

Service Availability Monitoring (sam) status and plans

Marian Babik et al. (CERN)

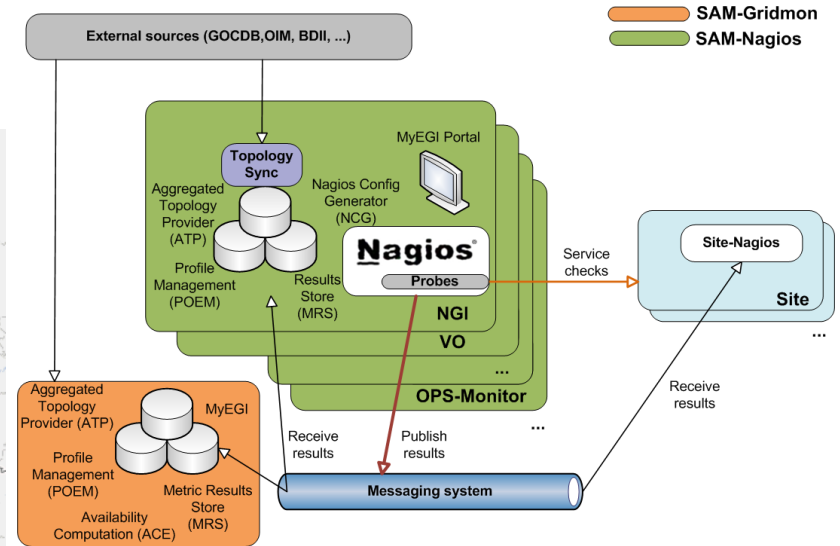
Emir Imamagic (SRCE)

Paschalis Korosoglou (AUTH)



- SAM overview/ SAM Architecture
- Description and recent changes for all components
 - SAM Update-17
 - SAM Update-19
- Near-term plans
- Long-term plans

SAM regional instances



- 40 regional instances
- Hosting over 230 metrics
- Monitoring over 4000 services

- Major rework of the SAM architecture
- New features:
 - Introduction of Web-based profile management
 - Enables adding custom probes
 - integrated into MyEGI
 - Status and availability computation with just 15 minutes delay
 - Fully supported SAM VO instances
- More information: <http://goo.gl/dfzwa>

- Major changes in the MyEGI web interface
 - addressing feedback received from EGI
- Operational tools monitoring
- Preparation for SAM UMD integration
- Update-19 is currently in validation
- More information: <http://goo.gl/HW3xz>



Operational Tools Monitoring

Nagios®

General

- Home
- Documentation

Current Status

- Tactical Overview
- Map
- Hosts
- Services
- Host Groups
 - Summary
 - Grid
- Service Groups
 - Summary
 - Grid
- Problems
 - Services (Unhandled)
 - Hosts (Unhandled)
 - Network Outages

Quick Search:

Reports

- Availability
- Trends
- Alerts
 - History
 - Summary
 - Histogram
- Notifications
- Event Log

System

Current Network Status

Last Updated: Wed Sep 19 12:10:36 CEST 2012

Updated every 601 seconds

Nagios® Core™ 3.3.1 - www.nagios.org

Logged in as /DC=ch/DC=cem/OU=Organic Units/OU=Users/CN=mbabik/CN=555091/CN=Marian Babik

[View Service Status Detail For All Service Groups](#)

[View Status Overview For All Service Groups](#)

[View Service Status Grid For All Service Groups](#)

Host Status Totals			
Up	Down	Unreachable	Pending
53	0	0	0
All Problems		All Types	
0		53	

Service Status Totals				
Ok	Warning	Unknown	Critical	Pending
226	2	32	11	0
All Problems		All Types		
45		271		

Status Summary For All Service Groups

Service Group	Host Status Summary	Service Status Summary
SERVICE_NAGIOS (SERVICE_NAGIOS)	1 UP	20 OK 1 WARNING : 1 Unhandled
SERVICE_egi.AccountingPortal (SERVICE_egi.AccountingPortal)	1 UP	1 OK
SERVICE_egi.AppDB (SERVICE_egi.AppDB)	1 UP	1 OK
SERVICE_egi.CRM (SERVICE_egi.CRM)	1 UP	1 OK
SERVICE_egi.GGUS (SERVICE_egi.GGUS)	1 UP	1 OK
SERVICE_egi.GOCDB (SERVICE_egi.GOCDB)	1 UP	3 OK
SERVICE_egi.GSTAT (SERVICE_egi.GSTAT)	1 UP	1 OK
SERVICE_egi.MSGBroker (SERVICE_egi.MSGBroker)	4 UP	12 OK
SERVICE_egi.MetricsPortal (SERVICE_egi.MetricsPortal)	1 UP	1 OK
SERVICE_egi.OpsPortal (SERVICE_egi.OpsPortal)	1 UP	1 OK
SERVICE_egi.SAM (SERVICE_egi.SAM)	1 UP	2 OK 1 WARNING : 1 Unhandled
SERVICE_egi.TMP (SERVICE_egi.TMP)	1 UP	1 OK
SERVICE_ngi.OpsPortal (SERVICE_ngi.OpsPortal)	2 UP	2 OK
SERVICE_ngi.SAM (SERVICE_ngi.SAM)	35 UP	170 OK 30 UNKNOWN : 30 Unhandled 10 CRITICAL : 10 Unhandled
		9 OK

- New availability monitoring view
 - up to date availability report for current month
 - directory of previous reports
 - support for PDF, CSV
- Better integration of status and availability views
- Gridmap with availabilities
- Many bug fixes

- 4 releases (627 tickets) since February
- Profile management system
 - SAM Update 16-17 (428 tickets)
- Monitoring of the Operational Tools
 - SAM Update 18-19 (294 tickets)
- SAM based on UMD
 - Planned for SAM Update 20
 - Moving from gLite-UI to EMI-Nagios
 - Non-backward compatible change

- Until end of EGI-InSPIRE
- SAM/UMD
 - SAM repackaging (EPEL-only)
 - Changes to core libraries
- Integration of the EMI probes
 - Pending EMI implementation of EMI-Nagios
 - Integration and testing
- Operational Tools availability
 - Computing avail./reliab.
- Continuous support and bugfixing

- Probe execution:
 - Target different granularities
 - Focus more on VO meta-services/activities
- Results aggregation:
 - Support for external monitoring systems
- Results visualization:
 - Common pluggable visualization interfaces
- Site Monitoring:
 - Common multi-VO SAM for sites to locally understand site performance

- SAM/Nagios and SAM/Gridmon stable
- Substantial improvements in MyEGI, profile management, Nagios configuration
- Integration of new probes
- Continuous support and bugfixing
- Near-term plans (MS708, EGI milestones)



Backup slides

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

- Integration of Desktop Grids and QCG probes
- Integration of UNICORE Job and `unicore6.StorageFactory`
- Enabled new SAM internal metrics on SAM/Nagios nodes
- `grid-monitoring-probes-org.sam`
 - Fixing compatibility with EMI WNs
 - Fixing EMI version detection in the WN probe

- http://youtu.be/CR_-1o0c-0

- SAM operates nightly validation platform
 - Runs basic validation tests for each component
 - 12 VMs running all known configurations
 - SAM-Gridmon
 - SAM-Nagios
 - NGI Nagioses (NGI_IT, CERN, NGI_UK)
 - VO Nagios
 - Operated continuously
 - Installed/upgraded every 2 days to latest SAM-Update (SVN)

- Upgrade of the preproduction line
 - CERN ROC
 - SAM central service (grid-monitoring-preprod) – became part of **EGI testbed**
- Upgrade of the production line
 - SAM central service (grid-monitoring)
- **EGI SR**
 - Upgrade of the production services
 - Tested by EAs
 - EGI SR report

- grid-monitoring, grid-monitoring-preprod
- Database migration to Update-17 (800GB)
- Old SAM decommissioned
- Decommissioning of Gridview
 - September
- GGUS past 12 months:
 - 241 GGUS tickets in 3rd level
 - 73 GGUS tickets in 2nd level

- ~ 1.5M hits/month
- ~ 30k hits/day
- Top hosts querying the Web API:
 - nagios-goegrid.gwdg.de (130k hits)
 - wwwcache4.rl.ac.uk (120k hits)
 - gw-8.icm.edu.pl (469k hits)
 - cta-mon.grid.cyf-kr.edu.pl (83k hits)
- Failures (0.3%)

- Now primary source of all external information
 - Synchronization of GOCDDB service types
 - Support for operational tools
 - Provides contacts and user details (secured)
- Glue2.0 support roadmap
 - <https://wiki.egi.eu/wiki/GOCDDB/Release4/Development/MultipleGRIS>

- New bootstrapping via profile management module:
 - bootstraps services from ATP and metrics from POEM
- New synchronization (sam-sync service)
 - reloads all SAM services (NCG, MRS)
- New metric configuration
 - replaces Hash.pm (Hash_local.pm)
 - JSON /etc/ncg-metric-config.conf (/etc/ncg-metric-config.d/*.conf)

- ensure probe package is already deployed
- metric configuration is available
 - /etc/ncg-metric-config.d/*.conf
- just adding metric to a profile
- for critical profiles changes need to follow [EGI PROC10](#)