



EGI-InSPIRE

UMD OPERATIONS CAPABILITIES QUALITY CRITERIA v2

| | |
|----------------------|---|
| Document identifier: | EGI-OPERATIONS-QC-V2.docx |
| Date: | 04/08/2011 |
| Document Link: | https://documents.egi.eu/document/364 |

Abstract

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



Copyright notice

Copyright © Members of the EGI-InSPIRE Collaboration, 2010. See www.egi.eu for details of the EGI-InSPIRE project and the collaboration. EGI-InSPIRE (“European Grid Initiative: Integrated Sustainable Pan-European Infrastructure for Researchers in Europe”) is a project co-funded by the European Commission as an Integrated Infrastructure Initiative within the 7th Framework Programme. EGI-InSPIRE began in May 2010 and will run for 4 years. This work is licensed under the Creative Commons Attribution-Noncommercial 3.0 License. To view a copy of this license, visit <http://creativecommons.org/licenses/by-nc/3.0/> or send a letter to Creative Commons, 171 Second Street, Suite 300, San Francisco, California, 94105, and USA. The work must be attributed by attaching the following reference to the copied elements: “Copyright © Members of the EGI-InSPIRE Collaboration, 2010. See www.egi.eu for details of the EGI-InSPIRE project and the collaboration”. Using this document in a way and/or for purposes not foreseen in the license, requires the prior written permission of the copyright holders. The information contained in this document represents the views of the copyright holders as of the date such views are published.

Document Log

| Issue | Date | Comment | Author/Partner |
|-----------|------------|---|------------------------|
| 1.0 | 03/11/2010 | First draft | Enol Fernández |
| 1.1 | 04/11/2010 | Added configuration modules QC | Enol Fernández |
| 1.2 | 11/11/2010 | Formatting and review of some criteria, changed name from monitoring to Operational | Enol Fernández |
| 1.3 | 31/01/2011 | Added Nagios failover configuration and APEL QC | Álvaro Simón |
| 1.4 | 08/02/2011 | Review of Accounting portal criteria. | Álvaro Simón |
| 1.5 | 08/02/2011 | Review of Accounting criteria. | Álvaro Simón |
| 2 DRAFT 1 | 10/05/2011 | Update to new template. Update of monitoring section. | Enol Fernández |
| 2 | 03/08/2011 | Release 2. Introduced input from EMI | E. Fernández, A. Simón |



TABLE OF CONTENTS

| | | |
|----------|---|-----------|
| 1 | Monitoring Capability | 4 |
| 1.1 | Nagios Configuration Generation | 4 |
| | MON_NCG_1 | 4 |
| | MON_NCG_2 | 5 |
| 1.2 | Visualization Portal (MyEGI) | 6 |
| | MON_PORTAL_1 | 6 |
| | MON_PORTAL_2 | 7 |
| | MON_PORTAL_3 | 8 |
| | MON_PORTAL_4 | 9 |
| | MON_PORTAL_5 | 10 |
| | MON_PORTAL_6 | 11 |
| 1.3 | Database | 12 |
| | MON_DB_1 | 12 |
| | MON_DB_2 | 13 |
| 2 | Monitoring Probes | 14 |
| | MON_PROBE_1 | 14 |
| 2.1 | Service Probes | 15 |
| | MON_PROBE_GENERIC_1 | 15 |
| | MON_PROBE_GENERIC_2 | 16 |
| 2.1.1 | Job Execution Capability Probes | 17 |
| | MON_PROBE_JOBEXEC_1 | 17 |
| | MON_PROBE_JOBEXEC_2 | 18 |
| | MON_PROBE_JOBEXEC_3 | 19 |
| 2.1.2 | Compute Job Scheduling Probes | 20 |
| | MON_PROBE_JOBSCH_1 | 20 |
| 2.1.3 | File Access Capability Probes | 21 |
| | MON_PROBE_STORAGE_1 | 21 |
| 2.1.4 | Metadata Catalogue Capability Probes | 22 |
| | MON_PROBE_METADATA_1 | 22 |
| 3 | Accounting Capability | 23 |
| 3.1 | Generation of Accounting Records | 23 |
| | ACC_JOBEXEC_1 | 23 |
| | ACC_JOBSCH_1 | 24 |
| 3.2 | Accounting Store and Transmission for Job Execution Appliances | 25 |
| | ACC_STORE_1 | 25 |
| | ACC_STORE_2 | 27 |
| | ACC_CRON_1 | 28 |
| | ACC_CRON_2 | 29 |
| 3.3 | Visualization Portal | 30 |
| | ACC_PORTAL_1 | 30 |
| | ACC_PORTAL_2 | 31 |
| | ACC_PORTAL_3 | 32 |
| | ACC_PORTAL_4 | 33 |
| | ACC_PORTAL_5 | 34 |
| | ACC_PORTAL_6 | 35 |
| 4 | References | 36 |

1 MONITORING CAPABILITY

This section documents the Specific Quality Criteria for the monitoring system (NAGIOS) and the web portal to check the results.

1.1 Nagios Configuration Generation

| Generation of Nagios Configuration Files | |
|--|--|
| ID | MON_NCG_1 |
| Description | The NCG must be able to generate a correct configuration for Nagios that includes all the hosts and services to be monitored. |
| Mandatory | YES |
| Applicability | Nagios Configuration Generator (NCG) component. |
| Input from Technology Provider | Support for the automatic generator of configuration files for Nagios: /etc/nagios and /etc/nagios/wlcfg.d/* files must be generated based on the information gathered from GOCDB database. |
| Test Description | <p>Pre-condition Configured system.</p> <p>Test Generate Nagios configuration files according to the information available in the databases. Nagios service must be started without errors after NCG configuration.</p> <p>Expected Outcome Working Nagios configuration files.</p> |
| Pass/Fail Criteria | Pass if the automatic generation of configuration files works. |
| Related Information | NCG [R 2] |
| Revision Log | |

| Generation of Failover Nagios Configuration | |
|--|---|
| ID | MON_NCG_2 |
| Description | The NCG must allow a redundant service configuration for Nagios that includes failover capability. |
| Mandatory | YES |
| Applicability | Nagios Configuration Generator (NCG) component. |
| Input from Technology Provider | Support for the automatic generation of configuration files for Nagios with redundant services: <ul style="list-style-type: none"> • Several WMS • Robot certificates • Several VOs and VOMSES |
| Test Description | <p>Pre-condition Configured system.</p> <p>Test Generate Nagios configuration files according to the information available in the databases.</p> <p>Expected Outcome Working Nagios redundant configuration files using failover services.</p> |
| Pass/Fail Criteria | Pass if the redundant services are configured and used correctly. |
| Related Information | NCG [R 2] |
| Revision Log | |

1.2 Visualization Portal (MyEGI)

| Resource Summary View | |
|---------------------------------------|---|
| ID | MON_PORTAL_1 |
| Description | Provide a view of the summary status of resources. |
| Mandatory | YES |
| Applicability | MyEGI monitoring visualization portal |
| Input from Technology Provider | <p>MyEGI view must provide the following basic information:</p> <ul style="list-style-type: none"> • Site of the resource: Unique name to identify the site. • Resource name: The hostname where the service is running. • Type of service: The service flavour (CREAM,site-BDII, etc) • Current status: Critical, Downtime, OK, missing, Removed, Unknown or Warning. • Link to detailed and historical views: A link to view the service history. • Use colors to display the status of the resource. |
| Test Description | <p>Pre-condition Configured system.</p> <p>Test Browse the summary view of resources.</p> <p>Expected Outcome All requested information is provided</p> |
| Pass/Fail Criteria | Pass if the resource summary view is provided for any selected resource with all the information specified above. |
| Related Information | MyEGI Portal [R 3] |
| Revision Log | |

| Resource Detail View | |
|---------------------------------------|--|
| ID | MON_PORTAL_2 |
| Description | Provide a view of the detailed status of resources. |
| Mandatory | YES |
| Applicability | MyEGI monitoring visualization portal |
| Input from Technology Provider | <p>Detailed view of the current status for resources that shows the results of the last execution of all the probes. Include all information requested in the summary view plus:</p> <ul style="list-style-type: none"> • List of probes executed • Detailed results of probes • Last execution time for probe • Link to historical view |
| Test Description | <p>Pre-condition Configured system.</p> <p>Test Browse the detailed view of resources.</p> <p>Expected Outcome All requested information is provided</p> |
| Pass/Fail Criteria | Pass if the detailed view is provided for any selected resource with all the information specified above. |
| Related Information | MyEGI Portal [R 3] |
| Revision Log | |

| Resource Historical View | |
|---------------------------------------|--|
| ID | MON_PORTAL_3 |
| Description | Provide a view of the historical status of resources. |
| Mandatory | YES |
| Applicability | MyEGI monitoring visualization portal |
| Input from Technology Provider | Historical view of the probes executed at resources. Show graphically in a timeline the results for the probes. For any given probe show the detailed view fields when selected. |
| Test Description | <p>Pre-condition Configured system.</p> <p>Test Browse the historical view of resources in a Gantt chart.</p> <p>Expected Outcome All requested information is provided</p> |
| Pass/Fail Criteria | Pass if the historical view is provided for any selected resource with all the information specified above. |
| Related Information | MyEGI Portal [R 3] |
| Revision Log | |

| Resource Filters | |
|---------------------------------------|--|
| ID | MON_PORTAL_4 |
| Description | Provide ways to filter the information shown in the web interface for all the possible views of the portal. |
| Mandatory | YES |
| Applicability | MyEGI monitoring visualization portal |
| Input from Technology Provider | <p>Provide ways to filter the information shown in the web interface for all the possible views of the portal. At least, the displayed resources should be filtered by the following constrains:</p> <ul style="list-style-type: none"> • status of resource (select just one status or several) • type of service • supported VO • site which the resource belongs to • specific name of resource <p>for historical view, range of dates which will be used for the information.</p> |
| Test Description | <p>Pre-condition Configured system.</p> <p>Test Test the resource filters available.</p> <p>Expected Outcome Resources are shown according to the filters tested.</p> |
| Pass/Fail Criteria | Pass if the resource filters are provided and they work as expected. |
| Related Information | MyEGI Portal [R 3] |
| Revision Log | |

| Responsiveness | |
|---------------------------------------|---|
| ID | MON_PORTAL_5 |
| Description | Visualization portal should provide fast response to user requests. |
| Mandatory | YES |
| Applicability | MyEGI monitoring visualization portal |
| Input from Technology Provider | Information should be displayed as soon as possible. If too much information is to be shown, the portal should use a paginated interface or dynamically load the content and provide as soon as possible a first set of results. |
| Test Description | <p>Pre-condition Configured system.</p> <p>Test Browse complex page (e.g. lots of resources)</p> <p>Expected Outcome Page responsiveness is fast enough for navigation. Information is loaded dynamically or shown in a paged interface.</p> |
| Pass/Fail Criteria | Pass if the complex pages are responsive for navigation (no more than 15 seconds for showing the first set of results) |
| Related Information | MyEGI Portal [R 3] |
| Revision Log | |

| Linkable Views | |
|---------------------------------------|---|
| ID | MON_PORTAL_6 |
| Description | Views should have unique URLs that are independent to the user session |
| Mandatory | YES |
| Applicability | MyEGI monitoring visualization portal |
| Input from Technology Provider | Views should have unique URLs that are independent to the user session. These links should work for different users. |
| Test Description | <p>Pre-condition Configured system.</p> <p>Test Generate view link with user A, try it with user B</p> <p>Expected Outcome Both users A and B get the same view results.</p> |
| Pass/Fail Criteria | Views links must work for different users and/or sessions. |
| Related Information | MyEGI Portal [R 3] |
| Revision Log | |

1.3 Database

| Metric List Fetching | |
|---------------------------------------|--|
| ID | MON_DB_1 |
| Description | The list of metrics to use in each of the services must be fetch at regular intervals from a given central location. |
| Mandatory | YES |
| Applicability | Metrics Database |
| Input from Technology Provider | Test of the metric fetch mechanism. |
| Test Description | <p>Pre-condition Configured system.</p> <p>Test Fetch metrics from central metric database based on a queue messaging system. Generate list of updates for the current local metric database.</p> <p>Expected Outcome Metrics are fetched correctly. A list of updates is generated and stored in a local database.</p> |
| Pass/Fail Criteria | Test must exist and execute correctly. |
| Related Information | |
| Revision Log | |

| Resource List Fetching | |
|---------------------------------------|---|
| ID | MON_DB_2 |
| Description | The list of resources to be tested should be dynamically discovered |
| Mandatory | YES |
| Applicability | Metrics Database |
| Input from Technology Provider | <p>The list of resources to be tested should be dynamically discovered using the various information systems available. The list of sites to be tested meet the following requirements:</p> <ul style="list-style-type: none"> • listed in the BDII • listed in the GOCDB • status in the GOCDB is Certified |
| Test Description | <p>Pre-condition Configured system.</p> <p>Test Fetch resources by quering BDII and GOCDB. List of updates to perform to the local resource DB.</p> <p>Expected Outcome Resources are fetched correctly. A list of updates is generated.</p> |
| Pass/Fail Criteria | Resource list is generates correctly according to the requirements. |
| Related Information | |
| Revision Log | |

2 MONITORING PROBES

The Monitoring Capability executes a set of probes defined by the operations community. These probes *should* be provided by the TP for each product.

| Probe Template | |
|---------------------------------------|--|
| ID | MON_PROBE_1 |
| Description | A template and documentation for the creation of new probes that can be integrated in the monitoring framework must exist. |
| Mandatory | YES |
| Applicability | Monitoring Capability |
| Input from Technology Provider | Template for probes and documentation for the creation and integration of probes into the framework (or link to those documents) |
| Pass/Fail Criteria | The QC will pass if the template and documentation is available for external developers and is usable for creating new probes. |
| Related Information | |
| Revision Log | |

2.1 Service Probes

| Certificate Lifetime Probe | |
|---------------------------------------|---|
| ID | MON_PROBE_GENERIC_1 |
| Description | Provide a monitoring probe that assures that the host certificate lifetime for the service is valid. |
| Mandatory | NO |
| Applicability | All products that use host certificates |
| Input from Technology Provider | Certificate Validity Probe. The probe should only use the public interface of the service and run integrated in the monitoring infrastructure of EGI |
| Pass/Fail Criteria | The QC will pass if the TP provides with the service a probe for checking the certificate lifetime. This probe may be provided also indirectly as part of other probes. |
| Related Information | |
| Revision Log | V1.1 Added probe description. V2: Simplified description |

| Service Probe | |
|---------------------------------------|--|
| ID | MON_PROBE_GENERIC_2 |
| Description | Provide monitoring probes that test the functionality of the service |
| Mandatory | NO |
| Applicability | All Services |
| Input from Technology Provider | Monitoring probe that tests that the service provides the expected functionality. The probe should only use the public interface of the service and run integrated in the monitoring infrastructure of EGI. The exact tests to perform for each service are determined by the operations community. For the current probes specification check the SAM documentation [R 4] |
| Pass/Fail Criteria | Probes must exist, they must be integrated with the EMI monitoring infrastructure and provide the expected functionality. |
| Related Information | SAM documentation [R 4] |
| Revision Log | |

The criteria described in the next sections make reference to probes that are used by the EGI Operations community to monitor the Infrastructure. The specific appliances must support the execution of these probes.

2.1.1 Job Execution Capability Probes

| Job Execution Probe | |
|---------------------------------------|--|
| ID | MON_PROBE_JOBEXEC_1 |
| Description | Provide monitoring probes that test the functionality of Job Execution Capability |
| Mandatory | YES |
| Applicability | Job Execution Appliances |
| Input from Technology Provider | CE probes as described at: https://tomtools.cern.ch/confluence/display/SAM/CE |
| Pass/Fail Criteria | Probes must exist and behave as expected in the probe documentation. |
| Related Information | SAM documentation [R 4] |
| Revision Log | |

| CREAM Job Execution Probe | |
|---------------------------------------|---|
| ID | MON_PROBE_JOBEXEC_2 |
| Description | Provide monitoring probes that test the functionality of CREAM |
| Mandatory | YES |
| Applicability | CREAM Appliances |
| Input from Technology Provider | CREAM CE probes as described at: https://tomtools.cern.ch/confluence/display/SAM/CREAMCE-DJS |
| Pass/Fail Criteria | Probes must exist and behave as expected in the probe documentation. |
| Related Information | SAM documentation [R 4] |
| Revision Log | |

| WN Probes | |
|---------------------------------------|--|
| ID | MON_PROBE_JOBEXEC_3 |
| Description | Provide monitoring probes that test the correct function of Worker Nodes |
| Mandatory | YES |
| Applicability | Worker Node |
| Input from Technology Provider | WN probes as described at: https://tomtools.cern.ch/confluence/display/SAM/WN . |
| Pass/Fail Criteria | Probes must exist and behave as expected in the probe documentation. |
| Related Information | SAM documentation [R 4] |
| Revision Log | |

2.1.2 Compute Job Scheduling Probes

| WMS Probes | |
|---------------------------------------|--|
| ID | MON_PROBE_JOBSCH_1 |
| Description | Provide monitoring probes that test the functionality of WMS. |
| Mandatory | YES |
| Applicability | WMS Job Scheduling Appliances. |
| Input from Technology Provider | WMS probes as described at: https://tomtools.cern.ch/confluence/display/SAM/WMS . |
| Pass/Fail Criteria | Probes must exist and behave as expected in the probe documentation. |
| Related Information | SAM documentation [R 4] |
| Revision Log | |

2.1.3 File Access Capability Probes

| SRM Probes | |
|---------------------------------------|---|
| ID | MON_PROBE_STORAGE_1 |
| Description | Provide monitoring probes that test the functionality of SRM. |
| Mandatory | YES |
| Applicability | Storage Management Appliances |
| Input from Technology Provider | SRM probes as described at: https://tomtools.cern.ch/confluence/display/SAM/SRM . |
| Pass/Fail Criteria | Probes must exist and behave as expected in the probe documentation. |
| Related Information | SAM documentation [R 4] |
| Revision Log | |

2.1.4 Metadata Catalogue Capability Probes

| LFC Probes | |
|---------------------------------------|---|
| ID | MON_PROBE_METADATA_1 |
| Description | Provide monitoring probes that test the functionality of LFC. |
| Mandatory | YES |
| Applicability | LFC Appliances |
| Input from Technology Provider | LFC probes as described at: https://tomtools.cern.ch/confluence/display/SAM/LFC . |
| Pass/Fail Criteria | Probes must exist and behave as expected in the probe documentation. |
| Related Information | SAM documentation [R 4] |
| Revision Log | |

3 ACCOUNTING CAPABILITY

The use of resources within the e-Infrastructure must be recorded for understanding usage patterns by different user communities and by individuals within their communities.

3.1 Generation of Accounting Records

| Job Execution Appliances Accounting | |
|--|--|
| ID | ACC_JOBEXEC_1 |
| Description | Job Execution Appliances must generate accounting records for all the actions of the users into the local resources. |
| Mandatory | YES |
| Applicability | Accounting Appliances for Job Execution Capability (APEL) |
| Input from Technology Provider | <p>The Job Execution Capability must generate accounting records for the actions of the users into the local resources (jobs submitted to the underlying execution manager). These records must include, at least, the following information for all the jobs submitted to the system:</p> <ul style="list-style-type: none"> • User DN • VO • Job start execution time • Job end execution time • SPECint information • CPU & Wall Time • Number of slots/CPUs used by the job <p>The generation of accounting records must be available for the execution manager supported by the Job Execution Capability implementation. Support is expected for the following systems:</p> <ul style="list-style-type: none"> • Torque • SGE • Condor • LSF |
| Test Description | <p>Pre-condition Configured system.</p> <p>Test Creation of accounting records</p> <p>Expected Outcome Accounting records for the jobs submitted to the execution manager through the Capability.</p> |
| Pass/Fail Criteria | Pass if the accounting records are generated correctly for all execution managers supported. The generation of the records should not compromise the availability and reliability of the system. |
| Related Information | |
| Revision Log | |

| Job Scheduling Appliances Accounting | |
|---|--|
| ID | ACC_JOBSCH_1 |
| Description | Job Scheduling Capability must generate accounting records for all the actions of the users. |
| Mandatory | NO |
| Applicability | Accounting Appliances for Job Scheduling Capability |
| Input from Technology Provider | <p>The Job Scheduling Capability must generate accounting records for the actions of the users (jobs submitted to the appliance). These records must include, at least, the following information for each submitted job:</p> <ul style="list-style-type: none"> • status of job • submission time • completion time • failures <p>Summary information (number of submitted jobs, success rate, average submission time, etc) should also be provided.</p> |
| Test Description | <p>Pre-condition Configured system.</p> <p>Test Creation of accounting records</p> <p>Expected Outcome Accounting records for the jobs submitted the system through the Capability.</p> |
| Pass/Fail Criteria | Pass if the accounting records are generated correctly. The generation of the records should not compromise the availability and reliability of the system. |
| Related Information | |
| Revision Log | |

3.2 Accounting Store and Transmission for Job Execution Appliances.

The accounting information should be stored in a local database and transmitted in regular intervals to a central registry where information of the whole EGI infrastructure is stored.

| Local Accounting Store | |
|---------------------------------------|---|
| ID | ACC_STORE_1 |
| Description | APEL must be able to store the information collected from the execution manager in a site database. |
| Mandatory | YES |
| Applicability | APEL Accounting Appliances. |
| Input from Technology Provider | <p>APEL must be able to store the information collected from the execution manager in a site registry database, where information about all the jobs executed at the site is stored. The records must include the following information, as recommended by OGF community:</p> <ul style="list-style-type: none"> • ExecutingSite: Site name (example: RAL-LCG2) • LocalJobID: Local job name (example: 12311.lcgce02.gridpp.rl.ac.uk) • LCGJobID: Optional default value: NULL) • LocalUserID: Local user name (example: alicesgm 001) • LCGUserID: User DN (example:/C=IT/O=INFN/OU=Personal Certificate ..) • LCGUserVO: Local user group (example: alice) • ElapsedTime: Job Wall duration (example: P8H24M47S) • BaseCpuTime: Job CPU duration (example: P8H21M34S) • ElapsedTimeSeconds: Job Wall duration in seconds (example: 3500) • BaseCpuTimeSeconds: Job CPU time duration in seconds (example: 3000) • StartTime: Job start time (example: 2010-03-14T11:06:08Z) • StopTime: Job stop time (example: 2010-03-14T19:30:55Z) • StartTimeUTC: Job start UTC time (example: 2010-03-14T11:06:08Z) • StopTimeUTC: Jobs stop UTC time (example: 2010-03-14T19:30:55Z) • StartTimeEpoch: Job start time epoch (example: 1079262368) • StopTimeEpoch: Job stop time epoch (example: 1079292655) • ExecutingCE: Submit Host (example: lcgce02.gridpp.rl.ac.uk) • MemoryReal: Used real memory (example: 769548) • MemoryVirtual: Used virtual memory (example: 1244948) • SpecInt2000: SpecInt2000 value (example: 40322) • SpecFloat2000: SpecFloat2000 value (example: 30234) • EventDate: Event record date (example: 2010-03-14) • EventTime: Event record time (example: 19:30:55) |
| Test Description | <p>Pre-condition Configured system. Accounting records are correctly generated.</p> <p>Test Store accounting records into site registry.</p> <p>Expected Outcome Accounting records are stored in the site registry. Log of operations is available.</p> |
| Pass/Fail Criteria | Pass if the accounting records are stored correctly. Storage of the records should not compromise the availability and reliability of the system. |



| | |
|----------------------------|--|
| Related Information | |
| Revision Log | |

| Accounting Records Transmission | |
|--|---|
| ID | ACC_STORE_2 |
| Description | APEL must be able to send the records stored in the site registry to a central registry database by using a messaging system. |
| Mandatory | YES |
| Applicability | APEL Accounting Appliances. |
| Input from Technology Provider | Test for the transmission of records to the central registry using ActiveMQ. |
| Test Description | <p>Pre-condition Configured system. Accounting records are correctly generated and stored in local registry.</p> <p>Test Send new records to the central registry using ActiveMQ.</p> <p>Expected Outcome Only new records are sent to central registry by default but site administrators are able also to republish accounting records in a specific interval using accounting configuration files. They are stored correctly there. Log of operations is generated.</p> |
| Pass/Fail Criteria | Pass if the test is provided and passes. The transmission of the records should not compromise the availability and reliability of the system. |
| Related Information | |
| Revision Log | |

| Periodic Local Registry Store | |
|---------------------------------------|--|
| ID | ACC_CRON_1 |
| Description | The accounting appliance must periodically submit new accounting records to the local registry |
| Mandatory | YES |
| Applicability | APEL Accounting Appliances. |
| Input from Technology Provider | The accounting appliance must periodically submit new accounting records to the local registry. This action should be executed daily to check new executed jobs. |
| Test Description | <p>Pre-condition Configured system.</p> <p>Test Send new records to the local registry periodically (at least once per day).</p> <p>Expected Outcome Only new records are sent to local registry. They are stored correctly there. Accounting logs are generated locally.</p> |
| Pass/Fail Criteria | Pass if the new records are daily registered into the local registry. |
| Related Information | |
| Revision Log | |

| Periodic Central Registry Update. | |
|--|--|
| ID | ACC_CRON_2 |
| Description | The accounting appliance must periodically submit new accounting records to the global registry |
| Mandatory | YES |
| Applicability | APEL Accounting Appliances. |
| Input from Technology Provider | The local registry must be able to submit periodically new accounting records to global accounting registry using a message system. This process should be executed daily to check new executed jobs. |
| Test Description | <p>Pre-condition Configured system.</p> <p>Test Send new records to the global registry.</p> <p>Expected Outcome Only new records are sent to global registry by default but site administrators are able also to republish accounting records in a specific interval using accounting configuration files. They are stored correctly there. Accounting logs are generated locally.</p> |
| Pass/Fail Criteria | Pass if the local registry is able to submit new records to the global registry each day. |
| Related Information | |
| Revision Log | |

3.3 Visualization Portal

| Accounting Portal Summary View | |
|---------------------------------------|--|
| ID | ACC_PORTAL_1 |
| Description | Accounting portal must provide a front-end view of published CPU resources. |
| Mandatory | YES |
| Applicability | Accounting Portal Implementation |
| Input from Technology Provider | Accounting portal provides a front-end view of published CPU resources that have been aggregated into summaries. These summaries may view per: <ul style="list-style-type: none"> • Site • Countries • VO • NGI • Tier1 / Tier2 |
| Test Description | <p>Pre-condition Configured accounting portal.</p> <p>Test Browse summaries.</p> <p>Expected Outcome Summary views are shown with correct data for all the possible levels.</p> |
| Pass/Fail Criteria | Pass if the summary view is provided and is correctly generated for all possible levels |
| Related Information | EGI Accounting Portal [R 5] |
| Revision Log | |

| Accounting Portal Access Policy | |
|--|--|
| ID | ACC_PORTAL_2 |
| Description | Sensitive information about VO usage and Users DNs must be encrypted and only accessible to their VO managers via X.509 certificate. |
| Mandatory | YES |
| Applicability | Accounting Portal Implementation |
| Input from Technology Provider | Portal must include access policies for VO managers that restricts the information that can be accessed. |
| Test Description | <p>Pre-condition Configured accounting portal. Valid VO manager certificate.</p> <p>Test Browse VO view with VO usage and user DNs.</p> <p>Expected Outcome Information is displayed correctly.</p> |
| Pass/Fail Criteria | Pass if the access policy is applied correctly. |
| Related Information | EGI Accounting Portal [R 5] |
| Revision Log | |

| Accounting Portal Global View | |
|---------------------------------------|--|
| ID | ACC_PORTAL_3 |
| Description | Accounting Portal views must include a production global view |
| Mandatory | YES |
| Applicability | Accounting Portal Implementation |
| Input from Technology Provider | <p>Accounting Portal views must include a production global view. This view must include a custom view where users can select how display desired accounting data, users can select these options:</p> <ul style="list-style-type: none"> • Data to graph: Users can select Norm. Sum CPU in kSI2000-hours, or HEPSPEC-2006 number of jobs, Norm Sum elapsed time in kSI-2000 hours and HEPSPEC-2006 hours or CPU efficiency. • Data period to view. • Show data for Region, Date or VO and as function of Region, Date, VO or Country. • Group results by VO, Region or Date • Chart type: Accumulative bar, group bar or lines. • Scale: Linear or logarithmic. • A button to exclude operations VOs like dteam and ops. <p>This general view must include also a list of certified sites which are not publishing accounting data since last 3 months. Accounting Portal views must include different charts and graphs for ease of use.</p> |
| Test Description | <p>Pre-condition Configured System.</p> <p>Test Visualize data with charts</p> <p>Expected Outcome Charts are correctly generated for the accounting data available based on users selection.</p> |
| Pass/Fail Criteria | Pass if the charts are correctly generated for all the accounting data available and for all the chart models. |
| Related Information | EGI Accounting Portal [R 5] |
| Revision Log | |

| Accounting Portal VO Manager View | |
|--|---|
| ID | ACC_PORTAL_4 |
| Description | Accounting Portal views must include a production VO manager view. |
| Mandatory | YES |
| Applicability | Accounting Portal Implementation |
| Input from Technology Provider | <p>Accounting Portal views must include a production VO manager view. This view must include a custom view where only VO managers can select and display desired accounting data, available options are:</p> <ul style="list-style-type: none"> • VO to query including Group and Role. • NGI/Country to display. • Order by: Number of jobs, Norm. sum CPU, sum CPU, Norm sum time elapsed and sum. Time elapsed. • Data period to display <p>This view generates a list with desired accounting information (including CPU efficiency for each VO group), a percentage pie chart and a bar chart for selected period of time.</p> |
| Test Description | <p>Pre-condition Configured System.</p> <p>Test Visualize data with charts</p> <p>Expected Outcome Charts are correctly generated for the accounting data available based on VO managers selection.</p> |
| Pass/Fail Criteria | Pass if the charts are correctly generated for all the accounting data available and for all the chart models. |
| Related Information | EGI Accounting Portal [R 5] |
| Revision Log | |

| Accounting Portal VO Member View | |
|---|---|
| ID | ACC_PORTAL_5 |
| Description | Accounting Portal views must include a production VO member view. |
| Mandatory | YES |
| Applicability | Accounting Portal Implementation |
| Input from Technology Provider | <p>Accounting Portal views must include a production VO member view. This view must include a custom view where only VO members can select and display desired accounting data:</p> <ul style="list-style-type: none"> • VO including Group and Role. • Order by: Number of jobs, Norm. sum CPU, sum CPU, Norm sum time elapsed and sum. Time elapsed. • Data period to display. <p>This view generates a list with desired accounting information (including CPU efficiency for each VO group), a percentage pie chart and a bar chart for selected period of time.</p> |
| Test Description | <p>Pre-condition Configured System.</p> <p>Test Visualize data with charts</p> <p>Expected Outcome Charts are correctly generated for the accounting data available based on VO members selection.</p> |
| Pass/Fail Criteria | Pass if the charts are correctly generated for all the accounting data available and for all the chart models. |
| Related Information | EGI Accounting Portal [R 5] |
| Revision Log | |

| Accounting Portal Site Admin View | |
|--|--|
| ID | ACC_PORTAL_6 |
| Description | Accounting Portal views must include a site admin view. |
| Mandatory | YES |
| Applicability | Accounting Portal Implementation |
| Input from Technology Provider | <p>Accounting Portal views must include a production Site Admin view. This view must include a custom view where only site administrators can select and display desired accounting data for their sites, site administrator can select:</p> <ul style="list-style-type: none"> • Site to display accounting data. • Order by: Number of jobs, Norm. sum CPU, sum CPU, Norm sum time elapsed and sum. Time elapsed. • Data period to display. <p>This view generates a list with desired accounting information (including CPU efficiency for each VO group), a percentage pie chart and a bar chart for selected period of time.</p> |
| Test Description | <p>Pre-condition Configured System.</p> <p>Test Visualize data with charts</p> <p>Expected Outcome Charts are correctly generated for the accounting data available based on site administrators selection.</p> |
| Pass/Fail Criteria | Pass if the charts are correctly generated for all the accounting data available and for all the chart models. |
| Related Information | EGI Accounting Portal [R 5] |
| Revision Log | |



4 REFERENCES

| | |
|------------|---|
| R 1 | UMD roadmap: https://documents.egi.eu/public/ShowDocument?docid=100 |
| R 2 | Nagios Config Generator: https://tomtools.cern.ch/confluence/display/SAM/NCG |
| R 3 | My EGI portal: https://tomtools.cern.ch/confluence/display/SAM/MyEGI |
| R 4 | SAM Probes Documentation: https://tomtools.cern.ch/confluence/display/SAM/Probes |
| R 5 | Accounting Portal: http://accounting.egi.eu/ |