umbrella

PAUL SCHERRER INSTITUT

PSI

Umbrella AAI
Photon / Neutron community

Jean-F. Perrin, Mirjam van Daalen

EuroFEL FREE ELECTRON LASERS OF EUROPE

CRISP The Cluster of Research Infrastructures for Synergies in Physics

pandata Photon and Neutron Data Infrastructure

calipso way for light

nmi3

Contents today‘s presentation

Part 1: Intro Umbrella

Part 2: Umbrella Status

umbrella

PAUL SCHERRER INSTITUT PSI

Umbrella is the Authentication and Authorisation Infrastructure (AAI) concept for the Photon and Neutron community

It is the first time that such a kind of IT environment is offered:

- European wide
- Community overlapping
- Shared between different EU projects

EuroFEL FREE ELECTRON LASERS OF EUROPE CRISP The Cluster of Research Infrastructures for Synergies in Physics pandata Photon and Neutron Data Infrastructure calipso wayforlight nmi3

Umbrella is part of several FP7 projects:

- EuroFEL- ESFRI project Free Electron Lasers of Europe
- PaNData-Europe, PaNData ODI- FP7 projects
- CRISP – Cluster project of different ESFRI projects
- CALIPSO – I3 synchrotron community
- NMI3 - I3 neutron community
- BioStruct-X – renewal of I3 ELISA FP7 (only struct. biol)
- Instruct – ESFRI project

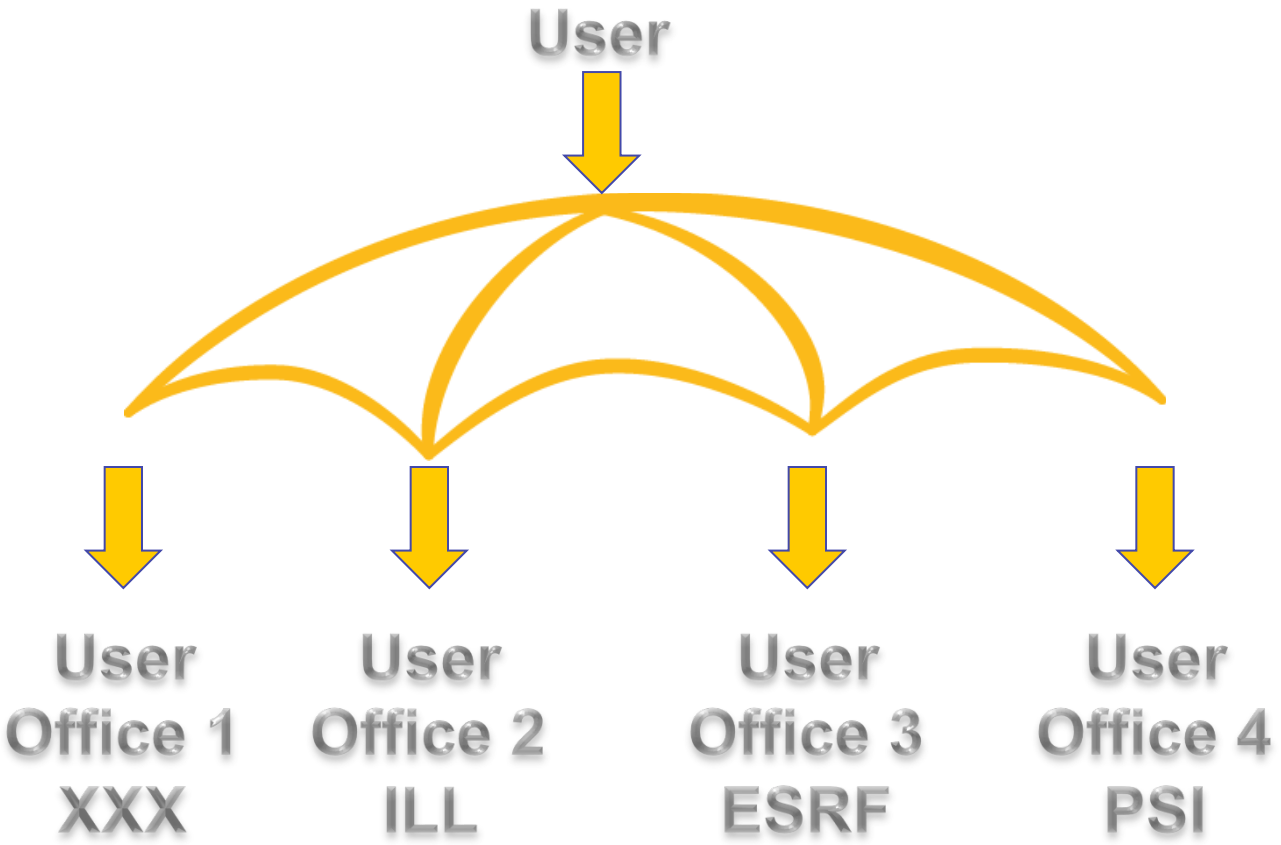
Future user operation at large scale facilities

What are the present and upcoming user needs?

a. 40% of the users do experiments at different facilities, trans-facility access for users.
b. Access to and management of experimental data (also within the collaboration).
c. Online entry mode: remote experiment access
d. Access to efficient data analysis tools.
e. Minimal administration load for users.
f. Remote file access.

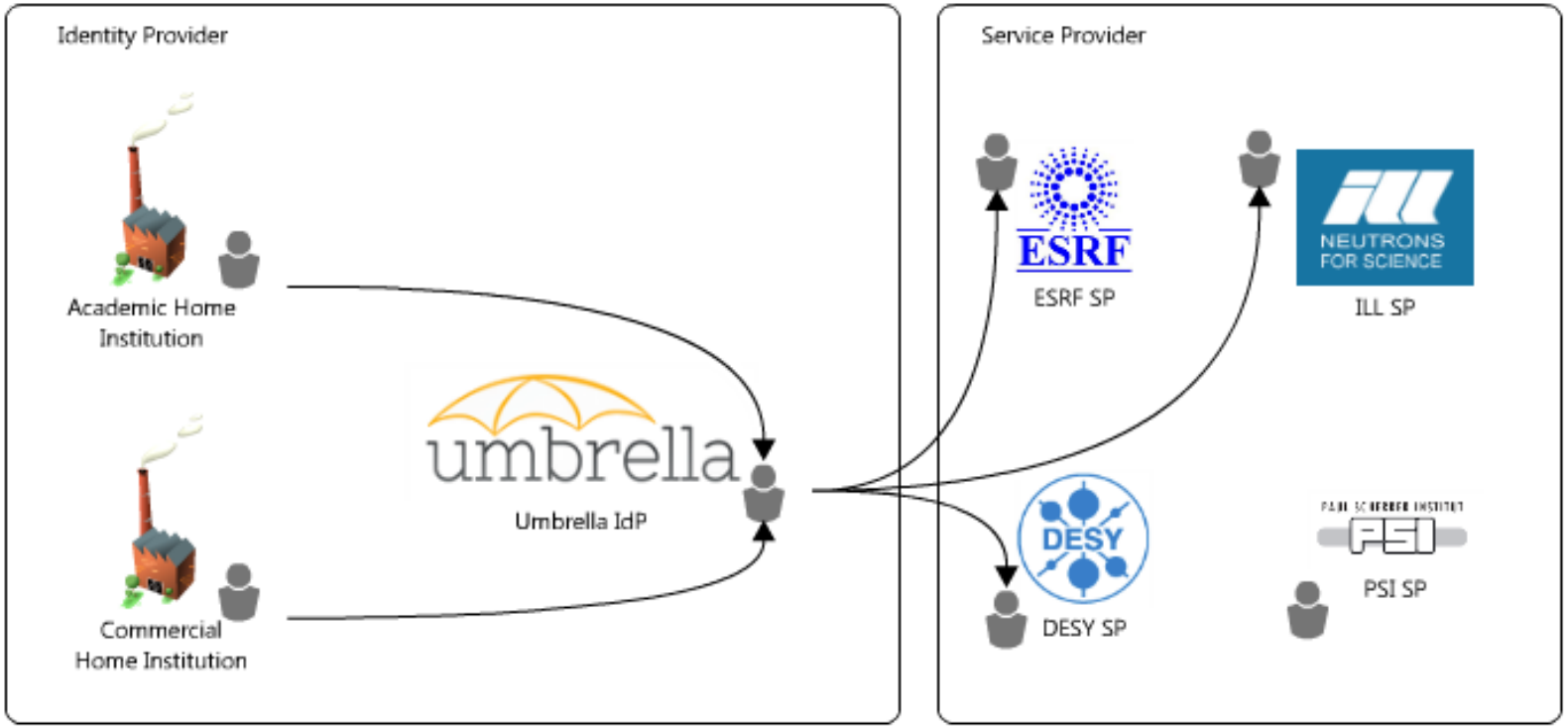
At the end all this needs a unique persistent user identification to have unified access to these tools.

How does it work?



Umbrella Characteristics

Overview



Umbrella Characteristics

Umbrella is the basis for various user services under development

a. Info & service portal
b. European proposal support (NMI3 & CALIPSO)
c. Remote experiment access
d. Remote file access
e. Metadata catalogue (iCAT)

Without a unique identifier it will not be possible to have unified access and work with these tools.

Umbrella Characteristics

Concept

- unique persistent Identifier on EU scale
- independent of home institution
- life time account
- account owned by the user
- single sign-on
- no possibility for cross-facility information pull
- waterproof but slim data protection system

Umbrella Characteristics

Incorporate confidentiality aspects

- high competition, especially structural biology
- time-window-structured access to experiments and data.

Authorisation is delegated to the systems participating in Umbrella

- for highest grade of independence
- in heterogeneous environments
- no complicated trust relationships

Umbrella Characteristics

Rely on existing local user office structure

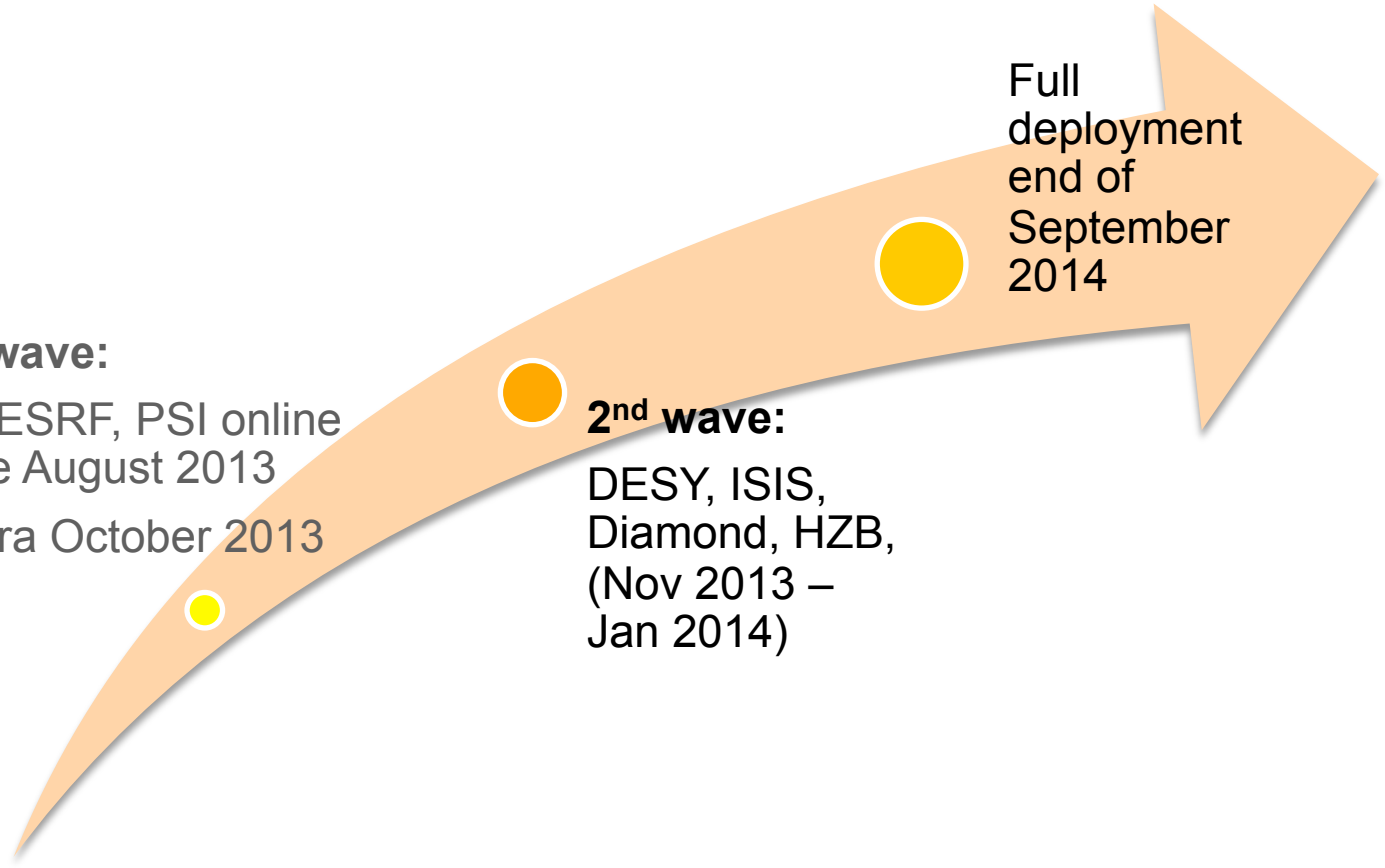
- Great experience
- Do It Yourself operation by the user
- Users: manage their personal entries
- User offices: supervising; manage authorizations
- Principal investigators: have responsibility for their teams and can handle authorization within their group

Base system on professional authentication standard

- Shibboleth, federated Single-Sign-On System (SAML), widely used
- Special photon / neutron user federation
- Supervising by the local User Offices

Roadmap for Umbrella deployment

Status of implementation



Status of Service Provider deployment

Facility	Status	SP installed	WUO adapted	Production
ESRF	OK	OK	OK	OK
ILL	OK	OK	OK	OK
PSI	OK	OK	OK	OK
Elettra	OK	OK	OK	OK
ISIS	OK	OK	OK	OK
Diamond	OK	OK	OK	OK
DESY	OK	OK	OK	OK

Umbrella Status

In operation

- Basic Umbrella https://umbrellaid.org/euu/
- Geo DNS (server Umbrella distributed between different facilities)

In progress

- Access to Umbrella via EduGain (Geant 3+, Switch)
  - Login with account home institution (Universities etc.)
- Link of Umbrella to Moonshot (Geant 3+ , non web based access)
  - Remote experiment access
- Access to iCAT metadata catalogue via Umbrella

Deployment planning Umbrella	Umbrella Deployment	CRISP	PaNData	NMI3	CALYPSO	Others
ESRF	implemented	x	x		x	
ILL	implemented	x	x	x		
DESY	implemented	x	x		x	
Diamond	implemented	x	x		x	
ISIS	implemented		x	x		
Elettra	implemented		x		x	
MaxLab	implemented		x		x	
HZB	when GATE in operation		x	x	x	
Soleil	implemented		x		x	
Alba	implemented		x		x	
EUXFEL	at start of user operation	x	x			
ESS	at start of user operation	x				
GSI	at start of user operation	x				
PSI	implemented	x	x	x	x	
FELBE	implemented				x	
CLIO	No Umbrella				x	
FELIX	Spring 2014				x	
KIT	Mai 2014					

Umbrella collaborators

ALBA

- Daniel Salvat

DESY

- Frank Schluenzen, Rolf Treusch, Thorsten Kracht, Jan-Peter Kurz, Ulrike Lindemann

Fermi/Elettra

- Cecilia Blasetti, Ornela Degiacomo, Giorgio Paolucci

ESRF

- Rudolf Dimper, Dominique Porte, Julien Savoyet, Stefan Schulze

European XFEL

- Krzysztof Wrona, Frederic Le Pimpec

GSI

- Peter Malzacher, Almudena Montiel Gonzalez, Kilian Schwarz

HZB

- Thomas Gutberlet, Dietmar Herrendoerfer

I LL

- Jean-Francois Perrin

IPJ (Poland)

- Robert Nietubic

MaxIV

- Krister Larsson

PSI

- Bjoern Abt, Stephan Egli, Stefan Janssen, Markus Knecht, Mirjam van Daalen, Heinz J Weyer

Soleil

- Frederique Fraissard

STFC

- Anthony Gleeson, Tom Griffin, Alistair Mills, Bill Pulford

umbrella

PAUL SCHERRER INSTITUT PSI

Thank you for your attention!

EuroFEL FREE ELECTRON LASERS OF EUROPE
CRISP The Cluster of Research Infrastructures for Synergies in Physics
pandata Photon and Neutron Data Infrastructure
calipso way for light
nmi3