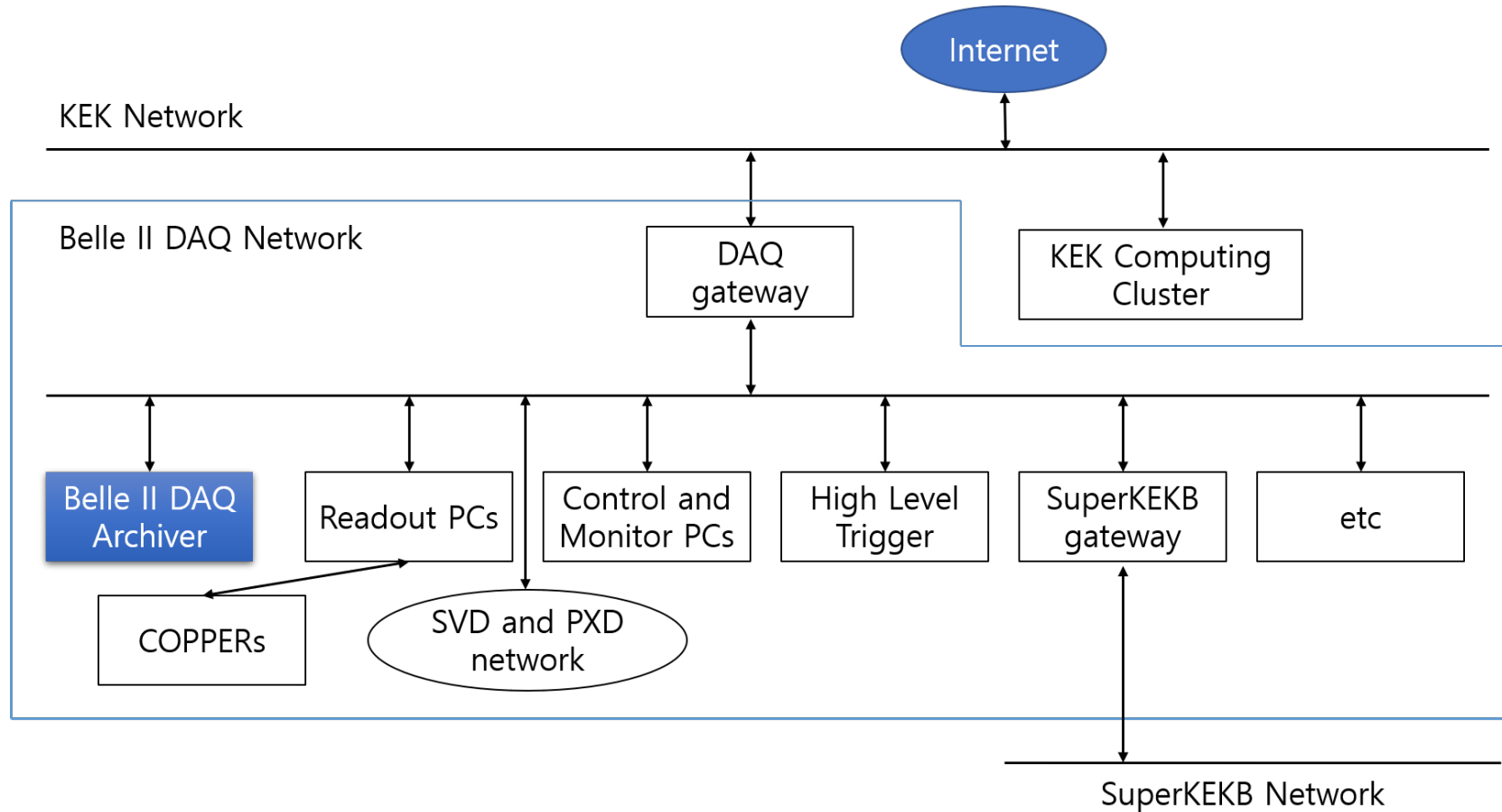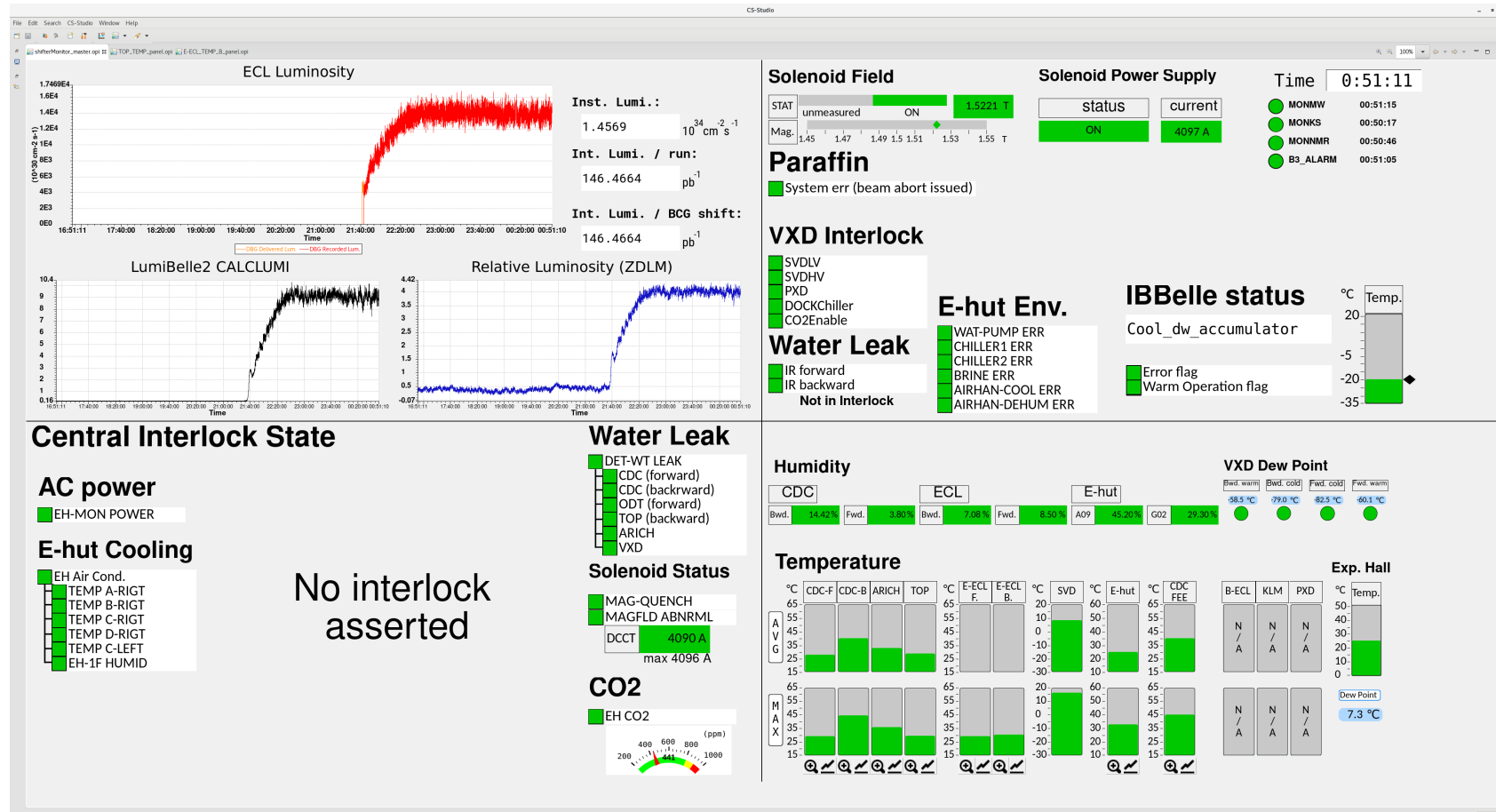# Archiver System Management for Belle II Detector Operation

Yongkyu Kim
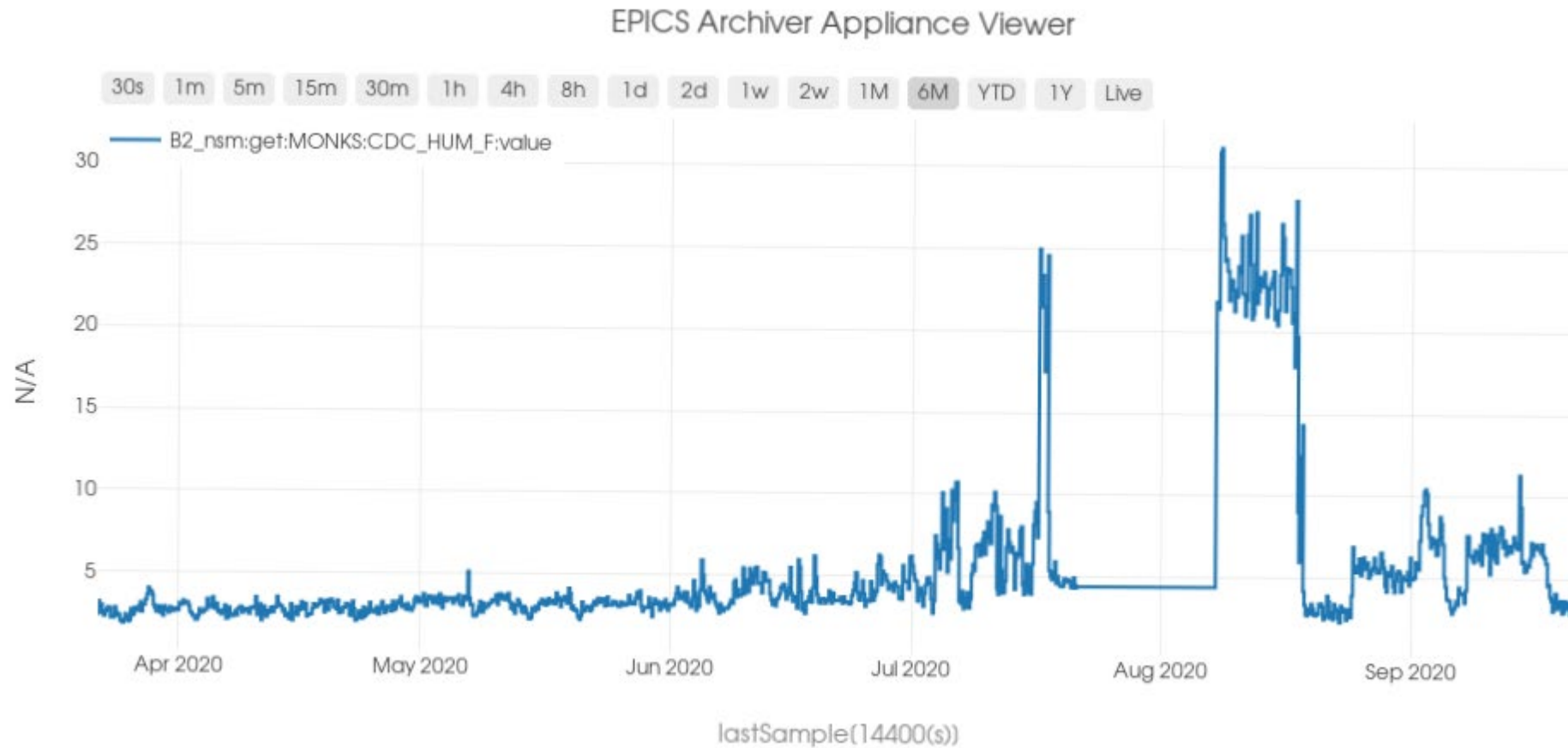
Belle II DAQ network

Monitoring System

Retrieval Webapp

EPICS Archiver Appliance Viewer
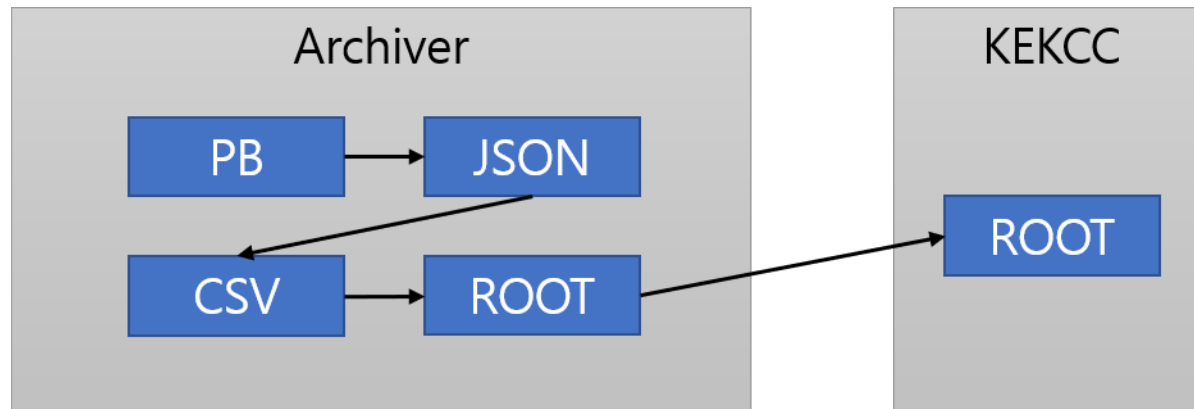
PB to ROOT

EPICS archiver
supports archiver specific format called PB, and only can be accesible in Belle II DAQ network.

we developed a chain of conversion programs to convert the PB data into the ROOT format by combining existing tools. We converts our monthly PB file in LTS and transfer it to KEKCC.

Archiver Status Notification

Disconnected PV check

[B2ARCH] Note on disconnected PVs ▶ [Inbox ×]

b2arch-b2arch1.daqnet@bpost.kek.jp via yonsei.ac.kr

This mail contains notification on disconnected PVs.
Here is summary of disconnected PVs

   1 BEAST:CLAWS:RATE:FRAC:BWD_Z0_1:
32 BEAST:CLAWS
  3 BEAST:DAQ
  6 BEAST:TPCMASTER

[B2ARCH] There is no disconnected PV ∑ [Inbox ×]

b2arch-b2arch1.daqnet@bpost.kek.jp via yonsei.ac.kr

This mail contains notification on disconnected PVs.
Here is summary of disconnected PVs

 There is no disconnected PV.

Work done by crontab

This mail comes every morning 7:10 KST

using Shell and Python script.

PV List Consistency check

PXD (Contact person: pxd@belle2.org)

DHP

#	PV name	Description	Unit	Comment
20	PXD:H<nnnn>:dhp_data:OCC:cur	PXD occupancies	Byte/Ev	<nnnn> = 1011,1012,1021,1022,1031,1032,1041,1042, 1051,1052,1061,1062,1071,1072,1081,1082,2041,2042,2051,2052

SVD (Contact person: @Yin Hao or svd-sc@belle2.org)

QM (28)

#	PV name	Description	Unit	Comment
28	SVD:QM:Monitor:3:<i>:<j>: <k>:HWOccupancy	SVD layer3 occupancy	%	<i> =1-7 , <j> = 1,2 <k> = 0,1 i: ladder, j: 0 = forward ~ (layer - 1) = backward, k: 0 = p-side, 1 = n-side
60	SVD:QM:Monitor:4:<i>:<j>: <k>:HWOccupancy	SVD layer4 occupancy	%	<i> =1-10 , <j> = 1,2,3 <k> = 0,1
96	SVD:QM:Monitor:5:<i>:<j>: <k>:HWOccupancy	SVD layer5 occupancy	%	<i> =1-12 , <j> = 1,2,3,4 <k> = 0,1
160	SVD:QM:Monitor:6:<i>:<j>: <k>:HWOccupancy	SVD layer6 occupancy	%	<i> =1-16 , <j> = 1,2,3,4,5 <k> = 0,1
4	SVD:OccMon:L<i>:Max	Max. occupancy of layer <i>	%	i: layer <i> = 3-6
4	SVD:OccMon:L<i>:Avg	Avg. occupancy of layer <i>	%	i: layer <i> = 3-6
4	SVD:OccMon:L<i>:AvgNorm	Avg. occupancy of layer <i> re-normalized to the alarm limit at 2%	%	i: layer <i> = 3-6

Parsed by Python script.

If there is difference, Archiver experts will notify subdetector experts.

Archiver Backup
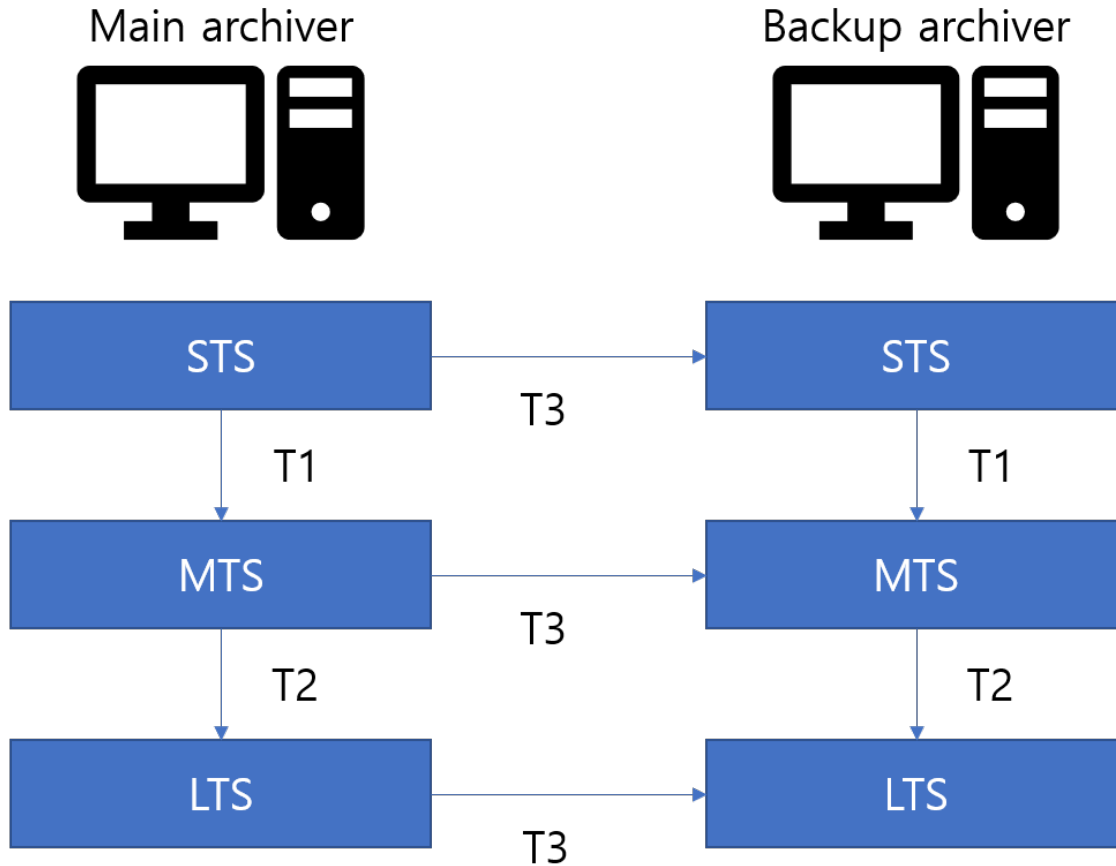
STS uses SSD
MTS and LTS uses HDD

T1 : < 3 days
T2 : < 1 week
T3 : every 20 min