Grid site and services monitoring at CERN T0

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Present scenario

What we have now:

Site Nagios server (https://sam-cern-roc.cern.ch/nagios/), running with ops VO, used for:

- EGI availability calculations
- EGI grid monitoring (alarms shown at the EGI dashboard, http://operations-portal.egi.eu/dashboard)
- Grid service monitoring for IT-PES (Nagios to SLS plugin)

How it works

- Periodic updates from EGI, RPM packaged, configured with yaim. No tailoring needed on our side, just to adapt to quattor (puppet in near future)
- N2SLS plugin developed in IT-PES (Steve Traylen)
- Nagios sensors distributed by default for all mw services, provided and tested by mw developpers
- We don’t add any other sensor, just deploy it as it is

What to retain

- Availability/reliability?
  - Solved in WLCG, use central instances using experiments' VOs
- EGI monitoring and alarms?
  - Useful while we can profit from it for free
- Grid service monitoring for IT-PES?
  - This is what we want to retain

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Positive points

- Nagios sensors for grid services provided by mw developpers
  - No effort/deep knowledge required on our side
  - CREAM, APEL, LFC, FTS, MyProxy, site and top BDII, SRM, VOMS, WMS, Argus, glexec
  - Well maintained up to now
- Integrated solution
  - A framework to easily run these probes (at WNs and core services), collect and display the results.
  - Regular releases of monitoring framework and probes
  - Integration with SLS
- Basic Nagios expertise required to manage it

Requirements

- No additional monitoring expertise
  - Build on existing one (in IT-PES, or elsewhere in the department)
  - Integrate with similar solutions in the department?
- Get middleware sensors from mw developers
- Cover all grid services (or at least the ones that are covered now)

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Alternatives? (1)

- Leave things as they are
  - + it is working, and it is useful
  - - solution will diverge from WLCG monitoring, this will imply lack of expertise on site, duplication of effort
  - - unclear EGI future

- Check tests from the experiments, select a subset that would fit our needs to monitor the grid services, and create a separate Nagios “site” profile, running under the experiment Vos: (this could also be of use to other WLCG sites?)
  - + reuse of SAM experiment instances and tests, consolidate on manpower and on a single solution
  - - This does not cover all grid services; who will maintain the probes?

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Alternatives? (2)

- Use the experiment Nagios monitoring run by IT-SDC as it is, using the Nagios to SLS plugin. Have a look during one month in parallel to the present EGI Nagios to see if we see the same service failures.
  - + reuse of SAM experiment instances and tests, consolidate on manpower and on a single solution
  - - This does not cover all grid services; more complex aggregation in SLS (4 VOs)
- Integrate Nagios probes into AI monitoring framework, reusing the EGI ops probes
  - + build on IT monitoring framework, expertise on site
  - - Don't know if this is possible at all
- General concern: don't know for how long the EGI ops Nagios probes will be maintained

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