# Technical Plan

for the operation of the SAM/ARGO Central Services

Introduction

In PY4 of EGI-InSPIRE the GRNET, CNRS and SRCE, jointly developed a new computation engine for availabilities and reliabilities that was built on top of open source components and which provides a superset of the functionality of the ACE component of the SAM Gridmon. In the end of 2013 it was decided that CERN would cease the operation of SAM after the end of PY4 of EGI-InSPIRE and GRNET, CNRS and SRCE would take over the operation of the central monitoring infrastructure and the evolution of monitoring in EGI. The timeline below presents the various activities starting from the mini project (P1) that was funded in EGI-InSPIRE PY4, the operation of the SAM Central Services (P2) and ARGO evolution (P3).
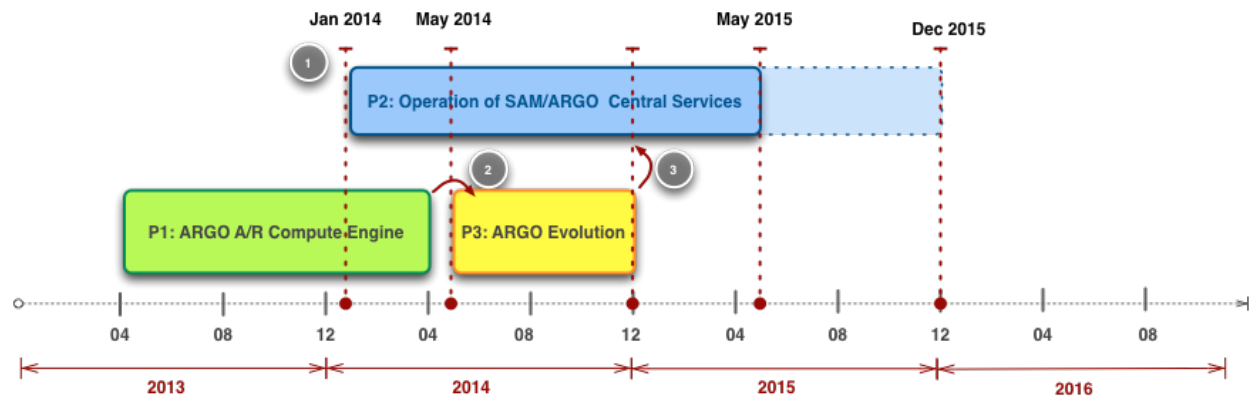
P2: Operation of the SAM/ARGO Central Services

When the call for proposals for the operation of the core services was announced by EGI.eu, it was stated that the starting date for work plan should be aligned with the beginning of PY5. During the negotiation phase EGI.eu requested that we start the work on P2 as early as possible in order to ensure the smooth transition on May 1st. Although some preliminary work started in late 2013, the actual start date of the P2 project should be considered January 1st 2014.

The yearly effort that is required for P2 is 28PM and the proposed duration was 1 + 1 year.

SAM/ARGO Central Services in Y1 (2014)

The existing SAM Gridmon is meant to run centrally and is comprised from 5 individual services:

1. The Aggregated Topology Provider (ATP)
2. The Profile Management Service (POEM)
3. The Availability Computation Engine (ACE)
4. The Metric Results Store (MRS)
5. The MyEGI Web Interface

Our plan for the first year of the project is to migrate the SAM Gridmon from CERN to CNRS, which will provide the Oracle infrastructure that is required by SAM Gridmon.

In the first 3 months we are going to deploy the central SAM Instance (SAM Gridmon) and go through service migration from the CERN data stores to our own infrastructure. After the testing of the services and infrastructure is complete, we are going to run the services in production. This means that the central GridMon instance will be operational and will retrieve data from the Message Broker Network. A period of 2 months is going to follow during which all NGI and VO SAM instances will be updated so that they include the new addresses for POEM Web and ATP. A request will be sent to all the operators of the SAM instances to update their instances within these 2 months.

On M5 (May 2014) the ARGO A/R service is going to be deployed in production on the ~okeanos cloud in parallel to the existing SAM Gridmon ACE service that will be already

operational at CNRS. Although the service will still continue to evolve through the P3 project, we consider very important to start collecting data as soon as possible so that when the decommission of the SAM Central Instance will take place in Y2, the ARGO A/R will already have A/R data for 1 year.

Support & Maintenance

As part of the work in P2, GRNET, CNRS & SRCE will provide combined 2nd & 3rd level support through a new Support Unit (SU) at the EGI Helpdesk to SAM/ARGO operators for installation of new SAM/ARGO instances, upgrade and configuration issues and to SAM users for views and re-computations of availability / reliability reports. The new SU at the EGI Helpdesk should be configured before the end of PY4 of EGI-InSPIRE.

The source code of the existing SAM components is currently available at CERN and GRNET source code repositories. We will coordinate with CERN in order to move all source code under the same central repository as a set of open source projects. Any maintenance work will take in the new repositories and will be open to anyone. If new builds of the SAM Nagios and SAM Gridmon are required, they will be performed on the Koji package building service provided by GRNET.

Maintenance will include:

- fixing of critical security bugs
- maintenance of probes to test the functionality of the SAM framework
- validation and integration of new probes that are compatible with the existing SAM framework
- coordination of software maintenance activities with other technology providers that provide software for the EGI Core Infrastructure or remote systems deployed by integrated and peer infrastructures that interoperate with the central EGI components of the system.

Due to the limited effort available for P2 no changes will be performed on the SAM code base apart from fixing of critical bugs and configuration changes that might be required by new probes. All the probes provided by the techology providers should be compatible with the existing version of the SAM framework.

The SAM Central Instance (Gridmon) & SAM Nagios in Y2

The goal in Y1 is the continuity of the service and the successful migration of the services from

CERN to our infrastructure. In Y2 we plan to replace the SAM Gridmon and SAM Nagios with ARGO, which will have been delivered by P1 and P3. In Y2 the operation of the Central Service will move from CNRS to the ~okeanos cloud at GRNET.

Task list

ID	Task	Responsible	Start	End
	2014 (PY1)			
1.1	Deployment of the SAM Central Instance	CNRS	JAN14	MAR14
1.2	Operation of the SAM Central Instance	CNRS	FEB14	APR15
1.3	Update of the SAM Nagios suite with new configuration	SRCE	MAR14	APR14
1.4	SAM Gridmon switch	CNRS	MAY14	MAY14
1.5	Coordination of the deployment of the new configuration	SRCE	MAR14	MAY14
1.6	Migration of the source code to a central repository	GRNET	APR14	APR14
1.7	Assume responsibility for the Support Unit in GGUS	GRNET	APR14	MAY14
1.8	Operation of the 2nd & 3rd Level GGUS SU	ALL	MAY14	DEC14
1.9	Deployment of the ARGO A/R Service	GRNET	APR14	MAY14
1.10	Operation of the ARGO A/R Service	GRNET	MAY14	DEC15
1.11	Koji Building service for SAM Gridmon and SAM Nagios	GRNET	JUL14	JUL14

1.12	Validation and integration of new probes in SAM Nagios & provide new packages, documentation for upgrade	GRNET/SRCE	JUL14	SEP14
	2015 (PY2)			
2.1	Deployment of ARGO Central Instance	GRNET	JAN15	MAR15
2.2	Operation of the ARGO Central Instance	ALL	MAR15	DEC15
2.3	Operation of the 2nd & 3rd Level GGUS SU	ALL	JAN15	DEC15
2.4	SAM Gridmon Decommission	CNRS	MAR15	APR15
2.5	Migration from SAM Nagios to ARGO Nagios	SRCE	MAR15	JUN15
2.6	Validation and integration of new probes in ARGO Nagios & provide new packages, documentation for upgrade	GRNET/SRCE	JUL15	SEP15