			<xs:element name="companyInfo" type="tns:CompanyInfo"/>
		</xs:sequence>
	</xs:complexType>
	<xs:element name="insurer" type="tns:Insurer" />

	<xs:complexType name="CompanyInfo">
		<xs:sequence>
			<xs:element name="companyName" type="xs:string"/>
			<xs:element name="fein" type="xs:string"/>
			<xs:element name="cocode" type="xs:int" nillable="true"/>
			<xs:element name="groupCode" type="xs:int" nillable="true"/>
			<xs:element name="groupName" type="xs:string" nillable="true"/>
			<xs:element name="phone" type="xs:string" nillable="true"/>
			<xs:element name="phoneExt" type="xs:string" nillable="true"/>
			<xs:element name="fax" type="xs:string" nillable="true"/>
			<xs:element name="stateOfDomicile" type="tns:StateAbbreviation"/>
			<xs:element name="address" type="tns:Address"/>
			<xs:element name="stateLicense" type="xs:string"/>
		</xs:sequence>
	</xs:complexType>
	<xs:simpleType name="StateAbbreviation">
		<xs:restriction base="xs:string">
			<xs:pattern value="[A-Z][A-Z]"/>
		</xs:restriction>
	</xs:simpleType>
	<xs:simpleType name="ZipCode">
		<xs:restriction base="xs:string">
			<xs:pattern value="[0-9][0-9][0-9][0-9][0-9]"/>
		</xs:restriction>
	</xs:simpleType>
	<xs:complexType name="Address">
		<xs:sequence>
			<xs:element name="addressLine1" type="xs:string"/>
```

8.1.6 Plan XSD

```
<?xml version="1.0" encoding="UTF-8"?>
<!--
	This file contains the Health Plan and related types.

	Please note the following:

	Some of the plan attributes might move to a data template. If this change happens, those attributes
would be sent in an XML fragment.

	Copyright 2012 National Association of Insurance Commissioners
 -->
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"
targetNamespace="http://www.serff.com/planManagementApi/exchange/model/pm"
	elementFormDefault="qualified"
	xmlns:tns="http://www.serff.com/planManagementApi/exchange/model/pm"
	xmlns:common="http://www.serff.com/planManagementApi/common/model/pm">

	<xs:import namespace="http://www.serff.com/planManagementApi/common/model/pm"
schemaLocation="../common/pm-common.xsd"/>
	<xs:include schemaLocation="insurer.xsd"/>
	<xs:include schemaLocation="data-template.xsd"/>

	<xs:complexType name="Plan">
		<xs:sequence>
			<xs:element ref="common:exchangePlanId"/>
			<xs:element ref="common:insurerPlanId"/>
			<xs:element ref="common:statePlanId"/>
			<xs:element name="planName" type="xs:string"/>
			<xs:element name="planType" type="tns:PlanType"/>
			<xs:element name="marketType" type="tns:MarketType"/>
			<xs:element name="planLevel" type="tns:PlanMetalLevel"/>
			<xs:element ref="tns:actuarialValue"/>
			<xs:element name="planStartDate" type="xs:date"/>
			<xs:element name="planExpirationDate" type="xs:date"/>
			<xs:element name="planStatus" type="common:PlanStatus"/>
			<xs:element name="newPlan" type="xs:boolean"/>
			<xs:element name="medicalRecordsCoverage" type="xs:boolean"/>
			<xs:element name="worldwideCoverage" type="xs:boolean"/>
			<xs:element name="designatedPcpRequired" type="xs:boolean"/>
			<xs:element name="sameSexPartnersAllowed" type="xs:boolean"/>
			<xs:element name="domesticPartnersAllowed" type="xs:boolean"/>
			<xs:element name="planMinAge" type="xs:int" />
			<xs:element name="planMaxAge" type="xs:int" />
			<xs:element name="lifetimeMaximum" type="tns:Amount"/>
			<xs:element name="annualMaximum" type="tns:Amount"/>
			<xs:element name="stateAbbreviation" type="tns:StateAbbreviation"/>
			<xs:element ref="tns:insurer" />
			<xs:element name="benefitTemplate" type="tns:XmlDataTemplate"/>
			<xs:element name="rateTemplate" type="tns:XmlDataTemplate"/>
```

```
        </xs:sequence>
    </xs:complexType>
    <xs:element name="plan" type="tns:Plan"/>

    <xs:simpleType name="ActuarialValue">
        <xs:restriction base="xs:decimal">
            <xs:minInclusive value="0"/>
            <xs:maxInclusive value="100"/>
            <xs:fractionDigits value="1"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:element name="actuarialValue" type="tns:ActuarialValue"/>

    <xs:simpleType name="PlanMetalLevel">
        <xs:restriction base="xs:string">
            <xs:enumeration value="Platinum"/>
            <xs:enumeration value="Gold"/>
            <xs:enumeration value="Silver"/>
            <xs:enumeration value="Bronze"/>
            <xs:enumeration value="Catastrophic"/>
        </xs:restriction>
    </xs:simpleType>

    <xs:simpleType name="PlanType">
        <xs:restriction base="xs:string">
            <xs:enumeration value="HMO"/>
            <xs:enumeration value="PPO"/>
            <xs:enumeration value="EPO"/>
            <xs:enumeration value="POS"/>
            <xs:enumeration value="HSA"/>
            <xs:enumeration value="HDHP"/>
            <xs:enumeration value="FFS"/>
            <xs:enumeration value="OTH"/>
        </xs:restriction>
    </xs:simpleType>

    <xs:simpleType name="MarketType">
        <xs:restriction base="xs:string">
            <xs:enumeration value="Individual"/>
            <xs:enumeration value="SHOP"/>
        </xs:restriction>
    </xs:simpleType>

    <xs:simpleType name="Amount">
        <xs:restriction base="xs:decimal">
            <xs:minInclusive value="0"/>
            <xs:fractionDigits value="2"/>
        </xs:restriction>
    </xs:simpleType>

</xs:schema>
```

8.1.7 HAPI WSDL

```
<?xml version="1.0" encoding="UTF-8"?>
<!--
	This file contains the initial Web Service definition for the service implement by NAIC. A state-based exchange is a client of this API.

	Please note the following:

	We anticipate reworking the schema section into more XSD files in a future revision.
	This file doesn't contain the complete list of operations yet.

	Copyright 2012 National Association of Insurance Commissioners
 -->
<wsdl:definitions xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
	xmlns:http="http://schemas.xmlsoap.org/wsdl/http/"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
	xmlns:soapenc="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:mime="http://schemas.xmlsoap.org/wsdl/mime/"
	xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
	xmlns:service="http://www.serff.com/planManagementApi/serff/model/service"
	xmlns:cpm="http://www.serff.com/planManagementApi/common/model/pm"
	xmlns:cserv="http://www.serff.com/planManagementApi/common/model/service"
	xmlns:tns="http://www.serff.com/planManagementApi/serff/service"
	targetNamespace="http://www.serff.com/planManagementApi/serff/service">

	<wsdl:types>
		<xs:schema elementFormDefault="qualified"
		xmlns:tns="http://www.serff.com/planManagementApi/serff/model/service"
		targetNamespace="http://www.serff.com/planManagementApi/serff/model/service">

			<xs:import namespace="http://www.serff.com/planManagementApi/common/model/pm"
				schemaLocation="../common/pm-common.xsd" />
			<xs:import
namespace="http://www.serff.com/planManagementApi/common/model/service"
				schemaLocation="../common/service-common.xsd" />

			<xs:complexType name="ValidationErrors">
				<xs:sequence>
					<xs:element name="msg" type="xs:string" minOccurs="0"
maxOccurs="unbounded" />
				</xs:sequence>
			</xs:complexType>

			<xs:complexType name="PlanXmlFragmentData">
				<xs:sequence>
					<xs:element name="planId" type="xs:string" />
					<xs:element name="xmlFragmentData" type="cpm:XmlFragment" />
				</xs:sequence>
			</xs:complexType>
```

```
            <xs:complexType name="DataTemplateOutcome">
                <xs:sequence>
                    <xs:element name="requestId" type="xs:string" />
                    <xs:element name="dataTemplateId" type="xs:string" />
                    <xs:element name="validationErrors" type="tns:ValidationErrors"
minOccurs="0" />
                    <xs:element name="planXmlFragmentData" type="tns:PlanXmlFragmentData"
minOccurs="0" />
                </xs:sequence>
            </xs:complexType>

            <xs:complexType name="DataTemplateOutcomes">
                <xs:sequence>
                    <xs:element name="dataTemplateOutcome" type="tns:DataTemplateOutcome"
minOccurs="0" maxOccurs="unbounded"/>
                </xs:sequence>
            </xs:complexType>

            <xs:complexType name="ValidateAndTransformDataTemplateReply">
                <xs:sequence>
                    <xs:element name="dataTemplateOutcomes" type="tns:DataTemplateOutcomes"
/>
                </xs:sequence>
            </xs:complexType>

            <xs:element name="validateAndTransformDataTemplateReply"
type="tns:ValidateAndTransformDataTemplateReply" />
            <xs:element name="validateAndTransformDataTemplateReplyResponse" type="xs:string"
/>

            <xs:complexType name="UpdatePlanStatus">
                <xs:sequence>
                    <xs:element ref="cpm:exchangePlanId"/>
                    <xs:element ref="cpm:planStatus"/>
                </xs:sequence>
            </xs:complexType>
            <xs:complexType name="UpdatePlanStatusResponse">
                <xs:sequence>
                    <xs:element ref="cpm:exchangePlanId"/>
                    <xs:element name="planStatus" type="cpm:PlanStatus"/>
                    <xs:element name="errorGroup" type="cserv:ErrorMessageGroup"
nillable="true"/>
                </xs:sequence>
            </xs:complexType>
            <xs:element name="updatePlanStatus" type="tns:UpdatePlanStatus" />
            <xs:element name="updatePlanStatusResponse" type="tns:UpdatePlanStatusResponse" />
        </xs:schema>
    </wsdl:types>

    <wsdl:message name="validateAndTransformDataTemplateReply">
```

```
        <wsdl:part name="request" element="service:validateAndTransformDataTemplateReply"/>
    </wsdl:message>
    <wsdl:message name="validateAndTransformDataTemplateReplyResponse">
        <wsdl:part name="response"
element="service:validateAndTransformDataTemplateReplyResponse"/>
    </wsdl:message>
    <wsdl:message name="updatePlanStatus">
        <wsdl:part name="request" element="service:updatePlanStatus"/>
    </wsdl:message>
    <wsdl:message name="updatePlanStatusResponse">
        <wsdl:part name="response" element="service:updatePlanStatusResponse"/>
    </wsdl:message>

    <wsdl:portType name="SerffPlanManagementService">
        <wsdl:operation name="validateAndTransformDataTemplateReply">
            <wsdl:input message="tns:validateAndTransformDataTemplateReply"/>
            <wsdl:output message="tns:validateAndTransformDataTemplateReplyResponse"/>
        </wsdl:operation>
        <wsdl:operation name="updatePlanStatus">
            <wsdl:input message="tns:updatePlanStatus"/>
            <wsdl:output message="tns:updatePlanStatusResponse"/>
        </wsdl:operation>
    </wsdl:portType>

    <wsdl:binding name="SerffPlanManagementServiceBinding"
type="tns:SerffPlanManagementService">
        <soap:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
        <wsdl:operation name="validateAndTransformDataTemplateReply">
            <soap:operation soapAction="urn:validateAndTransformDataTemplateReply"/>
            <wsdl:input>
                <soap:body use="literal"/>
            </wsdl:input>
            <wsdl:output>
                <soap:body use="literal"/>
            </wsdl:output>
        </wsdl:operation>
        <wsdl:operation name="updatePlanStatus">
            <soap:operation soapAction="urn:updatePlanStatus"/>
            <wsdl:input>
                <soap:body use="literal"/>
            </wsdl:input>
            <wsdl:output>
                <soap:body use="literal"/>
            </wsdl:output>
        </wsdl:operation>
    </wsdl:binding>

    <wsdl:service name="SerffPlanManagement">
        <wsdl:port name="SerffPlanManagementService"
binding="tns:SerffPlanManagementServiceBinding">
            <soap:address location="http://localhost/hapi"/>
```

```
            </wsdl:port>
        </wsdl:service>
</wsdl:definitions>
```

8.1.8 HHS Benefit Template XSD

```
<?xml version="1.0" encoding="UTF-8"?>
<!--
	This file contains an example XML schema definition for a benefit template. It defines the structure of the XML fragment for response
	to the validateAndTransformDataTemplate operation. It would be sent back to the SERFF Health Plan Management Service calling
	the validateAndTransformDataTemplateReply operation.

	Please note this content is fictitious due to not have the real templates from HHS.

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 -->
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema" targetNamespace="http://www.serff.com/planManagement/hhs-benefit-template"
	xmlns:tns="http://www.serff.com/planManagement/hhs-benefit-template" elementFormDefault="qualified">

	<xs:simpleType name="Amount">
		<xs:restriction base="xs:decimal">
			<xs:minInclusive value="0"/>
			<xs:fractionDigits value="2"/>
		</xs:restriction>
	</xs:simpleType>

	<xs:simpleType name="MandatoryCoverageStatus">
		<xs:restriction base="xs:string">
			<xs:enumeration value="EHB"/>
			<xs:enumeration value="Mandate"/>
			<xs:enumeration value="Not EHB or Mandate"/>
		</xs:restriction>
	</xs:simpleType>

	<xs:complexType name="BenefitService">
		<xs:sequence>
			<xs:element name="id" type="xs:string"/>
			<xs:element name="name" type="xs:string"/>
			<xs:element name="categoryId" type="xs:string"/>
			<xs:element name="categoryName" type="xs:string"/>
			<xs:element name="mandatoryCoverageStatus" type="tns:MandatoryCoverageStatus"/>
			<xs:element name="tier" type="xs:string" nillable="true"/>
			<xs:element name="covered" type="xs:boolean"/>
			<xs:element name="coinsuranceInNetwork" type="tns:Amount" nillable="true"/>
			<xs:element name="coinsuranceOutOfNetwork" type="tns:Amount" nillable="true"/>
			<xs:element name="copaymentInNetwork" type="tns:Amount" nillable="true"/>
			<xs:element name="copaymentOutOfNetwork" type="tns:Amount" nillable="true"/>
			<xs:element name="outOfPocketLimitInNetwork" type="tns:Amount" nillable="true"/>
			<xs:element name="outOfPocketLimitOutOfNetwork" type="tns:Amount" nillable="true"/>
```

```
                <xs:element name="coinsuranceInNetworkInterval1" type="tns:Amount" nillable="true"/>
                <xs:element name="coinsuranceOutOfNetworkInterval1" type="tns:Amount"
nillable="true"/>
                <xs:element name="copaymentInNetworkInterval1" type="tns:Amount" nillable="true"/>
                <xs:element name="copaymentOutOfNetworkInterval1" type="tns:Amount"
nillable="true"/>
                <xs:element name="startDateInterval1" type="xs:date" nillable="true"/>
                <xs:element name="endDateInterval1" type="xs:date" nillable="true"/>

                <xs:element name="coinsuranceInNetworkInterval2" type="tns:Amount" nillable="true"/>
                <xs:element name="coinsuranceOutOfNetworkInterval2" type="tns:Amount"
nillable="true"/>
                <xs:element name="copaymentInNetworkInterval2" type="tns:Amount" nillable="true"/>
                <xs:element name="copaymentOutOfNetworkInterval2" type="tns:Amount"
nillable="true"/>
                <xs:element name="startDateInterval2" type="xs:date" nillable="true"/>
                <xs:element name="endDateInterval2" type="xs:date" nillable="true"/>

                <xs:element name="coinsuranceInNetworkInterval3" type="tns:Amount" nillable="true"/>
                <xs:element name="coinsuranceOutOfNetworkInterval3" type="tns:Amount"
nillable="true"/>
                <xs:element name="copaymentInNetworkInterval3" type="tns:Amount" nillable="true"/>
                <xs:element name="copaymentOutOfNetworkInterval3" type="tns:Amount"
nillable="true"/>
                <xs:element name="startDateInterval3" type="xs:date" nillable="true"/>
                <xs:element name="endDateInterval3" type="xs:date" nillable="true"/>

                <xs:element name="referralRequired" type="xs:boolean" nillable="true"/>
                <xs:element name="priorAuthorizationRequired" type="xs:boolean" nillable="true"/>
                <xs:element name="quantitativeLimitonService " type="xs:boolean" nillable="true"/>
                <xs:element name="limitQuantity" type="tns:Amount" nillable="true"/>
                <xs:element name="limitUnit" type="xs:string" nillable="true"/>
                <xs:element name="nonQuantitativeLimitonService " type="xs:boolean" nillable="true"/>
                <xs:element name="listOfNonQuantitativeLimitsOfService" type="xs:string"
nillable="true"/>
                <xs:element name="miniumStay" type="tns:Amount" nillable="true"/>
                <xs:element name="explanation" type="xs:string" nillable="true"/>
                <xs:element name="exclusions" type="xs:string" nillable="true"/>
            </xs:sequence>
        </xs:complexType>

        <xs:complexType name="BenefitServiceGroup">
            <xs:sequence>
                <xs:element name="benefitService" type="tns:BenefitService"
maxOccurs="unbounded"/>
            </xs:sequence>
        </xs:complexType>
</xs:schema>
```

8.1.9 HHS Rate Template XSD

```
<?xml version="1.0" encoding="UTF-8"?>
<!--
	This file contains an example XML schema definition for a rate template. It defines the structure of the XML fragment for response
	to the validateAndTransformDataTemplate operation. It would be sent back to the SERFF Health Plan Management Service calling
	the validateAndTransformDataTemplateReply operation.

	Please note this content is fictitious due to not have the real templates from HHS.

	Copyright 2012 National Association of Insurance Commissioners
 -->
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"
targetNamespace="http://www.serff.com/planManagement/hhs-benefit-template"
	xmlns:tns="http://www.serff.com/planManagement/hhs-benefit-template"
elementFormDefault="qualified">

	<xs:simpleType name="Amount">
		<xs:restriction base="xs:decimal">
			<xs:minInclusive value="0"/>
			<xs:fractionDigits value="2"/>
		</xs:restriction>
	</xs:simpleType>

	<xs:complexType name="RateSet">
		<xs:sequence>
			<xs:element name="rate" type="tns:Rate" maxOccurs="unbounded"/>
		</xs:sequence>
	</xs:complexType>

	<xs:complexType name="Rate">
		<xs:sequence>
			<xs:element name="id" type="xs:long"/>
			<xs:element name="minimumAge" type="xs:int"/>
			<xs:element name="maximumAge" type="xs:int"/>
			<xs:element name="subscriberType" type="tns:SubscriberType"/>
			<xs:element name="usesTobacco" type="xs:boolean"/>
			<xs:element name="regionId" type="xs:long"/>
			<xs:element name="rateAmount" type="tns:Amount"/>
			<xs:element name="effectiveDate" type="xs:date"/>
			<xs:element name="expirationDate" type="xs:date"/>
		</xs:sequence>
	</xs:complexType>

	<xs:simpleType name="SubscriberType">
		<xs:restriction base="xs:string">
			<xs:enumeration value="Primary"/>
			<xs:enumeration value="Primary Plus One"/>
```

```
                <xs:enumeration value="Child Only"/>
                <xs:enumeration value="Family"/>
            </xs:restriction>
        </xs:simpleType>

</xs:schema>
```

9 Acronyms

ACRONYM	*Literal Translation*
BHP	Basic Health Plan
CHIP	Children's Health Insurance Program
ESB	Enterprise Service Bus
ESD	Enterprise System Development
FTP	File Transfer Protocol
GUI	Graphical User Interface
ICD	Interface Control Documents
IP	Internet Protocol
IT	Information Technology
MMC	Medicaid Managed Care
NY-HX	New York State Health Benefit Exchange
QARR	Quality Assurance Reporting Requirements
QHP	Quality Health Plan
SERFF	System for Electronic Rate and Form Filing
SQL	Structured Query Language
UI	User Interface
WSDL	Web Services Description/Definition Language
XSD	Xml Schema Definition