AWG

2nd meeting

May 14th 2003

Barcelona

AWG goals

- *Task 1 Joint collection of requirements from the testbed experiences*
  - *Milestone 1: report describing the joint prioritized list of requirements on the basis of Deliverables 8.3, 9.3, 10.3 (PM30)*
- *Task 2 Identification of services relevant to a common application layer*
  - *Milestone 2: Report on the identification of common interest services and community specific services (PM32)*
- *Task 3 Description of services relevant to a common application layer*
  - *Milestone 3 report describing services relevant to a common application layer (PM36)*

Agenda

- Joint list of requirements
  - Brief presentation of the macro use cases according to HEPCAL template
  - Are there additional mini use cases identified by WP9/WP10 ?
  - Discussion
- Finalize Joint list of recommendations
- Rehearse Wim's talk
- AOB
  - Application test bed status : how to address TB instability ?

Discussion : from use cases to a joint list of requirements

- Are HEPCAL mini use cases equivalent to low level grid services ?

- Are there mini use cases which are not identified in HEPCAL documents that are requested by WP9/WP10 ?

- Are HEPCAL mini use cases addressed by EDG middleware 2.0 ?

- Is EDG2.0 implementation of low level services satisfactory from the user point of view ?

WP9/WP10 additional mini use cases

- Time constrained job submission
- Parallel job submission
- Metadata anonymization
- Transfer of access rights to a file from one grid user to the other

Robustness

Rank				Description	Middleware components
WP8	WP9	WP10	**average**		
4	3	2	**3**	R1 Uniform standards for middleware error reporting (making it easier for applications to intercept middleware errors and take the appropriate actions), e.g. reliable return status	All
4	4	?	4	R2 Improved fault detection and fault tolerance	All
4	4	4	**4**	R3 Need 98% of job submitted to pass through WMS and related middleware successfully (i.e. no failure for middleware reason to be compatible with overall 95% throughput)	All (WMS + RC + Inf Sys)
1	1	2	**1.3**	R4 Need of synchronisation between the clocks of the different WN, CE and SE of different nodes – need sync to several seconds for globus purposes (critical) – others want it to milliseconds for other purposes, this is less critical IMO. Must check on whether this is really critical.	This is a WP6/WP4 issue ? – need to have all sites running xntp plus a good scheme for periodic synch check.

Reliability and scalability

Rank				Description	Middleware components
WP8	WP9	WP10	**average**		
	4	5	**4.6**	RS1 **Need to submit System must** handle thousands of concurrent jobs	WMS + Inf Sys
5	5	5	**5**	RS2 Need to register millions of files	RM
5	4	?	**4.5**	RS3 Reliable file transfer. Must be able to transfer multi GB files with global reliability of 99%, to be compatible with an overall 95% efficiency	RM

Security

Rank				Description	Middleware components
WP8	WP9	WP10	**average**		
3	5	4	**4**	S1 Need to control file access right at the user name level (ACLs) (and VO subgroup level, e.g. "LHCb production manager" which is a subgroup of "LHCb"	SE/RM
3	5	3	**3.6**	S2 Need to control metadata access right at the user name/subgroup level (ACLs)	RM
1	1	2	**1.3**	S3 Need to encrypt data on SEs	SE
5	5	2	**4**	S4 Need a comprehensive grid-security implementation (e.g. control access to VO data/resources by multiple user groups with different levels of privilege within the VO)	VOMS
2	5	?	**3.5**	S5 Security inside Spitfire by certificate (VO, Group, user)	Spitfire
5	4	?	**4.5**	S6 Outbound IP connectivity allowed from WNs. LHCb want inbound connectivity also e.g. via daemon running on CE gatekeeper	Security procedures

Information system

Rank				Description	Middleware components
WP8	WP9	WP10	**average**		
3	3	3	**3**	IS1 Method for publishing and locating Resource Brokers available to the VO	II
3	3	3	**3**	IS2 Ability to locate the Information Index associated to the RB (i.e. how to ensure the II is the same one being used by the RB?)	II
3	2	?	**2.5**	IS3 Include information about availablility of resources (i.e. scheduled outages, downtime, etc.)	II
3	?	?	**3**	IS4 Per-VO view of information system – only see resources for which you (or your VO) have access	II

Accessibility

Rank				Description	Middleware components
WP8	WP9	WP10	**average**		
4	4	5	**4.3**	A1 Need programmable APIs (in C, C++ and java) to interface programs with middleware services	All
5	4	4	**4.3**	A2 Need recent system release support (redhat 7.3)	All
3	3	?	**3**	A3 Improve documentation quality. In fact a really good user index would really help !	All

Data management

Rank				Description	Middleware components
WP8	WP9	WP10	**average**		
4	3	4	**3.6**	DM1 Need easy grid file access from running application (gridopen / gridclose / gridread / gridwrite POSIX like interface)	RM, SE
3	4	3	**3.3**	DM2 Need automatic replication of files by grid middleware to ensure file accessibility and performances.	WMS, RM
4	2	4	**3.3**	DM3 Better support for application metadata (e.g. as user-defined fields associated to the LFN)	RM
3	3	?	**3**	DM4 Method to identify which SE is accessible to a user (see per-VO information system)	II
5	4	3	**4**	DM5 Need SE and CE(WN)space management	SE + CE +WN
5	3	2	**3.3**	DM6 The current RC should be replaced by a system that solves the logical collection problem (not sure what this means – do you mean the 2000-file limit?)	RM
4	3	2	**3**	DM7 Built-in replica consistency checking	RM
3	3	?	**3**	DM8 Replica Manager needs better support for directory structure handling (requirement explained in D9.3 section 5.1.2.2) (see also HEPCAL)	RM

TB instability

- Existing tools to monitor the test bed
  - Mapcenter (WP7) : information on daemons running on grid nodes
  - Globus MDS (Nordugrid) : no info on RB
  - Future : R-GMA in EDG 2.0

- WP6 working on a procedure to test grid elements (RB, SE, CE,…) by submitting jobs at regular frequency