Elog task group report

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Mandate

Investigate a common solution for eLog in the context of collaborative services

Activities

- More information on the confluence page: https://confluence.desy.de/display/BI/ELog+Task+Force
- acquire uses cases;
- define list of requirements;
- find possible options:
  - look at experience of other HEP experiment;
- setup testbed to explore different options;
- propose a (set) of long term solutions;

Inputs so far

Already now, several groups needed some king of log system and tried different solutions.
We can use these experience to understand requirements, what works and what does not, wishlist, problems, etc
Not only traditional on-line cases (data taking, testbeams, . . .), but *off-line* as well.

- On/Offline shifts at KEK
- BEAST Operations
- TOP detector commissioning
- PXD+SVD test beams
- Software quality shift
- MC campaign productions
- you?

Use cases

What we would like to have from different experience is the following:

- location of use:
  - does it need to be close to the place of use, or not?
    - ★ eg online eLog: desy.de or local? what if network problem? local/remote with syncronisation?
- network/access:
  - local/worldwide read/write?
  - authentication/authorisation: who need access? do we distinguish among the Belle
- who does what:
  - shifter/expert/run manager/ etc
- categories to be defined:
  - eg: need to upload the current status of data taking in one click/automatic?
  - mandatory shift-list to be followed
- attachments:
  - plots, snapshots, pictures, documents, . . .)
- notification:
  - to whom (ML, individual(s))? All logs or setup filter (eg only those marked as “critical”)
- AoB?

Requirements

- Easy to use and maintain, scalable to large number of elog, searchable, backup, ...
- authentication/authorization: possibly w/o adding a new set of usernames/password, eg reusing desy ones,
- web interface (also mobile friendly);
- model for access:
  - online shift are typically run from inside a private network, not accessible from outside
  - offline shift are typically run from wan.
  - read access should be possible from anywhere
  - write access might be limited
  - what if network problem during online shift? maybe a local eLog to be replicated/synchronized with a global one?

Requirements (cont'ed)

- edit/delete switchable: eg: data-taking log is write only
- possible to define fixed tag/categories
  - have a structured entry, namely a set of mandatory field to be filled for each run/data-taking/whatever and then free text to add notes and other stuff. This would help to harvest data if needed.
  - eg shift list to be filled
  - maybe a way to upload files via script? Eg: at the end of each run create automatically an eLog entry with all the useful information.
- able to handle attachments
- possibility comment on elog entry (in a threaded way)
- priority or sticky log entry
  - eg: HW change for the next run, should be on top even after n other elog entries

Requirements (cont'ed)

- Mail connection:
  - possibly also a mail gateway: user send a mail to a particular address and the mail is entered in the elog system
  - subscribe to elog: each time an elog is inserted, mail to all subscribed people
  - or setup a filter so that given type of entries are submitted to a given list of people;
  - attachment handling (attach or via link)
  - answer to that mail should be logged in the elog as well
  - possibility to disable reply

Other HEP experiment

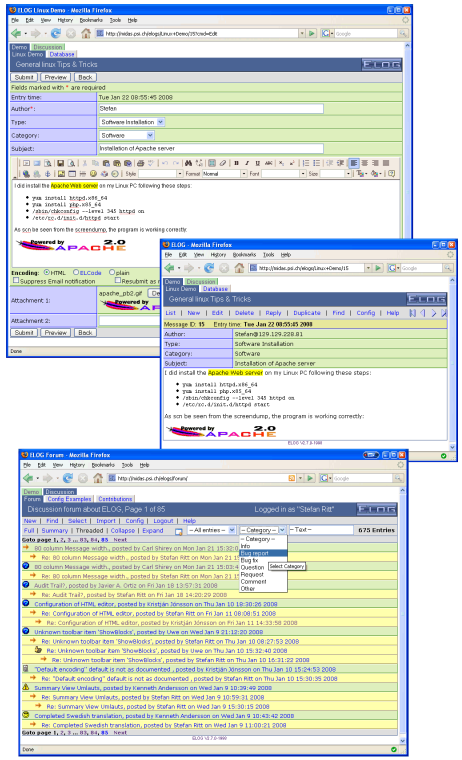
1. CMS eLog [Bukowiec et al.(2010)]
   - new code, same look and feel as eLog:
   - Oracle backend, written in the Java, XHTML and JavaScript
2. ALICE eLog [Carena et al.(2010)]
   - Custom made, MySQL, PHP
3. ATLAS [Radu et al.(2012)Radu, Miotto, and Magnoni]
   - previous one (ATLOG) based on eLog: scalability issue
   - current ELisA: ModelView-Controller (MVC) framework, Ajax, JSON, JavaScript, jQuery
4. LHCb [Leung and Neufeld(2015)]
   - eLog based: optimization for perfomances
5. DESY: doocs [Kammering et al.(2002)]
   - XML based web service, apache, Java servlet w/ tomcat
6. BNL: olog
7. others?

Options on the market

- Twiki/Confluence
  - Currently used by computing shift
  - ✓ already available
  - × not really build for eLog, not scalable
- eLog
  - https://midas.psi.ch/elog/
  - Currently used by many: TOP, PXD-SVD, Beast
  - ✓ used by other HEP exp as well, experience in B2 as well
  - × current instances are world scattered (2 at Hawaii, desy, KEK)
- DESY elog book (doocs)
  - An electronic logbook (e-logbook) developed by the DOOCS team http://tesla.desy.de/doocs/elogbook/
  - ✓ available and already connected with confluence authentication system
  - × need to investigate: we have acces to a test-log
- Olog (BNL)
  - http://olog.github.io/
  - Just signaled by Michael Ritzert
- JIRA
  - × Not really a log system

Current most popular option: eLog

- http://midas.psi.ch/elog/ author: Stefan Ritt
- First release 2001: latest release (3.2.1) 5/9/2016 (GNU public license)
- initial choice of LHC experiments (with [heavy] customization)
  - C, javascript, css
  - web interface
  - own web server (can work with apache)
  - very configurable
  - flat file "database"
  - form (shift check-list), categories, sub-cat
  - mail notification, with filter, attach, etc
  - access control: native, kerberos, LDAP, guest
  - two way synchronization (keep two or more logbooks in sync)



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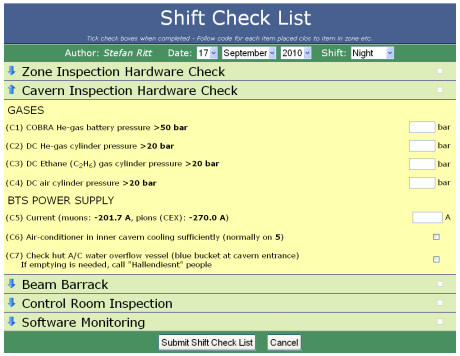

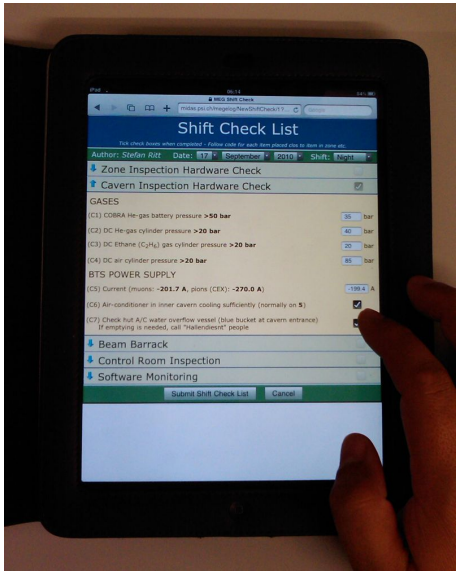

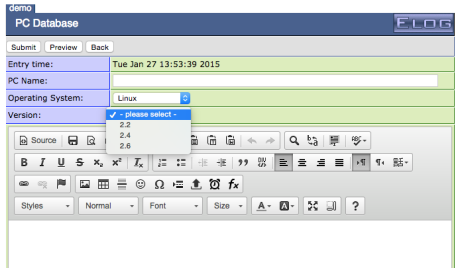

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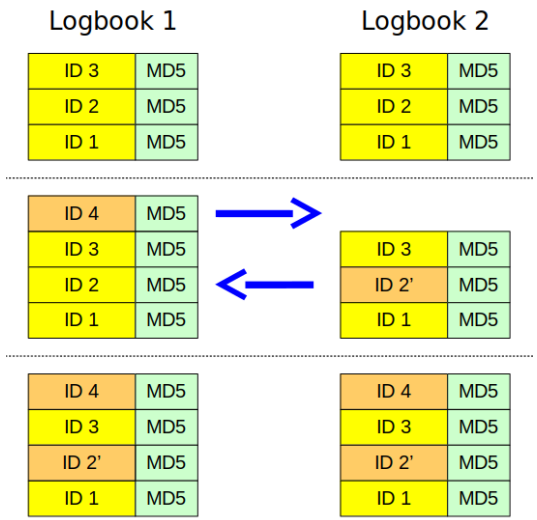

Test setup for PXD-SVD

- In contact with Benjamin Schwenker and Alan Campbell from PXD-SVD community
- a PXD-SVD test beam will start soon (13/2) and need a eLog server.
- Previously they used a "private" server in desy which is no longer available.
  - ✓ setup a VM at desy (officially supported)
    - ✓ ready, thanks to Andreas Gellrich
    - ✓ access requires login with desy credential
    - ✓ desy instance will be avaialble as https://elog.belle2.org soon
    - ✓ an other instance is available at KEK (by computing group)
  - ✓ setup an eLog server
  - ▸ use the previous eLog configuration from past test-beam to configure a eLog for next testbeam
    - ★ provide eLog to PXD-SVD people
    - ★ learn from the process
    - ★ import the old eLog into the new server (low priority)
  - ▸ plan B: there is a backup server available at Max Planck Institute in Munich just in case.

Additional stuff

Additional or backup slides

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