VSAC Users' Forum

Thursday, February 19
2:00 – 3:00 PM, ET

Today's Agenda

- **The VSAC SVS API**

- **Announcements
  VSAC Code System Updates:**

    Week of 2/23: RxNorm 2015-02

    Mid March: US Edition of SNOMED CT 2015-03

VSAC SVS API v2

- VSAC Download Ecosystem
- VSAC SVS API is intended for machine consumption
- Based on IHE SVS Technical Framework
- Changes to the VSAC SVS API
- Two method calls
- Supported Use Cases
- Several parameters
- Example API calls and resulting XML
- Additional non-SVS 'helper API calls,' or utility services
- Authorization Tickets: TGT and Service

VSAC Download Ecosystem

Download Type	Expected Users	VSAC Access Location
Excel Spreadsheet	Human Analysts	Download Tab User Interface (Search Value Sets) Authoring (My Value Sets, Editing)
Text File (pipe delimited transformation of SVS XML)	Programmer/ Computers	Download Tab User Interface (Search Value Sets)
XML (IHE SVS)*	Computer	Download Tab User Interface (Search Value Sets)
API (IHE SVS)*	Computer	Method calls in command line or URL

*Integrating the Healthcare Enterprise Sharing Value Sets Technical Framework

VSAC Download Tab

Prepackaged eCQM value sets (Excel, XML, Text)

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*Integrating the Healthcare Enterprise Sharing Value Sets Technical Framework

6

VSAC Search Value Sets

All published value sets (Excel, XML, Text)

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*Integrating the Healthcare Enterprise Sharing Value Sets Technical Framework

VSAC Authoring – My Value Sets

Draft and Published Value Sets from your Author/Steward group (Excel)

VSAC Authoring – Editing
Draft and Published Value Sets from your Author/Steward group (Excel)

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*Integrating the Healthcare Enterprise Sharing Value Sets Technical Framework

IHE SVS Technical Framework

Integrating the Healthcare Enterprise

IHE IT Infrastructure (ITI)
Technical Framework Supplement

Sharing Value Sets
(SVS)

Trial Implementation
August 10, 2010

What's New: SVS Base URL

OLD (v1) {baseUrl} =   https://vsac.nlm.nih.gov/vsac/ws

NEW (v2) {baseUrl} = https://vsac.nlm.nih.gov/vsac/svs

Two VSAC SVS API Method Calls

{baseUrl} = https://vsac.nlm.nih.gov/vsac/svs

1. **{baseUrl}/RetrieveValueSet**
   Retrieves only the value set concept list for a value set.
   Example: https://vsac.nlm.nih.gov/vsac/svs/RetrieveValueSet

2. **{baseUrl}/RetrieveMultipleValueSets**
   Retrieves value set metadata content as well as the concept list for one or more value sets.
   Example:
   https://vsac.nlm.nih.gov/vsac/svs/RetrieveMultipleValueSets

Parameters: What's New

These Parameters Remain the Same
ticket
id
version (new interpretation=label)
effectiveDate
includeDraft

New Parameters	Old Parameters
profile (expansion profile)	n/a
tagName combined with **tagValue** tagName=CMS eMeasure ID&tagValue=CMS100v1	cmsemeasureid
tagName combined with **tagValue** tagName=eMeasureIdentifier&tagValue=100	measureid
tagName combined with **tagValue** tagName=NQF Number&tagValue=0142	NQFNumber

VSAC SVS API Parameters

Parameter	Description	Note	SVS API METHOD
ticket	Single-use service ticket	Each ticket expires after one API call or 5 minutes.	RetrieveValueSet RetrieveMultipleValueSets
id	Value set OID		RetrieveValueSet RetrieveMultipleValueSets
version	String that uniquely identifies a specific value set expansion.	Examples: "MU2 EP Update 2014-07-01" or "20141020"	RetrieveValueSet RetrieveMultipleValueSets
effectiveDate (Discouraged)	Date to determine the most current value set expansion as of that date, example: 20141020	Must be used together with "id" Defaults to VSACAutoExpansion	RetrieveMultipleValueSets
includeDraft	Retrieves most current definition of an unpublished draft value set. To generate an expansion we need profile and definition.	Must be used together with "profile" and "id"	RetrieveMultipleValueSets
profile	Expansion profile: predetermined calculation of value set against a certain code system version, includes predefined legacy codes.	Example: "MU2 EP Update 2014-07-01"	RetrieveMultipleValueSets
tagName	Tag for multiple value sets (utility API retrieves available tagNames)	Example: "CMS eMeasure ID" Must be used together with "tagValue"	RetrieveMultipleValueSets
tagValue	Tag value for multiple value sets (utility API retrieves available tagValues for a given tagName)	Example: "CMS100v1" Must be used together with "tagName"	RetrieveMultipleValueSets
programType and subtype	MU2, MU3, CCDA, QRDA, etc. (subtype example: EH, EP for MU)	**Coming Soon**	RetrieveMultipleValueSets

Authorization :
Ticket Granting Tickets and Service Tickets

- **Obtain a Ticket Granting Ticket (TGT)**
  Make a POST request to https://vsac.nlm.nih.gov/vsac/ws/Ticket
  Use your UMLS username and password: **username**=xxxxxxx**&password**=xxxxxxx
  You only need one TGT for all your single-use service tickets each day (8 hours).

- **Obtain a Service Ticket for each API call, using your TGT**
  Make a POST request to https://vsac.nlm.nih.gov/vsac/ws/Ticket/<TicketGrantingTicket>
  Use http://umlsks.nlm.nih.gov as the service in the POST request.
  Each service ticket is good for 5 minutes but expires after each API call.

- **Use one service ticket for each VSAC API call.**
  Make a GET request with the VSAC API URL, using a new service ticket for each API call.

Supported API Use Cases

1. **Retrieve the latest available value set expansion based on the latest definition of that value set.**
   {retrieveValueSetUrl}?**id={OID}**&ticket={serviceTicket}
   -or-
   {retrieveMultipleValueSetsUrl}?**id={OID}**&ticket={serviceTicket}

2. **Retrieve a released expanded value set with the specified release version label.**
   {retrieveValueSetUrl}?**id={OID}&version={versionLabel}**&ticket={serviceTicket}
   -or-
   {retrieveMultipleValueSetsUrl}?**id={OID}&version={versionLabel}**&ticket={serviceTicket}

Supported API Use Cases (continued)

3. **Retrieve a value set expansion associated with the specified expansion profile.**
   {retrieveMultipleValueSetsUrl}?**id={OID}&profile={profileName}**&ticket={serviceTicket}
   [Note: this call retrieves the latest published value set expansion if you do not use the includeDraft parameter (as below). However, if the specified value set OID has not been published, then no results will be returned by the API.]

4. **Retrieve a value set based on its most recently published definition, or the most recent draft definition if available, calculated with the specified expansion profile.**
   {retrieveMultipleValueSetsUrl}?**id={OID}&profile={profileName}&includeDraft=yes**&
   ticket={serviceTicket}

Supported API Use Cases (continued)

5. **Return a value set expansion as of a given date.**
    {retrieveMultipleValueSetsUrl}?**id={OID}&effectiveDate={effectiveDate}**&
    ticket={serviceTicket}
    [Note: this parameter will always apply the VSAC Auto Expansion profile with the most recent code system versions in VSAC.]

6. **Return one or more value sets based on associated metadata labeled by tagName.**
    {retrieveMultipleValueSetsUrl}?**tagName={tagName}&tagValue={tagValue}**&
    ticket={serviceTicket}

Example API Call and Resulting XML

Use Case

Retrieve all value sets and metadata for CMS eMeasure ID CMS100v3

API Code

GET https://vsac.nlm.nih.gov/vsac/svs/RetrieveMultipleValueSets?**tagName=**CMS eMeasure ID &**tagValue=**CMS100v3&ticket=ST-20430-X0nKrEe0fYel07mqtKMs-cas

Resulting XML

```xml
- <ns0:RetrieveMultipleValueSetsResponse>
  +<ns0:DescribedValueSet ID="1.3.6.1.4.1.33895.1.3.0.45" displayName="Comfort Measures " version="MU2 EH Update 2014-04-01">
   </ns0:DescribedValueSet>
  +<ns0:DescribedValueSet ID="2.16.840.1.113762.1.4.1" displayName="ONC Administrative Sex" version="MU2 EH Update 2014-04-01">
   </ns0:DescribedValueSet>
  +<ns0:DescribedValueSet ID="2.16.840.1.113762.1.4.1021.3" displayName="Aspirin ingredient specific" version="MU2 EH Update 2014-04-01">
   </ns0:DescribedValueSet>
  +<ns0:DescribedValueSet ID="2.16.840.1.113762.1.4.1045.31" displayName="Other Anticoagulants for AMI" version="MU2 EH Update 2014-04-01">
   </ns0:DescribedValueSet>
  +<ns0:DescribedValueSet ID="2.16.840.1.113883.3.117.1.7.1.139" displayName="Aspirin Allergen" version="MU2 EH Update 2014-04-01">
   </ns0:DescribedValueSet>
```

…truncated

21

Utility Services - Tag Names (Metadata)

Use Case

Return the list of metadata tag names.

API Code

GET https://vsac.nlm.nih.gov/vsac/tagNames?ticket=ST-21401-wTMvhXLtZ27uKIhutbEt-cas

Resulting XML

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<tagNames>
   <name>CMS eMeasure ID</name>
   <name>eMeasure Identifier</name>
   <name>NQF Number</name>
</tagNames>
```

Search Value Sets - Filters

Search Value Sets - Filters

Utility Services - Tag Values (Metadata)

Use Case

Return the list of metadata tag values for a specified metadata tag name.

API Code

GET https://vsac.nlm.nih.gov/vsac/tagName/CMS eMeasure ID/tagValues?ticket=ST-21787-cvddeyd7ih7XnBUb0lcX-cas

Resulting XML

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<tagValues tagName="CMS eMeasure ID">
  <value>CMS100v1</value>
  <value>CMS100v2</value>
  <value>CMS100v3</value>
… truncated
</tagValues>
```

Search Value Sets - Filters

Utility Services - Expansion Profiles

Use Case

Return the list of expansion profiles.

API Code

GET https://vsac.nlm.nih.gov/vsac/profiles?ticket=ST-117397-UK9FratiEQQopcCJe3V1-cas

Resulting XML

```xml
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ProfileList>
   <profile>VSAC Auto Expansion</profile>
   <profile>MU2 Update 2015-05-01</profile>
   <profile>MU2 EP Update 2014-05-30</profile>
   <profile>MU2 EH Update 2014-04-01</profile>
   <profile>MU2 EP Update 2013-06-14</profile>
   <profile>MU2 EH Update 2013-04-01</profile>   ...truncated
</ProfileList>
```

Authoring Interface- Expansion Profiles

Authoring Interface- Expansion Profiles

Utility Services - Version Labels

Use Case

Return all available version labels for a specified value set OID.

API Code

GET https://vsac.nlm.nih.gov/vsac/oid/2.16.840.1.113883.3.464.1003.110.12.1027/versions?ticket=ST-22286-wss0r47EbL96bqNLXkNl-cas

Resulting XML

```
<VersionList oid="2.16.840.1.113883.3.464.1003.110.12.1027">
   <version>20150127</version>
   <version>MU2 EP Update 2014-07-01</version>
   <version>MU2 EP Update 2014-05-30</version>
   <version>20140501</version>
   <version>20140125</version>
   <version>20131030</version>
   <version>MU2 EP Update 2013-06-14</version>
   <version>MU2 Update 2012-10-25</version>
</VersionList>
```

30
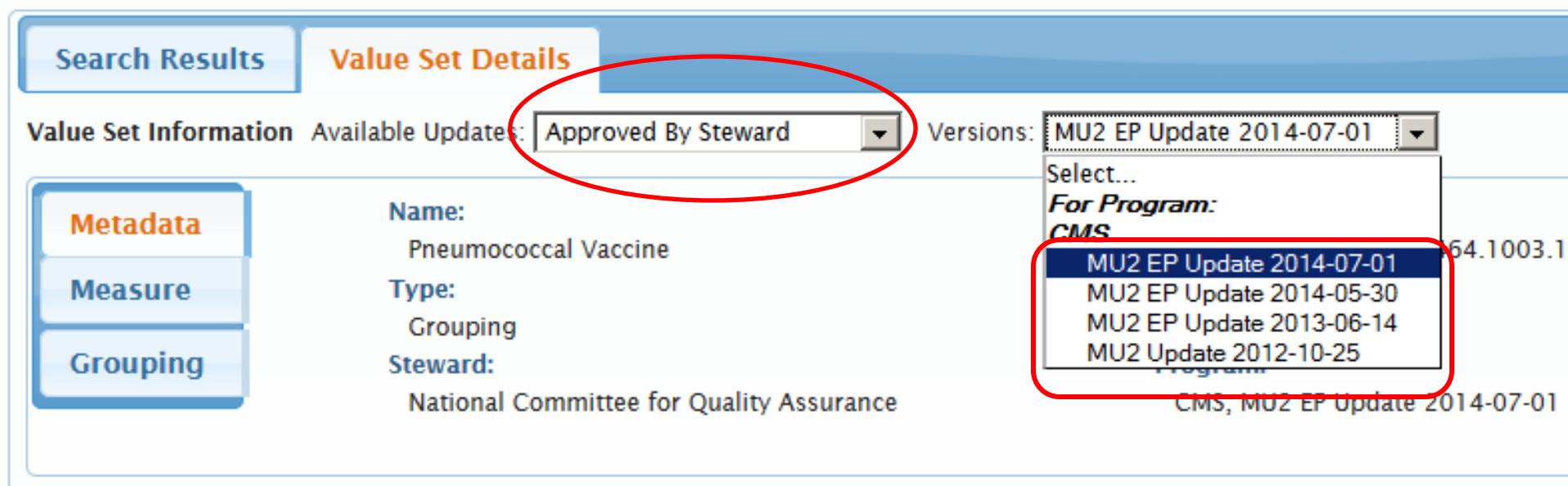
Search Value Sets – Value Set Details

Search Value Sets – Value Set Details

Questions?

Send comments, questions, ideas to:
custserv@nlm.nih.gov
(place VSAC in the subject line)

Upcoming VSAC Users' Forum:
March 19, 2015