SOFTWARE FORGES WEBINAR – TECHNICAL ASPECTS OF INTERLINKING SOFTWARE FORGES

Meeting minutes

Software forges webinar - Technical aspects of interlinking Software Forges- 2012.05.22 – Meeting minutes

Venue	Virtual Meeting	Meeting date	2012-05-22
Author	MDK	Meeting time	15:00 - 17:00
Reviewed by	SG	Issue date	2012-05-24
Status	For review	Version	0.04

Attendees	Abbreviation	Organisation
Olivier Berger	OB	FR – FusionForge / TSP
Roland Mas	RM	FR – Adullact / FusionForge
Roberto Galoppini	RG	IT – SourceForge
Angelo Marcotulli	AM	IT - Directorate for Technology Innovation and Phone Systems
José Angel Diaz	JAD	ES – CENATIC
Phil Archer	PA	UK – W3C
Szabolcs Szekacs	SS	EU – ISA Programme
Stijn Goedertier	SG	BE – PwC EU Services
Niels Van Hee	NVH	BE – PwC EU Services
Debora Di Giacomo	DDG	BE – PwC EU Services
Michiel De Keyzer	MDK	BE – PwC EU Services

Excused attendees	Abbreviation	Organisation
Sander van der Waal	SVW	NL/UK – OSS Watch / Simal
David Flanders	DF	AU – Australian National Data Service (ANDS)

AGENDA:

Agenda Item	Owner	Subject
1	SS	Welcoming and introduction
2	SS	Vision for an enhanced federation of software forges and analysis of existing software forges
3	SG	How to join the federation step-by-step
4	SG	Introduction to mapping to ADMS.F/OSS v0.3
5	SG	Generate ADMS.F/OSS asset descriptions from a spreadsheet with Refine RDF
6	all	Discussion on implementing an ADMS.F/OSS exporter
7	NVH	Proposed solutions for exchanging software description metadata
8	all	Discussion
9	SS	Conclusion

Software Forges: Webinar 2012.05.22 on the technical aspects of interlinking software forges

Software Forges: Webinar 2012.05.22 - Presentation

MEETING MINUTES

**1. Welcoming and introduction**

2. Vision for an enhanced federation of software forges and analysis of existing software forges

Discussion

- SS introduced the webinar, bringing two important messages:
  - The ISA Programme fully supports the work that has been carried out in the Working Group.
  - The ADMS.F/OSS specification will be implemented on Joinup and the ISA Programme will encourage implementations on the e-Government forges of the Member States.

- SS thanked the Working Group for their many contributions and hard work. He expressed the hope that many public sector software forges would participate in ADMS.F/OSS enabled federation on Joinup.

- SG explained the objectives of the webinar:
  - To outline the vision for better interlinking on-line software repositories.

- o To discuss the technical aspects of implementing the ADMS.F/OSS metadata vocabulary and protocols for the exchange of software description metadata.

- SG explained the vision for an enhanced federation of software forges:

  - o Public administrations in Europe often develop software solutions in isolation. Many reusable software solutions, even when based on open standards and specifications, are not shared with other public administrations. To encourage the sharing and reuse at national level, 15 independent software forges and repositories have been constructed in seven different countries.

  - o From the perspective of cross-border and cross-sector digital interactions between European public administrations, the situation of national software catalogues, repositories, and forges for development of F/OSS by public administrations is not ideal. It prevents them from obtaining an adequate overview of all available software from a single point of access. A recent study demonstrates that here are still considerable information barriers to the sharing and reuse of software among public administrations.

  - o The creation and maintenance of an enhanced software catalogue for the EU public sector will help overcome these information barriers.

Software catalogues in the EU public sector
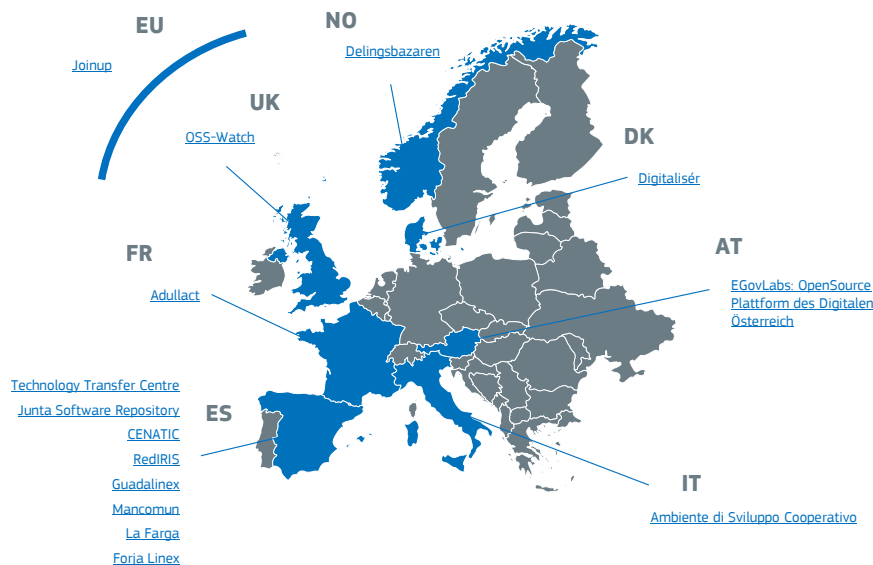
- RG remarks that the Italian public OSS repository, Ambiente di Sviluppo Cooperativo, is no longer maintained. He enquires about the advantages for commercial forge owners of joining the federation.

  - o SS answers that the benefit for project owners is that their projects will get more visibility. Once information about their software is described in ADMS.F/OSS, it can be published everywhere. With an enhanced

federation of e-Government software there is a better chance that the project will be discovered and reused. For repositories, the advantages are more indirect: traffic on the repository is increased and the different federated repositories are promoted more.

o RG points out that if the ISA Programme wants the big commercial forges to join the federation, it should work on a vision for them.

o SS agrees, but explains that the ISA Programme is concerned with fostering a better coordination between the European public administrations on the development of interoperable systems, based on the sharing and reuse of open platforms and open standards.

o A software metadata vocabulary such as ADMS.F/OSS would allow public administrations to use the commercial software forges to host their F/OSS software development projects, rather than maintaining an often costly public administration forge. Government could promote the sharing and reuse of F/OSS by maintaining a much less expensive catalogue of interoperable software solutions which describes the software hosted elsewhere.

Decisions

- The ISA Programme fully supports the work that has been carried out in the Working Group.

- The ADMS.F/OSS specification will be implemented on Joinup and the ISA Programme will encourage implementations on the e-Government forges of the Member States.
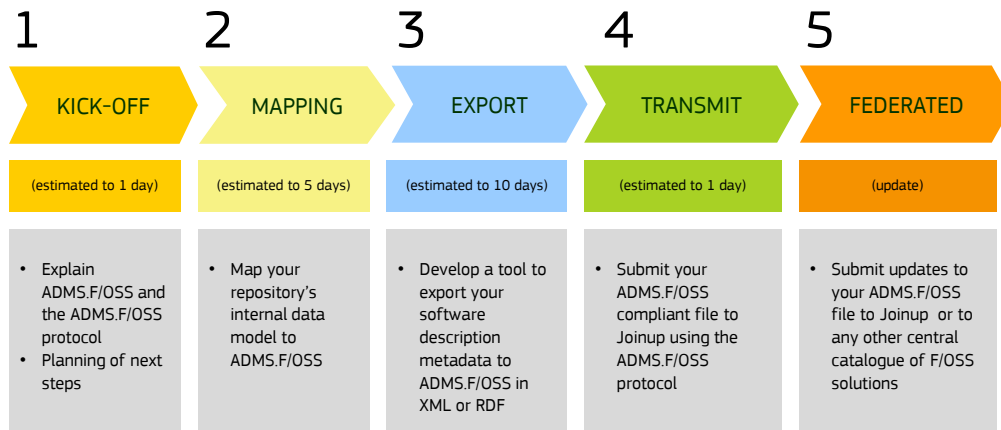
Documentation

- Software Forges Webinar - Technical aspects of interlinking software forges - presentation

- Software Forges: Webinar 2012.05.22 on the technical aspects of interlinking software forges – Joinup Page

- Vision for an enhanced federation of software forges

- Analysis of existing software forges

3. How to join the federation step-by-step

Discussion

- SG explains that there are 5 steps in joining the federation:

  o **1. Kick-off (estimate 1 day)**: first we organise a meeting between our team and your team to identify barriers and enablers.

  o **2. Mapping (estimate 5 days)**: analysing a mapping of the descriptions of your semantic assets to ADM.F/OSS.

  o **3. Export (estimate 10 days)**: export your description metadata to an ADMS.F/OSS file (in XML or RDF)

  o **4. Transmit (estimate 1 day)**: send the ADMS.F/OSS file to the Joinup repository

○ **5. Federated**: What is the benefit for you joining the federation?

- SG says that this whole process can be covered in less than 20 man days.
    ○ The attendees agree that this is a realistic estimation.

Documentation

- [Software Forges Webinar - Technical aspects of interlinking software forges - presentation](#)
- [Software Forges: Webinar 2012.05.22 on the technical aspects of interlinking software forges – Joinup Page](#)

4. Introduction to mapping to **ADMS.F/OSS v0.3**.

Discussion

- SG explained that by filling in your local repository's metadata in a spreadsheet template, it is possible to generate ADMS.F/OSS RDF metadata from a spreadsheet.

- SG added that every software forge uses its own taxonomies. All these taxonomies are very similar but they slightly differ from each other. The ADMS.F/OSS v0.3 specification is open to any taxonomy but particularly highlights two contributions made by Working Group members: one contribution by CENATIC with regards to the different taxonomies used in the Spanish Forges. Another important contribution to this, are the Trove taxonomies of SourceForge, made available under CC by 3.0. These are also in the

spreadsheet template.

- o JAD added that the study that was done by CENATIC was with regards to the Spanish new generation forge. The taxonomies on the current regional Spanish forges are very similar, but in many cases have been customised by the forge administrators.

- JAD says that the big problem they encounter is the translation of the taxonomies for the different forges in the different languages that exist in Spain.

  - o SG says that the use of URI's can be a good solution to this problem. That way, we can use common URI's for all the languages and translate the labels of the values. As a consequence we will be able to use the same taxonomies but still keep our own translations.

  - o The spreadsheet can be used to align taxonomies and define matching concepts for your own terms and export them in SKOS RDF format.

Use the spreadsheet template to align taxonomies

European Commission

Every forge uses its own taxonomies... mappings are needed

ConceptURI	skos:notation	skos:exactMatch
http://sourceforge.net/api/trove/index/rdf#162	assembly	http://dbpedia.org/page/Assembly_language
http://sourceforge.net/api/trove/index/rdf#163	ada	http://dbpedia.org/page/Ada_%28programming_language%29
http://sourceforge.net/api/trove/index/rdf#164	c	http://dbpedia.org/page/C_%28programming_language%29
http://sourceforge.net/api/trove/index/rdf#165	C++	http://dbpedia.org/page/C%2B%2B
http://sourceforge.net/api/trove/index/rdf#172	ml	http://dbpedia.org/page/Standard_ML
http://sourceforge.net/api/trove/index/rdf#173	modula	http://dbpedia.org/page/Modula

The spreadsheet helps you define matching concepts for your own terms… and export them in SKOS RDF format.

- OB remarked that RDF is extensible and that the Working Group should promote its use.

- SG added to this that ADMS.F/OSS is not mandating the use of one common controlled vocabulary but accepts differences. What is important is that vocabularies are documented in a machine-readable format, so that mappings can be foreseen.

  - o RM says it is probably not possible that everyone uses the SourceForge Trove taxonomies but it is probably a good starting point for a beginning software forge. He also remarks that there is no such thing as one Trove taxonomy. After installation of FusionForge there is an initial taxonomy but the administrators often edit this once installed. Many forges add their own categories. Adullact has its own categories especially because of its interest in public sector software.

  - o OB says that for the forges that have different taxonomies and categories, it is an advantage of the federation that if a project is found

through the federation, different forges can add their own categories and values to the project and thus enrich the project metadata.

- o SG says that taxonomy mappings (alignment of taxonomies) can be foreseen, when starting to implement ADMS.F/OSS. What is important, is that the taxonomies of local forges become available in a machine-readable format.

Documentation

- [Software Forges Webinar - Technical aspects of interlinking software forges - presentation](#)
- [Software Forges: Webinar 2012.05.22 on the technical aspects of interlinking software forges – Joinup Page](#)
- [Generate ADMS asset descriptions from a spreadsheet with Refine RDF](#)
- [CENATIC Study on taxonomies in the Spanish forges](#)

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5. [Generate ADMS.F/OSS asset descriptions from a spreadsheet with Refine RDF](#)

6. Discussion on implementing an [ADMS.F/OSS](#) exporter

Discussion

- SG explained that an implementation of ADMS.F/OSS in the form of an exporter plugin would be beneficial to the ISA Programme. A study of existing software forges has revealed that a large majority of them are based on FusionForge / GForge 4.8. This means that with the effort of one implementation, several forges could join the ADMS.F/OSS-enabled federation on Joinup. SG enquired whether this would be feasible?

- OB replied that he has experience with developing a DOAP export plugin for FusionForge.
  - o The plug-in exports metadata.
  - o When you access the homepage of a project on FusionForge, using a different tool then your browser, you will get an RDF document in XML.
  - o The plug-in could be easily adapted to produce ADMS.F/OSS descriptions.
  - o RM remarks that the Doaprdfplugin is not in FusionForge 5.1, only 5.2 and more recent.
  - o SG asks a time estimate of the adaption of the plug-in to ADMS.F/OSS?
  - o OB says this depends on the context.

- SG says that many of the existing forges are based on FusionForge.

- SG says that others, such as the SIMAL project and the Apache Software Foundation has experience with using DOAP as a format for software metadata exchange.

- SG says we also started to think what the federation could look like on Joinup. The information shared is quite rich: also information about the releases and the metrics are shared. Very little information is really mandatory.

Documentation

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- [Software Forges: Webinar 2012.05.22 on the technical aspects of interlinking software forges – Joinup Page](#)

## 7. Proposed solutions for exchanging software description metadata

Discussion

- SG explained that once a software forge is able to export software description metadata, the next step is to exchange it with other forges, such as the Joinup catalogue of "federated forges".

- SG explained that four solutions could be proposed for metadata exchange, based on the following assumptions:

  - **Snapshot approach**: A file with software description metadata is not very large (+/- 1-10 Mb). So each time an entire snapshot can be sent.

  - **Confidentiality**: As the software description metadata is already available on the Web, confidentiality is not a requirement.

  - **Availability**: It is not required to have description metadata updated in real-time. The update frequency can be daily, weekly, monthly...

  - **Integrity**: Data integrity must not be comprised.

- NVH explains the 4 possible solutions:

  - **Solution 1 – Rest Web Services**: Local repositories send the software description metadata to a Web service on the central repository.

  - **Solution 2 – E-mail**: Local repositories send the software description metadata via e-mail to the central repository.

  - **Solution 3 – Harvesting**: Local repositories publish the software description metadata on the Web. The central repository harvests the metadata descriptions from there.

  - **Solution 4 – Upload on Joinup**: Local repositories manually upload the software description metadata (spreadsheet or RDF/XML format) on the central repository using a Web user interface.

Solution	Pros	Cons	Notes
Solution 1 – REST Web Services	• Fully automated • Client provided by DIGIT	• Higher implementation effort	Recommended in the mid/long-term
Solution 2 – E-Mail	• Minimum implementation effort	• Manual procedures are required • Lower integration	Recommended for the first wave
Solution 3 – Harvesting	• No communication protocol needs to be implemented on local repository side	• Requires higher availability of local repository systems	Recommended for non-centralized architectures
Solution 4 – Upload on Joinup	• No communication protocol needs to be implemented • Mapping to ADMS.F/OSS is not needed for spreadsheets	• Manual procedures are required • Lower integration	Recommended for the first wave

- NVH explains that the currently foreseen solutions are Solution 3 (Harvesting) and Solution 4 (Upload on Joinup).
- RM explains how FusionForge is already exchanging software metadata.
  - FusionForge can do the exchange via the global search plug-in. This works with an URL from where any client can fetch a list. One HTTP request is executed and there is no need to any exchange of mails.
  - SG says this is related to solution 3 (Harvesting). The existing federation on Joinup already uses this solution by using a standard RSS export function (e.g. For Adullact the RSS export link is: https://adullact.net///export/rss_sfprojects.php) to collect (limited) F/OSS project description from the federated repositories:
    - Software name.
    - URL to the software project's location on the original repository.
    - A short description of the software.
  - OB says the DOAP plug-in works in the same way: one URI from where you can fetch the metadata.
  - NVH says that all these examples are indeed very similar to Solution 3 (Harvesting).
- SG says that because all forges are based on FusionForge or Gforge Solution 3 (Harvesting) could be very beneficial.

Solution 3 – Harvesting

Publish/Subscribe Strategy
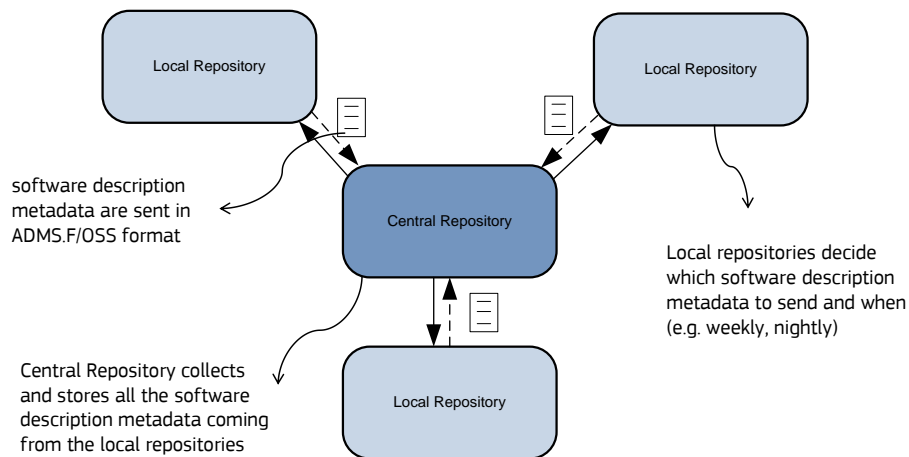
- o RM says it should be easy to adapt the structure of the global search plug-in to ADMS.F/OSS.
  - o OB remarks that the forges will need to upgrade to FusionForge 5.2.
- JAD says that in a study, they have examined some technologies to see how they could manage the data.
  - o SG asks if it is possible to share this study.
  - o JAD will share the study but says this is in Spanish. It can briefly be explained in English:
    http://fng.morfeo-project.org/wp-content/uploads/2011/12/ENT_11PRO001CT015-4.-Documento-de-Arquitectura-V01R02_publicar.pdf
- SG asks if JAD could provide some information about the Spanish forges that will be migrating to FusionForge. What is their current forge technology? And when will they migrate?
  - o JAD agrees.

Documentation

- Software Forges Webinar - Technical aspects of interlinking software forges - presentation
- Software Forges: Webinar 2012.05.22 on the technical aspects of interlinking software forges – Joinup Page
- CENATIC Study on technologies to manage data

Action Items	Responsible	Deadline

Share the CENATIC study on technologies to manage data.	JAD	Done
Provide information about which of the Spanish forges will be migrating to FusionForge.	JAD	2012.06.05
Make RM a member of the ADMS.F/OSS Working Group and add him to the mailing list.	MDK	2012.05.23

8. Discussion

9. Conclusion

Discussion

- SG invites all participants to review the ADMS.F/OSS v0.3 Specification on Joinup and give your comments via the forum.
- Next ADMS.F/OSS Working Group Virtual Meeting: 2012.06.05.
- SG explains the next steps:
  - The specification of ADMS.F/OSS will be finalised in June.
  - In July you will be invited to take part in the first implementation wave.
- SG asks JAD if it is still feasible for the new generation forge to build in support for ADMS.F/OSS.
  - JAD confirms this is possible and says that the e-Government initiative of the Spanish Federation Government intends to set up an enhanced federation of software solutions itself. Spain would benefit from the AMDS.F/OSS specification.

Documentation

- ADMS.F/OSS v0.3
- ADMS.F/OSS: Working Group Virtual Meeting 2012.06.05