



*Polish Infrastructure
for Supporting Computational Science
in the European Research Space*

Grid Resource Bazaar

Platform for resource allocation for VOs
(AKA Service Level Management)

T. Szepieniec, M. Tomanek and M. Radecki
ACC CYFRONET AGH

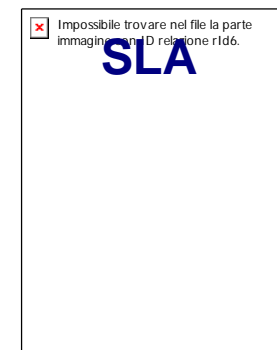


Motivation: Resource Allocation for VOs

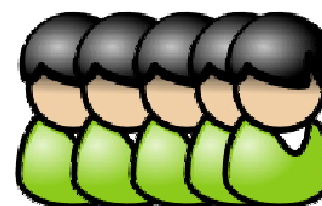
- ◆ **General: Providing services for VOs that maintain customer satisfaction**
- ◆ VOs
 - ◆ Need way to express their expectations related to resources and services they need
 - ◆ Want to know capacity of resources allocated for them to plan experiments
- ◆ Sites
 - ◆ Are autonomous in managing resource allocations for VOs
 - ◆ Need to know what are the expectations
- ◆ NGI
 - ◆ Has role of single contact point for national VOs
 - ◆ Coordinates and mediates in the resource allocation process



Customer/VO



NGI operator



Resource/Service Providers

Platform for traceable, efficient SLAs negotiations

New call Date scope: Start: 1/1/1970 End: 31/8/2009 Set

Actions & logs

Actions

Date	Topic	SLA	See	Det.
2009/10/2	Tomasz Szeplieniec (CYFRONET) proposed a new SLA	15		
2009/9/22	Tomasz Kukulka (jakis site) proposed a new SLA	18		
2009/8/2	Tomasz Szeplieniec (CYFRONET) accepted SLA change offer	10		

Log

2009/10/1	Tadeusz Szymocha (IFJ-PAN-BG) proposed a new SLA	
-----------	--	--

Chart section - CPU & STORAGE Chart options

Number of cores/CPU

Storage space (GB)

List of calls Active & Published F ↓ ↑

<input type="checkbox"/>	Call name	VO Name	CPU	Stor.	Comp. Star	Comp. End	Act. Start	Act. End
<input checked="" type="checkbox"/>	alice call	alice	60	60	8/9/2009	9/30/2009	8/1/2009	9/1/2009

SLA: 367 for call: 'alice call' Edit Report_MISCONFIGURED

Basic information:

Related call: 426, alice call
VO Name: alice
Computation Period: 2009-06-01 - 2010-04-30
States: Main: AGREED Activity: ACTIVE Configuration: PREPARED
Responsible person: Malgorzata Tomanek
Description: Agreement registered according to BDII status from 1.06.2009

Resources:

Estimated:	cores/CPU[No.]	stor. space [GB]
	1	1
Best effort:	cores/CPU[No.]	stor. space [GB]
	150	52960

SLA edition: SLA no. 367

Best effort:

Number of CPUs: 150
Storage: 52960 GB
Comp. start date: 18/1/2010
Comp. end date: 30/4/2010
 Unspecified end date
Description: Agreement registered according to BDII status from 1.06.2009

Services:

VOMS: 33
LFC: 44

Top BDII Level: adres do serw
 adres do serw

Main Features

- ◆ Lightweight SLA negotiations process
 - ◆ View of all offers at once, support for decision making
 - ◆ Possibility to customize NGI-role
- ◆ Intuitive set of metrics to describe computational and storage resources: aggregated walltime, max. walltime for a single job, max. cores per job
- ◆ Customized views for actors:
 - ◆ VOs, Sites, NGI
- ◆ Integration with EGI authorization sources:
 - ◆ GOC DB for site managers
 - ◆ VO-id cards for VO managers
- ◆ Notifications on actions and events
- ◆ Full history of SLA changes
- ◆ Mechanism for SLA blocking

NEW: Bazaar Site Admin Toolkit

- ◆ Motivation: Integration with LRMS for automatic SLA configuration
 - ◆ Torque/MAUI support; MOAB support soon
- ◆ **BazaarSAT-asd** – Active SLAs Download
 - ◆ Using RestFul API for getting active SLAs for a site
 - ◆ Output: XML specification ready for tools processing
 - used by other tools
- ◆ **BazaarSAT-mcg** – Maui Configuration Generator
 - ◆ Generate fair shares for group/account based on current SLAs metrics, timeframe
 - ◆ Process maui config customized with *Bazaar rules*
 - Regexp expression to set-up maui priorities and other specification details
 - ◆ Site admin retains full control
- ◆ **BazaarSAT-tsf** – Torque Submit Filter
 - ◆ Block new jobs from blocked SLAs
 - ◆ Modify job description according SLA
 - Example: account string, limit wall-time

Status

- ◆ Bazaar has been deployed for production environment in PL-Grid since April 2011
 - ◆ some NGI-specific extensions including integration with PL-Grid User Portal,
- ◆ Ready for collaboration with interested NGIs

Contact us: bazaar@grid.cyfronet.pl

bazaar.grid.cyfronet.pl