Requirements for the PVSS Central Log Viewer

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Introduction

This document summarizes the initial set of requirements for a Central Log Viewer for PVSS. Such log viewer, when implemented by IT/CO-BE, would allow to display PVSS log messages from all PVSS systems in a distributed system, in a centralized place (i.e. in a single application).

The requirements gathered here are based on initial discussions with the members of ATLAS and CMS Central DCS Teams. They are supposed to act as an input for the first prototype implementation.

Please note that the viewer is separate from the "error handler plugins", which actually allow to make use of the PVSS log data in external application. The prototypes of such plugins, allowing to publish the log messages using the DIM protocol, and save them into an Oracle database, are currently developed by ATLAS and CMS.

Requirements

General requirements

- the central log viewer should be a stand-alone application, working on Windows and Linux
- it should be able to display PVSS log messages from the systems that form a large (up to O(100)) PVSS distributed system
- it should deliver the functionality provided by the original PVSS log viewer, including the filtering and scrolling through the list of messages
- it should be able to display "live" data, coming from PVSS systems, as they come via the DIM data stream (over the network)
- it should be able to display the historical log messages, stored in an Oracle database

ATLAS-specific Requirements

- the current implementation used by ATLAS (including the log-error handler plugin) is available at ATLAS DCS Twiki page
- it should be possible to filter the messages based on so called "severity"; it is the ATLAS-specific set of pre-defined messages, with pre-defined error codes (1000+X); it should be possible to highlight/colour the lines containing the messages according to this code
- format the data into a tabular form (so that certain columns can be shown/hidden)
- it should be possible to configure the colours for various messages, etc.
- when a message is right-clicked, it should be possible to execute a configurable action (eg. display related help page, copy to e-logbook, etc); the actions that are executed should be "pluggable" (i.e. extensible)
- ATLAS stores/retrieves the log messages using the CORAL DB Interface; the database schema (if decided on a unified approach) needs to be compatible with CORAL
- when the historical log entries are queried from the database, it should be possible to search (filter) on things such as
  - system
  - severity
  - any string in the content of the message
  - specify the start/end of the time period being queried
- the priority is to implement the "online" (DIM) part first - the "historical" queries are not of so high importance at the moment

CMS-specific Requirements

- the data-input abstraction part should be flexible, allowing to plug various mechanisms for data input: