

# Atlas SAM tests

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Monitoring Consolidation

26th September 2013

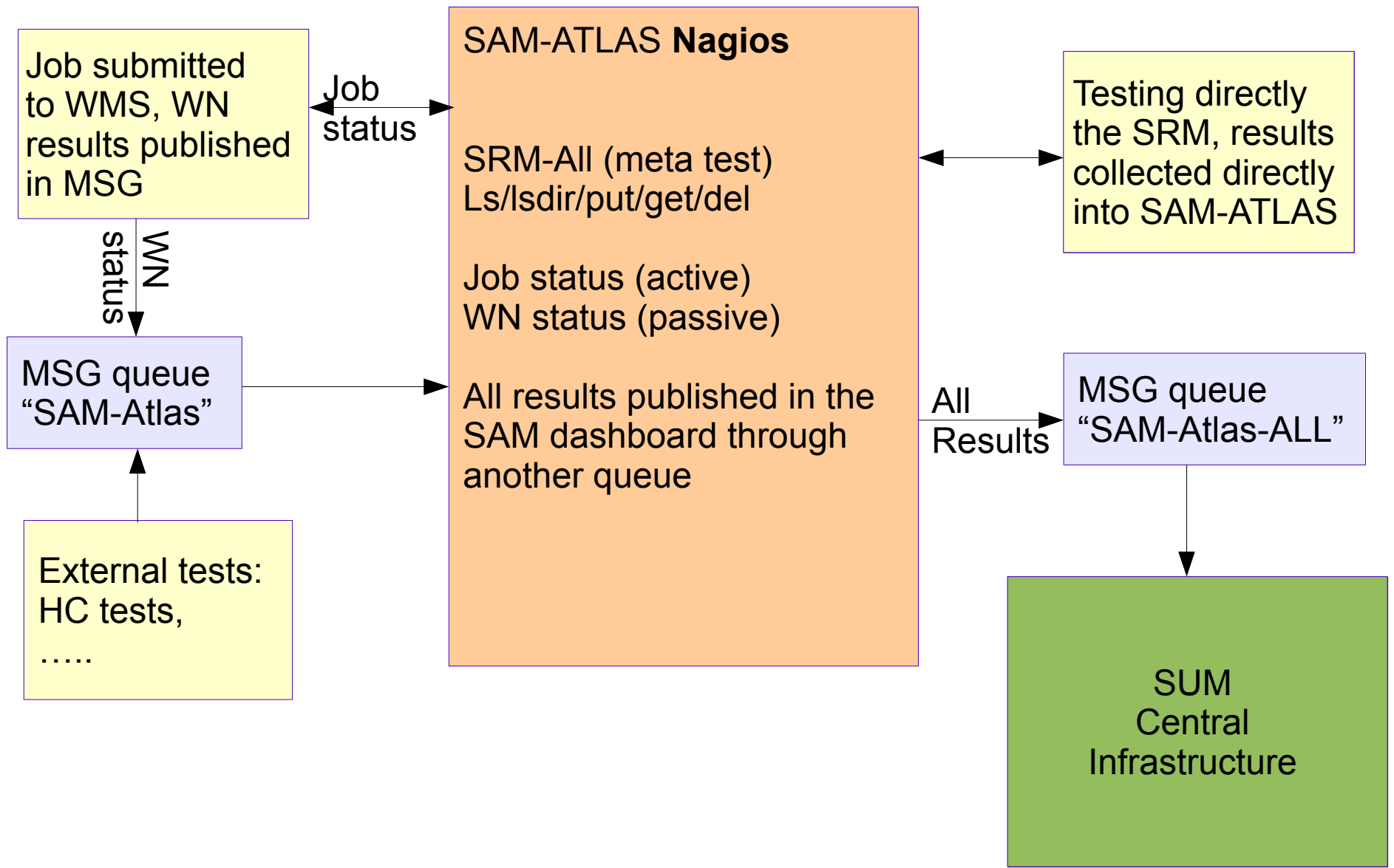


# Layout

- Current tests
- Development
- Nagios
- Conclusions



# Diagram

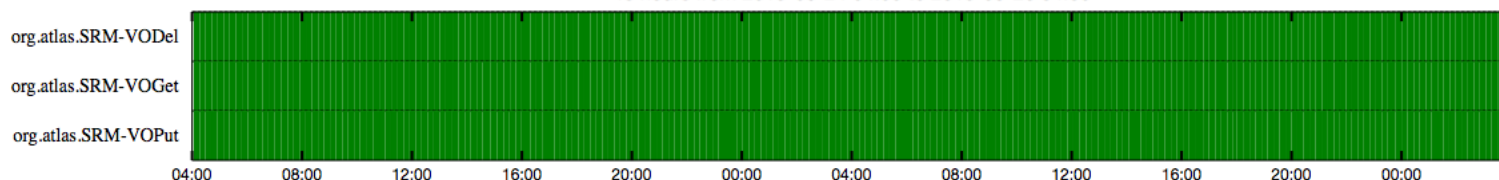


# Test Types

- All tests are visible in nagios and in SUM
- In SUM they are organised in profiles (using POEM)
  - **Atlas critical:**
    - SRM (put/get/del)
    - CE (JobSubmit+WNswtag +WNswspace - lcgadmin Role)
  - **Other profiles**
    - ATLAS (all), ATLAS\_CE\_CRITICAL, ATLAS\_INTERNAL, ATLAS\_PILOT, .....

Test history bohr3226.tier2.hep.manchester.ac.uk using ATLAS\_CRITICAL

48 hours from 2013-09-24 04:00 to 2013-09-26 04:00



# CE probes

- 16 probes
  - **Critical**
    - use standard jobSubmit
    - /atlas/Role=lcgadmin
    - still use WMS
  - **Non critical**
    - Use other roles
    - Integrated from other monitoring
  - In nagios there are no profiles

org.atlas.CE-Pilot-submission-atlas	?	OK
org.atlas.HC-Analysis-atlas	?	WARNING
org.atlas.WN-FrontierSquid-/atlas/Role=lcgadmin	?	OK
org.atlas.WN-LocalFileAccess-/atlas/Role=lcgadmin	?	WARNING
org.atlas.WN-gangarobot_panda-atlas	?	OK
org.atlas.WN-gangarobot_wms-atlas	?	OK
org.atlas.WN-swspace-/atlas/Role=lcgadmin	?	OK
org.atlas.WN-swspace-/atlas/Role=pilot	?	OK
org.atlas.WN-swtag-/atlas/Role=lcgadmin	?	OK
org.sam.CREAMCE-JobState-/atlas/Role=lcgadmin	📄	OK
org.sam.CREAMCE-JobState-/atlas/Role=pilot	📄	OK
org.sam.CREAMCE-JobState-atlas	📄	OK
org.sam.CREAMCE-JobSubmit-/atlas/Role=lcgadmin	? 📄	OK
org.sam.glexec.CE-JobState-/atlas/Role=pilot	📄	OK
org.sam.glexec.CE-JobSubmit-/atlas/Role=pilot	? 📄	OK
org.sam.glexec.WN-gLExec-/atlas/Role=pilot	? 📄	UNKNOWN



# CE Evolution

- External tests
  - HC results are published but not usable at CE level yet.
    - Results are averaged on all site CEs
    - Use the same message queue as other tests on the WN.
  - APFmon results are published via a separate script that extracts info from the log files and calculates the efficiency.
    - There is no error yet that can be exposed to sites
- Clean up
  - Many probes are now duplicate using different roles
  - WMS probes should be replaced



# WMS replacement

- Proposed APF based on condorg to test submission to sites
  - More in line with current atlas setup
  - CMS would use a similar infrastructure
  - Still to be setup and probes to be written



# Storage probes

- 19 probes
  - Critical tests
    - Standard SRM (only) tests
    - /put/get/del
    - All probes developed by the experiment
  - Non critical
    - ls/lkdir/put/get/del
    - space token granularity
  - /atlas/Role=production

org.atlas.SRM-AllATLAS-/atlas/Role=production	📄	OK
org.atlas.SRM-GetATLASInfo-/atlas/Role=production	? 📄	OK
org.atlas.SRM-VODel-/atlas/Role=production	? 📄	OK
org.atlas.SRM-VODelATLASDATADISK-/atlas/Role=production	? 📄	OK
org.atlas.SRM-VODelATLASGROUPDISK-/atlas/Role=production	? 📄	OK
org.atlas.SRM-VODelATLASLOCALGROUPDISK-/atlas/Role=production	? 📄	OK
org.atlas.SRM-VODelATLASSCRATCHDISK-/atlas/Role=production	? 📄	OK
org.atlas.SRM-VOGet-/atlas/Role=production	? 📄	OK
org.atlas.SRM-VOGetATLASDATADISK-/atlas/Role=production	? 📄	OK
org.atlas.SRM-VOGetATLASGROUPDISK-/atlas/Role=production	? 📄	OK
org.atlas.SRM-VOGetATLASLOCALGROUPDISK-/atlas/Role=production	? 📄	OK
org.atlas.SRM-VOGetATLASSCRATCHDISK-/atlas/Role=production	? 📄	OK
org.atlas.SRM-VOLs-/atlas/Role=production	? 📄	OK
org.atlas.SRM-VOLsDir-/atlas/Role=production	? 📄	OK
org.atlas.SRM-VOPut-/atlas/Role=production	? 📄	OK
org.atlas.SRM-VOPutATLASDATADISK-/atlas/Role=production	? 📄	OK
org.atlas.SRM-VOPutATLASGROUPDISK-/atlas/Role=production	? 📄	OK
org.atlas.SRM-VOPutATLASLOCALGROUPDISK-/atlas/Role=production	? 📄	OK
org.atlas.SRM-VOPutATLASSCRATCHDISK-/atlas/Role=production	? 📄	OK





# Storage Evolution

- Storage probes are being rewritten using gfal2
  - Current tests have many dependencies on the framework which make difficult debugging.
    - More complex to fix the issue than rewriting from scratch
    - New GET with fixed files, no dependencies from the PUT
    - Gfal2 API methods more concise
  - Not only SRM
    - gfal2 manages multiple protocols "for free", within the same probe.
  - DB driven configuration
    - ADC sites information via AGIS RESTful interface
  - Experiment independent
  - Output is Nagios compliant



# Nagios currently

- Using Nagios for SUM tests
- Code to publish extra information in Nagios
  - Some information is already published (HC/pilot efficiency)
- At the moment used as a collector for all tests published in SUM
  - Similar to other experiment, in particular LHCb, situation
    - Perhaps should consider common code. The original LHCb code was atlas even if it has now evolved.



# Conclusions

- Atlas SUM tests represents basic site functionality
- New tests are required to represent the changing workflow of the experiment
  - Storage tests are already being rewritten
  - CE job submission tests need the infrastructure being put in place and the probes to be written.
    - APF proposed as an alternative to WMS
      - in common with CMS?
- Nagios used as a collector for all tests published in SUM
  - Same as LHCb
- Some tests need further work to be usable by sites
  - Independently from nagios



# Backup slides



# GFAL2 probe (1)

(S. Tupputi)

- ATLAS SAM tests development on sam-atlas-dev machine
- Introduced usage of new gfal2 python API
  - Testing different protocols from the same probe
  - API methods more concise and esier to use
  - Gridmon/lcg\_utils/gfal have been obsoleted
- ADC sites input information from AGIS RESTful interface
- Tests output Nagios compliant
  - OK, WARNING, CRITICAL
- All space tokens tested
  - DATADISK, SCRATCHDISK, GROUPDISK, LOCALGROUPDISK, PRODIDSK
    - Each token has a SAM folder



# GFAL2 probe (2)

(S. Tupputi)

- GetATLASInfo: not a real test anymore. It reorganizes the sites information from AGIS
- LsDir: listdir() to list first 10 entries in a directory
- Ls: stat() to list a fixed-name pre-placed file
- Put: copyfile() to place a small-size file, if copy successful copies another fixed-name file to be used in the Del test
- Get: copyfile() tries to get a fixed-name pre-placed file (not dependent from put anymore)
- Del: cancel() deletes file placed during the Put test after doing a Ls on it.
  - Only test with a dependency on a Put test.

