Subject: EPICS & LabVIEW
Posted by Brand on Mon, 05 Apr 2004 16:10:17 GMT
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Hello!
following eMail was posted to the Tech-Talk list of EPICS:

GSI will build FAIR, an International Facility for Antiproton and Ion Research, http://www.gsi.de/zukunftsprojekt/index_e.html, and therefore we are evaluating possible SCADA solutions for accelerator and experiment control.

The two most important options are EPICS and PVSS/JCOP (CERNs favorite solution).

HADES, http://www-hades.gsi.de/ becomes part of CBM http://www.gsi.de/zukunftsprojekt/experimente/CBM/index_e.html and a lot of members of the PANDA collaboration are coming from BaBar http://www.gsi.de/zukunftsprojekt/experimente/hesr-panda/index_e.html. Since both communities are using EPICS today, there is a good chance for using EPICS in the future.

Since our group, http://www.gsi.de/informationen/wti/dvee/exp_kontrol/exp_kontrol_systeme_e.html, developed an control system framework based on LabVIEW, http://labview.gsi.de/CS/cs.htm, we would like to save our investments in that development. Last year we had some discussions with Jochen Klier, NI Germany, about the extension of the Data Logging and Supervisory Control Module (DSC) to large systems. I suggested to him to check the features of EPICS and PVSS for ideas on improving the DSC module.

On VIP 2004 in Germany I talked to Michael Santori, Buisiness & Technologie Fellow of NI, about the plans of a native CA integration into LabVIEW. Probably I will have a discussion with the LabVIEW core developer team in Austin at the NI Week 2004. I also talked to Mathias Clausen, whether this activity is a part of the EPICS 2010 activities, but he did not know any details.

I would like to offer my participation within the task of integrating a native CA interface into LabVIEW.

Regards Holger

Subject: Re: EPICS & LabVIEW
Posted by Brand on Fri, 04 Jun 2004 07:22:17 GMT
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Hello,
in the attachment you can find my summary of feedback I got from some EPICS experts. Thanks to all of them.

I will send this document also to NI and the EPICS Tech-Talk list, http://www.aps.anl.gov/epics/tech-talk/index.php.

Regards Holger Brand

File Attachments

1) LabVIEW-CA Summary.pdf, downloaded 4111 times

Subject: Re: EPICS & LabVIEW
Posted by Brand on Fri, 04 Jun 2004 08:11:12 GMT
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Hello,
here some more links concerning EPICS-LabVIEW interfaces.

ICALEPCS 2003, Shared Memory Interface,
http://icalepcs2003.postech.ac.kr/db/proc_papers/TU514/TU514.pdf

EPICS spring conference 2004, A summary:
http://lansce.lanl.gov/EPICS/presentations/Joe%20Xu%20EPICS-LabVIEW1.pdf

Regards Holger

Subject: EPICS Test Installation
Posted by Brand on Mon, 07 Jun 2004 11:40:30 GMT
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Hello,
IŽd like to present my planned roadmap to provide an EPICS test installation at GSI.
Refer to the EPICS Homepage, http://www.aps.anl.gov/epics/index.php for details information about EPICS.

Download of software
Download of software to the GSI Linux Cluster and unzip.
Build for targets and create a IOC demo application

vxWorks
I have an ELTEC e7 available in a VME crate in out lab to run the IOC with vxWorks.
The combination of vxWorks on ELTEC e7 is used in the HDAES experiment. There are a lot of application running. Refer to http://www-hades.gsi.de/scs for details.
Linux
We could use our Linux group server to run an IOC with Linux.
Windows
We could use our Lab-PC to run an IOC with Windows.
RTEMS
We have to select a supported board to start with RTEMS. Later we would try to run it on ELTEC e7, too.

Create coresponding host applications

Graphical User interface

Motif Editor and Display Manager, MEDM
Exeed, a commercial Motif library, is needed to used MEDM also with Windows.
LabVIEW
The LabVIEW Shared Memory Interface to EPICS IOC is recommened, since the ActiveX Interface is depricated.

Alarm Handler, ADT, ALH
Archiver, AR
Buckup and Restore, BURT
IOC Database Management Tools
Orcale DB Interface

This test installation could then later be used as starting point for real experiment controls.

Regards Holger

Subject: Re: EPICS & LabVIEW CA Integration
Posted by Brand on Fri, 03 Sep 2004 06:28:34 GMT
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Hello,
at NIWeek 2004 I could try a pre-alpha version of LabVIEW 8.

The discussion with the NI developer lead me to the decision to defer the CA integration into LabVIEW until LabVIEW 8 becomes available as beta version.

Regards Holger
