EGI-InSPIRE

UMD Instrumentation Quality Criteria v2

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Abstract

This document describes the Quality Criteria for the Instrumentation Capabilities of the UMD distribution must meet.



Document Log

Issue	Date	Comment	Author/Partner
2 DRAFT 1	15/02/2011	Preparation of new release	Enol Fernández
2 DRAFT 2	01/07/2011	Update of criteria	Enol Fernández
2	03/08/2011	Release 2	Enol Fernández

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1 REMOTE INSTRUMENTATION

There are no standardised interfaces known for the Remote Instrumentation Capability. The QC in this document is based in the Instrument Element [R 2] proprietary implementation from DORII [R 3] project.

Instrument Element API	
ID	**INSTRUMENT_IE_1**
Description	Instrument Element appliances must support the Instrument Element API
Mandatory	YES
Applicability	Instrument Element implementation of Remote Instrumentation Appliances

Input from Technology Provider	Complete test suite for the Instrument Element API as described in WSDL. 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 also with valid and invalid credentials. Invalid credentials should throw security related exceptions.	
Test Description	**Pre-condition**	Valid user credentials.
	Test	Test all interface functionality, with correct/incorrect input and with valid and invalid credentials.
	Expected Outcome	Log of all the operations performed. All the documented functions work as documented.
Pass/Fail Criteria	The Instrument Element Appliance must have complete tests of its SOAP interface. The test suite must be executed without errors.	
Related Information	UMD Roadmap [R 1] Instrument Element [R 2]	
Revision Log		

Instrument Element File Access	
ID	**INSTRUMENT_IE_2**
Description	Instrument Element appliances should provide a file access transfer capability for moving data in and out of the instrument.
Mandatory	YES
Applicability	Instrument Element implementation of Remote Instrumentation Appliances

Input from Technology Provider	File access transfer capability for reading and writing data, preferably gridFTP.
Pass/Fail Criteria	The Instrument Appliance must provide a file access capability for transferring data from and to the product.
Related Information	UMD Roadmap [R 1] Instrument Element [R 2] File Access QC [R 4]
Revision Log	

Instrument Element Messaging System	
ID	**INSTRUMENT_IE_3**
Description	Instrument Element appliances should provide a messaging system for asynchronous monitoring of instrument variables and signalling alarms and events to the users.
Mandatory	YES
Applicability	Instrument Element implementation of Remote Instrumentation Appliances

Input from Technology Provider	Messaging capability implementation for the asynchronous monitoring and notification of alarms and events to users, preferably JMS implementation.
Pass/Fail Criteria	The Instrument Appliance must provide a messaging capability for asynchronous monitorisation and notification of events.
Related Information	UMD Roadmap [R 1] Instrument Element [R 2] Messaging Capability QC [R 5]
Revision Log	

Instrument Manager Support	
ID	**INSTRUMENT_IE_4**
Description	Instrument Element appliances must provide mechanisms for managing instruments.
Mandatory	YES
Applicability	Instrument Element implementation of Remote Instrumentation Appliances

Input from Technology Provider	Implementation of the Instrument Manager (IM) framework as described in the Instrument Element documentation (XML description of the instrument and abstract classes for the implementation).
Pass/Fail Criteria	The Instrument Appliance must completely support the Instrument Manager framework as described in the Instrument Element documentations. The framework must provide a way to define attributes read from the instrument, configuration parameters for the instrument, the different commands the instrument may receive and the states and transitions of the instrument.
Related Information	UMD Roadmap [R 1] Instrument Element [R 2] Messaging Capability QC [R 5]
Revision Log	

2 REFERENCES

R 1	UMD roadmap: https://documents.egi.eu/public/ShowDocument?docid=100
R 2	Instrument Element: http://www.dorii.eu/resources:adaptation:middleware:IE
R 3	DORII (Deployment of Remote Instrumentation Infrastructure) Project: http://www.dorii.eu/
R 4	Storage Capabilities QC
R 5	Information Capabilities QC