Measuring what we deliver & problem resolution targets

Julia Andreeva , CERN

21.04.2008, WLCG workshop, CERN

CCRC08 targets from different perspectives

- **Targets for the LHC VOs**

  - make sure that required resources are allocated at the sites and that services with required functionality are in place (challenge preparation)

  - make sure that allocated resources and services are used EFFICIENTLY and the VO workflow targets are met (challenge)

- **Targets for service providers and infrastructure support**

  - make sure that resources requested by the experiments are allocated and that services with required functionality are in place (challenge preparation)

  - ensure the quality of the services defined as critical by the LHC VOs accordingly to the requirements of the experiments

  - MoU targets regarding services provided by the sites (availability, time to solve the problem…)

Measuring, chasing problems, reporting, resolving

- **Monitoring**

  - VO specific monitoring systems

  - WLCG monitoring systems (Gridview, SAM,…)

  - System for propagating of monitoring information

  to local fabric monitoring, to have a single point of monitoring data for site admins

  - New monitoring displays being developed for the

  the challenge and beyond (Gridmap for for critical services and experiment workflows)

- **Reporting of problems and tracking of problem resolution**

  - E-logger, GGUS

Examples of using of the monitoring systems of the experiments during CCRC08

ATLAS

- Both DDM and ProdSys Dashboards had been intensively used by shifters and taken as a main source of information for people taking shifts during CCRC08

  ATLAS Shifter's Workbook:

  https://twiki.cern.ch/twiki/bin/view/Atlas/ADCoS
- Very positive feedback from people taking shifts
- New features like 'shifter's quick view', integration of ticketing systems with the dashboards, shifter's daily report covering open issuers for the next shifter…

Example of using SAM by the experiments

CMS

- CMS specific tests are run in the SAM framework.
  The goal is to improve the protection of the CMS use-cases at T1/T2
- Site availability for CMS is calculated in the CMS Dashboard application based on the results of these tests
- Daily checks of test results and site availability are performed by an allocated team (6 people)
- Site problems are reported to Savannah and are followed up on daily basis
- The overall situation is reviewed every week at the Facility Operations meetings

Publishing monitoring info to the site fabric monitoring

- The goal is to decrease the time needed for detecting and fixing of the problems at the site and not to force site admins to look in multiple monitoring pages is order to find the problem with the Grid services at his site.
- The prototype is put in place and was tried by several sites
- Only 10 sites are currently using it. Why?

Alarms

- Alarm people who can take actions in case of problem
- To be done with care
- Experiment specific monitoring systems are sending alarms (Dashboard, MonAlisa)
- Alarms can be configured from SAM in case of failure of critical tests
- Nikhef prototype presented at F2F meeting 1st of April.

  Suggests to use mails, which are automatically classified and processed. Those which are signed and sent as registered user are being stored at the web site.

  Nagios probe checks this site, the mail is forwarded to the private email list.

Any feed back?

Gridmap for monitoring of the services defined as critical by LHC VOs

- The first prototypes are created for all 4 experiments

  http://gridmap.cern.ch/ccrc08

  Observations and actions:
- Still a lot of services for which status is not indicated
- Were progressing slower then we were expecting to
- Working group uniting people having experience in monitoring for each experiment, coordinated by Andrea Sciaba.
- Still need to work with the experiments to improve the set of services to be shown on the Gridmap
- Some maps have a mixture of services with experiment workflow bits (LHCb, ALICE)
- SLS proved to be a perfect tool for services to publish their status in a straight forward way. This status can be then republished elsewhere (Gridmap). People involved in this work are sharing their experience in creating sensors and publishing to SLS as well as their experience in developing SAM tests.
- Some effort will be saved since some services are defined as critical by several experiments and can be addressed in a common way.
- Confident that in one week will have much more complete view

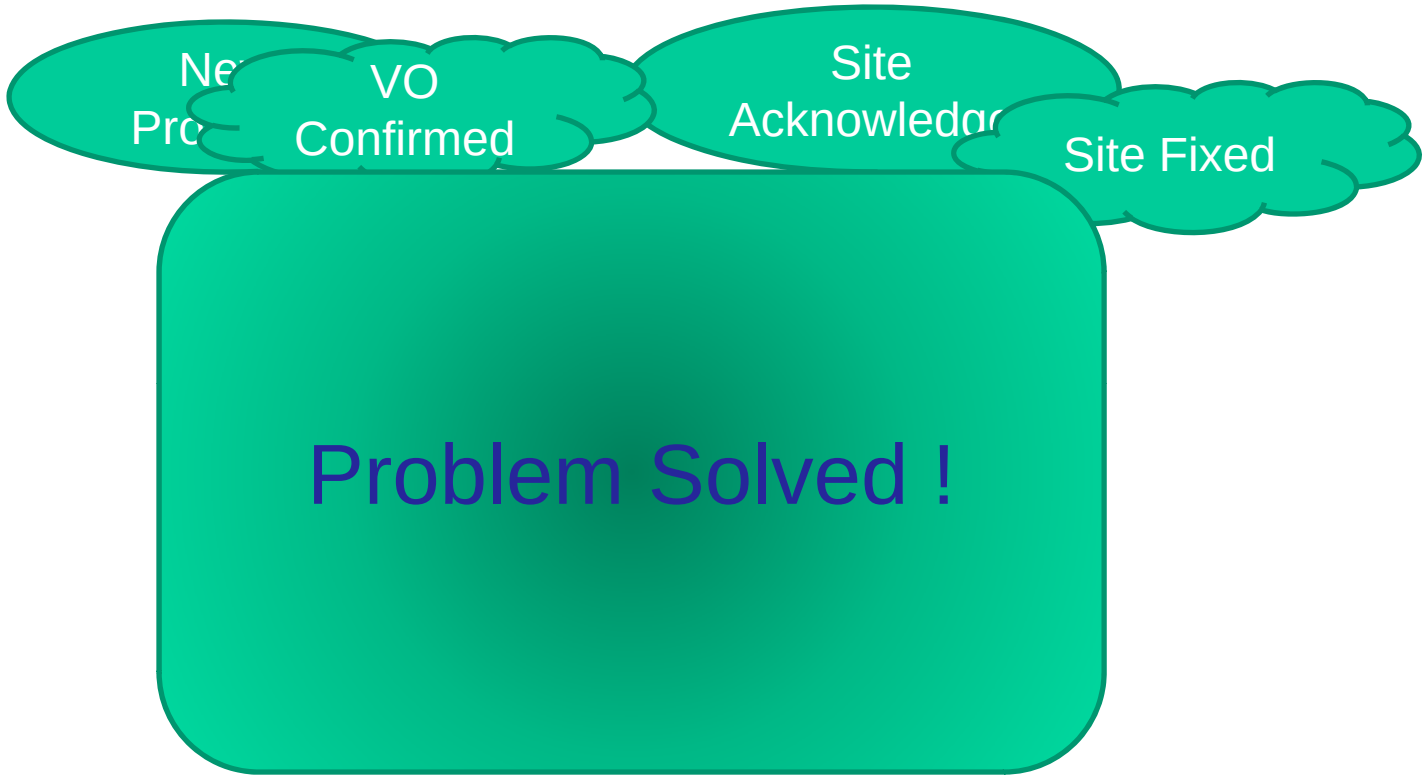
Gridmap for monitoring of the workflows of the Experiments

- The goal is to show whether the targets of the experiments for the functional blocks are met.
- This information is available in the monitoring systems of the experiments and currently is not being published anywhere in the consistent way.
- The most complicated part is how to define the status (colour) for every functional block. The targets are not defined for every item (for example not necessary for every T1-T2 link), the target can change from one day to another.
- The compromise solution would be : in case there is not clear target to use success rate instead.

  Any other suggestion?

Response time reporting workflow

Thanks to James Casey for this slide



200 ier-1 centres,

200

200 ted

200

Problem Report: Issue ID #42 : 2008-02-01 10:30 :
MoU Area: CERN-PROD/ Distribution of data to Tier-1 Centres
Time to First Response : 1:00
Time to Problem resolved : 1:29
Time to VO confirmation : 2:23

Critical Service Follow-up

- **Targets (not commitments) proposed for Tier0 services**
  - Similar targets requested for Tier1s/Tier2s
  - Experience from first week of CCRC'08 suggests targets for **problem resolution** should not be too high (if ~achievable)
    - The MoU lists targets for responding to problems (12 hours for T1s)
  - ¿ **Tier1s: 95% of problems resolved <1 working day ?**
  - ¿ **Tier2s: 90% of problems resolved < 1 working day ?**
- ➢ Post-mortem triggered when targets not met!

Time Interval	Issue (Tier0 Services)	Target
End 2008	**Consistent use of all WLCG Service Standards**	**100%**
30'	**Operator response to alarm / call to x5011** / alarm e-mail	**99%**
1 hour	**Operator response to alarm / call to x5011** / alarm e-mail	**100%**
4 hours	**Expert intervention in response to above**	**95%**
8 hours	**Problem resolved**	**90%**
24 hours	**Problem resolved**	**99%**

E-logger and GGUS

- During the first phase of CCRC08 one E-logger for observations and another one for MoU targets had been used.
- Proved to be very helpful
- However, there is a common feeling that there is an overlapping between e-logger and GGUS , people should not submit multiple bug-reports, there should be a single system in place.
- GGUS functionality should be extended to cover the MoU targets and to be able to create a report as described on slide #10.
- There are some questions related to implementation of this request. Maria sent a questioner last week

E-logger and GGUS. New features in GGUS

- *1. Definition of "First Response" of site*
- *2. Definition of "Problem Resolved" by site*
- *3. Definition of "VO Confirmation"*
- *4. What about weekends, public holidays, etc.? Is there a 24*7 for these tickets on T1 level?*
- *5. Who is allowed to submit such tickets?*
- *6. Shall they afterwards be visible for all supporters?*
- *7. Such tickets need to bypass TPM and ROC too (as requested by ATLAS)?*
- *8. What is the difference between these tickets and the tickets that will usually be raised by e.g. ATLAS shifters as protected tickets? Or are they the same?*

There was a request to have RSS feed in addition to notification by e-mail. The first trial version exists. It allows to display all new/open GGUS tickets over last 24 hours.

http://gus.fzk.de/rss_test.php

Volunteers to try and send feedback?

New features in GGUS

There was a request to have RSS feed in addition to notification by e-mail. The first trial version exists. It allows to display all new/open GGUS tickets over last 24 hours.

http://gus.fzk.de/rss_test.php

Volunteers to try and send feedback?

Backup slide. Monitoring of VO critical services

- Critical Services “GridMap” is becoming more informative, in particular regarding test status part.

Best example is ATLAS

Still there is a big room for improvements (a lot of white and blue colours, which should gradually disappear)