EMI SA2 Report

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SA2, WP Leader

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EMI 2 - Matterhorn

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What happened in SA2 since AHM in Lund…

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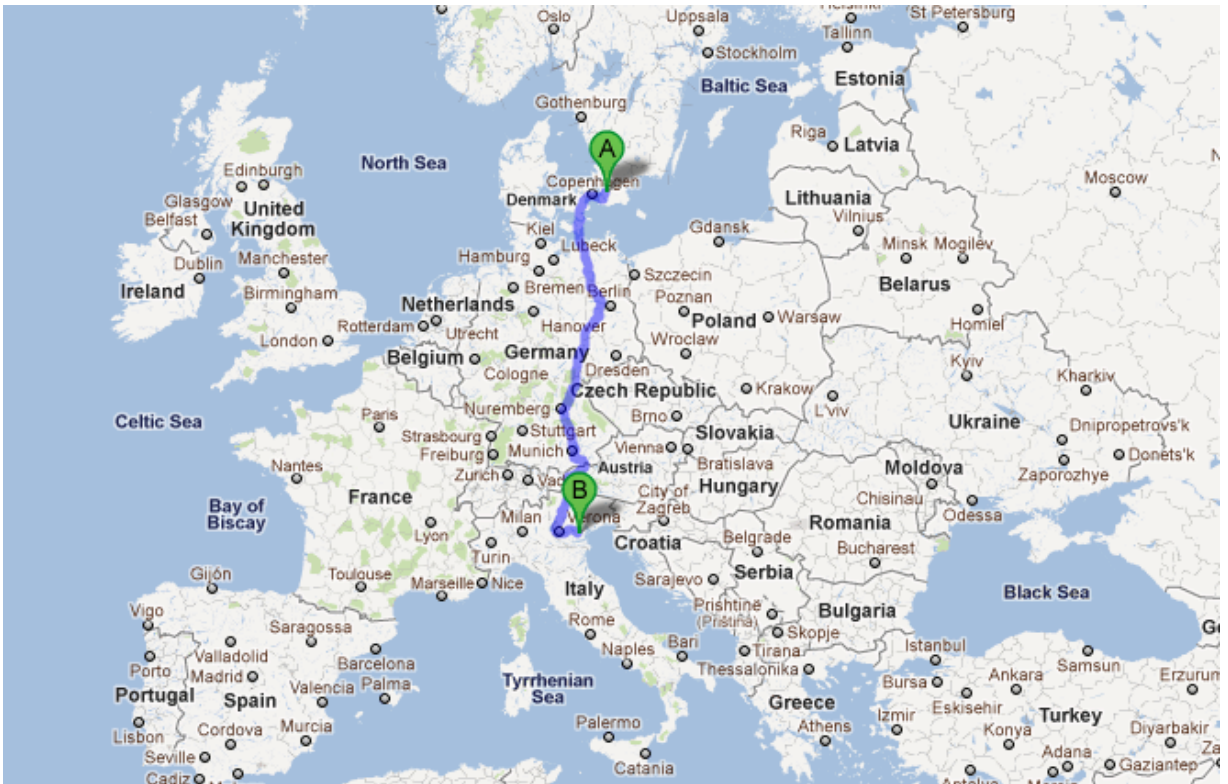
From Lund to Padova



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Changes in SA2

- Changes about Quality Control and Review tasks
  - Decided after the feedback from the First EMI Review
- SA1 and JRA1 QC tasks

  → Merged in SA2.7 Quality Control

  Without development of tests in the PTs (JRA1 QC)

  Task Leader Giuseppe Fiameni
- SA2.5 (Reviews)

  → Goes in SA2.2 (QA Review) and SA2.7 (Doc Review)
- No significant impact on PTs
  - SA2 and QC were working very closely already (participated all weekly meetings) and this change is still useful (action lists, tasks, etc)

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Outline

- Policies
- Metrics
- Tools
- Testbeds
- Quality Control

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SA2.2 - QA Policies and Check Lists

- SA2 QA Policies and Production Check List reviewed for the second year of EMI and ready for EMI 2
  - https://twiki.cern.ch/twiki/bin/view/EMI/SA2
- Implementation of the Verification Dashboard
  - http://emi-dashboard.cern.ch/ → Plenary on Tue AM
- New version of the Software Quality Assurance Plan (under internal review)
- Definition of the EMI Metrics and Quality Model
  - Review of existing metrics (EMI Metrics Specification)
    - *https://twiki.cern.ch/twiki/pub/EMI/QualityModel/EMI_SA2_MetricsSpecification_v1.3.doc*
  - Definition of a Quality Measurement plan and targets
    - *https://twiki.cern.ch/twiki/pub/EMI/QualityModel/EMI_SA2_QualityModel_v1.3.doc*

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http://bit.ly/emisa2

Policy	Description	Status	Latest Approved version
Release Management	This policy describes how releases are managed in EMI	Approved	v2.1 approved on 21.07.2011.
Change Management	This policy describes how to introduce changes in the EMI release.	Approved	v3.3 approved on 03.10.2011
Configuration and Integration	This policy describes how to build and integrate your software into the EMI release	*v2.0 not approved but officially used for EMI 1, a new document including the Debian policies is in progress*	v1.0 approved on 03.12.2010.
Packaging	This policy describes how to create software packages.	2.0 in progress	v1.0 approved on 11.03.2011
Testing	This policy describes how to test your software components.	Approved	v3.0 approved on 22.08.2011
Documentation	This policy describes how to prepare software documentation.	Approved	v3.0 approved on 21.07.2011
Certification	This policy describes how to certify your software components.	Approved	v3.2 approved on 08.08.2011

SA2.2 - Ongoing

- Maintenance of the SA2 QA policies, as needed
  - Polices are stable and approved but can be discussed and changed
- Consolidation of the Verification Dashboard → Tue AM
  - Integration with the Report Generation mechanism so that metrics from data collected in the Dashboard can be generated.
  - Integration with the Bug Tracking Dashboard so that information about RfCs per Task can be shown.
  - Integration with ETICS so that ETICS-related checks can be automated.

  →Estimated: Mid December

→In order to pass the Verification Dashboard, PTs should really follow:

- Testing report template
- Certification report template
- Change Management Policy, to properly fill in fields like the *List of RfCs*.

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SA2.3 - Metrics

- Several improvements to EMT Bug-tracking Report
- Defined comprehensive set of QA metrics (Quality Model)
- All QA reports available here
  - http://cern.ch/emiqa
- Added metrics fro EPEL compliance (ongoing for Debian)
  - Done by ETICS team: Integrated Rpmlint (and Lintian)
  - Compliance to EPEL policies is an EMI2 target → RPM
  - Build from sources is also goal of the project
- Developed bug-tracking dashboard
  - Verify EMT bug-tracking report
  - Bring middlewares into line with required XML fields
  - Allow SA1 and QC to filter data and produce customized reports

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SA2.3 – RfC Tracking Dashboard

	Middleware	Component	Priority	Status	Severity	UID	SubmittedOn	EndedOn	AssociatedTest
1	ARC	ARClib	high	accepted	defect	2645	2011-09-26T16:14:09	Not closed yet	N/A
2	ARC	ARClib	high	tested	defect	2485	2011-06-20T11:48:19	2011-09-20T22:11:47	N/A
3	ARC	Data Management	high	fixed	defect	2592	2011-08-20T09:33:55	2011-09-19T10:57:06	N/A
4	ARC	Information System	high	fixed	defect	2443	2011-05-26T11:06:21	2011-09-15T11:45:36	N/A
5	ARC	Packaging/Distribution	high	tested	defect	2447	2011-05-27T15:19:21	2011-09-21T16:03:44	N/A
6	MPI	MPI-Start	high	closed	defect	35	2011-05-12T15:22:38	2011-09-27T09:37:57	Yes
7	MPI	MPI-Start	high	closed	defect	38	2011-05-24T12:17:22	2011-06-16T09:33:16	Yes
8	MPI	MPI-Start	high	closed	defect	41	2011-07-11T12:38:26	2011-07-12T15:39:58	Yes
9	MPI	MPI-Start	high	closed	defect	42	2011-07-14T10:57:49	2011-07-14T10:58:34	N/A
10	MPI	MPI-Utils	high	closed	defect	39	2011-06-07T13:33:41	2011-06-20T11:14:39	N/A
11	UNICORE	Documentation	high	tested	defect	3304521	2011-05-19T10:39:00	2011-05-26T12:55:37	No
12	UNICORE	HiLA	high	tested	defect	3405528	2011-09-07T11:48:00	2011-09-29T14:47:42	No
13	UNICORE	Server	high	tested	defect	3367929	2011-07-15T12:40:00	2011-08-09T08:45:53	No
14	UNICORE	UCC	high	tested	defect	3371018	2011-07-19T07:44:00	2011-07-19T10:23:55	No
15	UNICORE	UCC	high	tested	defect	3406663	2011-09-09T06:32:00	2011-09-09T06:55:53	No
16	UNICORE	UCC	high	tested	defect	3413306	2011-09-23T12:49:00	2011-09-23T13:06:35	No
17	UNICORE	UNICORE/X	high	tested	defect	3297788	2011-05-05T07:28:00	2011-05-05T09:04:26	No
18	UNICORE	UNICORE/X	high	tested	defect	3313749	2011-06-08T13:08:00	2011-06-08T13:19:08	No
19	UNICORE	UNICORE/X	high	tested	defect	3403939	2011-09-04T09:47:00	2011-09-04T14:07:57	No
20	UNICORE	UVOS	high	tested	defect	3388065	2011-08-07T21:32:00	2011-08-07T21:48:39	No
21	gLite	APEL	high	tested	defect	84078	2011-07-08T10:37:52	Not closed yet	N/A
22	gLite	Argus	high	tested	defect	83281	2011-06-15T12:52:58	2011-08-30T10:45:16	N/A
23	gLite	Argus	high	tested	defect	84846	2011-07-26T11:25:37	2011-09-26T10:21:26	N/A
24	gLite	Argus	high	tested	defect	84848	2011-07-26T11:33:38	2011-09-26T10:21:56	N/A
25	gLite	BDII	high	tested	defect	84241	2011-07-12T15:06:33	2011-09-05T10:39:27	N/A
26	gLite	BDII	high	tested	defect	84242	2011-07-12T15:12:40	2011-09-05T10:38:53	N/A
27	gLite	CEMon	high	tested	defect	83082	2011-06-10T10:12:01	2011-06-24T09:10:36	N/A
28	gLite	CEMon	high	tested	defect	85183	2011-08-04T15:08:50	2011-09-23T11:44:27	N/A
29	gLite	CREAM	high	tested	defect	82567	2011-05-24T13:44:19	2011-06-23T18:44:24	N/A
30	gLite	Gridsite	high	tested	defect	82023	2011-05-09T16:49:49	2011-08-16T09:37:40	N/A
31	gLite	Trustmanager/util-java	high	nottested	defect	83426	2011-06-20T13:53:06	2011-08-29T15:42:24	N/A
32	gLite	VOMS/VOMS-Admin	high	tested	defect	84645	2011-07-21T10:16:51	2011-07-28T15:07:04	N/A
33	gLite	WMS	high	accepted	defect	86485	2011-09-07T12:12:56	Not closed yet	N/A
34	gLite	WMS	high	fixed	defect	86490	2011-09-07T14:38:29	Not closed yet	N/A
35	gLite	WMS	high	tested	defect	82687	2011-05-27T12:22:27	2011-08-04T18:37:18	N/A
36	gLite	gLExec/LCAS/LCMAPS	high	tested	defect	84672	2011-07-21T18:38:10	2011-08-10T14:59:13	N/A
37	gLite	gLExec/LCAS/LCMAPS	high	tested	defect	85211	2011-08-05T11:02:59	2011-08-05T16:42:39	N/A

SA2.3 - Rpmlint

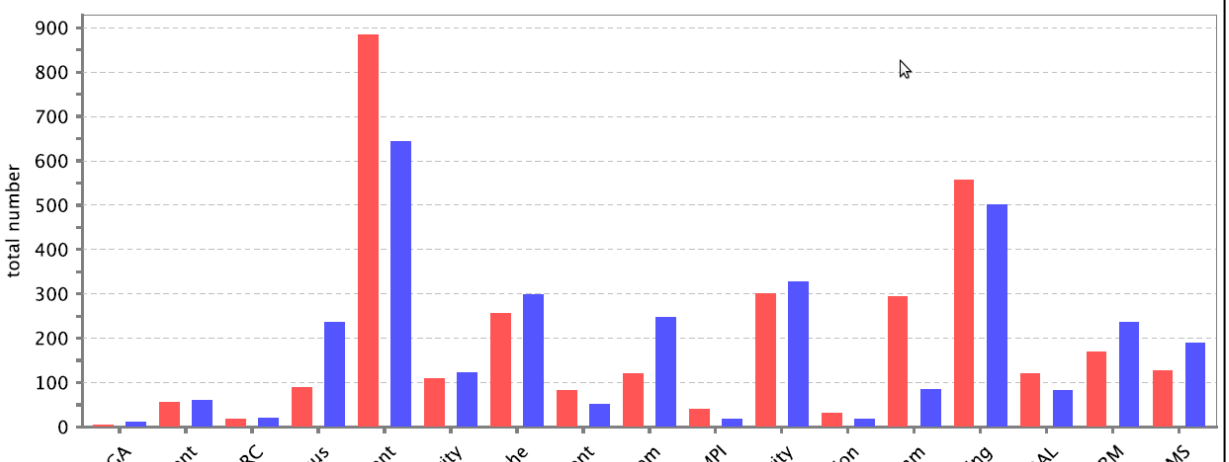
- Collecting Rpmlint data of ETICS builds
- Need to find out what needs is needed by EPEL
- This is a major metrics for EMI 2 and EMI 3

Rpmlint errors and warnings per product team, no outliers

at 8 October 2011, outliers: gLite Job Management

This graph zooms into the lower part of the previous graph, clarifying the situation for subsystems that were not clearly visible in the previous graph.

Link to rpmlint detailed log: http://etics-repository.cern.ch/repository/reports/id/f4fa2d42-fcfb-474f-9b81-d6a20d3baeb8/sl5_ia32_gcc412EPEL/-/reports/rpmlint/index.html



SA2.3 - Ongoing

- Verification of the EMT Bug-tracking report for each weekly meeting
  - Fedback to PTs (on the metrics) and to ETICS (on the report)
- Changes to Bug-tracking descriptions
  - Affected Platforms, Affected Major release, Target Major release, Associated Test
- SA1 KPIs to be added to EMT report
  - Difficult to connect GGUS data and PTs tracker information
- Fine tune static analysers
  - Focus on verifying the packaging for EPEL and APT
- **Create EMT task tickets and report on important metrics at EMT meetings**

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SA2.4 - ETICS Platforms

- New platforms integration
  - SL6 and Debian 6 (32 and 64 bits)

    Feedback received for SL6 client

    Debian 6 configurations in ETICS needed for more client testing

    → Details in ETICS presentation (Tue AM + Tue P)

SL6	**Client**	• New RC version released • Around 250 builds sent to this platform
	Nodes	• Normal and High Performance nodes are in place
Debian 6	**Client**	• RC version released
	Nodes	• Some worker nodes in place for testing • More images after testing

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SA2.4 - ETICS Infrastructure

- Dynamic pool for worker nodes
  - Developed a new system for dynamic allocation in the pool
  - Always one machine free of each platform ready to receive a job → easier to balance the pool according demand
- Debian Working Group
  - Advised the ETICS team. APT repository, generation of DEB files.
- Problem of slow native HyperV drivers for SL6 solved
  - Modified the VM images to use SCSI virtual disks (faster)
- Maven repository
  - Mirror from the official Maven repository. *Should be accessible this week.*
- ETICS VM Images for PTs
  - Procedure to create a ETICS build node from scratch.
  - SL5 and SL6 HyperV images are already available for download

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SA2.6 - Testbeds (1)

- EMI Certification and Integration Testbed
  - LINK: https://twiki.cern.ch/twiki/bin/view/EMI/TestBed
- Intercomponent Testing Testbed
  - 8 EMI-1 Updates deployed
  - New Update policy (LINK → sec. 2.3), separation of Production / Candidate Release resources per Release:
    - *Production: RELEASE INTEGRATION CHECK → dedicated repo, updates triggered by Release Manager GGUS ticket, 1 week of SA2.6 manual tests + Nagios Monitoring*
    - *RC: CONTINUOUS INTEGRATION → Nightly Build repo, updates triggered by PTs GGUS ticket, PTs tests + Nagios Monitoring*
- New inventory
  - Resources grouped by Release/Prod/RC/Site + Nagios

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SA2.6 - Testbeds (2)

- Large Scale Testing Testbed + EMI Preview
  - Slowly Increasing Participation
  - Preliminary agreement with 16 Partners / 5 actually deployed services, not yet accessible as unique testbed
- Dedicated Demo/Training Testbed
  - Not be in conflict with testbed operations
  - Separate setup managed by NA2. Only some resources/services available
  - (LINK → sec. 4.5)
- EMI testbed used at EGI-TF Lyon for OUTgrid demo
  - Demo winner ☺
- Preliminary contacts with FutureGrid (→ EMI-NA3)
  - Possibly hosting some testbed resources for training purposes

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SA2.6 - Ongoing activities

- EMI-1 Updates installations
  - Every second week
- All EMI-1 Testbed Services under Nagios Monitoring (2-3 months)
  - PTs probes + EMI metapackage to handle dependencies (1 month ?)
  - Nagios Team provides configurable server for EMI (emiUI + all emi registry + server configuration of probes) (dates?)
  - SA2.6 deploys everything (above completed + ~ 1 month)
- EMI-2 deployment on Testbed (4-6 months)
  - Implement continuous integration on RC testbed
- EMI Preview / Large Scale / Demo-Training
  - Unify access to available resources: a single testbed (TBD)
  - move Training Testbed on FutureGrid (TBD)

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SA2.6 - Open Issues (1)

- Process coordination for Nagios Probes integration
  - Input from EMI JRA1
  - Input/ coordination with EGI-Nagios team
- Nagios probes integration testing chain
  - PT test probes on their resources
    → release them with Updates like any other software
  - EGI integrates probes with SAM-NAGIOS
  - SA2.6 deploys Nagios server and probes

→ Details in the SA1+SA2 Testbeds/Nagios session (Tue PM)

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SA2.6 - Open Issues (2)

- Multiplatform handling
  - Ready to deploy SL6 and Debian but not enough resources for 3 platform in parallel
    - ***current:*** *preEMI + EMI-1 * 2 (prod+RC)*
    - ***soon:*** *preEMI + EMI-1 * 2 (prod+RC) + (EMI-2 * 2 (prod+RC)) * 3 (platforms) + NAGIOS*
    - *All *2 if we count also the 32 and 64 bits versions*
- One/two platforms at a time sequentially (switch on/off virtual boxes ?)
  - Sustainable effort by few people
  - Automation is helping but is not enough
  - Release Cycle should change accordingly

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SA2.7- QC: EMI 1 Updates (1-7)

- **35** products **released**
- **33** products **fully verified**
- **2** products released, but **not fully verified**
- **12** products **postponed** on the release schedule

- **20** products **highly compliant**
- **15** products **partially compliant**
- **5** products **fully compliant**
  (*all checks marked with Yes*)
  → **Product Names in the SA1+SA2: QC Session (Tue PM)**

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SA2.7 – Passed Checks

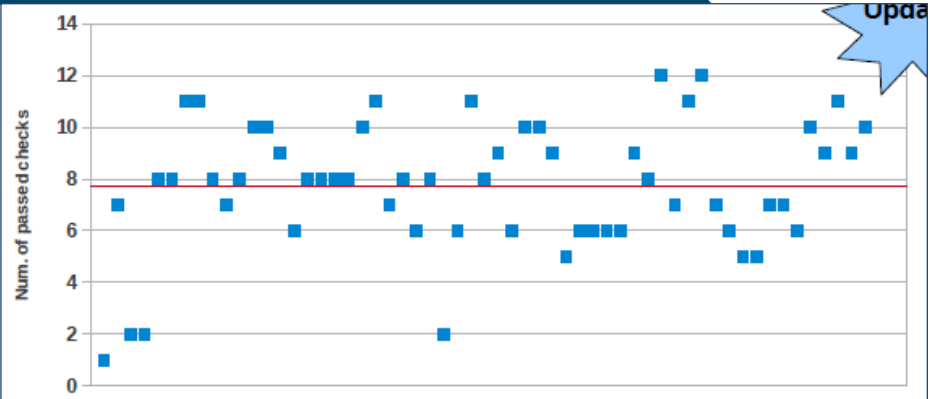
EUROPEAN MIDDLEWARE INITIATIVE

Passed QC checks

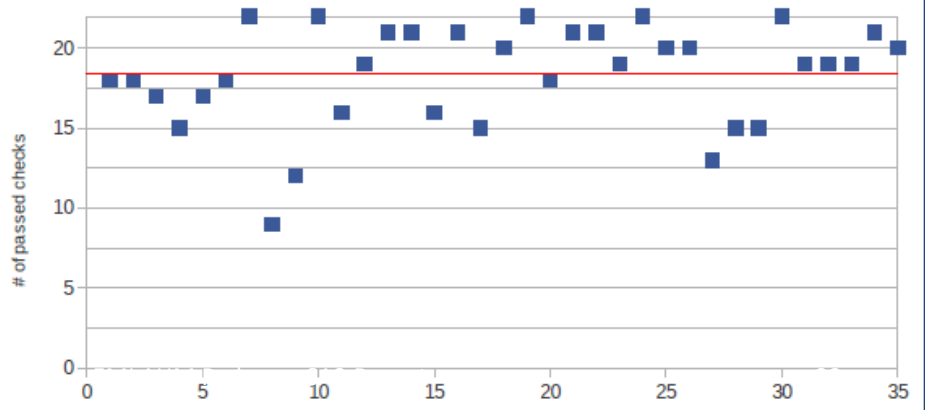
EMI 1

EMI 1 Updates

EMI 1 Updates 1-7



Products

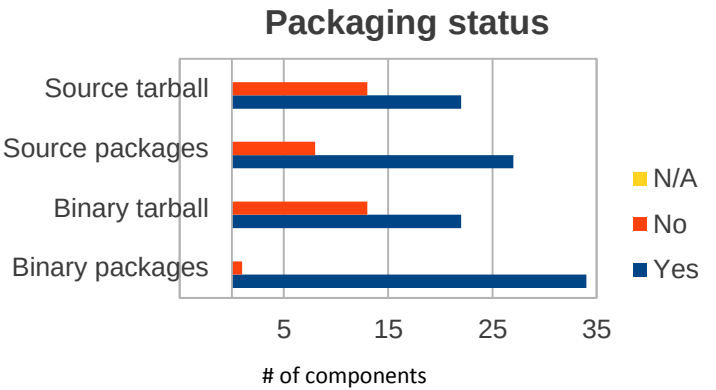


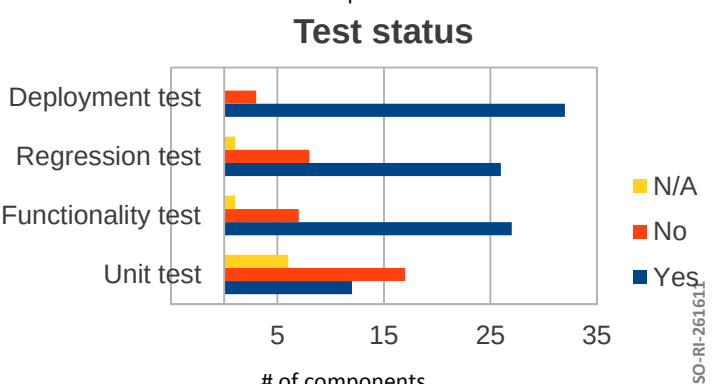
SA2.7 - Verification activity data

Availability of software packages

EMI 1 Updates 1-7

Availability of tests





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General QC comments

- Overall better results for the Updates
  - Verification process has significantly improved as well as the degree of compliance of released products
- New release process permits to better interact with PTs and not block the verification activity if minor issues are discovered
  - Less conflicts between QC and PTs
  - QC approach can now become a bit more rigorous
- Software packages are not always linked to the corresponding tasks
- ETICS configurations often result unlocked
  - Minor issue, the verification process is not stopped in this case
- Lack of Unit and Regression tests causes most of non-conformities
- Reports often do not comply with defined templates (→ see dashboards)

→ Details in the SA1+SA2: QC Session (Tue PM)

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Documentation Review

- Documentation process definition

https://twiki.cern.ch/twiki/bin/view/EMI/EMIDocReviewProcess

- Reviews of documentation after EMI 1
  - Sporadic: update 1-4
  - Systematic: update 5,7,8
- Standardization across EMI documentation?
  - Site admin/users should find same info in same links/section for every EMI product
  - If the project/PEB endorses it SA2 can provide templates and reports.
- Test Report Web Interface (dev for ARC)
  - DB application with web interface to input data for test reports
  - Web interface to submit, search and print test reports

http://arc-emi.grid.upjs.sk/testing/testResult.php

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Security Assessment Activity

- gLite
  - VOMS Admin 2.0.18 - DONE
  - Argus 1.2 - DONE
  - GLexec 0.8 - DONE
  - VOMS Core 2.0.2 - On-Going
    - *Started: May 2011. Expected duration: 6 months*
  - CREAM: Computing Resource Execution And Management
  - WMS: Workload Management System
- UNICORE
  - TSI (Target System Interface)
  - Gateway
- Activity carried on by Universitat Autònoma de Barcelona
  - Last release of the security assessment plan available on the EMI SA2
    https://twiki.cern.ch/twiki/bin/view/EMI/TSA27#Security_Assessment_Activity

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Most common remarks (text analysis)

QC Remarks on Tests

General QC Remarks

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More SA2 at AHM Padova

- SA2 Plenary talks (Tuesday AM)
  - ETICS, more in detail
  - Verification Dashboard, details on what PTs are expected to produce
- SA1+SA2 Common Session (Tuesday PM)
  - ETICS additional topics to discuss after plenary, EPEL, Deb 6 (Andres)
  - Testbeds, monitoring, issues, statistics, Nagios probes (Danilo)
  - Quality Control lessons/stats/issues (Giuseppe)
- SA2 Parallel Session (Tuesday PM)
  - XML from the bug trackers, RfC Tracking Dashboard, issues (Eamonn)
  - Reports generation and metrics calculated (Duarte)
  - Summary of the Documentation Reviews (Jozef)

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Thank you