TCB Requirements

Report on requirements assessed by Technology Providers

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Version 1

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Introduction

This technical report provides an overview of requirements managed at the TCB level, for which Technology Providers formulated effort assessments in accordance with [TCBReq].

The information given herein is intended as material for discussion at the upcoming 14th TCB meeting [TCB-14] for the participants to decide how to proceed with each of the requirements discussed in this document.

Assessed requirements

Currently, four requirements are tracked using the EGI requirements tracker, for which pertinent Technology Providers formulated effort assessments:

Capability		ID	Requirement	Prio	Requestor	Type
Storage	Storage Mgmt., File Access	2733	Stability and scalability of data management services)	5	UCB	nf
		910	Disk space management	4	LSGC	f
		1674	Enforce default SRM2.2 port on all storage elements	0	NGI_HR	f
Cross-cutting		1778	Better error messages	0	n/a	f

Table 1: Overview of requirements with effort assessment

Table 1 groups the included Requirements first by EGI Capability (e.g. File Access), then by the priority as recorded in the pertinent RT tracker entries. For each requirement, the RT tracker ID, the subject (abbreviated where required), priority and Requestor are provided, along with an indication whether it is a non-functional (nf) or functional (f) requirement.

The following sub-sections provide individual reports on each requirement

Data management services stability & scalability (#2733)

Originating from the LSGC VRC [LSGC] this requirement request to improve the scalability and stability of the data management services offered to EGI research communities.

User communities using some of the storage services offered by EGI have reported several variations of performance degradation and file losses.

EMI's assessment of this requirement indicates that the reported impact of the current situation is less correlated to the actual storage access services (such as dCache or DPM) and is more caused by underlying storage hardware being configured for different usage than anticipated.

The requirement and the assessment point towards a general configuration and documentation issue rather a defect of the storage access software. Therefore EMI's advice should be followed to seek professional advice for configuration of the manufacturer of the underlying storage system. As for the documentation of existing EMI storage services, specific defect tickets should be submitted via GGUS where required. Therefore the requirement is proposed to be returned and not further pursued at the TCB level.

Disk space management (#910)

Requirement #910 asks for specific mechanisms being implemented to preserve data and files, prevent data loss, and storage spaces being filled up.

EMI provided an assessment of the requirement, dissociating it into three different scenarios (a), (b) and (c) as described in the associated document.

For scenarios (a) and (b) solutions are already available and EMI recommends using them (i.e. GLUE2, SRM).

Scenario (c) describes a higher-level scenario that requires user communities to define a data retention policy for data kept in storage services available to them. All necessary technology is already available for communities to develop, agree and enforce such retention policies.

Enforcing implementing retention policies is considered detrimental to the aim of providing a platform of services that support a wide variety of use cases. Therefore this requirement should be returned to the originators with the suggestion to develop specific enhancement requests in case specific information is missing, and to pursue these further through GGUS.

Enforce default SRM2.2 port (#1674)

This requirement requests to configure storage services implementing SRM2.2 to use the same default port across EGI, or at least across EMI middleware components.

EMI assesses the technical effort to be low, but the coordination effort as high, when Technology Providers are involved.

An alternative solution to this requirement is to develop an operations policy requiring participating sites to configure storage services to bind to a selected port across all EGI installations.

Given the low priority for this requirement having narrow support across the operations community, this requirement should be returned to the OMB to pursue alternative solutions to this requirement.

Better error messages (#1778)

This requirement was last discussed at the last TCB F2F meeting in April 2012 [TCB-11] without a clear conclusion how to proceed. The pertinent statement of solution, and the minutes of the meeting both mention a document that EMI would provide with more information on available error messages documentation. The projected timeline was with EMI-2, which was cancelled without new updates on when this document would be provided.

EMI expects the quality of information coming out of this document to be low, not fulfilling the original requirement. IGE on the other hand has lowered the priority of this requirement and will react only to specific error message/code reports.

Given the low priority, the estimated low return on investment of the EMI document and narrow Technology Provider support for this requirement, this requirement should be returned to the EGI Communities to pursue this outside the TCB.

Conclusions

Three out of four requirements request improvements in the handling and management of storage services. The fourth requirement cuts across all available services seeking the harmonisation of error codes and messages.

Reviewing the available statements of solution provided for each requirement discussed in the previous section revealed that the most pressing requirement (#2733) in fact deals more with actual configuration and documentation of deployed components (hardware, software) rather actual enhancement of existing software – if configured properly, the services are said to provide the requested functionality at desirable performance. There is no reason to challenge this. Documentation issues are known to be very difficult to be managed and coordinated at strategic level. An alternative way to manage such issues is to use existing help desk infrastructures and file clear requests for information in such cases, requesting specific references (i.e. document name and location, section and page numbers) documenting the correct solution to described configuration scenario.

Two other requirements concern the usage of services according to specific policies (#910, #1674). While policies are often a community specific agreement (regardless the size of the community), software that support such policies should be kept as generic as possible while not limiting its users to enforce policies on top of it. That way, policies become a matter of service usage (and therefore perhaps also a matter of configuration) instead of specialised software supporting a limited number of usage scenarios.

Finally, the fourth requirement attempts to harmonise error codes and error messages across services and technology providers. The expected strategic benefit is considered low.

Therefore, all four requirements that are discussed in this document should be returned to the originating communities for further individual pursuit:

ID	Requirement	Proposed new state
2733	Stability and scalability of data management services)	RETURNED
910	Disk space management	RETURNED
1674	Enforce default SRM2.2 port on all storage elements	RETURNED
1778	Better error messages	RETURNED

References

[TCBReq]	TCB Requirements Management Process, https://documents.egi.eu/document/440
[TCB-14]	14th TCB meeting (F2F), 6 November 2012, Amsterdam, NL, http://go.egi.eu/TCB-14
[TCB-11]	11th TCB meeting (F2F), 24 April 2012, Amsterdam, NL, http://go.egi.eu/TCB-11
[LSGC]	Life Sciences Grid Community, http://lsgc.org/en/LSGC:home