BE-CO Activities during the LS2 period

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Contents

• Software consolidation & renovation
  • Post-ACCOR renovations
  • Applications & database consolidation
• Hardware consolidation & renovation
  • LHC WorldFIP infrastructure
  • OASIS consolidation
  • Timing renovation
  • Other projects
Post-ACCOR renovations

- Renovation of low-level controls
  - More than 900 front-end computers
- End-of-Life (EoL) of part of the Controls infrastructure
  - Operating systems (LynxOS, 32-bit Linux)
  - Real-time applications (FESA2, GM, SLEquip)
  - Communication (RDA2)
  - X/Motif applications
BE-CO’s EoL roadmap

End of FESA2 framework support

End of non InCA framework support

End of RDA2 & PROXY

End of GM & SLEQUIP

End of 32-bit machines

End of FESA2 dev. tools support

End of X MOTIF

End of FESA2

LS2: 2019-2020

2015

2016

2017

2018

LHC start

CTF stop

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Post-ACCOR renovations - planning

- Eqp groups’ renovation roadmap compliant
  - Require contributions from all eqp groups (10+)
  - Some items on the critical paths (e.g. b-train) with tight planning
  - Some items have to-be-validated technical solutions (high risk)
  - Followed up & updated every 6 months in CO3

- Non-InCA Java applications stop with CTF end of this year

Plan: 10972, 10973, 10974, 10975, 10976, 10977, 10979
Application & Database consolidation

- Public API changes (CALS, CCS, JAPC, LSA)
  - New API available at LS2 start or even earlier (early 2018)
  - Old API discarded at the end of LS2

- Layout service – new system & tools
  - Re-focus scope on pure layout data
  - Empower users to manage their own data
  - 1st version available early 2018

Plan: 10981, 10992, 10993, 10994
Application & Database consolidation

- New database servers & storage
  - New hardware for the database services
  - LS2: installation and switch to new systems

- Suppression of COPUB public account
  - Planning: gradual suppression until LS2

- Suppression of ADECONTROLS database
  - LS2: Complete deletion of account and tables

Plan: 10983, 10990, 10991
Hardware consolidation & renovation

- LHC WorldFIP infrastructure renovation
- OASIS consolidation
- Timing renovation
- Other projects
LHC WorldFIP infrastructure

- WorldFIP master renovation
  - Deploy CERN-designed bus arbiters & software stack to replace Alstom’s solution.
- EYETS: install pilots
- LS2: full replacement

Plan: 10822
LHC WorldFIP infrastructure

- WorldFIP Cu/Opt repeater renovation
  - Ageing Alstom repeaters replaced by in-sourced design (GOFIP)
  - LS2: Complete renovation

Plan: 10822
OASIS consolidation

- Eradication of the VXI platform
  - Replace 20+ y/o VXI digitisers by modern solutions
  - EYETS/YETS: partial eradication
  - LS2: Total eradication

Plan: 10829
OASIS consolidation

- Triggering network based on WhiteRabbit
  - LS2: Complete trigger generation & reception
  - Post-LS2: gradual switch to new infrastructure
  - EN-EL: network topology being finalised

Plan: 10821

http://indico.cern.ch/event/564604/
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Timing renovation

• Timing pulse distribution renovation
  • Replace 40 y/o pulse repeaters
  • TS/EYETS/YETS: small installations
  • LS2: complete renovation
  • IT/CS: Missing resources

Plan: 10795
Timing renovation

- Central timing network renovation
  - Renovate the central timing network (aka GMT) with White Rabbit
  - YETS: Deploy proof-of-concept
  - LS2: new network deployed
  - Post-LS2: slow migration to new infrastructure

Plan: 10797
Timing renovation

- Central timing’s external condition renovation
  - Renovate unreliable legacy hardware with modern industrial solution
  - Collaboration between BE-CO & BE-ICS
- LS2: complete migration

Plan: 10799, new activity by ICS
Other projects

- Decabling project (EN-EL)
  - Identification of obsolete BE-CO cables
- EYETS/YETS
  - PSB: 634 cables to be removed
  - PS: 2228 cables to be processed
  - SPS: 265 cables to be removed (points 3 & 5)

Plan: 10828
Other projects

- SPS intercom
  - Activity integrated in the Fire Safety Project by BE-ICS-AS

Plan: 10982
Other projects

- Replacement of TN routers & switches (IT)
  - Critical activities
  - Cost: 2 to 4 MCHF to be requested (consolidation)

Plan: 10042, 10043
Conclusions

• Post-ACCOR roadmaps **compliant with EoL**
  • Followed-up in CO3
• OASIS trigger renovation: **info to EN-EL**
• Timing pulse distribution: **follow-up with IT-CS**
• Some activities to be moved to BE-ICS (timing external conditions, SPS intercom)
• Consolidation **budget to be requested for IT network equipment**