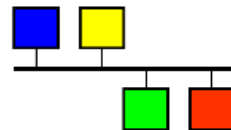


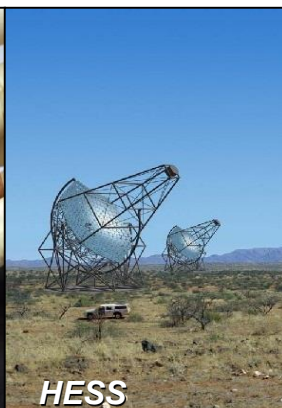
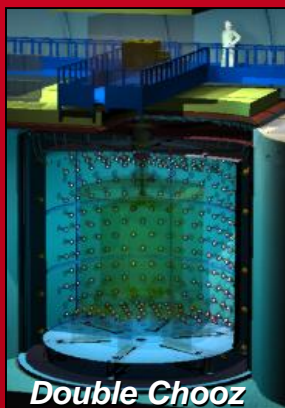
DE LA RECHERCHE À L'INDUSTRIE

cea

EPICS



WEB SERVICES USAGE

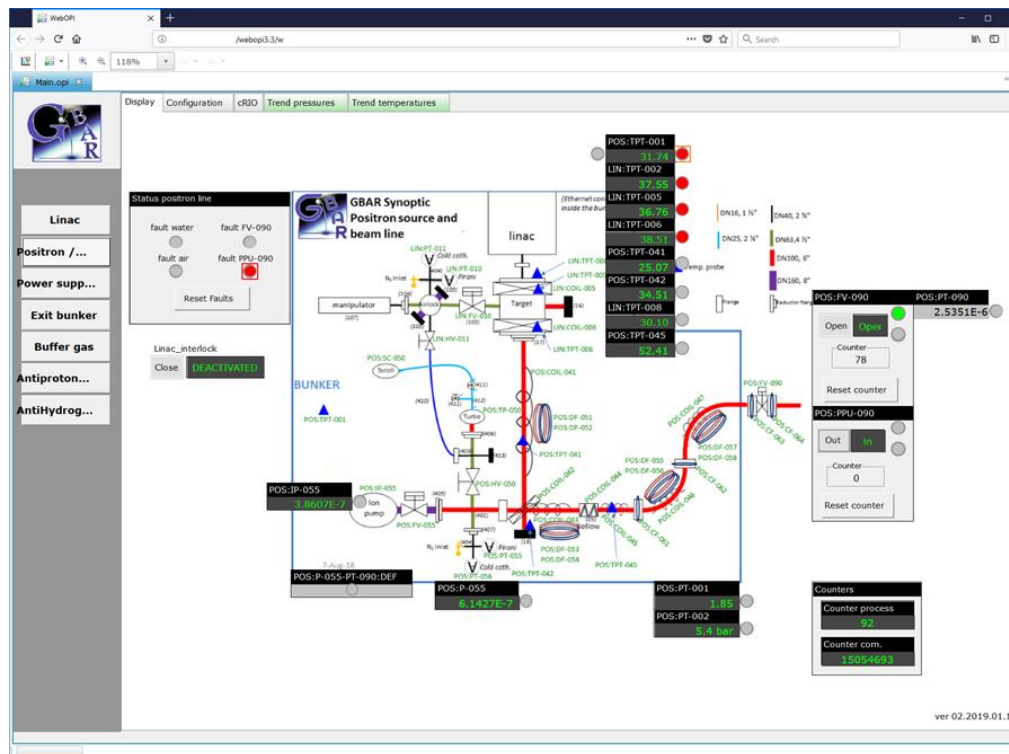


Paul LOTRUS & Katy SAINTIN

June 2019

WEB OPI (SNS): GBAR experiment

- CSS RAP <https://github.com/CONTROLSYSTEMSTUDIO/CS-STUDIO/WIKI/WEBOPI> running on Tomcat server gives easy access to online experiment status
- For read-only rights, we are using ca-gateway
- Performances: loading view is not fast
- Memory: Seems to have memory trouble, reboot of the application
- Resize of the controls is not an easy parameter for the developer
- Not CSS BOB compatible



Website alarm (SNS): Test stand CEA and GBAR experiment

- We don't have a great feedback from the users, probably because it is not integrated with the synoptic view website
- Installation documentation is light, and so the configuration is not that easy

The screenshot displays the 'Alarms' web interface. On the left, there are sections for 'View Alarm Configuration', 'Active Alarms', 'Stale Alarms', and 'Annunciations'. The 'Active Alarms' section contains a table with the following data:

#	Trigger PV Name	Alarm Time	Alarm Severity	Current Severity
1	POS.TPT-001.DEF	2019-04-26 15:07:58	MINOR	MINOR
2	POS.PT-090.DEF	2019-04-26 12:15:39	MAJOR	OK
3	LIN.TPT-105	2019-04-24 20:15:13	UNDEFINED	OK

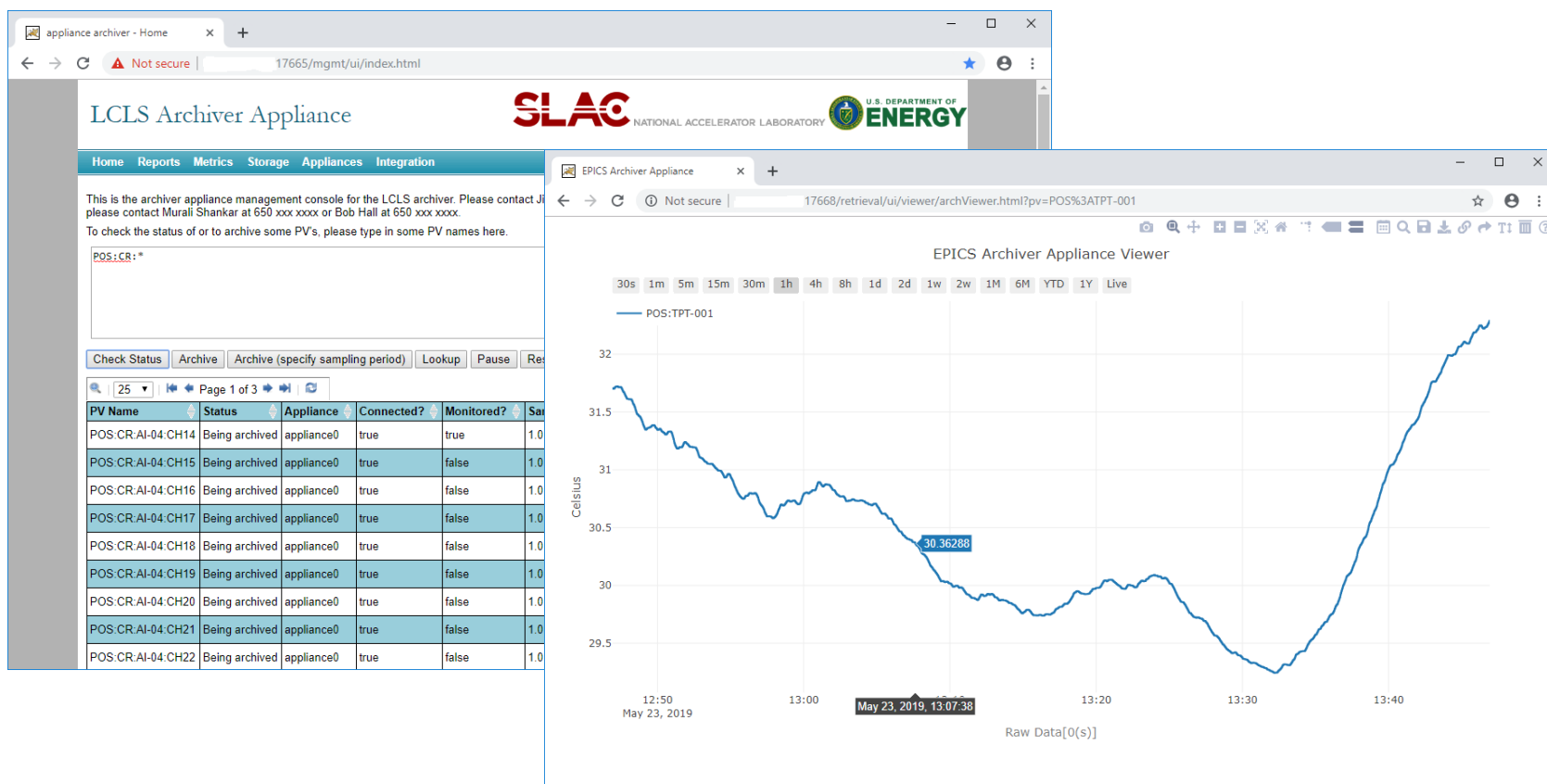
The right side of the interface features three charts:

- Alarms per 10 min periods, all configs, last 24 h, based on alarm severity:** A bar chart showing counts per 10-minute period over a 24-hour period. The y-axis is 'Counts per 10 minutes' (0 to 2). The x-axis shows time from 12AM to 12AM. A legend indicates MAJOR (red), INVALID (purple), and MINOR (yellow).
- 10 Alarms, config=Annunciator, last 24 h, cur_severity base NONE FOUND:** A cumulative distribution chart showing 'Signal Name' on the y-axis and 'Counts' on the x-axis (0 to 1). The title indicates 'NONE FOUND'.
- Top 10 Major Alarms, config=Annunciator, last 24 h, cur_severity based: NONE FOUND:** Another cumulative distribution chart, identical to the one above, showing 'Signal Name' and 'Counts'.

At the bottom, there are 'Alarms Statistics and Details Reports' with filters for PV pattern, time period, and severity.

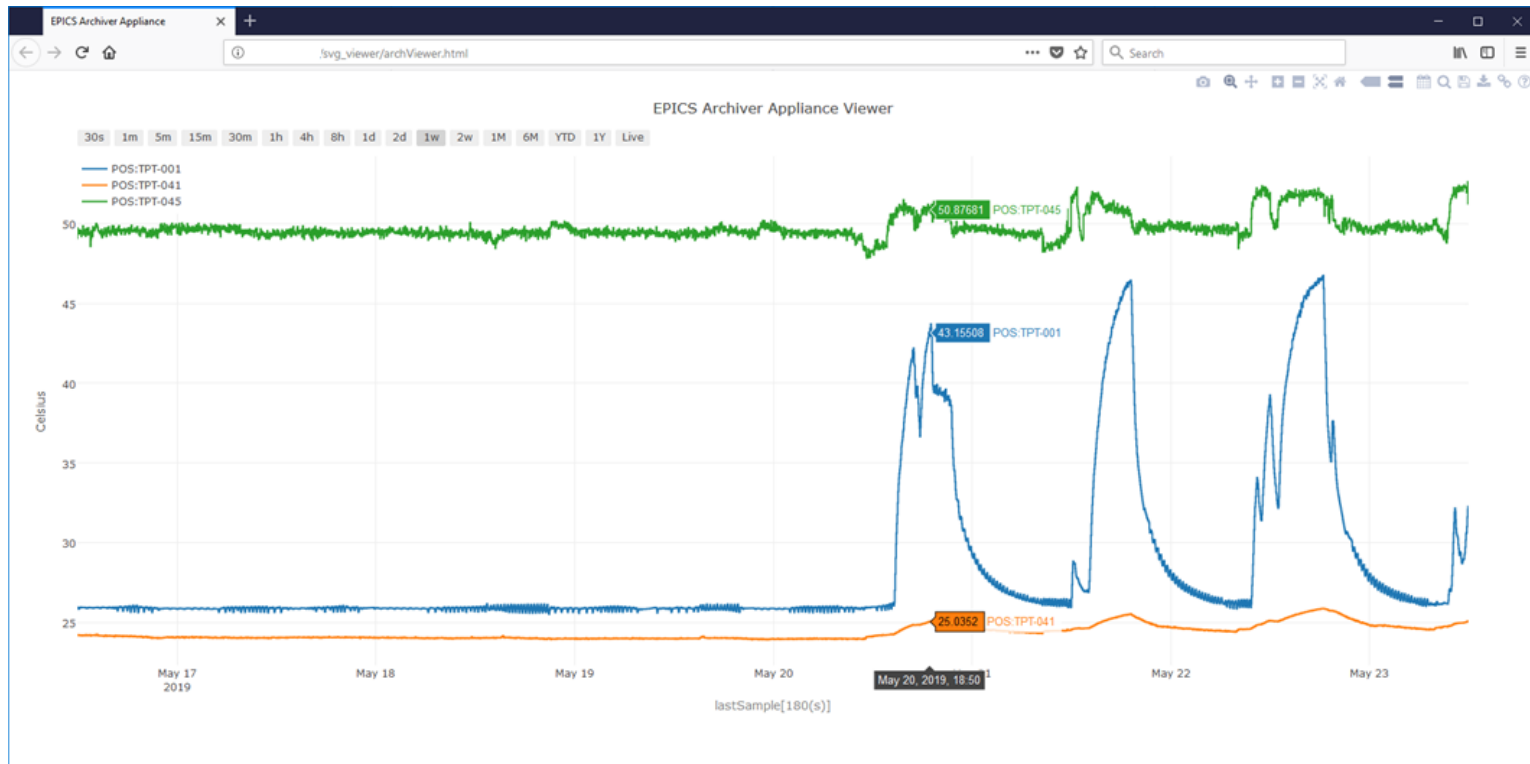
Archiver Appliance (SLAC): CEA Test stand and GBAR experiment

- Configuration and visualization with only one archiving machine
- Good documentation
- Good performance



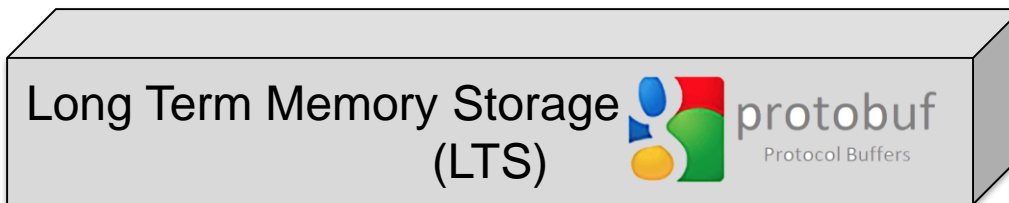
Archiver Appliance (SLAC): CEA Test stand and GBAR experiment

- Website running on tomcat server
- Only visualization
- Performance are good, good feedback from users
- It will be great to be able to get data with JSON request from this website. It could be used as a gateway for offline treatment

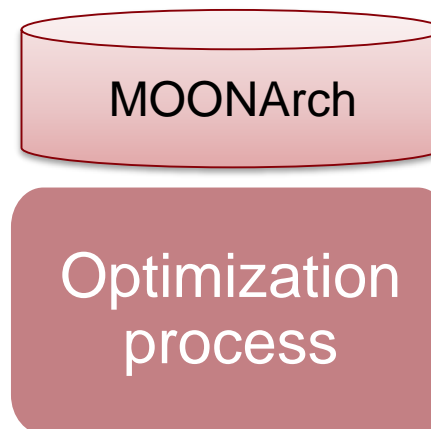
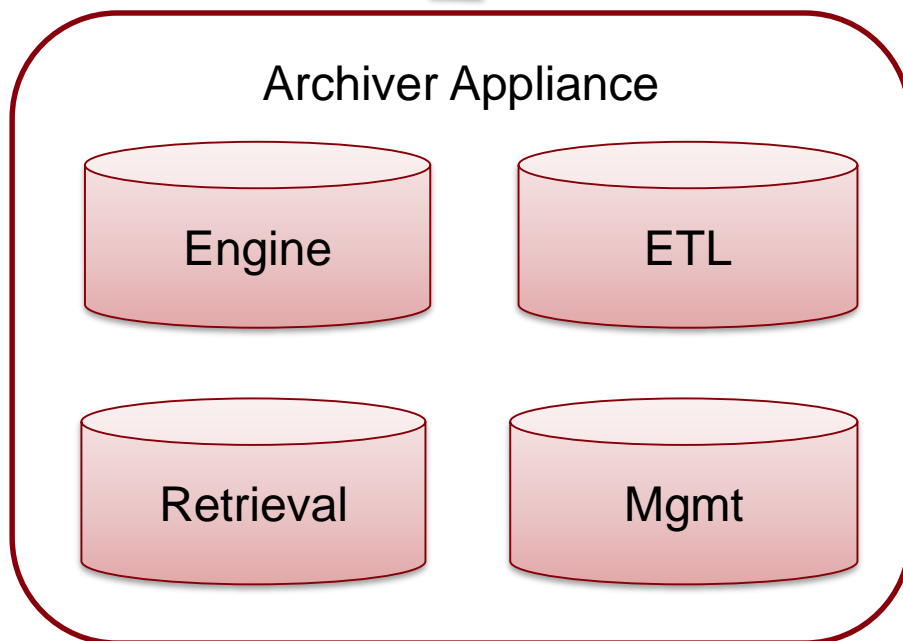


Small PC configuration: adapting Archive appliance

- Remove not interesting data
- Remove old data
- Not deployed for the moment



Apache Tomcat



Memory Optimizer ON Archiver Appliance (MOONARCH) - Mozilla Firefox@ifufxsis229

Memory Optimizer O... x

localhost:17669/moonarch/

MOON Archiver Appliance : Configuration page

User Configuration

Data depth: 1

Max Storage Duration: 5 year(s)

Optimization Mode: by File

PVs To Exclude: iphi:lebt:Thall
*BOB1_3_ON
ex : project.group.pvname ; can use wildcards (*)

Set Expert's Configuration

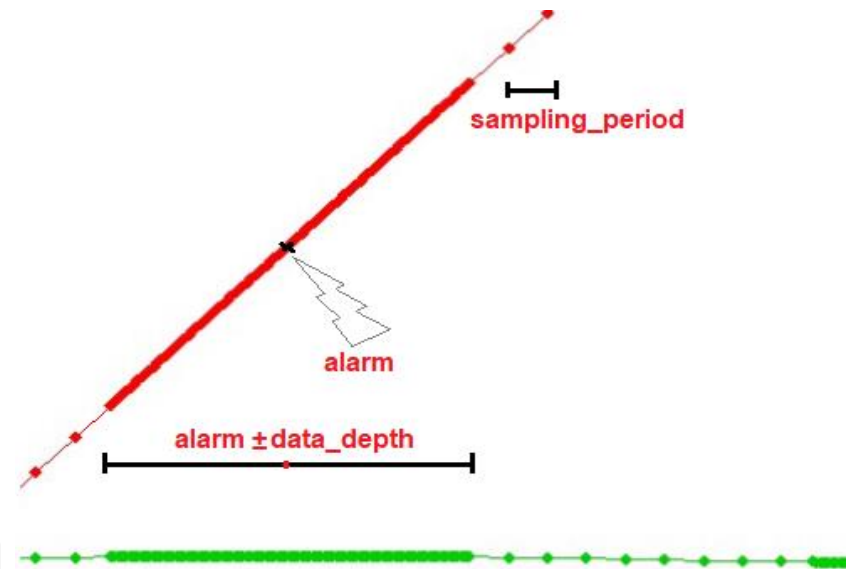
Load Default Configuration Leave Changes Change Configuration

Start Optimization

Stop Optimization

Parameters :

- Data depth
- Max storage duration
- Process variables to exclude
- Process period
- Optimization mode
- Process variables per task ...



Propriétés de : GBAR

Général | Partage | Sécurité | Versions précédentes | Personnaliser

GBAR

Type : Dossier de fichiers

Emplacement : D:\EPICS\ArchivingData

Taille : 1,32 Go (1 420 253 245 octets)

Taille sur le disque : 1,32 Go (1 420 967 936 octets)

Contenu : 394 Fichiers, 6 Dossiers



Memory size - 40 %

Propriétés de : GBAR

Général | Partage | Sécurité | Versions précédentes | Personnaliser

GBAR

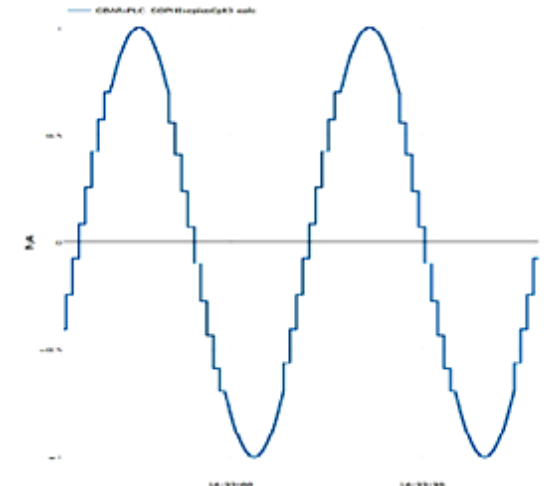
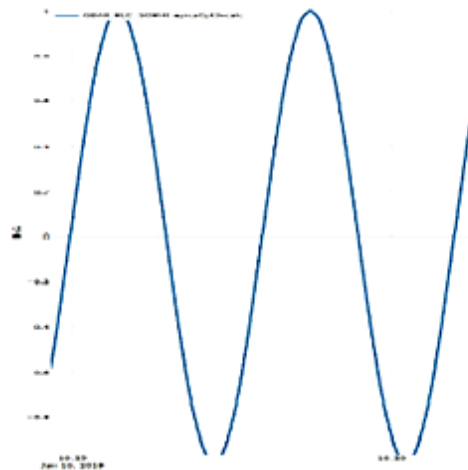
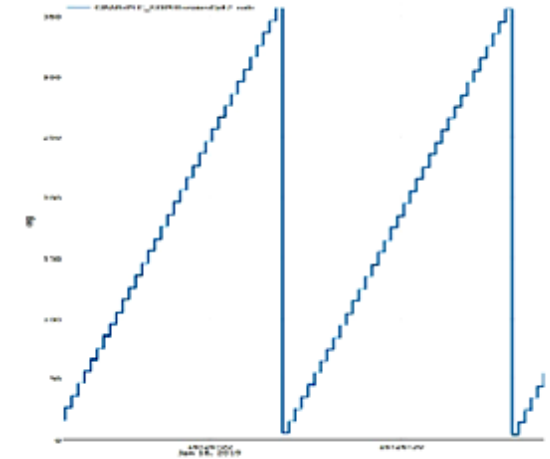
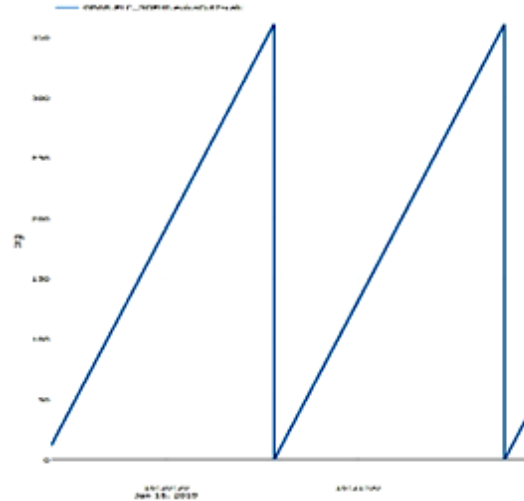
Type : Dossier de fichiers

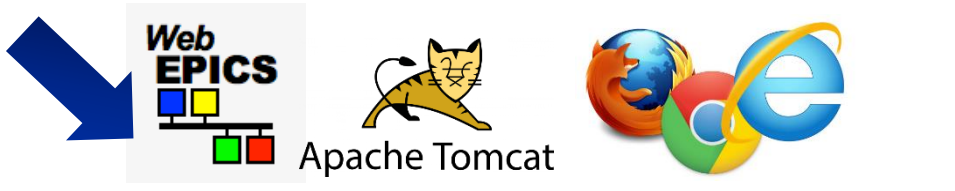
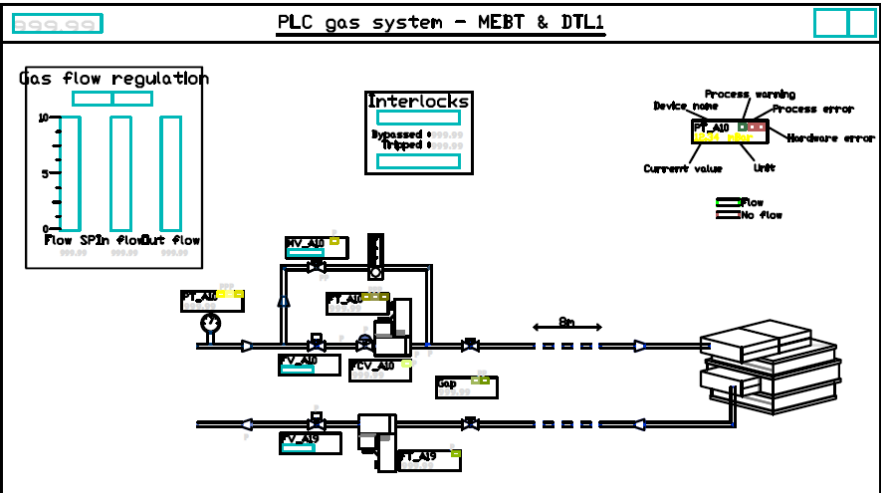
Emplacement : D:\EPICS\optimizedLts

Taille : 799 Mo (837 895 889 octets)

Taille sur le disque : 799 Mo (838 598 656 octets)

Contenu : 386 Fichiers, 6 Dossiers

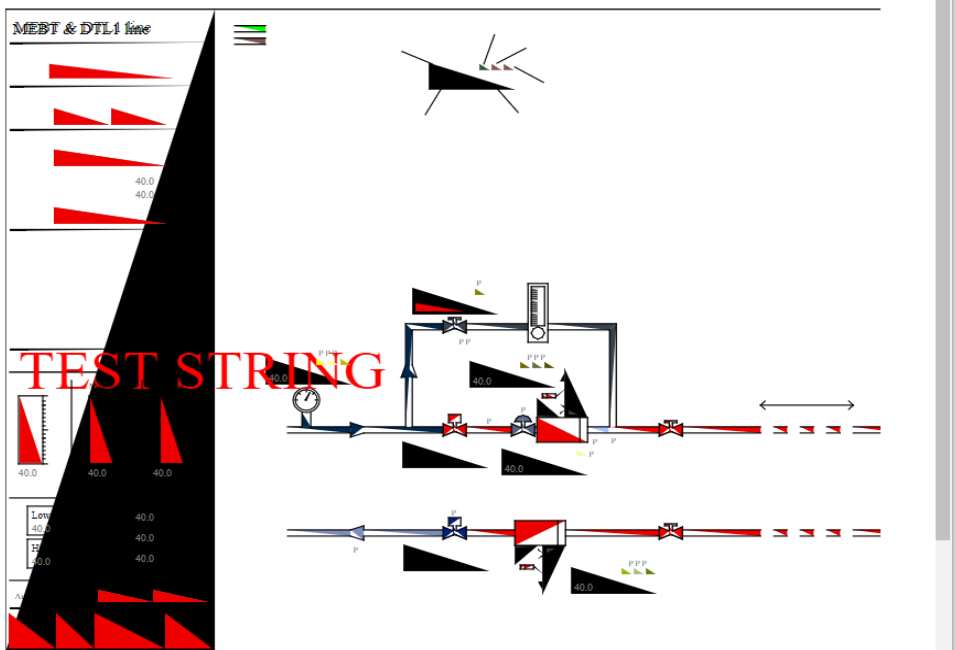
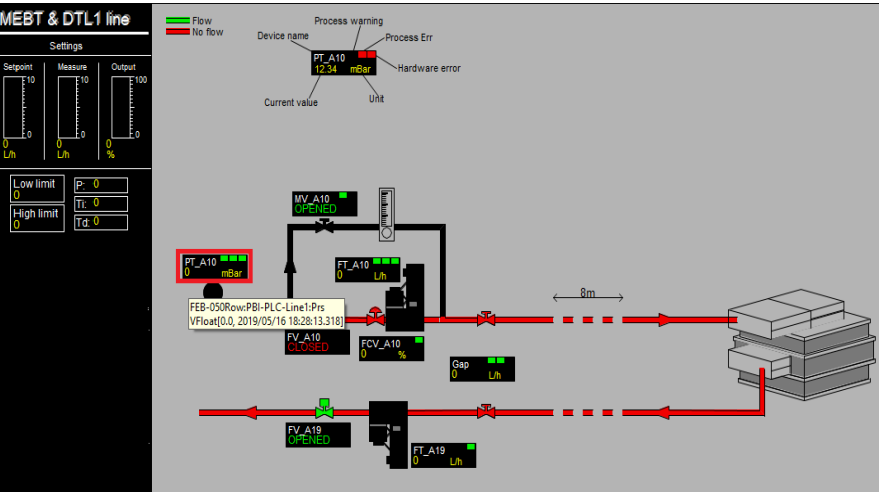




WEB EPICS

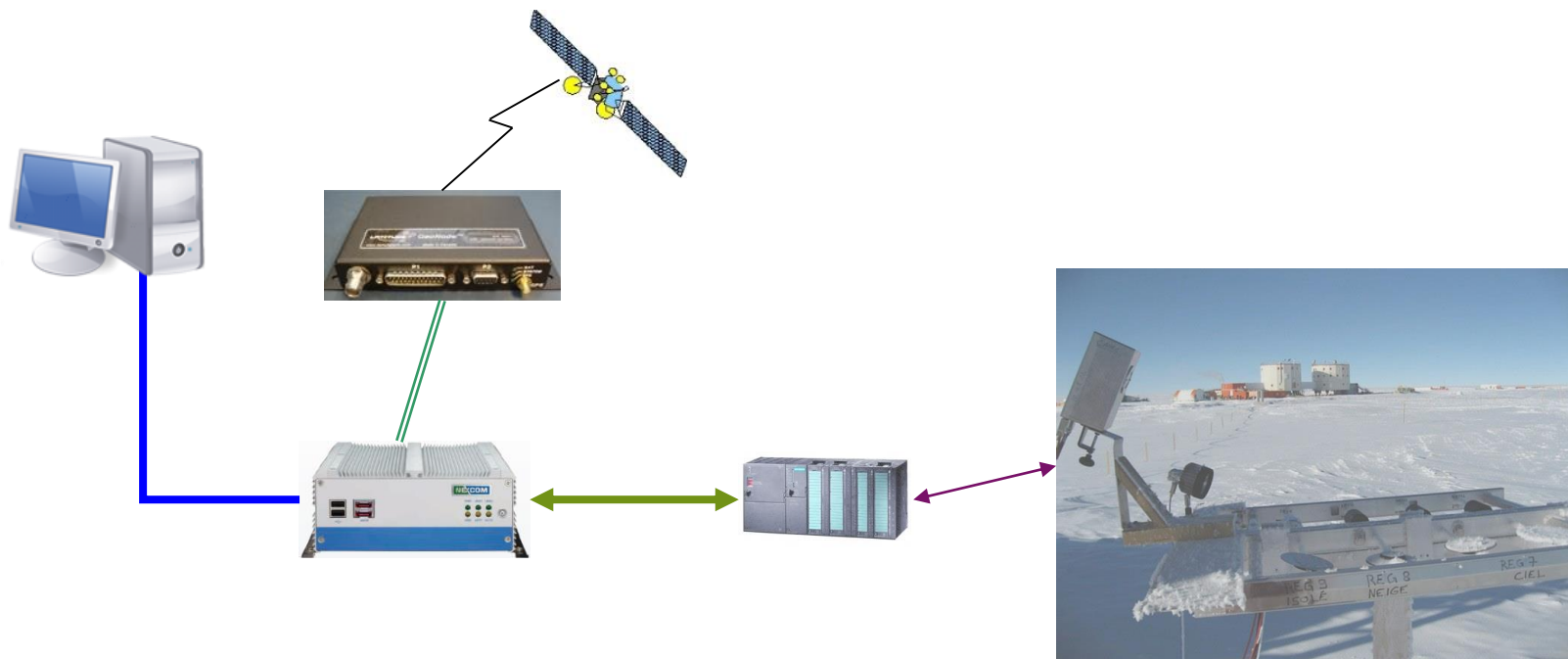
localhost:8080/IOCviewer/webepics

COUNTER PV	10
DOUBLE PV	40.0
ENUM PV	three
BOOLEAN PV	ON
STRING PV	TEST STRING



Needs

- Synoptic website compatible with CSS .bob
- Website that integrates synoptic website, alarm and archiving data (trend)
- Light solution that can run on a small PC configuration
 - We deploy also control software on small experiments in different places in the world
 - Constraints: cost, space in the rack, environment condition
 - Example: Concordia on South pole: Experiment to test the environment for a future telescope: understand freeze on different materials, how to remove the snow, etc.



Thanks a lot to the developers and the facilities that support them



memegenerator.net