



Lemon Monitoring

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CERN-IT/FIO/FD

WLCG-OSG-EGEE Operations Workshop
CERN, 19-20 June 2006



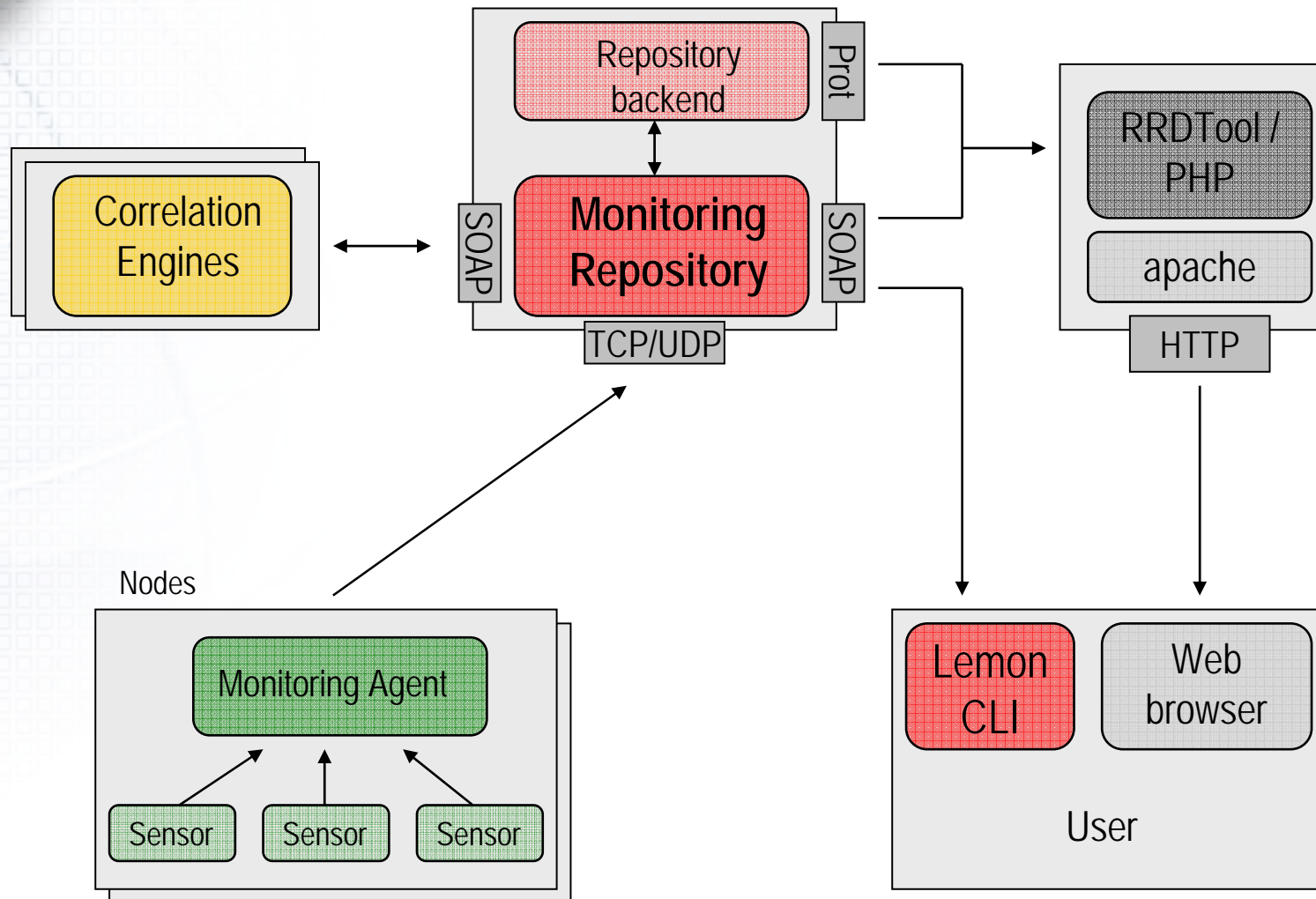
Lemon – LHC Era Monitoring

- Distributed monitoring framework + default metrics
- For nodes, DBs, power consumption, backups, VO jobs
- Scalable to ~10k nodes, 500+ metrics
- Early error detection and automatic recovery
- Web interface
- Integrated alarm system
- Data persisted to Oracle, Oracle Express or flat files
- Framework for plug-in sensors
- Site independent: BARC, CERN IT+AB, FZK, IN2P3, INFN, RAL
- GridICE based on LEMON (~180 sites)
- Easy to install out of the box
- Well documented at <http://www.cern.ch/lemon>





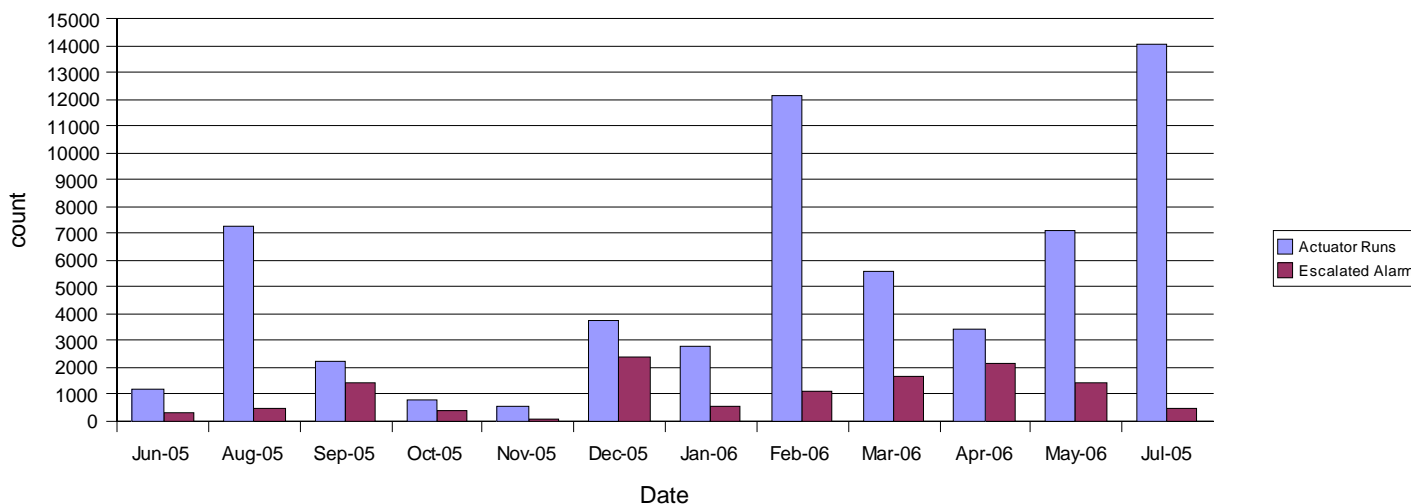
Lemon architecture





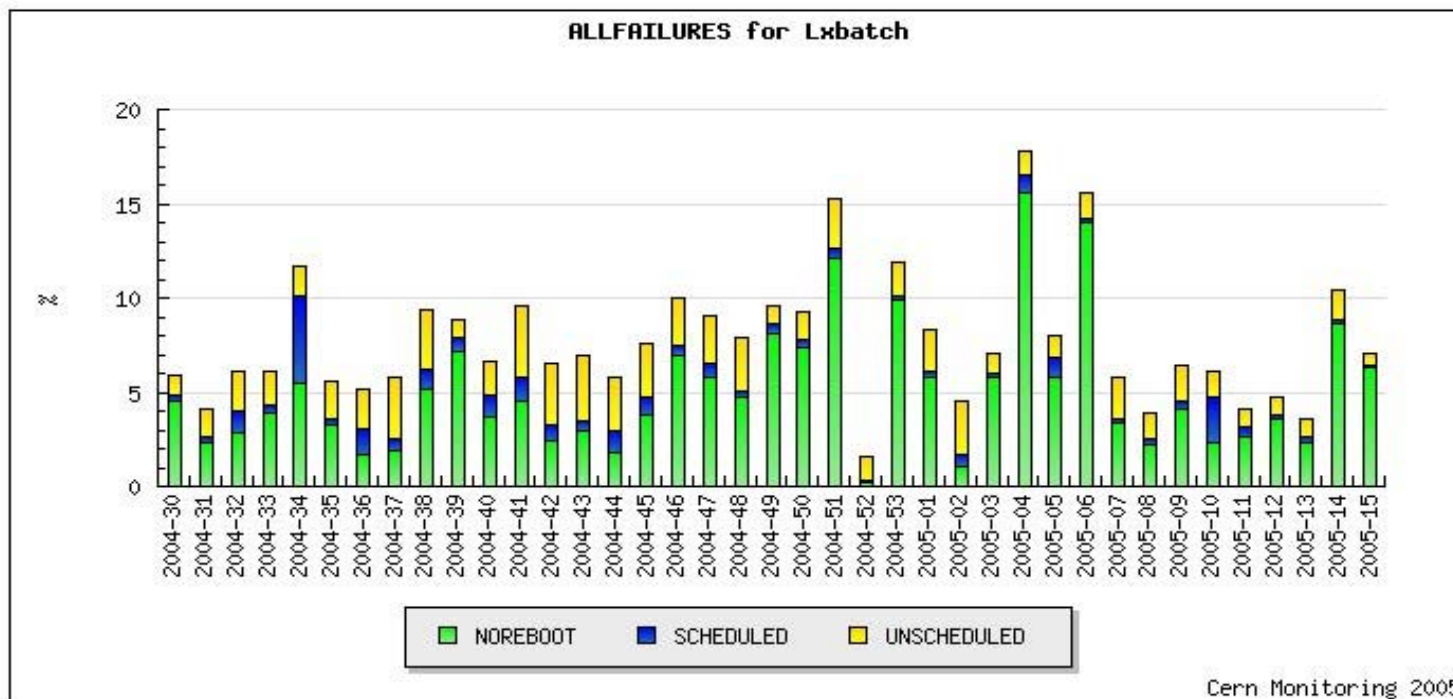
Automatic Recovery Actions

- Actuator called for defined conditions
- Complex correlations: $m1 > m2 - 50$ and $m3 < m4$
- Retry n times before raising an alarm;
- All actions logged, including success/failure
- Example: ssh daemon dead – action `/sbin/service sshd start`
- ~62 corrective actions defined



Error trending info: ALLFAILURES for Lxbatch

03 May 2005 Tue 18:29:10



Select category: ALLFAILURES | Select cluster: Lxbatch | Noreboot | Scheduled | Unscheduled | Counts | Incomplete | Submit

[back to host selection](#)



LEMON Alarm System

Lemon Monitoring Web Pages - Alarms - Opera 8.54

File Edit View Bookmarks Tools Help

New page Lemon Monitoring W... x

http://lemonweb.cern.ch/lemon-status/las/las.php

Google search

Home Documentation Alarms PCFinder Metrics Error trending Help

info: Lemon Alarm System 24 May 2006 Wed 16:14:22

You are logged in as: mirsi | [Settings](#) | [Sign out](#)

Number of alarms: 75

Select: All, None, New, Acknowledged, Closed Actions... Refresh Last update: 24/5/06 16:15:24

| ID | Created | Status | Entity name | Imp | Prio | Alarm name | | | | | |
|--------------------------|---------|-------------|-------------|---------------|------|----------------|-------------------------------------|-------------------------------------|--|--|--|
| <input type="checkbox"/> | 1157914 | 24/05 16:05 | NEW | tpsrv640 | 50 | tpdaemon_wrong | <input checked="" type="checkbox"/> | | | | |
| <input type="checkbox"/> | 1157913 | 24/05 16:05 | NEW | tpsrv640 | 50 | rtcpd_wrong | <input checked="" type="checkbox"/> | | | | |
| <input type="checkbox"/> | 1157893 | 24/05 15:47 | NEW | lxplus004 | 30 | 1 | high_load | <input checked="" type="checkbox"/> | | | |
| <input type="checkbox"/> | 1157890 | 24/05 15:43 | NEW | lxplus012 | 30 | 2 | no_contact | <input checked="" type="checkbox"/> | | | |
| <input type="checkbox"/> | 1157879 | 24/05 15:20 | NEW | itrac13 | 60 | 1 | high_load | <input checked="" type="checkbox"/> | | | |
| <input type="checkbox"/> | 1157869 | 24/05 15:07 | NEW | ce102 | 0 | 1 | high_load | <input checked="" type="checkbox"/> | | | |
| <input type="checkbox"/> | 1157863 | 24/05 14:58 | NEW | lxfsrk5307 | 50 | nmi_received | <input checked="" type="checkbox"/> | | | | |
| <input type="checkbox"/> | 1157858 | 24/05 14:21 | NEW | ce101 | 0 | 1 | high_load | <input checked="" type="checkbox"/> | | | |
| <input type="checkbox"/> | 1157856 | 24/05 13:33 | NEW | lxplus008 | 30 | 2 | no_contact | <input checked="" type="checkbox"/> | | | |
| <input type="checkbox"/> | 1157831 | 24/05 11:38 | NEW | lxplus020 | 30 | 2 | no_contact | <input checked="" type="checkbox"/> | | | |
| <input type="checkbox"/> | 1157808 | 24/05 10:46 | NEW | lxfsrk5501 | 50 | 1 | mirror_broken | <input checked="" type="checkbox"/> | | | |
| <input type="checkbox"/> | 1157792 | 24/05 10:21 | NEW | lxfsra1003 | 60 | sbatchd_wrong | <input checked="" type="checkbox"/> | | | | |
| <input type="checkbox"/> | 1157393 | 24/05 08:57 | NEW | lxfsrk5304 | 50 | 1 | mirror_broken | <input checked="" type="checkbox"/> | | | |
| <input type="checkbox"/> | 1157338 | 23/05 23:52 | NEW | lxfsra1008 | 60 | sbatchd_wrong | <input checked="" type="checkbox"/> | | | | |
| <input type="checkbox"/> | 1157337 | 23/05 23:13 | ACK | lemondb1 | 60 | 1 | mirror_broken | | | | |
| <input type="checkbox"/> | 1157336 | 23/05 22:38 | ACK | itrac09 | 60 | 1 | high_load | | | | |
| <input type="checkbox"/> | 1157273 | 23/05 20:01 | ACK | lxarda01 | 20 | spma_error | | | | | |
| <input type="checkbox"/> | 1157271 | 23/05 19:57 | ACK | filesrvr/na48 | 0 | spma_error | | | | | |
| <input type="checkbox"/> | 1156811 | 23/05 10:53 | ACK | lxplus001 | 30 | 2 | no_contact | | | | |
| <input type="checkbox"/> | 1156666 | 22/05 18:33 | ACK | itrac49 | 60 | io_error | | | | | |
| <input type="checkbox"/> | 1156565 | 22/05 14:53 | ACK | atlobk02 | 0 | 2 | no_contact | | | | |
| <input type="checkbox"/> | 1156564 | 22/05 14:53 | ACK | atlmysql01 | 0 | 2 | no_contact | | | | |
| <input type="checkbox"/> | 1156442 | 22/05 04:22 | ACK | lxbuild002 | 40 | extfs_warning | | | | | |



Summary



- Can re-use whole or part of LEMON
- Good fabric management essential to providing good grid services
- Queries to: project-lemon@cern.ch
- More details: <http://www.cern.ch/lemon>
- LEMON tutorial at CERN on 22nd of September