

Software news

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David Rousseau, SW news , S&C Plenary,
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Recent releases



- ❑ 15.6.X.Y :
 - "May reprocessing release"
 - Frozen Tier0 pp reconstruction and MC digi/reco pro:
 - <https://twiki.cern.ch/twiki/bin/view/Atlas/FrozenTier0Policy>
 - Large Summer Geant4 production on-going
 - Not used anymore for prompt reconstruction at Tier0
 - Still used for online monitoring at Tier0
 - Still used to collect analysis changes, for analyses looking at prompt pp data
 - **Can still be used for "tail" of 2010 analyses**
- ❑ 15.6.X.Y AtlasP1HLT
 - Tier0 to TDAQ release from May to Christmas 2010
- ❑ 15.8.X.Y (15.8.0 sw deadline 8th June) : (RC: Danilo Banfi)
 - Validation of what has been « DEV » for >1 year (more than 800 new tags wrt to 15.6.10):
 - Big Chain Test, sample A, physics validation=>OK
 - 15.8.0.2 was the last cache. **Discontinued !**
- ❑ 15.9.X.Y (15.9.0 sw deadline 13th July): (RC: Thomas Kittelmann)
 - Integration of Gaudi v21 (done) and lcg59 (new pool, root 5.26, coral, python 2.6 etc...)
 - Validation OK. 15.9.0.5 was the last cache used for bunch train validation. **Discontinued !**
- ❑ 16.0.X.Y (16.0.0 sw deadline 30th August) (RC: Nicolas Berger->Susumu Oda)
 - "Fall reprocessing release" (data reconstruction and summer Geant4 production digitisation/reconstruction)
 - 16.0.2.3,16.0.2.6 : used for major part of the reprocessing, 16.0.3.1 open
 - 16.0.X.Y will still collect analysis updates and technical fixes, **fulfilling frozen Tier0 policy** Susumu Oda has taken over release coordination from Nicolas
 - 16.0.X.Y will be used at Tier0 from beginning of 2011
 - **Recommended for all pp analyses**

Recent and future releases



<https://twiki.cern.ch/twiki/bin/viewauth/Atlas/SoftwareReleasePlans>

- ❑ 16.1.0 :
 - clone of 16.0.X.Y for TDAQ (like 15.7.0 vs 15.6.X.Y)
 - "2011 TDAQ release"
- ❑ 16.2.0 built 31st October:
 - "Heavy Ion release" essentially cloned from 16.0.2, with a few additions
 - 16.2.0.1 used at Tier0 and Tier1 for first HI collisions, now 16.2.1.1
 - Then will also be used for a dedicated HI reprocessing Jan/Feb 2011 (?)
 - **Recommended for all Heavy Ion digi/reco/analysis**
- ❑ 16.3.0 sw deadline Oct 25th (technical release) (RC: DavidR):
 - Interest from simulation and muon (magnetic field) to validate it
 - 16.3.0.Y just open, but only expect it to be used by a few experts
- ❑ 16.4.0 "Upgrade" digitisation/reconstruction clone from 16.0.2
- ❑ 16.5.0 sw deadline December 6th (technical release, current "dev")
- ❑ 17.0.0 sw deadline February 15th (spring 2011 reprocessing release), to be used at Tier0 in April/May
- ❑ Note : new root version 5.28 to be delivered 15th December. New lcg version probable in january. An additional technical release in january might be necessary for a smooth integration.

Backward compatibility



- ❑ This was endorsed by TOB 15th November
- ❑ See : <https://twiki.cern.ch/twiki/bin/view/Atlas/ForwardBackwardCompatibility>
- ❑ From release 16.5.0 onwards we will only maintain the capability to:
 - read raw data bytestream from fall 2008 (large cosmics data taking).
 - read geant4 hits from march 2010 geant4 production onwards (release 15.6.3.10)
 - read RDO/ESD/AOD and other derived format from Christmas 2009 reprocessing onwards (release 15.5.4)
- ❑ Note that capability to read trigger information in bytestream requires the capability to read the persistent version of some offline EDM classes
- ❑ Geometry older than ATLAS-GEO-00-00-00 (except ATLAS-CTB) are not supported anymore.
 - From today in dev/devval GeoModelSvc stops immediately when encountering old geometry
 - More geometries, buggy or obsolete to be disabled in the future
- ❑ Similar cleanup of obsolete conditions tag can also be done in the future
- ❑ Obsolete persistent classes (not used in any of the above) can be deleted (easier maintenance, smaller dictionaries)
- ❑ Old persistent classes, only used for old data can be put in separate packages (smaller dictionaries in memory)
- ❑ JobOptions, code referring to obsolete data/geometries can be removed

Release deletion



- ❑ Sites Atlas SW area full with >300 GB releases
- ❑ Too many releases, too big
- ❑ New cycle of release deletion
- ❑ Went rather well (see next page)
 - One group asked for two old releases to be kept at three sites
 - One physics group moved away from 15.9.0
 - One detector group moved away from 15.8.0
- ❑ More in SIT meeting

Rel	Production	kJob	Decision	Feedback
16.3.0	Simu/Muon val		Keep	
16.2.0	HI Tier0+ana		Keep	
16.0.2	Fall repro		Keep	
16.0.1		3416	Del 15 th Nov	
16.0.0		207	Del 15 th Nov	
15.9.0		1383	Del 30 th Nov	Used by exotics=>deletion postponed to 30 th nov
15.8.0		1147	Del 30 th Nov	Used by ID alignment=>deletion postponed to 30 th nov
15.6.13	pp Tier0 +ana	270	Keep	
15.6.12	MC10 Geant4	3510	Keep	
15.6.11	evgen	1217	Keep	
15.6.10	MC09 evgen	2837	Keep	
15.6.9	(may repro)	4271	Keep	
15.6.8		122	Del 30 th Nov	
15.6.7	(april repro)	278	Del 30 th Nov	
15.6.6		313	Del 30 th Nov	
15.6.5		638	Del 30 th Nov	
15.6.3	MC09 Geant4	460	Keep	
15.6.1		21	Del 15 th Nov	
15.6.0		0	Del 15 th Nov	
15.5.6		0	Del 15 th Nov	
15.5.4		11	Del 15 th Nov	
15.3.1		23	Del 15 th Nov	Higgs thesis=>keep at Freiburg, GridKA and DESY
14.2.25		39	Del 15 th Nov	Higgs thesis=>keep at Freiburg, GridKA and DESY

Software shifts



- ❑ Previous reconstruction and sw validation shifts have been merged (big work by Mark Hodgkinson and Rolf Seuster)
- ❑ Visible output, of interest of any developers:
 - Savannah bug reports
 - elog: <https://prod-grid-logger.cern.ch/elog/ATLAS+T0+SW+Validation+Logbook/>
 - Mailing lists about nightlies status (any one can register or contribute)
atlas-sw-dev-nightly-validation@cern.ch, atlas-sw-prodcache-nightly-validation
- ❑ Similar simulation shifts coming as well

Movements



- ❑ New PAT convenors have started : Amir Farbin and Karsten Koeneke (a big thank to Stathes Paganis and Stefano Giagu)
- ❑ Karsten needs to be replaced a.s.a.p at EMB (co-coordinated with RD Schaffer)
 - Nominations received
- ❑ Call for nominations for simulation co-coordinators (re-appointment possible), for March 2011
- ❑ Software Infrastructure Team : Krzysztof Ciba leaving end of December (see next page)

SIT manpower



- ❑ Krzysztof leaving : one of only 3 full-time CERN based SIT persons
- ❑ SIT is supporting >1000 users, with >500 contributing sw to releases (312 distinct users made tag collector submission in the last 6 months), on 2000 packages
- ❑ We're looking for a replacement asap. Project associate money available for someone to be based at CERN 1 year renewable. At least 2 years experience in sw/computing on linux. Job:
 - Taking over svn maintenance, RTT web pages , Dcube, CoolDozer,...
 - Release build shifts (Cat 2 shifts)
 - Improvements to release build infrastructure, investigation about new compilers etc...
 - Details negotiable
- ❑ In addition : we're looking for 2-3 people to be involved 30-50% FTE (M&O B, not necessarily based at CERN, could be short duration if experienced) in SIT activities (as above)
- ❑ If you're interested please check the SIT meeting Thursday PM for a broad display of possible projects

Other reinforcement



- ❑ Core job transform:
 - Specific transforms Simu_trf, Digi_trf, Reco_trf well maintained
 - ...but core trf is not at all
 - ~30% involvement (need good python experience)
- ❑ Reconstruction integration:
 - Integrating reconstruction development of ~200 developers
 - In october we had a week with:
 - pp data taking still running
 - Heavy ion imminent
 - Reprocessing running full steam
 - Plus dev nightlies
 - =>No crisis but we were lucky. Having 3 reco releases to manage simultaneously is common. 1 is exceptional.
 - Sw shifts functioning=>many bug reports
 - =>Need 2-3 people 30-50% FTE:
 - Maintenance of integration tests closest to what will be run
 - Python reco configuration
 - First line bug investigation

Release 17 deliverables



- ❑ Deadline 14th February. Meeting 14th Dec 4PM and wiki:

<https://twiki.cern.ch/twiki/bin/viewauth/Atlas/DeliverablesForRelease17>

- ❑ Spring reprocessing data and MC for summer conferences analysis
 - ❑ Also frozen Tier0 running from april/may till end of the year pileup up to 4-6 per bc, in time and out of time
- ❑ CPU/Memory management (despite asymmetric magnetic field map (?))
- ❑ Maximal physics output nevertheless
- ❑ Merge in:
 - Heavy Ion reconstruction (16.2.0)
 - Upgrade digi/reconstruction (16.4.0) (IBL developments being merged)
- ❑ Obsolete data cleanup
- ❑ ...
- ❑ Please have this in mind in discussions this week, so that we can have detailed plan at Rel 17 deliverable meeting

Post mortem



- ❑ Reprocessing and Tier0 post-mortem meeting
Thursday morning
- ❑ Nicolas Berger kindly agreed to summarize software issues
- ❑ Please send feedback to Nicolas Tuesday night latest
 - Not list of bugs
 - But deficiencies in the system, possibly how to improve, etc....
 - E.g. how did you like (or not) the handling of the different deadlines, how did you like (or not) frozen Tier0 policy

Conclusion



- ❑ Next major deadline release 17 : 14th February 2010 sw deadline
 - Spring reprocessing data and MC for summer conferences analysis
- ❑ Please have this in mind in discussions this week, so that we can have detailed plan at Rel 17 deliverable meeting 14th December
- ❑ Reinforcement needed in several areas (even if you're not interested maybe some lab colleague would be ?)