PaN-data ODI

Deliverable D3.4

Evaluation of initial AAA service infrastructure

Grant Agreement Number	RI-283556
Project Title	PaN-data Open Data Infrastructure
Title of Deliverable	Evaluation of initial AAA service infrastructure
Deliverable Number	D3.4
Lead Beneficiary	PSI
Deliverable Dissemination Level	Public
Deliverable Nature	Report
Contractual Delivery Date	31 Oct 2013 (Month 24)
Actual Delivery Date	20 Nov 2013

Evaluation of initial AAA service infrastructure PaNdata / WP3

Version 2.1, hjw Nov 10, 2013

Rev Nov 20, 2013

1   Introduction

At present (November 2013) implementation and deployment of the Umbrella [1] system is in full swing. It is deployed at five facilities (Elettra, ESRF, ILL, ISIS and PSI), the others will follow within the next months. This document provides an intermediate status report on the implementation / deployment of the system and gives first conclusions and concepts on how to proceed from deployment to operation.

2   Umbrella system

The system itself has been described already in detail in the previous deliverables (D3.1 – D3.3) and in references [1] – [3] so that for thorough information the reader is referred to these documents.

3   Implementation / deployment of basic Umbrella

Several general aspects had to be taken into account concerning an optimal organization of the deployment.

Umbrella is not a green-field project. Since many years the participating facilities all have their local identity systems for handling their user issues. During the deployment these systems need to continue to operate. Thus, the deployment of Umbrella has to seamlessly fit into the normal operation at these facilities. This led to the concept of subdividing the deployment into steps and phases.

Umbrella is an evolving system. Because of organizational and resource boundary conditions the functionalities of Umbrella are introduced one after the other; new features are being developed while others are deployed. At the present stage, only the 'basic Umbrella' will be deployed, the other features will follow as soon as they will be available. This offers the advantage that the users of the system can be involved in the development, which minimizes the risk of developing unnecessary or superfluous components. This approach, however, bears the risk that the advantages of the system are not immediately apparent, so that the development needs to be accompanied by an efficient documentation.

3.1 Implementation teams

For Umbrella as a federated system it is essential that all partners are thoroughly involved in all steps of development and deployment. For that, two implementation teams have been installed (management, technical, for details please see D3.3) which convene via regular telephone conferences and workshops (Harmonization Workshops [4] - [7], Umbrella Workshop, ESRF, Nov 2013) and discuss all aspects of the project. These meetings have been extremely instrumental for the progress of the project.

3.2 Waves

It was clear from the beginning that it is not practicable that Umbrella is deployed at all partner facilities at the same time. One reason is obviously the limitation of human resources. In addition, it would not be possible to synchronize such an effort. The local facilities are in full operation, each with very rigid and different boundary conditions and it would be impossible for them to deploy the new tool everywhere at the same time. Thus, the request for asynchronous deployment has been built into the Umbrella concept from the beginning.

The practical approach to this request was that the deployment schedule has been structured in terms of waves, with the first wave consisting of ESRF, ILL and PSI, implemented in spring 2013. The next wave consisted of ISIS and Elettra, where now (Nov 2013) Umbrella is also deployed. Because of its local schedule DESY will join in January 2014 with the remaining facilities following in the beginning of 2014.

3.3 Phases

The other ordering scheme for the deployment of Umbrella is phases. For this system, user friendliness is an important keyword. Umbrella will be successful only if its users are convinced that it offers an added value and if it is really usable and not only a nice prototype. Topologically, these users are distributed all over Europe, so that special care has to be taken to stay in close contact with these users and get their feedback on inevitable teething problems as immediately as possible.

Because of that, Umbrella has been opened to its users step-wise in four phases, from a small circle of system experts to the final unrestricted group of all users (for details please see D3.3). This concept was quite successful and all small initial problems which showed up could easily be kept under control.

3.4 Memorandum of Understanding

All partners agree that Umbrella must continue to operate beyond the limited lifetime of PaNdata ODI. Umbrella is a slim system but the resources needed for that are definitively non-zero. In addition, as mentioned before, the development has not finished and a minimum legal structure has to be set up for the next steps. The present partners therefore agree on setting up the necessary Memorandum of Understanding. It is expected that this will be accomplished till the end of 2013.

3.5 Affiliation Database

When a user registers at the user office of on the partner facilities he/she enters among other personal information like name, phone number also the home affiliation. In most user-office systems this affiliation information is not entered as a text string but the user selects it from an affiliation database provided by the

respective local system. This is the only way to ensure that the affiliation information is useful for further applications (e.g. financial support, statistical analysis for reports). Contrary to the other user information this affiliation information is not confidential and significant synergies can be gained if there is only one common affiliation database. A corresponding sub-project is under way. The IT components are ready and at present the respective managerial and operational steps have to be defined for including them in the standard Umbrella set. This was the topic of the Umbrella workshop (ESRF, November 2013) with strong participation from the user office representatives of the partner facilities, who play a decisive role in this phase of Umbrella.

4 Operation

At present, Umbrella is in the decisive transition phase from development and prototyping to operation. Whereas previously only a small, well-defined team had access to the system, Umbrella is now open to the full user community and many additional users have access to it, who are not yet fully familiar with the system. This asks for a service, for documentation and for dealing with upcoming problems. Because of resource limitation it is not possible to set up a specific professional operation team. Instead, it has been decided that the partners share the demands and the service at the local user offices is extended to take care of that. With the partners distributed all over Europe this needs a careful and efficient cooperation.

4.1 Support

Support has to be significantly extended to serve all those who want to use the Umbrella service. That means that documentation has to be kept fully up to date and detailed in content.

The local user office workflows have to be adapted to take over an initial hotline service. Part of the requests can be solved locally while others will have to be forwarded to the respective experts. Some requests may also need immediate reactions. The local user-office staff must be clearly instructed to handle these cases in a satisfactory and consistent way.

4.2 Monitoring

As the partners are entering with this service totally new ground, it is to be expected that the final organizational solution will not be identified immediately and that satisfactory procedures can be found only after several iterations. For that, a monitoring system will be installed which documents all problems and requests and the way these are managed, so that the proper managerial conclusions can be taken.

5 Next steps

It has been mentioned before, that the present implementation of Umbrella concerns only the basic components. Really attractive for users it will, however, become only when additional higher-level applications will be available.

One future application will be ICAT [8]. Users will increasingly require remote access to data taken at a facility. Data may e.g. be handled at remote analysis centers or a user may want to combine data taken at different facilities. ICAT will provide an intelligent data catalog, even across facilities.

Another project at the horizon is Moonshot [9]; which allows a user to remotely log in at an experiment, which will also open a bundle of novel possibilities.

6 Conclusion

Implementation and deployment of the Umbrella system is well on track. Conceptually, it is fully up to expectation and no basic flaws and deficiencies have been encountered. All teething problems could be easily managed.

Umbrella is now in the transition phase from deployment to operation. The concept for managing the appropriate operational request is ready together with the monitoring scheme for its success.

References

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[3] Specification of the AAI Infrastructure, PaNdata ODI Deliverable 3.1,Aug 29, 2012, rev. Jul. 10, 2013, <https://www.UmbrellaID.org/euu/documents>

[4] PaNdata / CRISP Harmonization Meeting I, ZRH Airport, Jun 27, 2011 < http://indico.psi.ch/conferenceDisplay.py?confId=1039>

[6] PaNdata / CRISP Harmonization Meeting II, DESY, Dec 8, 2011 < https://indico.desy.de/conferenceDisplay.py?confId=5061>

[5] PaNdata / CRISP Harmonization Meeting III, ZRH Airport, Jun 13, 2012 < http://indico.psi.ch/conferenceDisplay.py?confId=1752>

[7] PaNdata / CRISP Harmonization Meeting IV, EU XFEL, Jan 21/22, 2013 < https://indico.desy.de/conferenceDisplay.py?confId=2159>

[8] ICAT < http://code.google.com/p/icatproject/>

[9] Moonshot < https://www.ja.net/products-services/janet-futures/moonshot>