SAM Development and Operations

1. **Development**

- Better integration of SUM in the SAM software cycle
    - Regular attendance of the SUM developer to the SAM Developers Standup meetings (twice a week, 30 mins max.)
    - Improve understanding of the content of future SAM releases and start integration of SUM at earlier stage. SUM status update during meetings.
    - Test suite for SUM validation is welcome for integration in SAM nightly validation.

- Probes development
    - Must happen in local development instance. For development, the SAM team is using CVI VMs with configuration: SL5 x86_64 CVIVM image, 2GB RAM, 1 CPU, 40GB disc. On top of that we deploy the latest released SAM Update following the Installation Guide. Probes' developers must configure a VO Nagios instance.
    - Probes packages must contain:
        - the probes' implementation
        - the definition of package dependencies
        - the metrics configuration files:
            1. /etc/ncg-metric-config.d/<vo_name>.conf (configuration file for the metrics in the package)
            2. /etc/ncg/ncg-localdb.d/<vo_name>_param_override.conf (config file overriding config of generic metrics like org.sam*)
    - Probes teams build packages using Koji. These can be taken and deployed in the PPS and Prod VO SAM-Nagios by the SAM team at any point in time (when requested by the developers through SNOW)
    - Probes packages are expected to be validated by the probes' developers in their development VO Nagios and in the PPS instance, once deployed.
    - Access to SAM VO Nagios PPS and Prod instances is restricted to SAM service managers only.

2. **Staged Rollout**

- The SAM team deploys a pre-release in the pre-production SAM-Gridmon and VO SAM-Nagios.

- The SAM team informs EGI Staged Rollout and any other interested group (in particular 'sam-hep-vo-contacts') to start the official validation process.

- Check list during the SAM Staged Rollout:
    - Schema validation: test that SAM APIs do not break. We expect that this has already been tested by the SUM team during the SAM nightly validation cycle (development phase). This is a second test to be performed by the SUM team.
    - Functionality validation: check that SUM functionality works (services and sites statuses and availabilities are returned). To be performed by the SUM team.
    - Topology comparison: if a VO feed is the same in both prod and PPS, topologies will be compared by the SAM team that will provide justifications in case of differences. Tier0 & Tier1 sites should be identical while for Tier2s, differences should be less than 10% for release acceptance (obviously differences in

topology will be investigated and bugs fixed, but those few do not block a release.) To be performed by the SAM team.

- ○ Availability comparison: during five working days the SAM team will compare the daily availabilities for one specific profile per VO (to be decided which, VO_CRITICAL_FULL?) and will investigate and provide justifications for sites with differences above 10%. To be performed by the SAM team.

- SAM Staged Rollout (SR) process:
  - ○ The SR process will last 2 weeks. During this time, tickets can be opened against the release candidate deployed in the pre-prod instances. For the teams at CERN, this should be through SNOW.
  - ○ For the opened tickets, the SAM team will define their priority level:
    - Blocker: Blocks development and/or testing work, pre-production cannot run.
    - Critical: Crashes, loss of data, severe memory leak.
    - Major: Major loss of function.
    - Minor: Minor loss of function, or other problem where easy workaround is present.
    - Trivial: Cosmetic problem like misspelt words or misaligned text.
  - ○ Blocker, Critical and Major tickets will be fixed by the SAM Team before deploying a release in production.

3. **Deployment**

- Once a release has been validated by the SR process, the SAM team will announce its future deployment in production at least two working days in advance.

- Downtime will be scheduled in GOCDB and the experiments will be informed by the SAM team through the WLCG Daily OPS meeting.

- If no objections are received by the experiments, the SAM team will deploy the release in the production instances: SAM-Gridmon and VO SAM-Nagios.