Core Service Failures Results from TIC WG

Marcin Radecki

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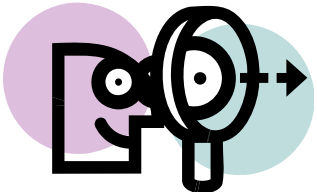
Where is the problem?

- **Service availability monitoring is not only a function of site services**
  - Example:
    - lcg-cr command, uses LFC and top level BDII which are not in the administrative domain of the site

Picture seen by monitoring



Reality

By what means we tell the problem occurred?

- **Three ways of determining a Core Service problem**
  1. Error message coming from gLite
     1. Improved SAM sensors deployed at regional SAM instance in CE
     2. Ambiguous error messages GGUS #33813
     3. Network stack problem – not enough information passed at the application layer
  2. Last Core Service status in SAM DB
     - Can be used by monitoring tools to avoid raising alarms on OK sites
     - Solution may pose unacceptable load on SAM DB
  3. Heuristics by which a Core Service failure is seen as many sites failing
     - Problem with services running on a performance edge
     - Problem with bad firewall config etc.

Loosing the error message as reliable information source we can only reach a kind of certainty level

Conclusion: How to improve?

- **Long-term goals**
  - Common error message format from all gLite components
  - Avoid design with dependencies on remote services or locate them within the site boundaries if possible
  - if not possible improve reliability of Core Services
- **Short-term goals**
  - limit impact of network on monitoring
    - locate monitoring closer to sites
    - integrate newtork monitoring results into service monitoring
  - put more „intelligence" into monitoring – in case of a service failure:
    - compare last core service result in SAM DB
    - run the test twice
    - run additional check on the dependency service

References

- **Full report on Core Services failures**
  - http://galaxy.agh.edu.pl/~radecki/cod-cs-failures.pdf
- **TIC web page on Core Service**
  - http://goc.grid.sinica.edu.tw/gocwiki/Tools_Improvements_for_COD/FailuresDueToCoreServices