

Service Availability Monitoring (SAM)

Marian Babik, David Collados, Wojciech
Lapka, Pedro Andrade, Paloma Fuente

(CERN)

Emir Imamagic

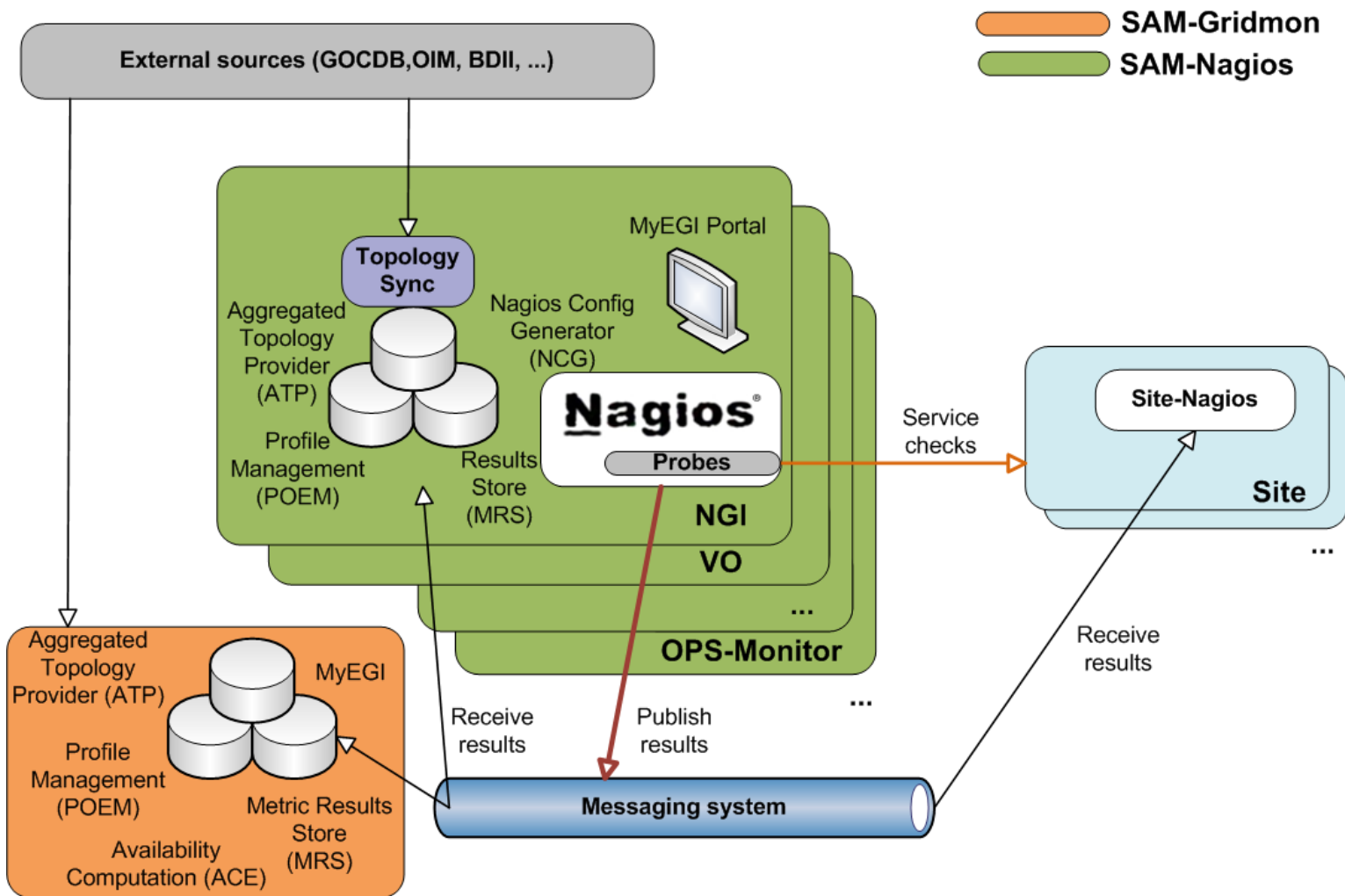
(SRCE)

Christos Triantafyllidis (AUTH)

- SAM overview/ SAM Architecture
- Description and recent changes for all components
- Documentation
- Distribution
- Operations and support
- Messaging

- SAM grid monitoring (SAM-Gridmon)
 - central services (Web, API, availability)
- SAM-Nagios
 - Monitoring platform supporting multiple configurations:
 - NGI-Nagios
 - VO-Nagios¹
 - Site-Nagios
 - Operations Tools-Nagios (ops-monitor)

¹ initial guide by Gonçalo Borges (NGI_IBERGRID)



- Service aggregating grid topology information and downtimes from different external sources (GOCDDB, OIM, CIC, BDII, GSTAT, feeds)
- Recent changes
 - regionalization
 - VO feeds
 - configuration via YAIM (ATP_VO_FEED)
 - sanity checking
 - integration of changes in GSTAT, VO cards
 - improvements in logging

- Replaces MDDDB (metric description database)
- Defines and groups metrics into profiles (e.g. ROC_CRITICAL)
 - metrics
 - VO
 - topological groups (optional) – region, site, ngi
- Profiles are used to generate Nagios configuration
- Regionalized:
 - multiple POEM WEB instances (central, regional)
 - synchronization of profiles from any number of sources
 - namespace concept (e.g. ch.cern.sam-ROC_CRITICAL)

- Generates Nagios configuration files
- Recent Changes
 - support for failover instance
 - integration of Globus5 and UNICORE probes
 - improved integration with Operations Portal
 - notification improvements

- Backup instance constantly monitors resources, but it has the following features:
 - alarms are not sent to Operations portal
 - results are not sent to the central MRS database.
 - email notifications are disabled
- Configuration
 - via `BACKUP_INSTANCE`
 - activated simply by removing the variable

- Development policy document [1]
 - languages, constraints, naming and package conventions
- Probe status document [6]
- Development of Grid monitoring probes in transition to EMI
- Support

- Stores metric output and computes service statuses
- Recent changes
 - performance tuning
 - performance measurements
 - new probe to indicate MRS status [5]

- SAM Web and application interfaces
- Recent changes
 - Added Gridmap-style features
 - visualization per site status, flavour, VO, profile
 - historical and current status views
 - topology view by regions and tiers
 - Service Availability (on the central instance [3])
 - Performance and validation of Web service API
 - throttling and limits

- New structure [2]
 - User's guide (in progress)
 - Administrator's guide
 - organized based on the supported nodetypes (SAM-Gridmon, SAM-Nagios)
 - Developer's guide
 - development policy document
 - web service specifications
 - Support
 - EGI Milestones (MS707)
 - Release notes
- Note: please don't refer to the former twiki.cern.ch documentation

- Improvements in meta-packages and dependencies
 - sam-nagios
 - sam-gridmon
- Release cycles
 - four weeks cycle
 - since April, 5 releases, 451 tickets
- Quality assurance
 - nightly validation
- EMI-1 aspects
 - probe integration testing (deployment process)

- 2nd level support established
- 3rd level support in rota with 3 week cycle
- Central services deployed (grid-monitoring.cern.ch)
- Transition to new availability computation engine
- Production and pre-production line established for central services

- EGI usage policy [4] (OMB)
- Deployment of authentication
- Enforcing the ACLs to the topics

- SAM-Nagios running stably
- SAM-Gridmon deployed and operated
- Smooth transition to new Availability Computation Engine (ACE)
- Development of new features ongoing (POEM, ATP history)
- Future plans (MS707, EMI milestones)

1. <https://tomtools.cern.ch/confluence/display/SAMDOC/Probes+Development+Policy>
2. <https://tomtools.cern.ch/confluence/display/SAMDOC>
3. <http://grid-monitoring.cern.ch/myegi>
4. https://wiki.egi.eu/wiki/PROD_MSG

5. <https://tomtools.cern.ch/confluence/display/SAM/Central+Data+Warehouse+Monitoring>¹
6. <https://tomtools.cern.ch/confluence/display/SAM/Probes>¹

¹ work in progress (final version will be moved to the public space)



Backup slides

- MS707
- Integration of UNICORE
- POEM integration
- History in Aggregated Topology Provider (ATP)
- Regionalization
 - [EGI #2791] SAM to monitor services and sites not in gocdb
 - [EGI #2792] Multi VO SAM/Nagios
 - [EGI #2793] SAM Run Custom Probes
 - ATP: support for multiple GOCDB endpoints