SA3 last year, lessons learned
The goals for the remaining months
The time after EGEE-II

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CERN Grid Deployment

SA3 in 2007

- **Achievements (done or almost done)**
  - Handling Change with an established process
  - Extensive use of the “Experimental Services” process
  - Extensive use of virtualized testbeds
  - Move to ETICS as the build system for gLite-3.1
  - Move to SL4 and VDT-1.6
  - Move to YAIM 4
  - Support for SGE (almost ready for the release)
  - Much improved release documentation
  - Better task tracking

- **Problems**
  - Batch system support for LSF and Condor
  - Interoperability for ARC and UNICORE
  - Patch certification is still largely a centralized activity
  - Communication is still expensive

SA3 in 2007

- **Handling Change with the established process**
  - 1 release per week
  - Process evolved, based on experience
  - 289 Patches in 2007
    - Corresponding to 820 closed bugs
    - ~10 Patches are in work in parallel
      - *Limited by local resources*
  - Patch certification sees more partner participation
    - 18 Patches certified by external partners
    - These are only 6%
  - Since the testbeds are up and running this is a major task for partners

Experimental Services

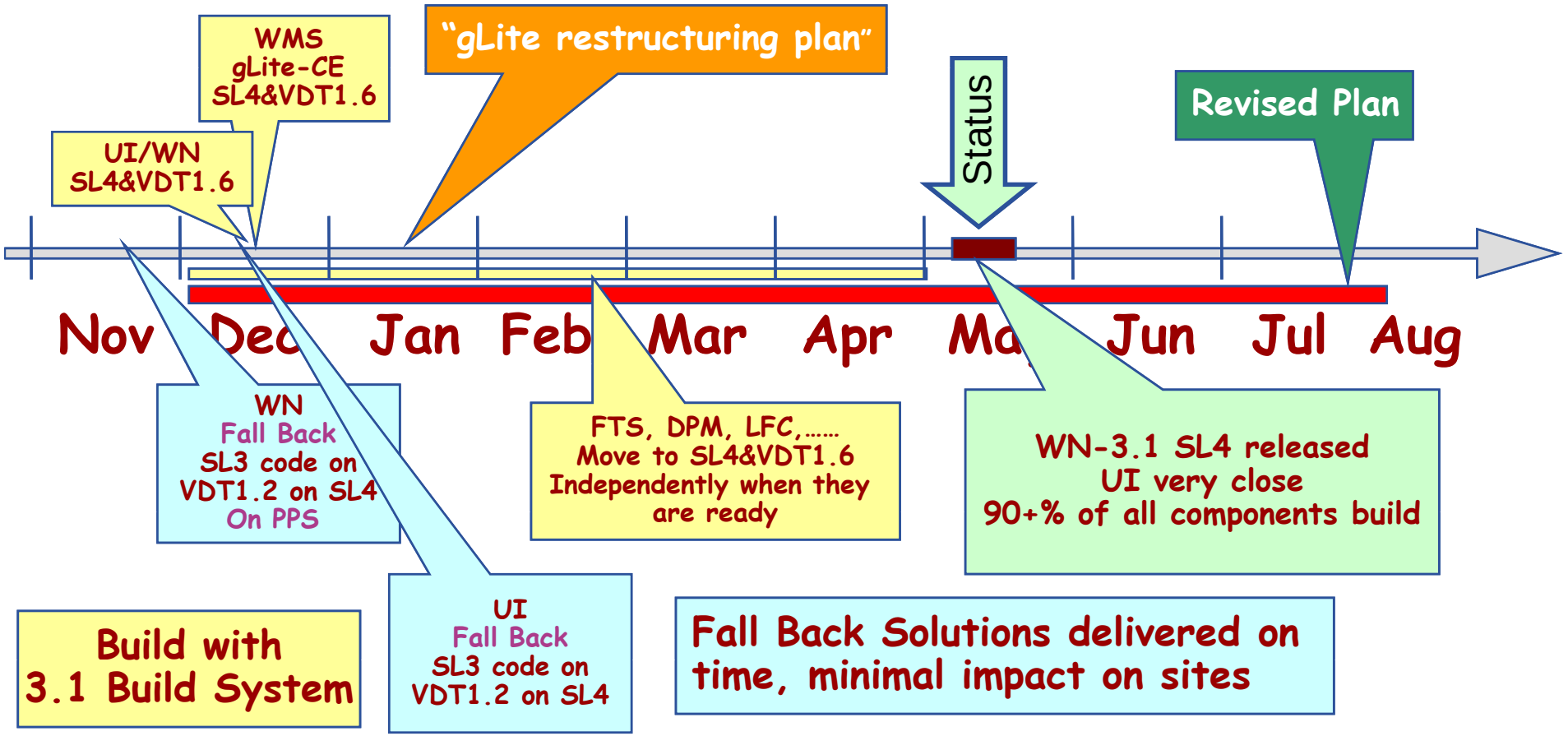
- **Extensive use of the "Experimental Services" process**
  - Only way to address scalability and stability of core services
  - We have to discuss how this can be done jointly with the PPS
    - Currently there isn't much activity on the PPS
  - For the WMS and CREAM-CE the service moved outside CERN
    - Service run by INFN
      - *Resources concentrated on this ---> LSF support reduced*
    - Verification of WMS checkpoint releases by Imperial College
      - *Time consuming*
  - Helped to speed up the process dramatically
  - Problems:
    - Reproducing the local setup proved very difficult
      - *Several iterations needed*
        - Months have been lost
      - *Tracking of activities on ESs has to be formalized*
      - *Build system use?*

Tests

- **Improved test coverage**
  - We are still far from where we wanted to be
    - Large contributions from outside SA3
      - *Summer visitors*
      - *Volunteers (Data management tests)*
    - *Adding regression testing still a dream*
      - But very important
    - How can we address this?
    - List are there on twiki test pages, we know what we want.....
  - Usage of virtualization reduces required hardware resources

Move to SL4

- **Revised plan from May (original target January)**
- **Problems to move to gLite-3.1 (including ETICS)**
  - Addressed by the PMB endorsed “gLite restructuring plan”



Move to SL4, VDT 1.6 and ETICS

- **This turned out to be much harder than anticipated**
  - Not a single reason, just too many changes at a time...
    - New OS, Build System (and evolution), 32 and 64 bit environments, new foundation, middleware evolution
  - Priorities have been and are still sometimes unclear
    - See WMS and CE work on SL3 with VDT-1.2
    - “Premium Customers” insisted on functional progress
  - ETICS system progressed while we migrated to it
    - Additional source of instability
    - ETICS is still frequently avoided by developers
      - *Performance issues*
      - *Lack of time to familiarize with the system*
      - *“re-synchronization” often unreliable and expensive*

YAIM

- **YAIM-4 Configuration support tool**
  - Independent releasable modules per component
  - Opened YAIM for developers and site admin contribution
  - Major refactoring of the tool
  - Removed almost all legacy Python configuration
  - Took quite some time and extensive effort
    - Reliability suffered
    - Resulted in a temporary loss of trust

Migration Status

- **Details later by Oliver Keeble**
- **Components:**
  - WN and UI (32 bits are in production)
  - LCG-CE has been ported to SL4 + VDT-1.6
    - Will reach PPS in 2 weeks (including DGAS support)
  - WMS/LB gLite 3.1 / SL4 version
    - certification in about 2 months
  - BDII released to PPS
  - DPM and LFC have been tested internally on SL4 (32 and 64bit)
    - Just waiting for the yaim component to complete certification (weeks)
  - FTS-2 SL4 pilot service is planned for October
    - Release and deployment at T1s in January
  - VOBOX prototype has been setup during summer
    - 1-2 months
  - Glite-PX
    - Finalising configuration (1 month)

Migration Status

- **More and ever more.....**
  - Glite-MON
    - Need config for tomcat 5.5
  - glite-SE_classic
    - Just started working, but simple
  - Glite-VOMS
    - Being processed as patch #1322
    - ~2 months
- **Strategy for 64 bit is prioritised;**
  - WN + Torque_client
  - DPM_disk
  - UI
  - Other services depending on 64bit advantage
- **Currently the 64bit WN + torque is undergoing runtime testing**
  - Our management scripts need to be updated to accommodate packages which must be installed 32/64
- **This corresponds to an enormous amount of testing**
  - Partner participation is required

Batch System Support

- **SGE: Quite advanced**
  - Can be released within approx. 2-3 months
- **LSF: Abandoned**
  - INF had to switch resources to experimental services
  - Larger sites have site specific solutions (hard to generalize)
  - We need to find a partner to pick this up!!!!
- **Condor: Slow progress**
  - It is not clear when we will see a complete solution
    - Need to get a detailed plan to track progress
    - Or stop effort and capitulate
- **Switch from gLite-CE to CREAM-CE**
  - Minor change, both use BLAH as the isolation layer
  - LCG-CE still needs support for the next Xx months

Interoperability

- **UNICORE**
  - Initial plan didn't work
  - New plan with reduced goals
    - Some progress visible
    - More during the session on interoperability
- **ARC**
  - Same as above
  - Long term commitment via NDGF
- **Overall disappointing**
  - NAREGI developed within 6 months almost complete set of tools

Communication and overhead

- **Expensive, especially for small partners**
  - 24 months project
  - 1 PM == 5 * 8 * 4 == 160 h of work
  - Phone conferences (prep., participation, minutes.., EMT, TCG,)
    - 24 * 2 * 2.5h == 120 h
  - Contribution to quarterly reports
    - 8 * 1 == 8 h
  - Contribution to reviews
    - 2 * 4 == 8 h (varies widely)
  - EGEE project conferences (and maybe User forum....)
    - 2 * 5 days (including participation) == 80 h (minimum)
  - All hands meetings + partner reviews
    - 2 * 2.5 * 3.5 days == 140 h
  - Deliverables and Milestones (production, review...)
    - 5 days on average (huge differences) == 40h
  - Time sheets
    - 24 * 0.5 == 12 h
- **Total Cost == 408 h == 2.5 PMs significant for smaller partners**

How can we improve communication?

- See Andreas Unterkircher's slides
- Input

Future

- **Some effort went into the EGEE-III proposal (weekends and nights)**
  - Has been submitted
  - Outcome not clear (but definitely not more than we asked for)

- **Main changes**
  - Some testing, integration and packaging effort co-located with development
    - Better link between SA3 and component developers
  - Certification still managed centrally
  - One partner will coordinate batch system support
  - More emphasis on Patch handling by partners
    - This will include contribution to regression tests
  - More emphasis on documentation
  - Role of ETICS has still to be defined
  - Number of partners: up to 17 (less than 2 FTEs per partner)
    - This will better coordination
      - *Detailed execution plan*
      - *Detailed activity tracking*

Discussion

- **Write write**
- **Some interests in using Xen tools (vgrid)**
- **There was some confusion on how to integrate tests and report result**
- **YAIM (especially pre 4) testing is extremely difficult for partners (blows the testbeds away...requires global expertise to debug)**
  - This comment by a tester comes quiete as a surprise, because Di does install tests.before shipping it to the partner testing
    - Needs to be followed up. Maria will be the point of contact to clarify this.
  - Tester: 3 bugs per node minimum SL3 (CentOS)-
  - Should improve with modularised YAIM
- **Availability of repositories**
  - Seems they change sometimes randomly.
  - Sometimes dissapear without notice
  - Questions are not always addressed in a timely manner

Discussion

- **If Mail fails, PLEASE Call someone at CERN.**
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Discussion

- **Write write**

Discussion

- **Write write**