



Enabling Grids for E-science

Report on SLA progress

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https://twiki.cern.ch/twiki/bin/view/EGEE/SA1_SLA_WG

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Information Society



- **SLA Working Group Established in May 07**
- **Mandate**
 - To define an SLA between ROC and Site by the end of 2007
 - Note: SLAs between sites and VOs is out of scope for this WG
 - Collect relevant examples of SLAs and other documentation
 - Review the documents and extract relevant issues
 - Identify broad areas that a minimal SLA should cover. Agreement between ROC and sites
 - Decide on the existence of a single or multiple SLAs with varying level of commitment of the involved parties
 - Create a draft SLA without the details on the threshold and numbers of limits
 - Define the relevant metrics
- **The SLA working group will:**
 - Will try to identify reasonable limits and thresholds
 - NOT Identify penalties and consequences of violation
- **SLA will actually be and SLD to start with**

- **Measure service level in view of improving it**
- **Formalize the responsibilities of both parties**
 - Avoid misunderstandings
 - Improve relationships between both parties
- **Understand what must be supplied**
- **Understand what is the minimum acceptable**
- **Identify service parameters**
 - Availability
 - Performance
 - Security
 - Quality

- **SEE-GRID SLA**
- **WLCG MoU**
- **INFN MoU**
- **GridPP SLA**
- **Oxford NGS Service Level Description**
- **Service Level Description for NGS Help-desk**
- **BalticGrid SLA (Networking)**
- **EGEE-II SA2 SLA (Networking)**

- **Hardware Criteria**
 - Minimum number of CPUs
 - Storage availability
 - Service nodes capacity
- **Supported Services**
- **Networking criteria**
 - Connection enough to support SAM test execution
 - BW and networking SLAs in place
- **Level of Support**
 - Support staff working hours
 - Ticket response time
 - FTE allocation of staff
- **Level of expertise**
 - Site administrator
 - Security administrators
 - Network administrator

- **VO Support**
 - Numbers/names of supported VO
 - Resources to be provided to VOs
- **Support for different levels of service in availability and ticket response times.**
- **Provision of Grid Operations Centers**
- **Site availability**
 - Average availability over a period of time
 - Reliability
 - Site downtime allowance
- **User support facilities provision**
- **Resource commitments**
- **Monitoring methodology**
- **Middleware upgrade procedures and timelines**

- **Reporting**
- **Management**
- **Participation to organizational bodies, meetings etc**
- **User level software**
- **Training**
- **Application Repositories**
- **Documentation**
- **User account management**

	SEE-GRID SLA	WLCG MoU	GridP P SLA	INFN MoU	Oxford NGS/Support Center SLDs	BalticGrid SLA	EGEE-II SA2 SLA
Definition of Grid Operation Services	X	X		X	X		
Minimum Hardware	X	X	X	X			
Network Connectivity	X	X	X			X	X
Level of Support	X	X		X	X		
Level of Expertise	X						
VO Support	X	X	X	X			
Site Availability	X	X	X		X		
Site Downtime	X						
Levels of Service/Support		X			X		
Provision of GOC		X	X				
User support facilities		X					
Middleware Deployment			X	X	X		
Reporting/Management	X	X	X	X			
Training					X		

- **SLD Drafted according to ITIL methodology**
 - De-facto industry guidelines for running IT services
 - Suggests what should be in an SLA
- **1. Introduction**
- **2. Parties to the Agreement**
 - 2.1 ROCs
 - 2.2 EGEE sites that run gLite middleware
- **3. Signatories**
- **4. Duration of the Agreement**
- **5. Amendment Procedure**
- **6. Scope of the Agreement**

- **7. Responsibilities**
 - 7.1 Regional Operating Centre (ROC)
 - 7.2 Sites (Service Providers)
- **8. Hardware and Connectivity Criteria**
- **9. Description of Services Covered**
- **10. Service Hours**
- **11. Availability**
- **12. Support**
 - 12.1 VO Support
- **13. Service Continuity and Security**
- **14. Service Reporting and Reviewing**
- **15. Referenced Document**

- **1. Introduction**
 - Description of SLD.
 - Relation between ROC and Sites
 - Short description of ROC and Sites
- **2. Parties to the Agreement**
 - Name the ROC and sites to sign the SLD
 - 2.1. ROCs
 - Full list of ROCs
 - 2.2 Sites
 - Description of the sites that can sign the SLD with the ROC

- **3. Signatories**
 - ROC managers - Site representatives
- **4. Duration of the Agreement**
 - As long as sites are part of the EGEE infrastructure (registered as production/certified in GOCDDB)
- **5. Amendment Procedure**
 - Amendment when mutually agreed by both parties. SLD addendum.

- **6. Scope of the agreement**
 - Commitments from ROC->Site and Site->ROC
 - Does not cover (GOCDDB, GGUS, SAM, VOs)
- **7. Responsibilities**
 - 7.1 ROCs
 - ROC management and support staff
 - Provide helpdesk facilities (GGUS support units or Regional Helpdesk interfaced with GGUS)
 - Register Site administrators in Helpdesk and GGUS
 - Provide 1st and 3rd level support
 - Ticket follow-up
 - Support deployment of gLite middleware on sites
 - Registration of new sites
 - Maintain accurate GOCDDB entries for ROC managers, deputies, security staff (name, phone, e-mail)
 - Adhere to OPS manual
 - Follow up issues raised by sites in weekly OPS meetings

- **Responsibilities**

- 7.2 Sites

- Provide 2nd level support
 - Provide one or more site admins, security contacts, details in GOCDDB (name, phone, e-mail)
 - Adhere to OPS manual
 - Maintain accurate information on their services (provided in GOCDDB)
 - Adhere to security and availability policy document
 - Adhere to the criteria and metrics defined in the SLD
 - Run supported version of the gLite middleware

- **8. Hardware and Connectivity Criteria**
 - At least one CE and <xx> Worker Nodes/CPU/Si2k
 - At least one SE and <xx> GB storage capacity
 - one site BDII
 - one MON service (accounting)
 - Sufficient network b/w to pass successfully SAM test
- **9. Description of Services Covered**
 - Services should be specified in GOCDB and monitored by SAM. Typical services are CE, SE, sBDII.
- **10. Service Hours**
 - Monday to Friday excluding public holidays, (8 hours minimum)
 - Service Hours to be specified in GOCDB
 - Response time to trouble tickets is expressed in service hours.

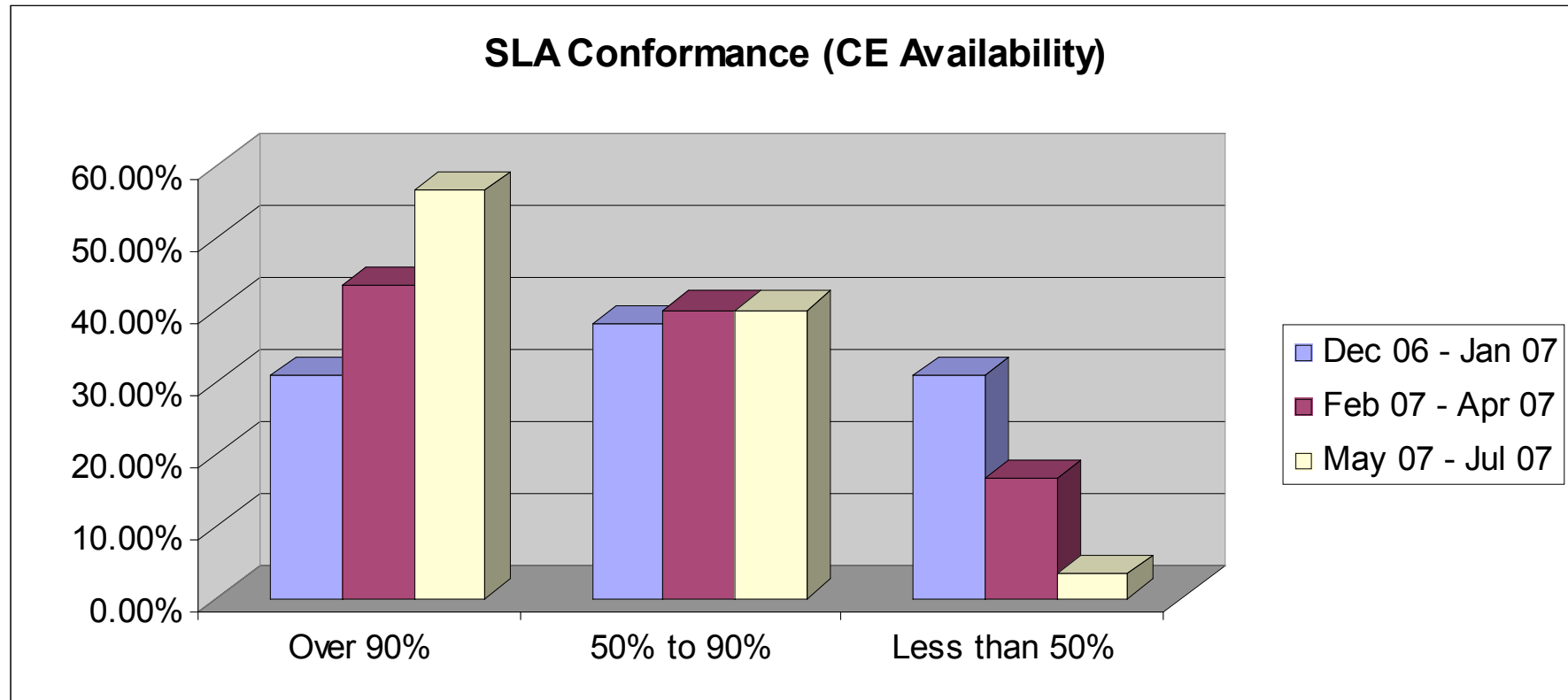
- **11 Availability**

- List of Services to be measured for availability is obtained from GOCDDB
- Availability measured by SAM and provided by GridView
- Availability measured as per SAM definition. (logical OR of instances, AND of critical services).
- Set of critical tests is subject to change and approved by the ROC managers and sites.
- Sites available at least xx% of the time over a xx period.
- Any individual outage in excess of <insert time period>, or sum of outages exceeding <insert time period> per month constitutes a violation.
- Site is granted xx hours of Scheduled Downtime per period
Scheduled downtime to be specified in GOCDDB

- **12. Support**

- The site will provide at least one system administrator who is reachable at all times during service hours
- The site is responsible for ensuring the accuracy of site contact details in GOCDB
- A site must respond to GGUS incidents within <insert time period>, resolve the incident within <insert time period>, and update status every <insert time period>. Missing any of these metrics on an incident constitutes a violation
- 12.1 VO Support
 - The site must support the ops VO plus at least one more VO
 - Site is encouraged to support as many VOs as it reasonably can.
 - Specific agreements between sites and individual VOs should be covered in a separate SLD

- **14 Service Continuity and Security**
 - Sign the Grid Site Operations Policy
- **15. Service Reporting and Reviewing**
 - Tracking the SLD performance should be done every xx months
 - Site availability reports will be published by GridView
- **16. Referenced Documents**
 - Operational Procedures Manual
 - Security and availability policy



**Improvements seen after three quarters
of pilot SLA enforcement**

- **Collaboration with ESC for support metrics**
- **Collaboration with MIG for metrics implementation**
- **Public announcement of the SLD draft (1 step done here)**
- **Coordination with TCG site representatives and other sites for comments**
- **Get feedback from Sites**
- **Measuring the current state of sites and propose some thresholds for metrics**
- **Thresholds can be adapted to improvements in overall service levels**

- Mailing list for discussion: project-eu-egEE-sa1-sla-group@cern.ch
- Twiki page with information and documentation: https://twiki.cern.ch/twiki/bin/view/EGEE/SA1_SLA_WG
- SLA Draft to be found in: <https://edms.cern.ch/document/860386/>

- **Questions?**