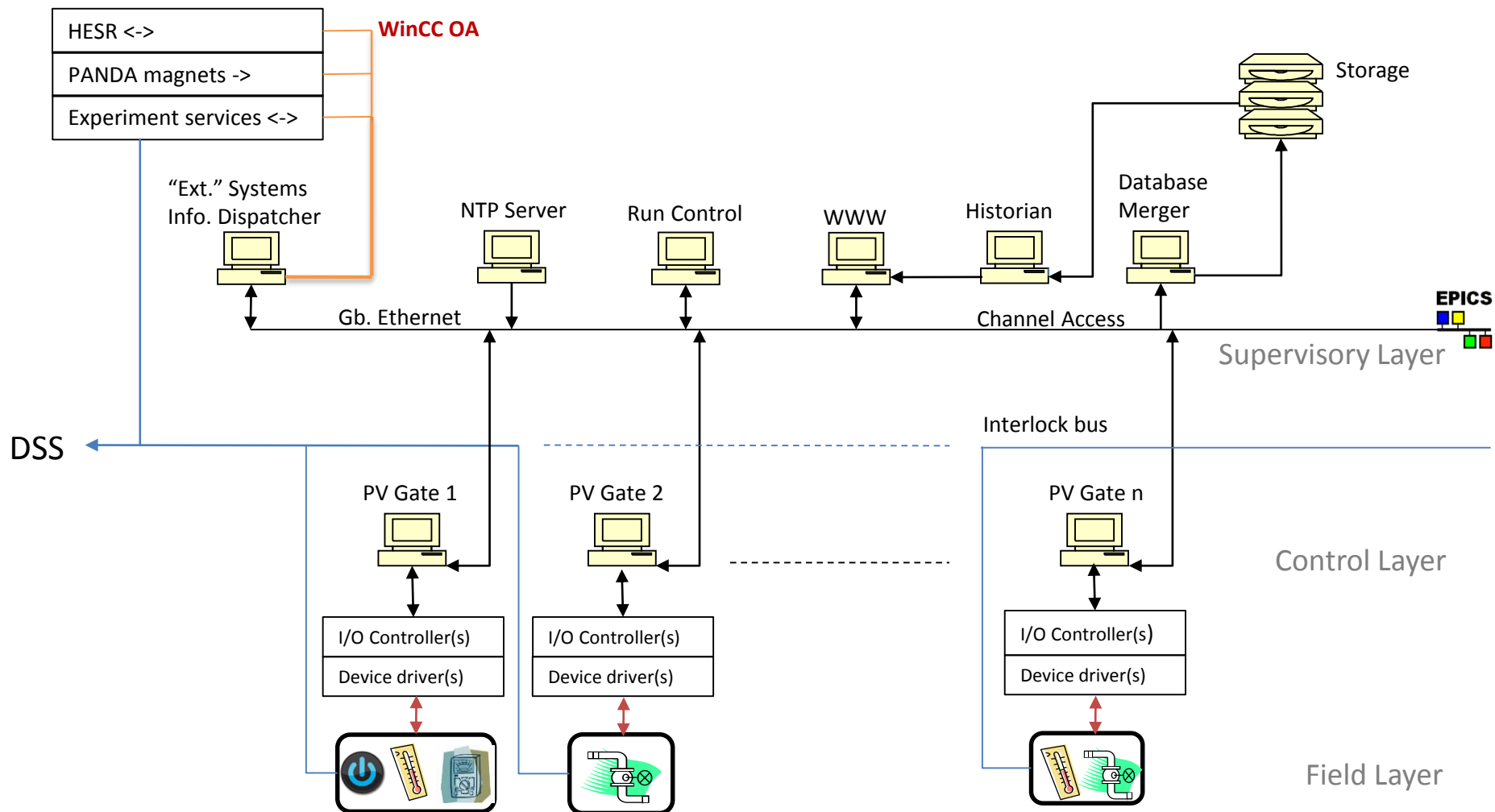




Software interface PANDA – HESR (EPICS – WinCC OA)

PANDA DCS Layers



EPICS <-> WinCC OA via DIM (?!)

DIM - Distributed Information Management System

- Client/Server communication system;
- Developed by DELPHI experiment (CERN) in the 90's;
- Latest release 20r15 (01/09/2015).

PVSS-DIM toolkit

- Adapter between PVSS DataPoints and DIM services;
- Latest release 20r8 (22.01.2015);
- Ready for WinCC OA 3.11 SP1 (Windows/Linux).

EPICS-DIM interface

- caDIMInterface (GSI- H.Brand 2006);
- Latest release (2010 ?) by P. Zumbruch (GSI);
- Unsuccessful runtime on Epics 3.14.12 – more support needed

EPICS <-> WinCC OA via TCP socket (!?)

TCP socket

- IP address:Port;
- Client/Server communication.

WinCC OA API TCP driver

- TCP communication protocol;
- TCP String to PVSS DataPoint conversion;
- Needs some fine-tuning “to talk” with EPICS 3.14.12 on RHEL 6 flavors.

EPICS asynDriver

- drvAsynIPPortConfigure – TCP Client driver;
- drvAsynIPServerPort – TCP Server driver;
- testIPServer example.

EPICS <-> WinCC OA via TCP socket (?!)

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EPICS asynDriver

- drvAsynIPPortConfigure – TCP Client driver;
- drvAsynIPServerPort – TCP Server driver;
- Example testIPServer

EPICS <-> WinCC OA via TCP socket

Send-Receive strings via 2 TCP Sockets

Tasks :

- WinCC OA : custom code to convert from string to DataPoint elements types and vice versa;
- EPICS: custom code to convert from string to Process Variables and vice versa.

Tools :

WinCC Strings support: built-in functions => custom scripts to process the rx/tx strings

EPICS: sCalcout record processing,

EPICS <-> WinCC OA via TCP socket

Functional prototype @ IFIN-HH:

```
File Edit View Search Terminal Help
Mpod0_SupplyControl
Mpod0_SwitchChannel0
Mpod0_SwitchChannel1
Mpod0_SwitchChannel2
Mpod0_SwitchChannel3
Mpod0_SwitchChannel300
Mpod0_SwitchChannel301
Mpod0_SwitchChannel302
Mpod0_SwitchChannel303
Mpod0_SwitchChannel304
Mpod0_SwitchChannel305
Mpod0_SwitchChannel306
Mpod0_SwitchChannel307
Mpod0_SwitchChannel4
Mpod0_SwitchChannel5
Mpod0_SwitchChannel6
Mpod0_SwitchChannel7
WINCC:stringInput
WINCC:stringOutput
epics> dbpf Mpod0_SupplyStatus 1
DBR_LONG:      1      0x1
epics> dbpf Mpod0_FanSpeed 1234
DBR_LONG:      1234    0x4d2
epics>
```

_QuickTest : RX_string (System1 - api_tcpdrv; #1)

Module Panel Scale Help

MPOD Crate

Switch	Status	FAN1
ON	ON	1234

MPOD Channel

Name	Switch	Status	Vset [V]	Vmon[V]	Iset	Imon
	ON					

Debug

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