Scottish Care Information

SCI Store

Interfaces Support Policy

25/02/2011
SCI-DSXX-001

1. Introduction

1.1 Intended Audience

- SCI Store User Group
- National IT program managers
- Local IM&T teams responsible for supporting SCI Store
- Application developers and integrators working for/on behalf of NHSScotland
- NHS Scotland national standards bodies (IWG – Interoperability Working Group, NCDDP – National Clinical Dataset Development Program)

1.2 Scope

The scope of this document is to extend the existing policy for supporting old versions of SCI Store Web Services to include 'inbound' feeds.

1.3 Purpose

The purpose of this document is to assist national programs and local IM&T departments in planning for future upgrades to their software by clarifying the support model for inbound feeds and bringing it into line with web services.

1.4 Management Summary

This document proposes extending the current policy for supporting old versions of SCI Store Web Services as follows:

- Continue with the current policy of supporting old versions of web services in new releases of SCI Store for a period of five years, subject to certain exemptions.

- Include inbound feeds (also known as 'XML Interfaces') in the 5-year support policy

- Align versions of XML Interfaces and web services to create an annual 'interface release'.

To limit the impact on boards who have already developed results interfaces, version 2.1 of the XML Interface will be exempt from retirement until 2011 (the 5 year rule would otherwise come into effect Q4 2009).

2. Overview

2.1 Background

As a result of the policy put into effect in June 2007, old versions of web services are maintained in new versions of SCI Store for a period of five years (subject to certain exemptions).

This policy was put in place due to the particular difficulties that boards were having in keeping 3rd party-developed applications up to date with the previous support policy, which was that SCI Store should support ' current/current – 1 version' of web services.

Inbound interfaces were excluded as most of the inbound interfaces in use at the time were maintained by Atos Origin, who keep them up to date with any changes to the system.

However, a number of health boards / suppliers have now taken advantage of SCI Store's XML Interfaces which allow 3rd parties to develop their own inbound feeds to SCI Store.

At the time of writing, the following XML Interfaces are available for use by 3rd parties.
- Investigation Report
- Patient Demographics
- Document meta-data
- ADT
- Merge

See Appendix A for details of the systems that have developed inbound feeds using the XML interfaces.

The XML interfaces are essentially XML Schemas which define the format of files that SCI Store can accept from source systems.

Like web services, the XML schemas are subject to change as a result of:

- New functionality being added to SCI Store

- Changes to the 'general' or other schemas made by other application developers or in support of eHealth programs such as NCDDP

- Technology changes (e.g. XML standards)

Therefore there is a need to version the XML schemas in a similar way to web services. In fact, the SCI Store team's goal is to align the versioning of the XML schemas with web services to create an overarching 'Interface version'.

2.2 Business Drivers

- To simplify the planning and management of software upgrades

- Provide more certainty around the longevity of XML Interface versions.

2.3 References

Background to this document:

NHSiS/RPT/00693 - SCI Store Web Services – Technical Review, 14th October 2005
NHSiS/REP/00020 - SCI Store Web Services Backward Compatibility, 22nd June 2007
(superseded by this document)

2.4 Assumptions /Constraints

- This document only addresses backward compatibility within SCI Store and is not intended to replace the development roadmap.

- The SCI Store backward compatibility policy does not apply to ECS Interfaces, the policy for which is currently under review.

- This policy does not apply to "Recipient Web Services" (the glue) which are only used by SCI Gateway.

Current Situation

The recent history of SCI Store releases is as follows:

Release Date	SCI Store Release Number	Supported Web Services Versions	Supported XML Interface versions
Q4 2004	2.1	2.1	2.1
Q4 2005	2.2	2.1/2.2	2.1/2.21
Q2 2006	2.3	2.1/2.2/2.3	2.1/2.2
Q4 2006	3.0	2.1/2.2/2.3	2.1/2.2
Q2 2007	3.1	2.1/2.2/2.3	2.1/2.2/3.1
Q4 2007	4.0	2.3	2.1/2.2/3.1
Q2 2008	4.1	2.3/4.1	2.1/2.2/3.1/4.1
Q4 2008	5.0	2.3/4.1	2.1/2.2/3.1/4.1
Q2 2009	5.1	2.3/4.1	2.1/2.2/3.1/4.1
Q4 2009	6.0	2.3/4.1/6.0	2.1/4.1/6.0
Q2 2010	6.1	2.3/4.1/6.0	2.1/4.1/6.0
Q2 2011	7.0	2.3/4.1/6.0	2.1/4.1/6.0

SCI Store Interfaces Backward-compatibilty

2.5 Policy

Old versions of SCI Store Interfaces (XML schemas and Web Services) will be supported in new releases for a period of five years, subject to certain exemptions2.

Changes affecting interfaces will only be made once a year and, consequently, new functionality may on occasion be held up until the next annual release.

The annual SCI Store release cycle envisaged is as below:

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1 Historically XML interface versions have not been complete updates. E.g. Version 2.2 only applied to document meta-data
2 There may be certain strategic changes – e.g. NCDDP, security, national hosting of SCI Store – where it would be undesirable from an NHSScotland perspective to allow applications to operate for an extended period using old versions of interfaces. The 5 year policy may be altered under such circumstances – e.g. to promote NCDDP compliance.

Quarter	SCI Store Release Number	Contents
Q4	x.0	Application changes
Q2 (following year)	x.1	Application changes **Version x.1 of** Interfaces (XML schemas and Web Services) introduced Catch-up of interfaces changes held back from previous release Support for up to 4 old versions of XML schemas and Web Services

The life expectancy of the interfaces will be approximately as follows, with the proviso that precise dates/release numbers are subject to change as a result of business priorities.

Version	Web Services	XML Interfaces	Release Date	Approx. End Of Life
2.1	Y Retired[*]	Y	Q4 2004	2011[$] (XML)
2.2	Y Retired*	Y Retired[#]	Q4 2005	Retired
2.3	Y		Q2 2006	2011
3.1		Y Retired[#]	Q2 2007	Retired
4.1	Y	Y	Q2 2008	2013
6.0	Y	Y	Q4 2009	2014
6.1			Q2 2010	
Etc.				

From version 6.0 onwards, support for all XML Schemas and Web Services will be fully aligned in a single 'Interface release'.

Notes:
* The SCI Store user group have taken the decision to retire Web Services 2.1 and 2.2.
# No systems are believed to be using versions 2.2 or 3.1 of the XML Interface and they will be retired.

Any upgrades / new developments should target the latest version – currently 6.0.

$ AOA will provide an exemption for version 2.1 of the XML Interface to allow boards and their suppliers a reasonable amount of time to come into line with the policy.   As a result, Version 2.1 of the XML Interface will be exempt from retirement until 2011 (the 5 year rule would otherwise come into effect Q4 2009).

3. Additional Information/Recommendations

3.1 SCI Store Team

3.1.1 General schema

SCI Store Interfaces will be upgraded at each release to use the version of the general schema that is current at the start of the development cycle.

3.1.2 Business rules and logic affect Web Services

When web services are described as 'backwardly-compatible', people tend to mean that the 'contract' provided to applications is not broken, so the applications do not have to be recoded.

However, other behaviour could still be altered – e.g. by a change to 'business rules' or other logic. Generally, the SCI Store team will endeavour to keep the behaviour static but there are times when changing the behaviour is in fact desirable (providing the contract is not broken) so the approach will be assessed on a case-by-case basis.

An example of a change that impacts behaviour is change made in 2007 to the 'find patient' web service in order to support the consent model. Prior to the change, patients who had withheld consent would appear in the search results. Clearly this is undesirable and the behaviour of web services was changed to omit them.

3.1.3 XML schema updates

The approach taken to date has been to update inbound schemas only when strictly necessary. However, this has lead to a confusing situation e.g. SCI Store Version 4.1 supports Web Services 4.1, Investigation Report 4.1 and Documents 2.3 (although of course, backward compatibility is provided).

In future, all inbound schemas will be updated to the latest interface version whenever a new version is released. This will reduce uncertainty over the support policy as all interfaces will have the same current version number and support lifecycle. It also allows the full set of XML schemas to be brought up to date with the general schema.

Updating all the XML schemas will have a small overhead on the SCI Store team and 3rd party application developers /integrators but it is felt this will be more than compensated for by having a simpler, more consistent support policy.

3.2 Health Boards

3.2.1 Maintenance Contracts

It is recommended that when application/ application development / integration services are procured by NHSScotland, maintenance agreements are put in place that ensure the applications are kept current with SCI Store.

3.3 Applications developers / integrators

3.3.1 Frequency of updates

Although the policy provides backward compatibility for up to 5 years, for many applications it will still be desirable to update the interfaces used more regularly than this. In particular, it is hoped that other national systems would upgrade as part of their regular release cycle.

3.3.2 Accessing multiple stores (national applications)

It is not possible to ensure that all health boards are running the same version of SCI Store and there can be a lag of 1 or 2 releases between them.

It is simplest to follow a "lowest version" approach – i.e. only update an interface when each site can support the new version. E.g. only implement the 4.1 XML Interface when all sites have upgraded to SCI Store 4.1

However, there may be situations in which national applications wish to utilise a new version of interfaces (for enhanced functionality) before all the SCI Stores have been upgraded. In this case, it is recommended that national system developers maintain backward-compatibility with the older versions of Store.

For XML Interfaces, it may be necessary to:
- Have the ability to generate 2 versions of the xml file
- Send the appropriate version depending on the local SCI Store

For web services, it may be necessary to:
- Provide default values for newly introduced data items
- Enable/disable functionality depending on which Store is being accessed

It is important that national systems are tested against all the versions of SCI Store that they will access in production.

Appendix 1 Inbounds developed using XML interfaces

Source System	XML Interface type	Current XML Interface Version
Carestream RIS	Investigation Report	V2.1
CRIS	Investigation Report	V2.1
Medipath Lab	Investigation Report	V2.1
Pinnacle Lab	Investigation Report	V2.1
Echo Lab	Investigation Report	V2.1
TRAK RIS	Investigation Report	V2.1
St John's local RIS	Investigation Report	V2.1

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2.2 Change Log

Issue	:	0.1
Date	:	13th May 2008
Change Authority	:	Mark Dashwood
Details	:	Document renamed and updated to cover 'inbound' interfaces as well as 'outbound' web services.

Issue	:	0.2
Date	:	1st June 2008
Change Authority	:	Mark Dashwood
Details	:	Updated following comments from J. Dillett and P. Tervit.

Issue	:	0.3
Date	:	6th August 2009
Change Authority	:	Mark Dashwood
Details	:	Updated following comments from M. Davidson and C. Roberts.

Issue	:	1.0
Date	:	20th January 2010
Change Authority	:	Mark Dashwood
Details	:	Finalised following circulation at User Group December 2009.

Issue	:	2.0
Date	:	20th August 2010
Change Authority	:	Mark Dashwood
Details	:	Brought up to date for release 6.1