Technical Meeting COMPASS DCS / EN-ICE

Date: 2nd March 2009 from 10:30am to 12:00am
Place: Scada Lab
This meeting was attended by:
Catarina Quintans (COMPASS DCS) (CQ)
Christophe Pires (COMPASS DCS) (CP)
Ana Sofia Nunes (COMPASS DCS) (ASN)
Mathias Dutour (EN ICE) (MD)
Piotr Golonka (EN ICE) (PG)

Note: Some items from the previous meeting have been integrated *in italic*.

Content:

General news:

MD announced the changes in the offered support for the management of firmware. The primary interface for firmware information is PH-ESE, the objectives being to:

- Better inform the end-users of the availability of a new firmware, related release notes and provide upgrade requirements and recommendations.
- Improve the manufacturer information provided to CERN with this respect.
- Maintain a clear picture and a repository of the current firmware recommended for the hardware (PH-ESE database, in progress).

PG announced the JCOP Fw 4.0.0 as available although it is not yet officially announced. See PVSS paragraph below for the details.
For information, PG indicated the PVSS Service Pack 1 shall be available by the end of march (3.8) while the next PVSS version, 3.9, in foreseen for December 2009.

Previously identified actions:
Action COMPASS*: Provide a description of the expected behavior of the DCS system and list of identified risks.*
Action pending.

Expectations and means to integrate the calorimeter in COMPASS DCS have to be identified.
Action CP*: Schedule a separate meeting with ITCO to address this point.*
Action closed. ASN indicated the Calorimeter data is partly integrated in a test project. It will be tested as in real conditions in April. More than 3000 datapoints are foreseen, there are not particular technical issues identified at this point.

CQ also indicated that PLC data (through Modbus TCP) shall be integrated.
The PLC data from the Saclay team shall be integrated, no particular technical issue identified. However, CQ raised a risk, as the PLC data to integrate has

changed and it is not clear whether the modbus server providing this information will be upgraded accordingly/on time by the Saclay team.

From the same team, a CAEN SY127 power supply data (though Channel Access / EPICS) have to be integrated in the DCS for the run. The mechanism already in place to get the SY127 data in PVSS (API Manager) is already in place and simply needs to be extended. CQ indicated this has not a high priority.

PVSS / General:

JCOP Framework v. 4.0.0 for PVSS 3.8
As mentioned in the General news paragraph, PG indicated that the final JCOP Framework version for PVSS 3.8 (v.4.0.0) is available for the CERN users. EDIT: Here is the link to download JCOP Fw. v.4.0.0:
http://itcobe.web.cern.ch/itcobe/Projects/Framework/Download/Framework/Framework4/framework4.0.0/framework4.0.0.zip

For the installation, the latest version of the Installation Tool (3.5.1) is required, available at
http://itcobe.web.cern.ch/itcobe/Projects/Framework/Download/Components/ComponentInstallation/welcome.html

Potential COMPASS migration to PVSS 3.8:

PG indicated there is no new functionality in this new JCOP framework version, simply a port to PVSS 3.8. The list of issues encountered is consolidated in the following Twiki pages:
https://twiki.cern.ch/twiki/bin/view/Controls/38NewFeatures

MD advised COMPASS to setup a machine with a copy of the operational project and to port it to PVSS 3.8 for testing purpose. CQ asked about the requirement for the migration.

CQ reported that PVSS 3.8 was tested (part of the functionality) and it went fine so far. PG warned that the migration from PVSS 3.6 to 3.8 is not trivial, the help and migration tool readme files' recommendations shall be carefully followed.

PG recommended the following migration path:

- Migration of the test project (copy of the operational project, without archiving) from 3.6 to 3.8 PVSS. Make sure the migration was successful.
- Then for the real project, migrate the database schema to version 8 (also requires PVSS patch P048), then migrate the project to PVSS 3.8. Validate migration.

Action MD: Confirm the FwWiener still support the Krakow OPC server. FwCaen component shall still support as well the DIM protocol (SLiC).

PVSS/ Oracle archiving:

The DCS data this year will be archived in Oracle. CQ is worried that the Oracle archiving presents some flaws during the data taking. MD suggested to identify critical scenario and to use them proof-test the Oracle archiving before the run.

CQ wants to run these tests with the configuration of the real system as for the run, not performed at this time.

CQ is also looking for a solution to give access to archived data in parallel to the archiving process itself. CQ foresees a set of PVSS panels to give access to the data while PG indicated the possibility of using the "PVSS RDB Archiver Data Access Interface for External Applications" - an extension of database schema developed in IT/CO-BE.

The DAI API was tested by ASN who reported problems with it. PG was informed and is taking care of the issues, which shall be solved on the following days. After then, COMPASS will complete testing and decide which mechanism is best to give access to the archived data.

PVSS/ConfigurationDB:

To prevent the incident that occurred in 2008 on a wrongly configured ISEG module (see Minutes of October 2008), CQ would like to secure the operations of the ConfigurationDB, in particular for Detector people with little experience of the ConfigurationDB.[…] After further discussions, we came to the conclusion that a safer approach would be to restore the devices from a snapshot and apply predefined recipes on them.
CQ confirmed this will be the followed path by COMPASS, associated panels and functionality possibly handled by CMP.

Wiener:

MD indicated that Wiener agreed to provide the new OPC server for COMPASS to perform tests during the Winter break, (free of charge for testing purpose).
MD confirmed that in case the tests are considered successful by COMPASS DCS team, Wiener will officially integrate the UEP5021 in the list of equipment supported by their OPC server, hence the licence fee from then on. Nonetheless, MD reminded such integration may not be free of charge.

We discussed the possibility to upgrade an entire CANbus to run the OPC server tests. CQ indicated a CAN bus with 3 UEP6021 and 3 UEP5021 could be used for this purpose. (CQ prefers not to upgrade the UEP6021 for the time being.)

***Action COMPASS**: Identify and organize the setup for these tests. (Possibly a dedicated PVSS project, an entire CANbus upgraded). ITCO will help to get this setup right.*
Concerning the UEP 6021 upgrade, CQ explained it not clear whether the upgrade can still be done and the equipment may move soon for operation.

Action MD: Contact Wiener again to get the corrected EEPROM for the UEP5021 fan trays.
EDIT: Done, Wiener re-checked the fantray EPROM firmware (H1 5.07): no obvious bug. However, Wiener tested it without a power supply attached to the fan tray and requested one. MD will follow this up with COMPASS, possibly using PH-ESE test environment.

CAEN:

Concerning the obsolescence management of CAENet equipment and software, CAEN will provide to CERN a model of their foreseen strategy before the end of the year. The intention is for CAEN to clarify the level of support end users can expect w.r.t. their equipment and software on the long term.
EDIT: A second version of this document has been received on 3rd March 2009 and is being checked by PH-ESE and EN-ICE-SIC.

About the CAENet communication issue, MD indicated the complete test system (PC + A1303 + SY527 crate + modules) is ready to be shipped to CAEN. EDIT: Done.
Due to the little support from CAEN so far, MD proposed several alternatives offline before this meeting minutes. CQ indicated the most realistic scenario with respect to the CAENet issue is simply to run with SLC3 this year again if no credible solution has been found with CAEN before the run. In this case, MD recommended to inform the CERN Security team. CQ then mentioned the COMPASS technical board would be informed as well if SLC3 is used.

MD offered to check the OPC server performance and stability on the Windows platform which has not been tested since a long time.
Action MD: Test the CAENET equipment with recent OPC server on the Windows platform.

Concerning firmware upgrade, CQ mentioned COMPASS' SY527 requiring a hardware upgrade will be sent to CAEN: EDIT: Done.

DIP:

Action COMPASS*: Make sure the router for proper COMPASS<>TN networking bridge will be in place before the next run.*
Action closed. The new router will be in place for the run of 2009.

NIM Crates:
MD asked whether the remote control of NIM crates through Wiener OPC would be of interest to COMPASS, NA62 and E-Pool are interested in this solution. CQ is not sure whether this is required for COMPASS due to the few NIM crates in use.

Action CQ*: Check whether the remote control of NIM crates through Wiener OPC would be useful for COMPASS.*
Action closed, CQ indicated there is no obvious interest in this ability.
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