Lemon Monitoring

Presented by Bill Tomlin
CERN-IT/FIO/FD

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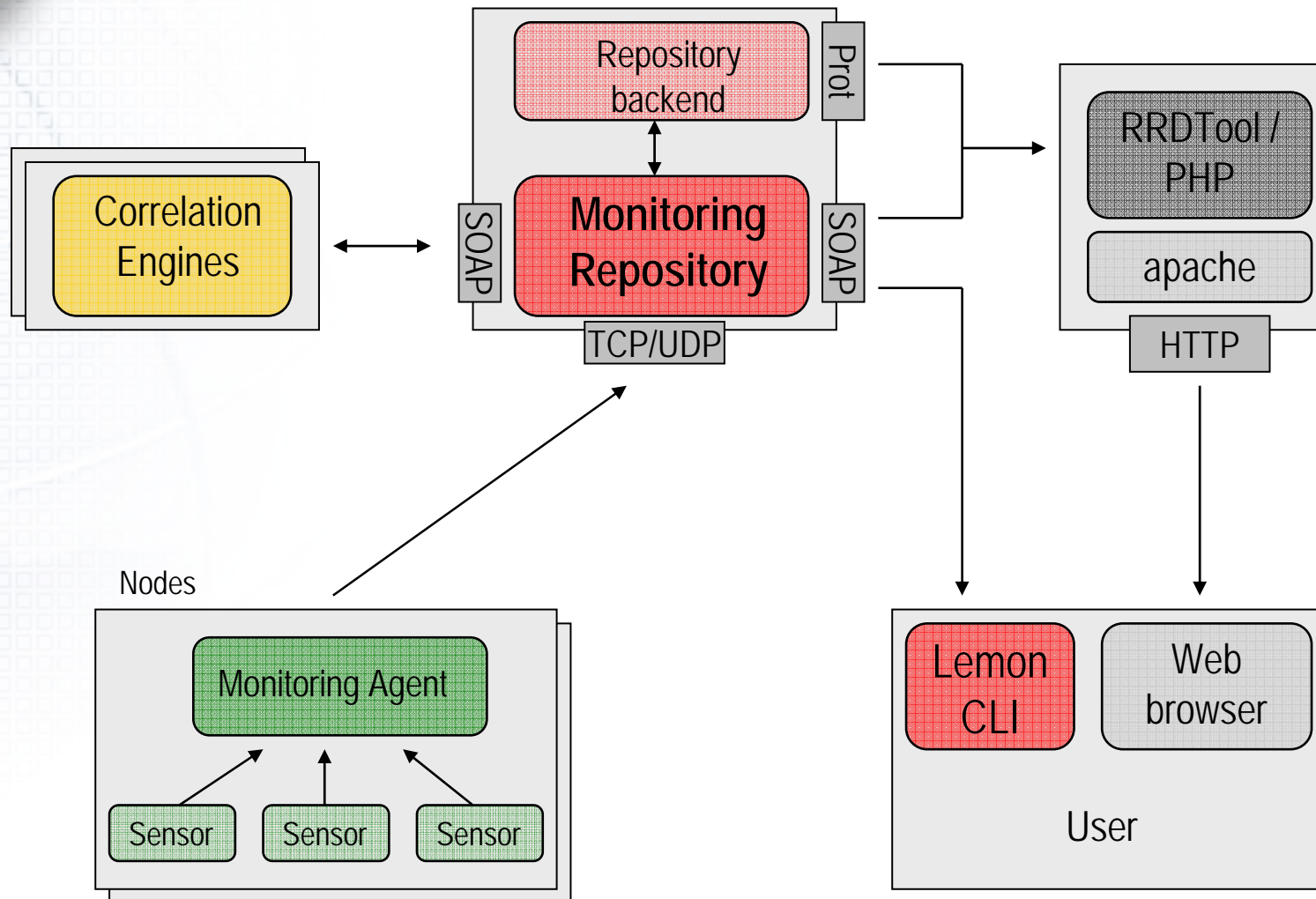CERN, 19-20 June 2006

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)
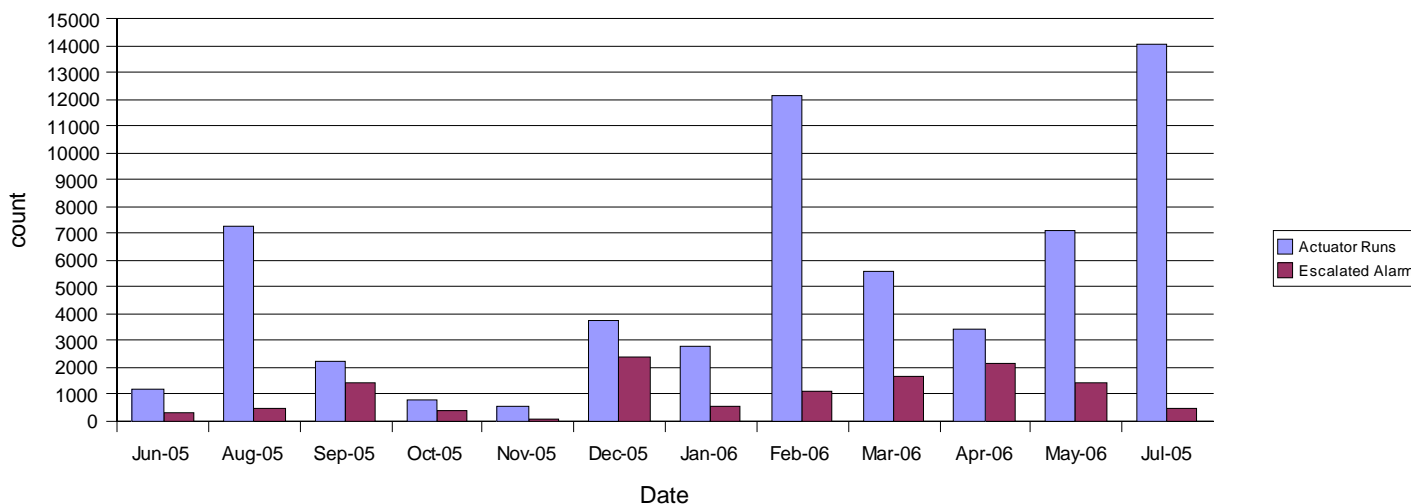- Easy to install out of the box
- Well documented at http://www.cern.ch/lemon

Lemon architecture

Repository backend

Prot

SOAP

Monitoring Repository

SOAP

TCP/UDP

Correlation Engines

RRDTool / PHP

apache

HTTP

Nodes

Monitoring Agent

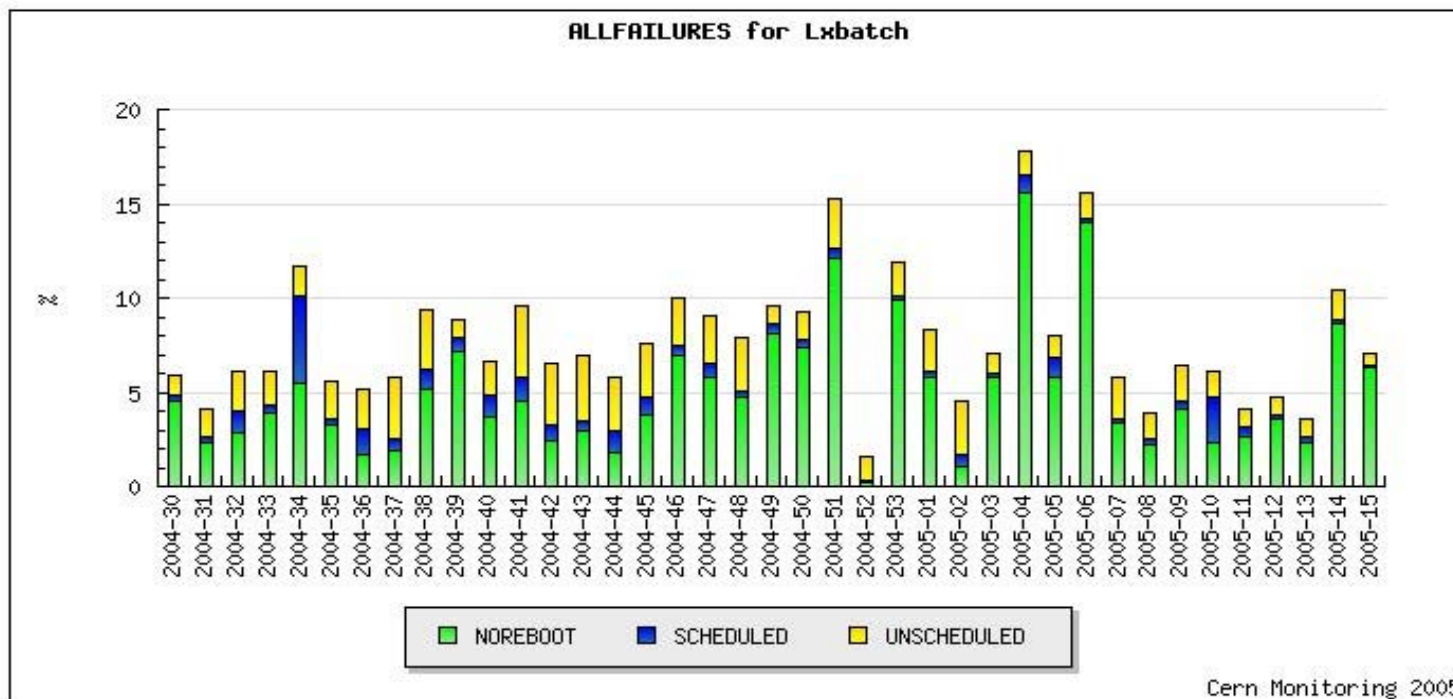Sensor   Sensor   Sensor

Lemon CLI   Web browser

User

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

File   Edit   View   Go   Bookmarks   Tools   Window   Help

http://lemonweb.cern.ch/lemon-status/plot_error_trending.php?category=ALLFAILURES&cluste   Search

CERN Monitoring Web Pages - Metri...

CERN Monitoring

| Home | Documentation | Alarms | PCFinder | Configuration | Metrics | Error trending | Help |

Error trending info: ALLFAILURES for Lxbatch

03 May 2005 Tue 18:29:10

ALLFAILURES for Lxbatch

Legend: ■ NOREBOOT   ■ SCHEDULED   ■ UNSCHEDULED

Cern Monitoring 2005

Select category: **Select cluster:**   Noreboot Scheduled Unscheduled Counts Incomplete

ALLFAILURES ▼   Lxbatch ▼   ☑   ☑   ☑   ☐   ☐   Submit

back to host selection

Last modified by mirsi (CERN IT/FIO-FS), January 20 2005 08:40:13.   PHP version: 4.3.4

W3C HTML 4.01   W3C CSS

Cern Monitoring 2004

LEMON Alarm System

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