

Email: Kleinman to Farmer

1/11/2011 1:57 AM

from rkleinman@sifassociation.org

subject RE: SIF Draft Web Services Specification

to jxf@immagic.com

cc: paulheald@sigmasys.com

jim

For the first time in more than a month the SIF WS ball is in someone else's court (early draft SIF WS Developer Kit sent to initial reviewers), so I have a chance to catch up on some back email.

One is to ask if additional SOAP header information could be contained in messages sent to SIF-compliant Zone Integration Servers that would be ignored. For example this could include SAML attributes, a more complex WS Addressing use, and reliable message delivery.

We have a Parking Lot issue around how exactly to extend the SOAP header to include SIF things we haven't worked out yet, like SAML Assertions and wsu: Security fields. The choice is to either:

- Put an extensible element at the bottom of the SIFHeader information, contained in the SOAP Header
- Require that any SIF additions be added as a separate SOAP Header element (so you'd have the wsa: addressing info, the SIFHeader info, and the "SIFExtension" complex elements in the SOAP Header ... where the last one was basically undefined).

It is easier for an unaware application to ignore information by using the 2nd technique, and we are pretty much decided on it. This let's us put a "must understand" on the SIFHeader element, and it allows others complete freedom to piggyback in additional SOAP Header segments.

SIF uses verified TLS to meet the needs of the Zone Integration Server due to actions taken on the basis of information in the SOAP body. For broader applications it seems encrypted messages would be more convenient. We could discuss with SIFA the possibility of making the ZIS perform this conversion for messages between higher education and SIF-compliant systems.

We are way behind the curve on standardizing this level of message security (because our messages primarily travel over an intranet within an enterprise as opposed to over the internet between two different organizations), but with v2.5 SOAP we have taken a major step which could help us. At this point we have 3 namespaces:

- **The Transport**, which defines the elements of SIFHeader, carried in the SOAP Header
- **The Message**, which defined the “outer wrappings” of the SOAP Body, identifying message type-specific elements like “Event” and “Query”
- **The Data Model**, which represents objects like StudentPersonal. These data objects lie “inside the Message elements in the SOAP Body

What makes this interesting is that all three namespaces are now completely independent of each other. So for example:

- The Transport can be changed from SOAP 1.1 to SOAP 1.2 (or Rest in which case we'd have to add the missing WS-Addressing elements) and the Message and Data Model Schemas would be unaffected. We can add wsu: security, we can have WS-Policy assertions ... nothing changes but the Port binding for the Service.
- The Message Schema can be changed to something more transaction focused without affecting the Transport or the Data Model
- The Object Data Model can be changed (to SIF US or AU or UK or SEA-specific or even Higher Ed) without affecting the SIF infrastructure (Transport or Messaging)

Of course any of these changes first needs to be standardized or it becomes difficult to find a partner who understands what you are trying to say. J

Because higher education did not participate I believe some of us have the implicit responsibility to provide the higher education IT community with a description of how to interface with SIF-compliant systems.

We currently have a Student Record Exchange Zone Service cluster, which we are looking to define a WSDL around and put it over SOAP to make it into a complete Web Service. Several Pearson folks and educators were leading the charge last time I looked.

There are SIF contributors who might be interested in a discussion with Higher Ed folks.

Perhaps this could be done via PESC EA2. And to explain the process SIFA used that offered higher education participation since July 2009.

This is key. I have long been of the view that there are two equally difficult problems being tackled in E-Transcripts

1. Data Model

- What is the schema of an XML Document that describes a Transcript?
- What does “Math 101 mean”?
- What is the grade range and curve? What is an “Honors” course?

2. Infrastructure

- Does the High School send the transcript direct to the College, or is there an intermediate Transcript Broker?
- How do partners in this exchange find each other and verify each others identity?
- If the E-Transcript were a PDF file, what would be the message exchange sequence from start to finish, and who would the actors be?

I thought there was some contact between the two groups (SIF / Pesc). If there hasn't been, I'd be willing to participate in an EA2 meeting.

Regards,

Ron Kleinman, CTO
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<http://www.sifassociation.org>

Date: Fri, 03 Dec 2010 22:21:25 -0500
From: "Ron Kleinman" <rkleinman@sifassociation.org>
Subject: RE: SIF Draft Web Services Specification
In-reply-to: <4CED8E99.6050105@immagic.com>
To: "Jim Farmer" <jxf@immagic.com>,
"Paul Heald" <paulheald@sigmasys.com>,
"Matthew Coombs" <mcoombs@deltacollege.edu>,
"Randy Timmons" <rtimmons@sigmasys.com>,
"Arnie Miles" <adm35@georgetown.edu>,
"Tim Bornholtz" <tim@bornholtz.com>

One is to ask if additional SOAP header information could be contained in messages sent to SIF-compliant Zone Integration Servers that would be ignored. For example this could include SAML attributes, a more complexWS Addressing use, and reliable message delivery.

Jim,

Rather than having a set of top level Header tags (like WS-Addressing) Will the following (optional) SIF_External element description in the SOAP Header do it?

```
<xs:complexType> <xs:sequence> <xs:any processContents="lax" />  
</xs:sequence> </xs:complexType>
```

If so, it's in there.

Regards,

Ron Kleinman, CTO
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rkleinman@sifassociation.org=20

-----Original Message-----

From: Jim Farmer [mailto:jxf@immagic.com]

Sent: Wednesday, November 24, 2010 2:16 PM

To: Paul Heald; Matthew Coombs; Randy Timmons; Arnie Miles; Tim Bornholtz

Cc: Ron Kleinman

Subject: SIF Draft Web Services Specification

The 17 Nov draft "Appendix Q" can be obtained at:

http://www.immagic.com/eLibrary/TECH/SIF_US/S101117K.pdf

I added the footer.

There are two possible actions that we can take.

One is to ask if additional SOAP header information could be contained in messages sent to SIF-compliant Zone Integration Servers that would be ignored. For example this could include SAML attributes, a more complex WS Addressing use, and reliable message delivery.

SIF uses verified TLS to meet the needs of the Zone Integration Server due to actions taken on the basis of information in the SOAP body. For broader applications it seems encrypted messages would be more convenient. We could discuss with SIFA the possibility of making the ZIS perform this conversion for messages between higher education and SIF-compliant systems.

There are notes in the draft that suggestions some comments on these points may be helpful.

Because higher education did not participate I believe some of us have the implicit responsibility to provide the higher education IT community with a description of how to interface with SIF-compliant systems.

Perhaps this could be done via PESC EA2. And to explain the process SIFA used that offered higher education participation since July 2009.

jim

Date: Tue, 23 Nov 2010 17:38:30 -0500
From: "Ron Kleinman" <rkleinman@sifassociation.org>
Subject: RE: The Mysterious Appendix Q
To: "Jim Farmer" <jxf@immagic.com>

Jim,

We got through the review at the Developer Camp with the design left intact, and very few small changes. At this point there is consensus that the end result must map to something that looks reasonable to a web service developer, rather than simply being something that an existing SIF vendor can paper over their code to claim "web service functionality" (like putting everything in the SOAP Body and duplicating a minimal SOAP Header from information contained lower down).

I've attached the latest draft, which incorporates the Developer Camp feedback, and reflects this approach. It's been a question of balance ... as you know, WS-Security isn't in there, because it didn't reflect our needs (more Enterprise web service than Internet), and we do have an intermediary who cracks open and changes the contents of messages on occasion.

Regards,

Ron Kleinman, CTO
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Date: Thu, 28 Oct 2010 21:01:23 +0100
From: Scott Wilson <scott.bradley.wilson@gmail.com>
Subject: Re: Interoperability of SIF-compliant systems and higher education for the exchange of data

In-reply-to:

To: David Moldoff <dmoldoff@academyone.com>
Cc: Jim Farmer <jxf@immagic.com>,
Michael Sessa <michael.sessa@pesc.org>,
Ron Kleinman <rkleinman@sifassociation.org>,
Alex Jackl <alexj@ccsso.org>,
Tim Cameron <Tim.Cameron@PESC.org>,
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On 28 Oct 2010, at 20:12, David Moldoff wrote:

> Jim,
>
> I appreciate the communications and think there are several good
issues for a full day conference spread throughout your two messages.
>
>> First, your passionate plea to uncover the resistance to
interoperability driven by the desire to lower costs and increase reuse
is shared. Question is, are we willing to give up the investment we
have made in our own approaches even if we could agree on a new
approach? There has to be a driving self interest why stakeholders
would support the investment to make their software open and
interoperable. And, in doing so, they have to commit new funds. So,
this is difficult to achieve, given today's climate.
>
>> Second, it is not just business models and technology resistance,
but fear and anxiety that hold us back because system safety and
security are poorly understood across a large cross section. So, many
hide the details instead of publishing them on EdUnify for instance.
They lack any formal SOA Governance. And, as a result, it is just
better to leave things hidden and out of sight. Which, then makes
things more expensive in the long run as we have little emphasis on
reuse as you know.
>
>> Third, it is also the reluctance of organizations to give up what

they think is proprietary. Many believe the data elements and structures are 'theirs' and won't share it without fees. They also claim the ownership of the data. This will continue to add friction across all sorts of Cloud or SOA services as they attempt to retain their install base like traditional SIS vendors do today. As new composite applications are developed, I am hoping to see their adoption of a more open mindset.

>

>> Fourth, it is IT's scarcity of knowledge reinforcing the status quo. Keep it under the covers. We are all compensated for our expertise - and are employed because everything is not plug and play. It would commoditize our area of expertise - like my laptop power cord or my Bluetooth headset does not require a system programmer to connect. If we achieve some level of connectivity, what does that mean to the industry? It is like we are still hard wiring our washer and dryer to the circuit breaker in every house - instead of agreeing on how best to connect and retain the connections with a simple plug. Expediency seems to have a higher priority across many organizations.

>

> On another read, I think your concentration on the transport (exposing = the differences on how one can request and receive a service using SOAP) is in contrast to my concentration of developing a logical layer of services (however delivered in the backend by SOAP or other transport). I don't believe there is a one-size-fits all transport architecture that will gain enough adoption to foster the VHS/Beta debate. We also have REST for instance and PESC's EdUnify is also including it. But, I do believe communities can work together to foster logical services - which is where most of the harmonization has to occur. That is what the work with RS3G is centered on.

I think I'm in agreement with David here. Something which has come up a few times over the years: application-level transports come and go (often not quickly enough!), its the data models and semantics that have lasting impact. So harmonising ideas for logical services in student mobility (or, perhaps put another way, identifying clearly-defined business activities that involve sharing data) and combining that with shared semantic models (e.g. EuroLMAI) would seem a good focus of effort. Getting from there to agreement on REST vs SOAP vs RDF vs XML vs YAML vs ESB vs MOM vs AMQP vs STOMP is the relatively easy part. I'm sure some suppliers and stakeholders will have their favourites, but pragmatically you do as many connection styles as you need to.

(In the UK for example, HEIs will use whatever UCAS and HESA decide on, even if its a protocol that involves us engraving the data onto ten foot high tablets of stone and dragging them by hand all the way to their HQ.)

> RS3G is not dictating an ESB or any form of architecture to deliver the Student Mobility web services. They just want to engage in the abstracted logical services to cross SISs - to keep things loosely coupled and to support the movement of data and processes that span borders/systems following the student. The least resistance is not to add an ESB like architecture, but to offer inline web services or REST interface that can address the specifications.

>

> Maybe we can convince stakeholders that it is warranted to have just

one transport or ESB. My experience tells me that will be very hard. = Systems spread across postsecondary institutions like mushrooms- or for that matter K12 - have their own integration strategy and components because of the business logic layer, how they enforce constraints, etc. We have way too many options on the table and too many vendors offering different technology stacks to narrow down choices artificially in a market filled with innovation and diversity. There is no silver bullet. Maybe in a few years, some of this will consolidate.

>

> I think most applications (and vendors) have an integration strategy and resources already employed - which will imply friction even if you could get agreement on one best or adequate approach.

> Oracle SQL and Microsoft SQL for instance have embedded the means to support web services in their database systems, just as Web Sphere and BizTalk have evolved to serve the enterprise integration market along = with other players too numerous to mention.

Agreed, and in many cases the IT teams in universities have developed = competence in using the integration tools that often come with their = core infrastructure services to develop new services and integrations as needed, so plug-and-play at this level usually means having = clearly-defined, easily mapped entities and fields.

> PESC's focuses on message payloads (and the resulting implications of a shared data dictionary) mostly. The Canadian province in Ontario = implemented an ESB across 40+ institutions using the PESC messages = without DTS. This allowed them to abstract the SIS differences. They were served well by the tools they selected, but were not confined by = our specifications. They would say they do have interoperability and it is working for them.

>

> SIFA has focused on the ESB like architecture with data messages. It works well where it can be the central and singular transport. There is some overlap in messages obviously and data elements with PESC. The messages are still presented at a transactional level and serve the sectors across applications. Does that mean we work to merge them? Maybe in some areas. I don't think that is what you are suggesting though. I gather it is more around the transport specifications with DTS and SOAP.

>

> The recent common data standards effort under way in the US led by the Department of Education is doing some new heavy duty lifting, much like we have seen in other parts of the world coordinated by governments. The abstracted differences are isolated and can be dealt with as they are uncovered with mapping. But, this still does not mean every institution or State agency is going to run out to Best Buy and implement their plug and play system.

>

> So, I believe, we need to find how to make this all more important to institutions, schools, districts, agencies and their stakeholders who desire to have open and interoperable systems to support learners and processes that span their domain.

>

> Maybe we should open a blog or wiki on the subject and allow comments Jim... We could do this on EdulWorld.org.

>=20

> All my best,
>
> David K. Moldoff, AcademyOne, Inc.
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> 610-436-5680 ext 301
> 484-410-9669 Cell
> www.academyone.com
> Navigating Education
>=
> Blogger Profile
> LinkedIn Profile
>
>
> -----Original Message-----
> From: Jim Farmer [mailto:jxf@immagic.com]
> Sent: Thursday, October 28, 2010 1:09 PM
> To: Michael Sessa
> Cc: Ron Kleinman; Alex Jackl; Tim Cameron; Matthew Coombs; Aaron
Godert; Christopher Sawwa; Jason Wrage; Charles F Leonhardt; Arnie
Miles; Janina Mincer-Daszkiewicz; Simone Ravaioli; Scott Bradley
Wilson; Daniel Rehak; Tim Bornholtz; Paul Heald; Larry Fruth; Avron
Barr; Randy Timmons; Andy Sprague; Mark Stubbs; Jill Abbott; David
Moldoff
> Subject: Re: Interoperability of SIF-compliant systems and higher =
education for the exchange of data
>
> You are correct that the number and sequence of implementations is an
opinion, both on which ones and what dates. There is however
significant documentation of intent of these efforts. The issue, which
Ron identified, is these were separate activities. Since July 2009
several of the separate activities have become aware of the others and
cooperated fully. Several of those leading were identified in the
communication.
>
> The point was the need for coordination to minimize future operating
expenditures.
>
> I thought it would be useful to share this information, especially
because decisions are being made every day that may limit future
interoperability. These are generally event-driven decisions because of
future commitments as those of RS3G, SIFA and LETSI had specific
dates--November 2010 and January 2011--for implementation.
>
> Only ADL has attempted harmonization. You will recall from the last
ADL/LETSI meeting how difficult it is to get representation from all of
the initiatives together--limits on their time and availability of
travel funds. And from the last ADL/LETSI meeting, which you attended,
how difficult it is to work without all of the homework necessary for a
productive meeting as Dan Rehak did for the first harmonization
meeting.
>
> Dave Moldoff has very thoughtfully documented his participation in
the RS3G meetings. You can compare his documents, available on the RS3G
Web site, with those I authored to see my concern not about the
business functionality--his specialty, but about the data transport

specification. Because of costs, it is very expensive to change a data transport network after it has been implemented by a number of colleges and universities--a point well understood by FSA in their Common Origination and Disbursement initiative and its plans for real-time transaction oriented data transport.

>

> RS3G shows the difficulty of separate business models. QS-Uniolution is dominant in the growing market as a result of a large and growing number of participants and Metcalfe's network effect. The University of Warsaw software supports direct real-time data exchanges that separates the technology from specialized knowledge of student mobility in the European Higher Education area. Gaining the benefits of integrating these business models is both a remaining economic and technical challenge.

>

> I believe there is a serious point that led to your comments. The integration issues would have been addressed by the standards agencies if the resources and calendar time were available for this type of broad coordination and design. Funding a PESC technical effort several months ago with full-time technical staff experienced in data transport would have avoided some of the future problem of integration. (There are several technical leaders in the PESC membership who are contributing their available time among many demanding priorities, which we appreciate). Those funding development were likely unaware of the future integration issues and hence did not respond to funding needs.

>

> I have attempted to share information among the developer communities so they at least know of similar work. I am not sure this is a useful activity in today's context. Perhaps it is better to let all of these proceed independently, or as independent as they will knowing about others, and let the market decide in some future date. This is not the route taken in industry where firms donated key talent for the future benefits.

>

> You are also correct that I may be overly sensitive to the integration issues. This comes from my participation in several of these efforts beginning a number of years ago, and being a university and college CIO when these issues were first raised.

>

> I believe your frustration is well founded. I am sure there are many others who have the same frustration.

>

> jim

>

>

>

>

> On 10/28/2010 11:36 AM, Michael Sessa wrote:

>> I question what was expected to be implemented in higher education and

>> the insinuated decision. Is this fact or opinion of Sigma of im+m?

>> I've asked Dave Moldoff, our most senior PESC Board member who has

>> also been involved with RS3G from inception to comment.

>> -M

>> Michael D. Sessa

>> President and CEO

>> PESC - Postsecondary Electronic Standards Council 1250 Connecticut

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>> the purpose indicated; and may not be reproduced or distributed
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if
>> you received this email in error.
>> //
>> =

>> --
>> *From:* Jim Farmer [mailto:jxf@immagic.com]
>> *Sent:* Fri 10/22/2010 11:25
>> *To:* Ron Kleinman; Alex Jackl; Tim Cameron; Matthew Coombs; Aaron
>> Godert; Christopher Sawwa; Jason Wrage; Charles F Leonhardt; Arnie
>> Miles; Janina Mincer-Daszkiewicz; Simone Ravaioli; Scott Bradley
>> Wilson; Daniel Rehak
>> *Cc:* Tim Bornholtz; Paul Heald; Michael Sessa; Larry Fruth; Avron
>> Barr; Randy Timmons; Andy Sprague; Mark Stubbs; Jill Abbott
>> *Subject:* Interoperability of SIF-compliant systems and higher
>> education for the exchange of data
>>
>> Recent communications suggest the emerging SIF specification for the
>> exchange of data differs, for security reasons, from what was =
expected
>> to be implemented in U.S. higher education. The attachment is a
>> collection of information related to that decision. Because of the
>> broad impact of this difference in the U.S. and subsequent data
>> transport specifications and practices, Paul and I thought you may
be
>> interested in this information we had collected.
>>
>> This is also an implicit suggestion that U.S. higher education
should
>> participate in the forthcoming RS3G/Terena EuroCAMP--itself a model
of
>> collaboration--and the SIFA Developers workshop. Information on both
>> is included.
>>
>> I should point out the critical parties have been very cooperative
>> with higher education. Ron Kleinman and Jason Wrage at SIFA have
>> unhesitatingly provided us information and responded to our =
questions.
>>
>> Similarly Professor Janina Mincer-Daszkiewicz, University of Warsaw,
>> who is leading the RS3G pilot and providing a detailed profile has
>> provided excellent documentation, responded to questions, and
>> facilitate conversations with the developers.
>>
>> Chris Sawwa, lead of LETSI's architecture workgroup has shared their
>> emerging specification and details of the pilot testing that has
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>> going on for several months.
>>
>> All have attempted to use industry standards and to support
>> interoperability as circumstances permitted. All were under severe
>> time limits. Paul and I find their decisions consistent with the
>> standards, the limits placed by security--which prompted the SIFA
>> change, and available information about the activities of others.
>>
>> We in higher education should be grateful for their collaborative =
efforts.
>>
>> The emerging need for interoperability of data exchanges between
U.S.
>> K-12 and higher education became a topic of discussion between the =
SIF
>> Association and several of us. We met with Ron Kleinman in July
2009.
>> In January JISC CETIS and CEN, the European standards agency, met in
>> Bolton UK exchanging information discussing the issues. In February
>> 2010 Dan Rehak and his colleagues at ADL hosted the first
>> "harmonization" meeting among the standards bodies in February 2010.
>> The first RS3G-Terena joint meeting was held in March at the =
University of Bologna.
>>
>> The SIF documentation describes their Zone Integration Sever
>> suggesting functions that are also found in the typical Enterprise
>> Service Bus. So far only the Kuali Foundation has documented the
need
>> for, the design of, and subsequent initial implementations of an
ESB.
>> This may become critical to U.S. higher education if
interoperability
>> between SIF-compliant systems and higher education requires
>> transformation of messages. Kuali Rice and Kuali Student have been
>> following the discussions with the other parties, including RS3G.
>>
>> I hope you find these notes useful.
>>
>> jim
>>
>>
>> --
>> Jim Farmer
>> im+m +1-202-296-7498 (voice mail not available)
>> cell phone +1-405-408-9264
>> Georgetown University 202-687-0126 (no voice mail please)
>>
>>
>>

Message-ID: <4CC1ACED.9010303@immagic.com>

Date: Fri, 22 Oct 2010 11:25:33 -0400

From: Jim Farmer <jxf@immagic.com>

Organization: instructional media + magic, inc.

To: Ron Kleinman <rkleinman@sifassociation.org>, Alex Jackl <alexj@ccsso.org>, Tim Cameron <tim.cameron@pesc.org>, Matthew Coombs <mcoombs@deltacollege.edu>, Aaron Godert <agodert@cornell.edu>, Christopher Sawwa <csawwa@meridianksi.com>, Jason Wrage <jason.wrage@thinqed.com>, Charles F Leonhardt <leonhardt@georgetown.edu>, Arnie Miles <adm35@georgetown.edu>, Janina Mincer-Daszkiewicz <jmd@mimuw.edu.pl>, Simone Ravaioli <sravaioli@kion.it>, Scott Bradley Wilson <scott.bradley.wilson@gmail.com>, Daniel Rehak <daniel.rehak@gmail.com>
CC: Tim Bornholtz <tim@bornholtz.com>, Paul Heald <paulheald@sigmasys.com>, Michael Sessa <seffa@pesc.org>, Larry Fruth <lfruth@sifassociation.org>, Avron Barr <barr@aldo.com>, Randy Timmons <rtimmons@sigmasys.com>, Andy Sprague <asprague@sigmasys.com>, Mark Stubbs <M.Stubbs@mmu.ac.uk>, Jill Abbott <jabbott@sifassociation.org>

Subject: Interoperability of SIF-compliant systems and higher education for the exchange of data

Recent communications suggest the emerging SIF specification for the exchange of data differs, for security reasons, from what was expected to be implemented in U.S. higher education. The attachment is a collection of information related to that decision. Because of the broad impact of this difference in the U.S. and subsequent data transport specifications and practices, Paul and I thought you may be interested in this information we had collected.

This is also an implicit suggestion that U.S. higher education should participate in the forthcoming RS3G/Terena EuroCAMP--itself a model of collaboration--and the SIFA Developers workshop. Information on both is included.

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Similarly Professor Janina Mincer-Daszkiewicz, University of Warsaw, who is leading the RS3G pilot and providing a detailed profile has provided excellent documentation, responded to questions, and facilitate conversations with the developers.

Chris Sawwa, lead of LETSI's architecture workgroup has shared their emerging specification and details of the pilot testing that has been going on for several months.

All have attempted to use industry standards and to support interoperability as circumstances permitted. All were under severe time limits. Paul and I find their decisions consistent with the standards, the limits placed by security--which prompted the SIFA change, and available information about the activities of others.

We in higher education should be grateful for their collaborative efforts.

The emerging need for interoperability of data exchanges between U.S. K-12 and higher education became a topic of discussion between the SIF Association and several of us. We met with Ron Kleinman in July 2009. In January JISC CETIS and CEN, the European standards agency, met in Bolton UK exchanging information discussing the issues. In February 2010 Dan Rehak and his colleagues at ADL hosted the first "harmonization" meeting among the standards bodies in February 2010. The first RS3G-Terena joint meeting was held in March at the University of Bologna.

The SIF documentation describes their Zone Integration Sever suggesting functions that are also found in the typical Enterprise Service Bus. So far only the Quali Foundation has documented the need for, the design of, and subsequent initial implementations of an ESB. This may become critical to U.S. higher education if interoperability between SIF-compliant systems and higher education requires transformation of messages. Quali Rice and Quali Student have been following the discussions with the other parties, including RS3G.

I hope you find these notes useful.

jim

Mon Sep 27 17:25:20 2010

From : Jim Farmer ,jxf@immagic.com>

To: Ron Kleinman <rkleinman@sifassociation.org>

CC: Tim Bornholtz <tim@bornholtz.com> ,

Paul Heald <paulheald@sigmasys.com> ,

Randy Timmons <rtimmons@sigmasys.com> ,

Arnie Miles <adm35@georgetown.edu>

Subject: [Fwd: KualI and Web Services]

At the Sigma Systems meeting Friday September 17th Tim was asked to review KualI data transport architecture. This is preliminary to comparing it with others such as SIFA, ADL/AICC, Meteor, and RS3G and Georgetown's Thebes. His reply is below.

At this point I am clueless whether harmonization is possible--a political and economic issue--or the magnitude of the effort. It appears technically feasible at this time. (RS3G expects to go live in November with its 10 university pilot. AICC participants already have a functional Web Services Data Transport in pilot implementation that could be extended. A current standards-based Meteor II has been discussed, but not yet a funded project).

Three questions:

I believe I read a communication that said SIFA now supports WS-Trust in addition to the WS-Addressing and Basic Level WS-Security discussed at the February harmonization meeting. Is this true?

Is there any public draft documentation on the details of the SOAP header that you can share with us for review? I have read Jason Wrage's Blog with a diagram showing how a SIF Message is mapped to a SOAP message. This seemed to me well done. This was done 6 November 2008. Is there a more current version? I hope to be in communication with him later.

From the program for the Specification Developer Camp it seems the details of data transport will be discussed during the Track 2 Session on Wednesday 10 November. And perhaps your scalability session 3:00 to 4:30. Is that correct? Will these track sessions be available by audio and WebEx as well?

Hope that all is going well. I am looking forward to the complete SIFA specification for Web Services data transport.

jim

----- Original Message -----

Subject: Kualo and Web Services

Date: Fri, 24 Sep 2010 13:04:46 -0400

From: Tim Bornholtz <tim@bornholtz.com>

To: Jim Farmer <jxf@immagic.com>, Randy Timmons <rtimmons@sigmasys.com>, Paul Heald <paulheald@sigmasys.com>

From our meeting last week, I was asked to look into the current state of Kualo Web Services, how they are handling service security, and what standards or best practices they are following.

As was mentioned in our meeting, the documentation is sparse to say the least. From what I can find, they have a pretty good grasp of the Web Services standards and are using them appropriately. Most of the services deployed as SOAP WS-* are also accessible through a REST interface. The library enabling all of the web services ccess is Apache CXF. "CXF helps you build and develop services using frontend programming APIs, like JAX-WS and JAX-RS. These services can speak a variety of protocols such as SOAP, XML/HTTP, RESTful HTTP, or CORBA and work over a variety of transports such as HTTP, JMS or JBI."(1)

The source code for Kualo Student is currently only available to founding members but a public release is scheduled for December 2010. I focused primarily on Kali Rice since that is the foundation project for messaging and also has several production ready releases available.

Within Kualo Rice, there are several web services defined with JAX-WS(2). Some of the identity management web services are: getting and setting users, user roles, and user permissions.

Within the rest of Rice, there really aren't any other services defined with JAX-WS. But since they are building on top of Spring Framework and Apache ServiceMix for the ESB (Enterprise Service Bus), many of the components of Rice can be exposed automatically by the container.

From the KS Phase I Recommendations v2.0 document (3): "The registry [of Apache ServiceMix] is internal and automatically updated when services are deployed; this eliminates the need for custom configuration files. ServiceMix offers the most routing and transformation options of all the buses evaluated. Clustering, with load balancing of services, is supported, but services must be manually deployed to each instance. Federation is also supported, enabling an environment where services hot deployed on any bus are instantly recognized by each bus. ServiceMix leverages the Apache CXF web service engine, adding to it the capability to hot deploy individual services and providing a lightweight service packaging option."

From what I can tell, Kualo Student does implement a minimal Security Token Service (STS) which is used in WS-Trust to issue the SAML assertions. This is similar to the Shibboleth Identity Provider concept. WS-Trust is also the same standards Arnie Miles and I have implemented in Thebes and that's what I would recommend going forward.

I hope this helps a little to understand what they're doing with Kualu but it would be better if I could get the source code for Kualu Student to give a more accurate picture of what they're doing.

Thanks,

Tim