Summary

Patrick Fuhrmann
EMI data area lead

Reminder : This is us !

WLCG ARC

Catalogue Synchronization

ARGUS Integration

EMI SECURITY

DATA client Library consolidation

EMI DATA

SRM Security

UNICORE Integration

Standards NFS 4.1

Standards http(s) WebDav

GLUE 2.0

Storage Accounting

SRM Spec Simplification

Standardization OGF IETF
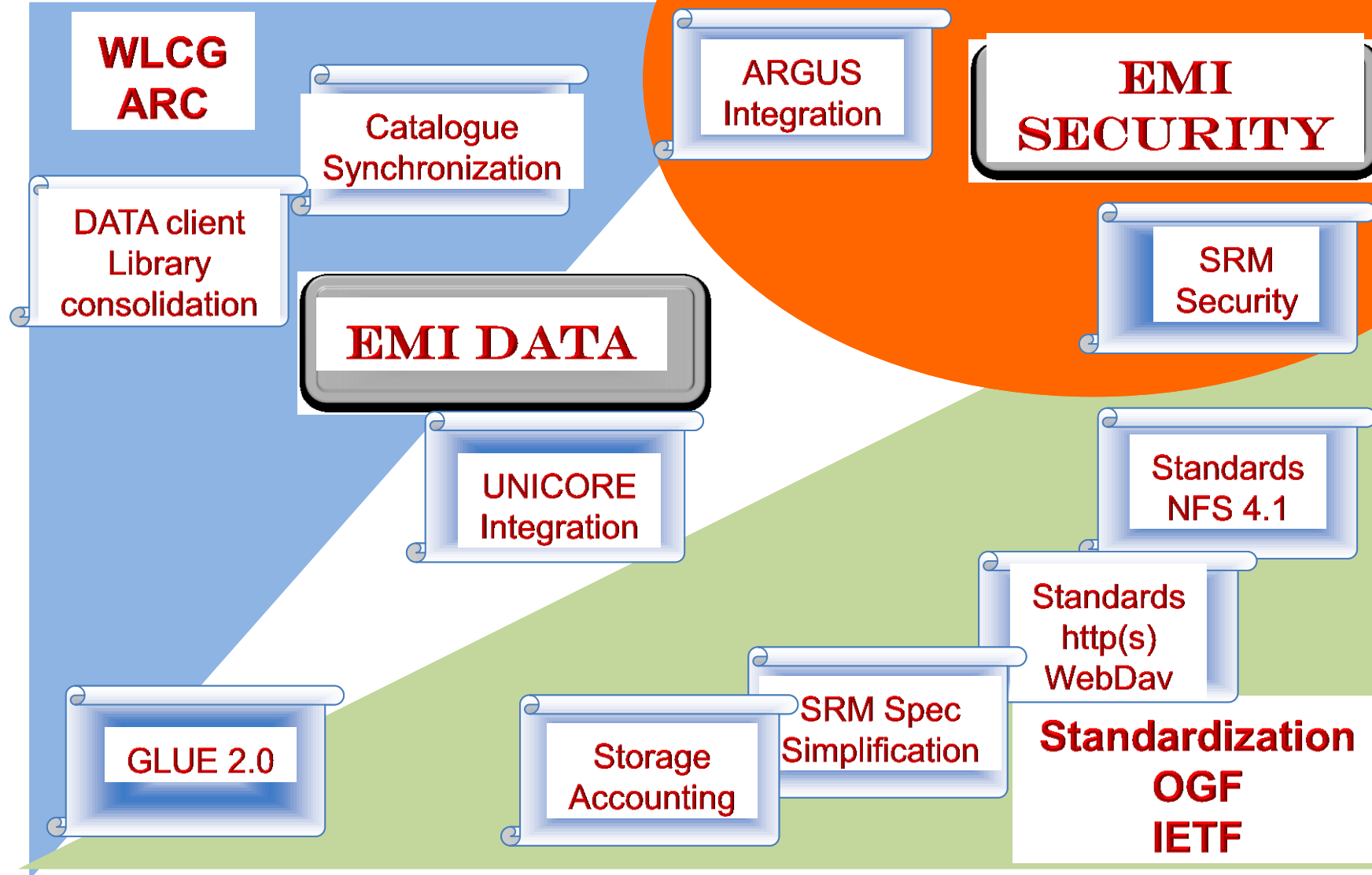
Reminder : Data Area activities

- ## 11 Activities (Details later)
  - SRM specification [me , status report]
  - SRM security (httpg/s) [Paul , status report]
  - NFS 4.1 development and performance evaluation [me , status report]
  - Catalogue synchronization [Fabrizio , status report]
  - Storage Accounting record [Ralph, status report]
  - GLUE 2.0 migration [Oliver , status report]
  - Client library consolidation client [Zsombor, status report]
  - UNICORE : SRM and catalogue [Christian L., status report]
  - Integration of ARGUS [individual, progress by DPM and dCache]
  - Monitoring [nobody yet, but has to be covered]
 - Message passing evaluation [wiki page, don't now how to proceed]

SRM

SRM specification consolidation

Patrick

			2010								2011				
			Mai	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	
			1	2	3	4	5	6	7	8	9	10	11	12	
			Year 1										Year 2		Year 3
1.0	SRM specification consolidation														
1.1		Start dicussion within OGF													
1.2		Collect community feedback													
1.3		Initial document													
1.4		SRM integration into UNICORE													
1.5		Review and final document													

SRM security (replacing httpg by https)

Paul
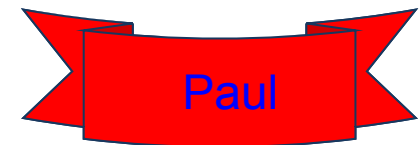
			2010								2011				
			Mai	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	
			1	2	3	4	5	6	7	8	9	10	11	12	
			Year 1										Year 2		Year 3
2.0	Replacing httpg with https														
2.1		Prototype one client one SE													
2.2		All EMI SE's and clients													
2.3		Migration scenario and design													

Standard data access

Standard access protocols (NFS4.1, WebDav)

Patrick
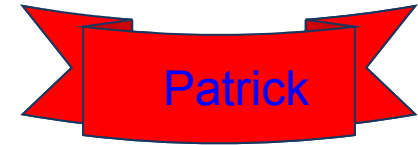
			2010								2011					
			Mai	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr		
			1	2	3	4	5	6	7	8	9	10	11	12		
3.0	Posix Access (NFS4.1)		Year 1												Year 2	Year 3
3.1		Setup of performance test system														
3.2		Performance test results (CHEP)														
3.3		Production file:// StoRM and dCache														
3.4		file:// for all SE in production														
4.0	https/WebDav															
4.1		http(s)														
4.2		WebDav														

UNICORE : Catalogue and SRM client

UNICORE integration : Catalogue and SRM client

Christian

				2010								2011					
				Mai	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr		
				1	2	3	4	5	6	7	8	9	10	11	12		
									Year 1							Year 2	Year 3
6.0	File catalogue access for UNICORE																
6.1		Implementation of file catalogue integration															
6.2		Evaluation of file catalogue intergration														PM 15	
1.4		SRM integration into UNICORE															

Activities (cont.)

GLUE 2.0 migration

Oliver
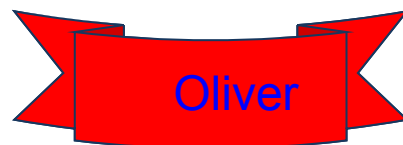
			2010							2011				Year 1		Year 2	Year 3
			Mai	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr				
			1	2	3	4	5	6	7	8	9	10	11	12				
7.0	**GLUE 2.0**														Year 1		Year 2	Year 3
7.1		Common interpretation of GLUE 2.0	▨	▨	▨	▨	▨	▨										
7.2		Publishing 1.3 with 2.0							▨	▨	▨	▨	▨					
7.3		Publishing 2.0												▨				

Data client library consolidation

Zsombor

			2010							2011				Year 1		Year 2	Year 3
	Data client library consolidation		Mai	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr				
			1	2	3	4	5	6	7	8	9	10	11	12				
8.0															Year 1		Year 2	Year 3
8.1		Development	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨	▨				
8.2		Migration												▨				

Activities (cont.)

Integration of ARGUS

Integration of ARGUS		2010								2011					
		Mai	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr		
		1	2	3	4	5	6	7	8	9	10	11	12		
		Year 1												Year 2	Year 3
	Blacklist integration (at least one SE)														
	Blacklist integration (all SE's)														
	Integration of more functionality if required														

Ralph
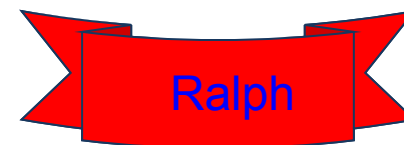
Storage accounting

	Storage Accounting	2010								2011					
		Mai	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr		
		1	2	3	4	5	6	7	8	9	10	11	12		
10.0		Year 1												Year 2	Year 3
10.1	Definition of storage accounting record														
10.2	Add support in SE/FTS														

Activities (cont.)

Monitoring

Monitoring		2010								2011				Year 2	Year 3
		Mai	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr		
		1	2	3	4	5	6	7	8	9	10	11	12		
11.0							Year 1								
11.1	Definition of a common Monitoring Interface														
11.2	Implementing Sensors in SE's and FTS														

Manageability

Managebility		2010								2011					
		Mai	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr		
		1	2	3	4	5	6	7	8	9	10	11	12		
							Year 1							Year 2	Year 3
	CLI and Web Interfaces														

Evolution of "message passing"

Evalution : Message Passing		2010								2011					
		Mai	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr		
		1	2	3	4	5	6	7	8	9	10	11	12		
							Year 1							Year 2	Year 3
	Possible use cases														

Activities in detail

About 20 people in a small room

 Agreements on the different activities :

EMI INFSO-RI-261611

European Middleware Initiative

Catalogue synchronization

- Interaction between storage element and catalogue is still the way we would like to go although we are aware that this only partially fixes deficiencies of the current system.

- However we will start by :

- Improving GFAL to reduce the number of occasions where the content of catalogues and SE's start to diverge.

- We will provide a tool (using an message passing infrastructure) where SE system administrators can provide a list of 'lost file'. Those entries will then be removed from the various catalogues.

- Based on the experience of that approach we will plan further actions.

GLUE 2.0 migration

- Details on the content of GLUE 2.0 are done.
- Plans of deployments are not due.
- Servers will be updated first :means they will
  - Start publishing GLUE 1.3 information into the GLUE 2.0 framework.
  - Followed by GLUE 2.0 information.
- Clients will follow (about april/may) understanding both GLUE 1.3 and GLUE 2.0. (fallback if necessary)

SRM , https and delegation

- SRM https demonstrator w/o delegation using the https mode of GLOBUS.

- Tested against standard SSL library.

- Tested GDS delegation service as part of the SRM service (same host same port), as FTS currently does. So we know it works.

- On delegation :

  - Working group between security/computing and data, with the goal to find a commonly acceptable delegation service. (Goal of our technical director) Groups lead by Paul.

  - As far as we understand GDS fulfils all the requirements for data.

NFS 4.1

- Servers implementations are in a good shape. dCache production ready for EMI-1. DPM very likely mid of EMI-1/2.

- Clients will become available slowly. Depends on RedHat (6.>2) and FERMI people (providing SLx)

- Performance and reliability better than expected. Serious tests done on a 50% Tier II based on NFS 4.1 at DESY with dCache.

- Improve collaboration with ROOT people.

- Industry solutions on the way. (IBM at CNAF and NetApp at DESY)

Integration with ARGUS

- Individual effort.

- DMP and dCache already provide an interface (prototype) with ARGUS.

- Very good support by ARGUS team.

- We don't see problems here.

- FTS and LFC will follow.

European Middleware Initiative

Storage Accouning

- Requirements collected from all kind of sources. (Security, OGF, experiments ..)

- First draft of the Storage Record definition available (Wiki)

- However still discussions on details.

Client library consolidation

- Groups just created.

- Very complex topic.

- Doesn't influence EMI-1

- Need to have a f2f meeting with GFAL and ARC developers to understand the potential of merging ARC and GFAL (and maybe dCache and StoRM) libraries.

European Middleware Initiative

UNICORE integration

- Work just started. New person has to learn UNICORE.

- Catalogue integration : Not clear to either use java/jni with official LFC client library or use plain java and contribute java to official LFC library.

- SRM client options :
  - Use the dCache one.
  - BeStMan : preferred as they provide real client API. (Alex Sim would be happy to support us)

European Middleware Initiative

Monitoring

- Will start beginning of next year.
- No working group build yet.
- No work done yet. (intentionally)

European Middleware Initiative

SRM Specification

- Very important have agreement with non EMI bodies. (BeStMAN, OGF, OSG, CASTOR, WLCG).

- All relevant people are informed of your efforts.

- Agreement so far : no spec nor code changes ☺

- Mostly providing useful documentation to understand SRM and best effort documentation.

European Middleware Initiative

Summary summary

- EMI-Data People are very committed to their work in EMI.

- All working groups provide workplans, results and meeting minutes in our WIKI.

- Working groups all in time.

- Trying to have code changes ready for EMI-1 well in advance to avoid delays.

- Will start a success ticker page so that management and interested partners can easily follow our work.

- Patrick : AHM for EMI-Data has been very effientand surprisingly successful.

Thank you

EMI is partially funded by the European Commission under Grant Agreement INFSO-RI-261611

EMI INFSO-RI-261611