EGI-InSPIRE

UMD Information Capabilities Quality Criteria v2 DRAFT 1

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Abstract

This document describes the Quality Criteria for the Information Capabilities identified in the UMD Roadmap.



Document Log

Issue	Date	Comment	Author/Partner
1.0	19/01/2011	Reorganisation of criteria into UMD roadmap 2 groups.	Enol Fernández
1.3	09/02/2011	Review of criteria	Enol Fernández
2 DRAFT 1	20/06/2011	Update to new template, review of criteria. Add messaging.	Enol Fernánez / Mario David

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1 INFORMATION MODEL

1.1 Information Model Schema

GlueSchema Support	
ID	**INFOMODEL_SCHEMA_1**
Description	Information exchanged in the EGI Infrastructure must conform to GlueSchema
Mandatory	YES
Applicability	Information Model Appliances

Input from Technology Provider	Test that the information published by the product conforms to the GlueSchema v1.3 and v2.0 (optionally)	
Test Description	**Pre-condition**	None.
	Test	Check that information published conforms to GlueSchema (v1.3 and v2)
	Expected Outcome	Information conforms to GlueSchema.
Pass/Fail Criteria	Information published must be available in GlueSchema v1.3 and GlueSchema v2. It is expected that all products transition to GlueSchema v2.	
Related Information	UMD Roadmap [R 1] GlueSchema v1.3 [R 2] GlueSchema v2 [R 3]	
Revision Log	V2: Merged INFOMODEL_SCHEMA_* into this criterion.	

2 INFORMATION DISCOVERY

2.1 Information Discovery Interface

Information Discovery Interface	
ID	**INFODISC_IFACE_1**
Description	Information published by the appliance must be available through LDAPv3 protocol
Mandatory	YES
Applicability	Information Discovery Appliances

Input from Technology Provider	LDAP interface for getting the available information.	
Test Description	**Pre-condition**	Information Discovery Appliance is running
	Test	Fetch information from Discovery Appliance using LDAPv3.
	Expected Outcome	Information is retrieved correctly from server.
Pass/Fail Criteria	Information published must be available through LDAPv3 protocol.	
Related Information	UMD Roadmap [R 1]	
Revision Log		

2.2 Information Discovery Functionality

2.2.1 Information Aggregation

The Information Discovery services aggregate information from lower level sources of information in a hierarchical way. Appliances providing the Information Discovery Capability must be able to aggregate lower level sources of information and apply filter to that information

Information Filtering	
ID	**INFODISC_AGG_1**
Description	The information discovery service must be able to filter some of the data coming from information sources (e.g. do not publish information of a compute capability for a given VO)
Mandatory	YES
Applicability	Information Discovery Appliances

Input from Technology Provider	Test for the information filtering features.	
Test Description	**Pre-condition**	Valid sources of information are available. Valid filter.
	Test	Filter sources according to filter.
	Expected Outcome	Output filtered information
	Pre-condition	Valid sources of information are available. Invalid filter.
	Test	Filter sources according to filter.
	Expected Outcome	Error message stating that the information cannot be filtered. Output unfiltered information.
Pass/Fail Criteria	The administrator must be able to define filters for the information that gets published by the appliance. The appliance defines the format and syntax for the filters.	
Related Information	UMD Roadmap [R 1]	
Revision Log		

Information Aggregation	
ID	**INFODISC_AGG_2**
Description	The information discovery service must be able to collect data from different sources and aggregate them in a single source of information.
Mandatory	YES
Applicability	Information Discovery Appliances

Input from Technology Provider	Test for the information aggregation features.	
Test Description	**Pre-condition**	Set of valid information service sources available and correct.
	Test	Aggregate information from sources
	Expected Outcome	Output aggregated information
	Pre-condition	Set of valid information service sources available, at least one incorrect (e.g. not GlueSchema compliant)
	Test	Aggregate information from sources
	Expected Outcome	Output aggregated information without incorrect source. Show a warning message.
	Pre-condition	Set of valid information service sources, at least one unreachable
	Test	Aggregate information from sources
	Expected Outcome	Output aggregated information without unreachable source. Show a warning message.
Pass/Fail Criteria	The appliance must aggregate several sources of information. When one of them presents errors or is unreachable, others still must be published. Update interval for sources must be configurable.	
Related Information	UMD Roadmap [R 1]	
Revision Log		

2.2.2 Availability/Scalability

Size Test	
ID	**INFODISC_AVAIL_1**
Description	Information Discovery appliances must be able to handle big amounts of data. Central services for the whole EGI.eu infrastructure may contain information from several hundred sites.
Mandatory	YES
Applicability	Information Discovery Appliances

Input from Technology Provider	Test for the limit of size of the data handled by the service. Documentation on how to support large data sizes.	
Test Description	**Pre-condition**	Correctly configured service.
	Test	Add information to the service until it cannot handle it.
	Expected Outcome	Size limit of information
Pass/Fail Criteria	Pass if the test is provided and the limit is enough to handle the current information of the *whole* EGI.eu infrastructure.	
Related Information	UMD Roadmap [R 1]	
Revision Log		

Stress Test	
ID	**INFODISC_AVAIL_2**
Description	The information discovery service should be able to handle load under realistic conditions.
Mandatory	YES
Applicability	Information Discovery Appliances

Input from Technology Provider	Stress test for the service that calculates the maximum throughput of the service.	
Test Description	**Pre-condition**	Correctly configured service.
	Test	Stress test the service until is not available.
	Expected Outcome	Throughput of the service is enough to handle realistic load.
Pass/Fail Criteria	Pass if the throughput provided by the appliance is able to handle at least 20 concurrent requests.	
Related Information	UMD Roadmap [R 1]	
Revision Log		

3 MESSAGING

Messaging Interface	
ID	**MSG_IFACE_1**
Description	Messaging Appliances must support (at least one of) the interfaces currently in production in the EGI Infrastructure or identified by the UMD Roadmap
Mandatory	YES
Applicability	Messaging Appliances

Input from Technology Provider	Complete test suite for the Messaging interfaces supported by the appliance. The test suite must include tests for all the documented functions. For all functions, check both correct and invalid input. Invalid output should throw an exception as documented.	
Test Description	**Pre-condition**	Messaging Appliance configured
	Test	Test all interface functionality, with correct/incorrect input.
	Expected Outcome	Log of all the operations performed. All the documented functions work as documented.
Pass/Fail Criteria	The Messaging Appliance that claims to support an interface must have complete tests of that interface. The test suite must be executed without errors. **At least one** of the following interfaces must be supported: • JMS 1.1 [R 4] • AMQP [R 5]	
Related Information	UMD Roadmap [R 1]	
Revision Log		

4 REFERENCES

R 1	UMD roadmap: https://documents.egi.eu/public/ShowDocument?docid=100
R 2	GlueSchema Specification v1.3: http://glueschema.forge.cnaf.infn.it/Spec/V13
R 3	GlueSchema Specification v2.0: http://www.ogf.org/documents/GFD.147.pdf
R 4	JMS (Java Message Service Specification) 1.1: http://www.oracle.com/technetwork/java/jms/index.html
R 5	AMQP (Advanced Message Queuing Protocol): http://www.amqp.org/confluence/display/AMQP/Advanced+Message+Queuing+Protocol