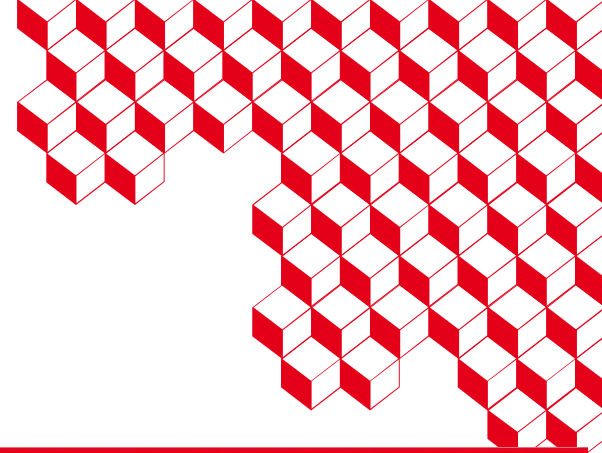




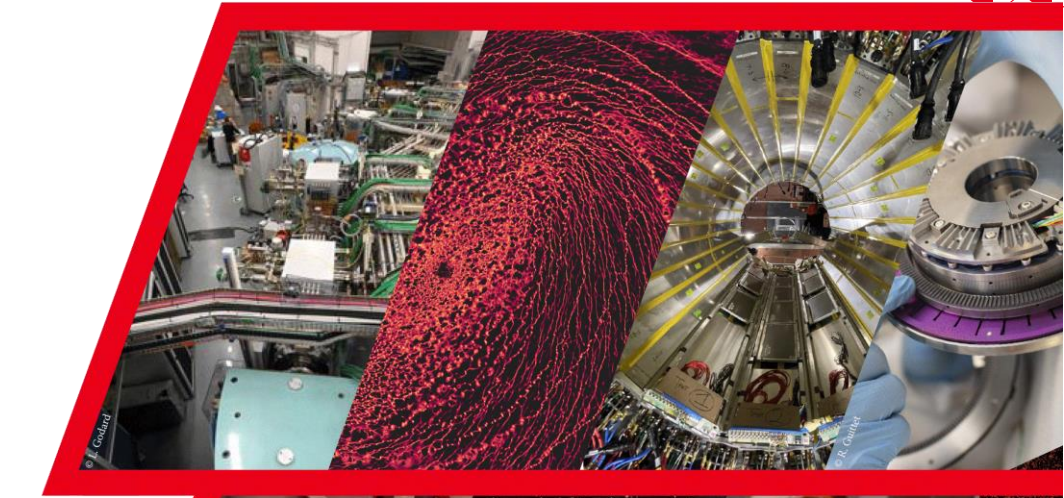
irfu



Site Report

IRFU

GRIF-IRFU



Outlook

■ IRFU

1. Computing @IRFU
2. Human resource & organisation evolution
3. Securing Computer rooms
4. Power shortage study

■ GRIF-IRFU

1. Overview
2. Pledges, News
3. French Certificate Authority change (again)

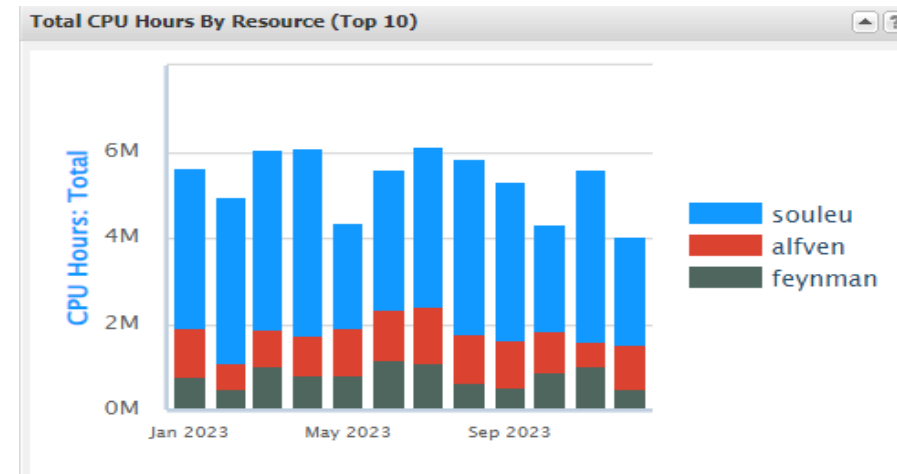




■ ■ IRFU

Computing @IRFU

- GRIF-IRFU : WLCG-Tiers2
- 3 Computing clusters
 - HTC, HPC
 - CentOS7, Rocky8,9, Debian
 - For local users (>150)
 - storage
 - DAS 2Po,
 - NAS 5Po
 - 63 million hours of computing (2023)



Human resource

IRFU/DEDIP/LIS



- After >3years managing GRIF-IRFU
~being the *soloteam*
- 1 engineer will join (sept24)



Organization project

From

- Unix / GRID / Windows Team
- 4 / 1 / 1 engineers + 2 technicians
- + apprentices & trainees (~5)

To

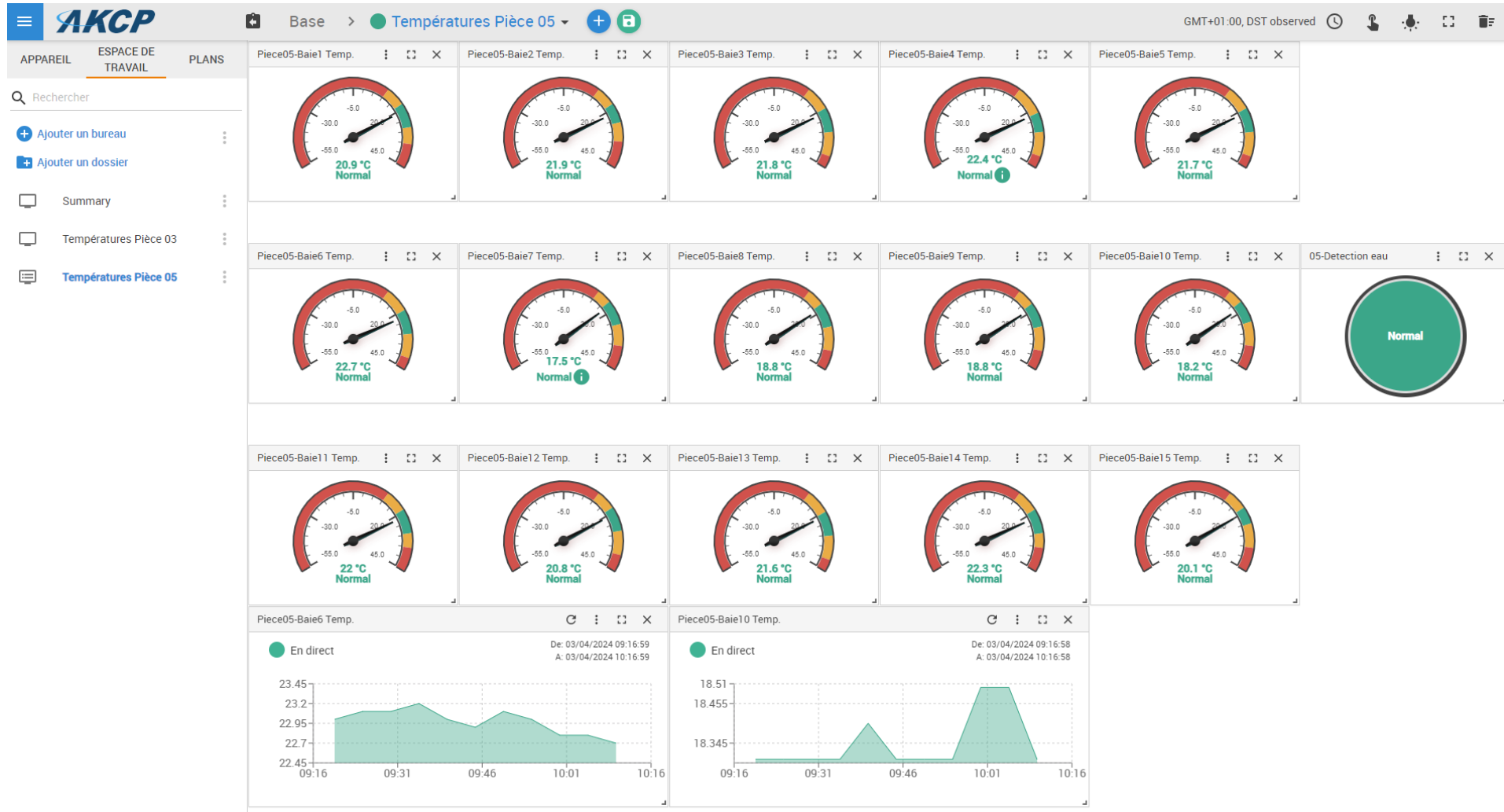
- Service / Operation center
- Aiming at
 - Consolidated team
 - Integrating ITIL principles
 - Adopting DevOps methodologies

Securing server rooms

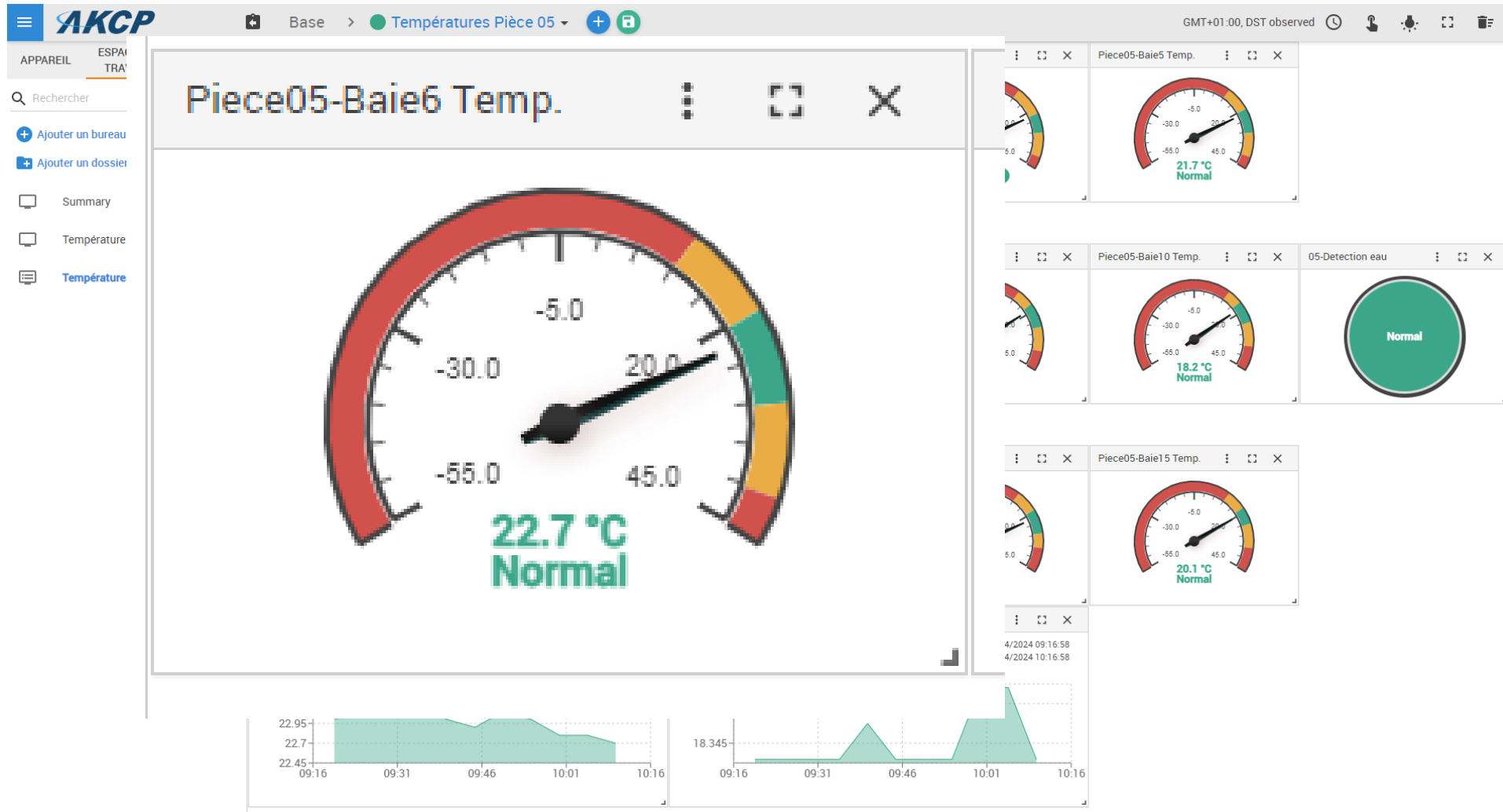
- Temperature sensor at server rack front face
- Water leak sensor (testing phase)
 - 30m “serpentine coil”
 - sensitive
 - condensation on a valve
 - found rain infiltration (after storm)



Securing server rooms

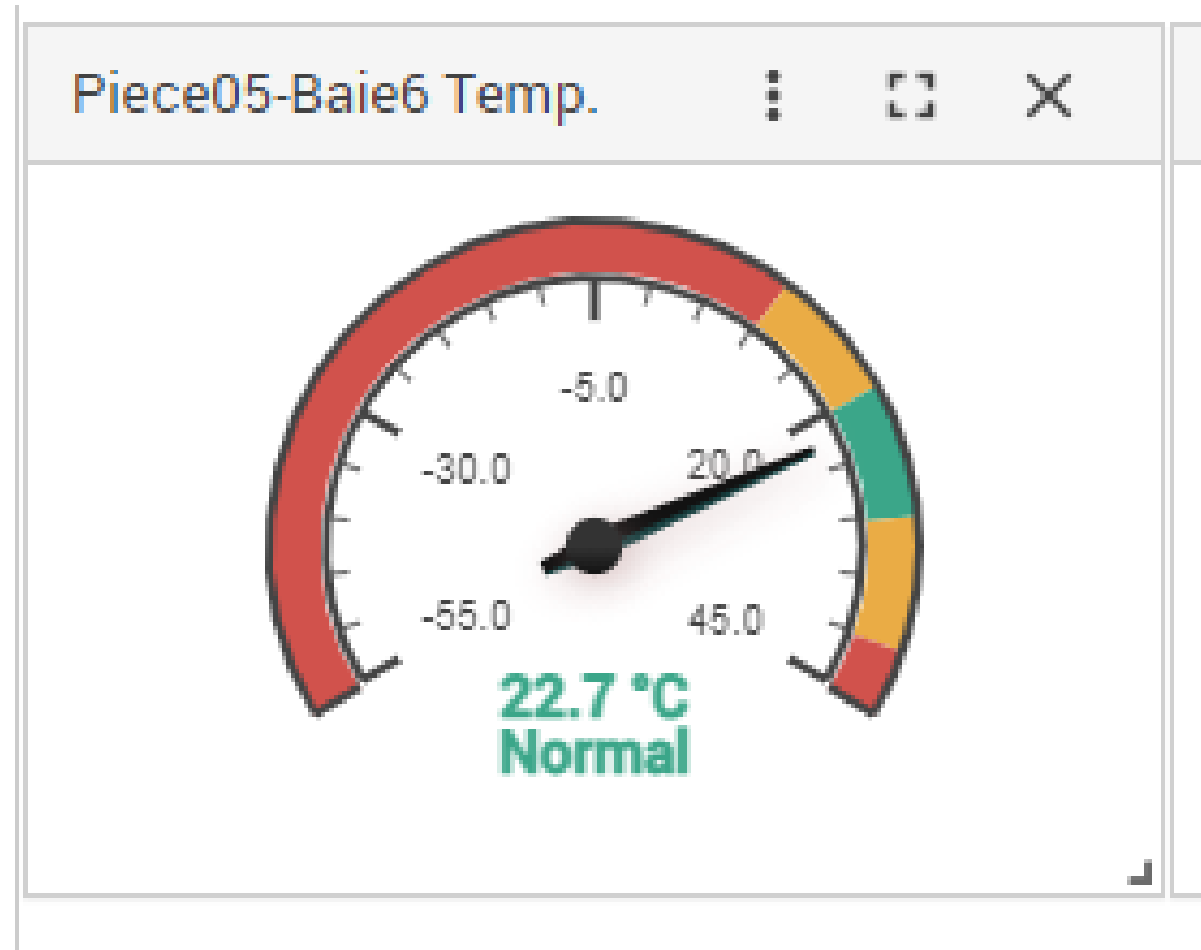


Securing server rooms



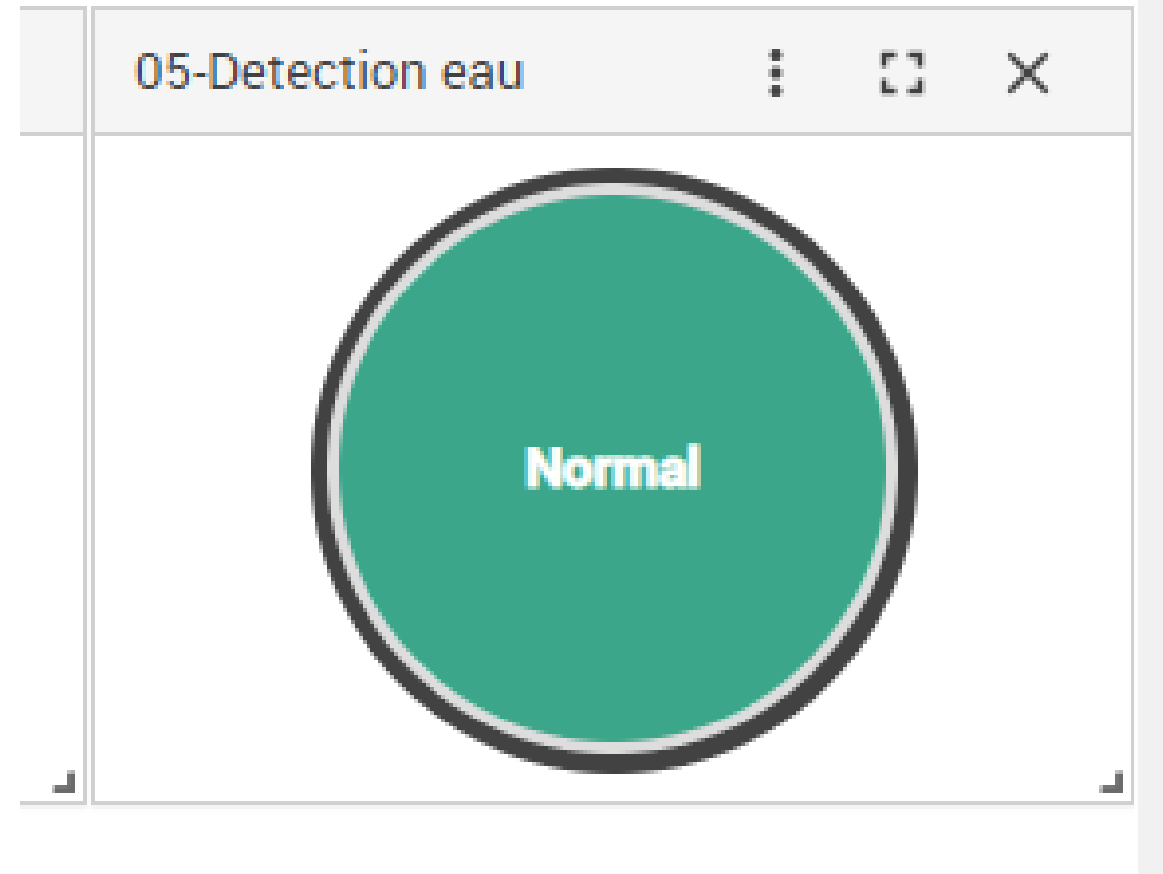
Securing server rooms

- warning / critical Threshold
 - Email notification
 - Power OFF on PDU (in the server rack)
 - Connection to the CEA Saclay center fire department and security service (FLS)



Securing server rooms

- Water Detection OK / NOK
 - Email notification

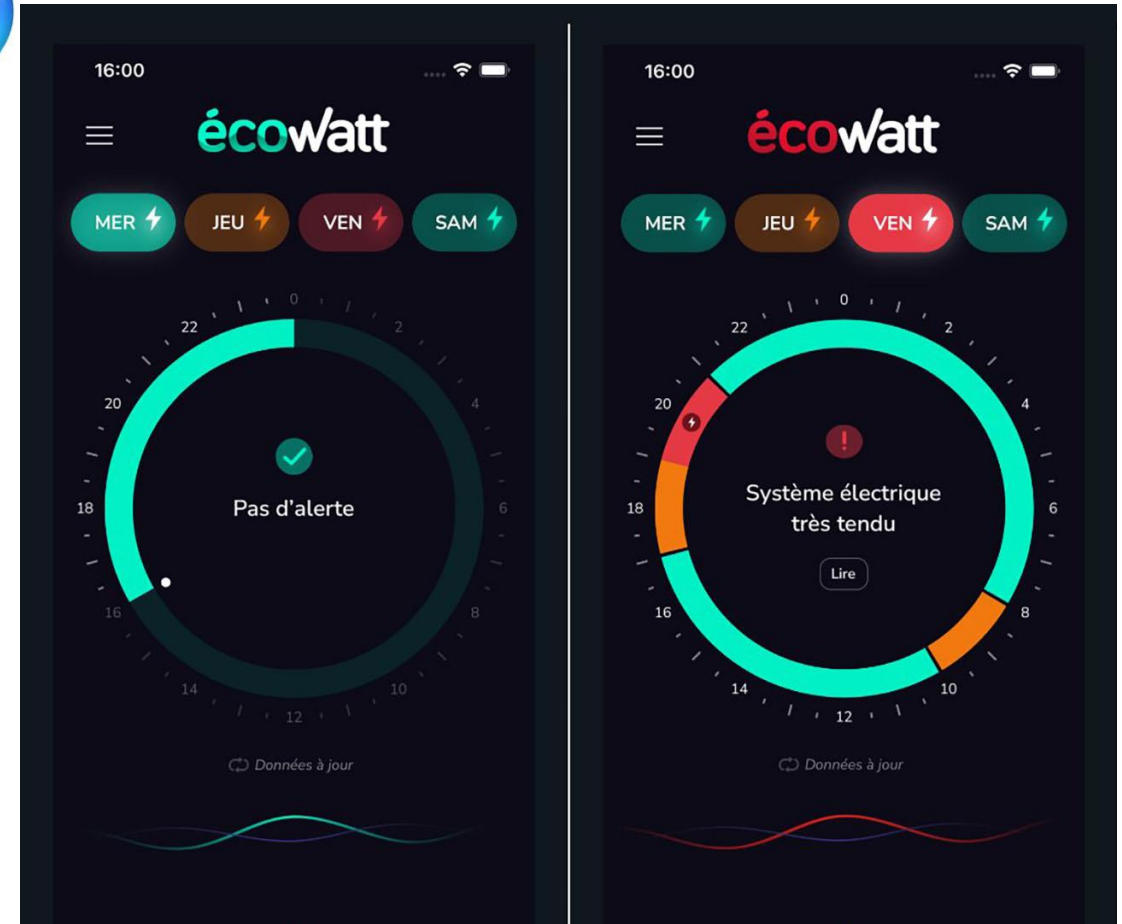


Winter 2022/ Ecowatt


- Possible Energy shortage at winter 2022/23 (FR)
- How to limit rapidly energy consumption w/o poweroff



```
racadm set System.Power.Cap.Watts XX
```



Winter 2022/ Ecowatt

- Possible Energy shortage at winter 2022/23 (FR) 
- How to limit rapidly energy consumption w/o poweroff

```
racadm set System.Power.Cap.Watts XX
```

- Decrease on
 - Computing power : /6 (or more...)
 - Energy consumption
 - -40% on compute nodes (only)
 - -20% on cooling
- -25% globally

No energy shortage in the end.






■ ■ GRIF-IRFU



- Grille de Recherche en Île de France
 - LPNHE
 - IJCLab
 - LLR
 - IRFU



GRIF/ overview

- GRIF pledge 2024
 - CPU: 167 kHS23
 - Disk: 15 PoIRFU ~40%
- Storage migration @GRIF
 - DPM->EOS => EOS WS 2023
by Emmanouil Vamvakopoulos [1]
 - Single entry point for Experiments
 - Caveat
 - Downtime OUTAGE / AT RISK affects experiments
- CE
 - HTCondorCE 9.0.20-1.el7
 - Common pool of worker between LLR, IJCLab
 - LPNHE
 - ARCCE 6.18.0-1.el7
 - IRFU
- DC24
 - No significant change in transfer rates



[1]

https://indico.cern.ch/event/1227241/contributions/5326728/attachments/2634739/4557860/EOSGRIF_EV_APRIL_2023-1.pdf

GRIF-IRFU 2024

PLEDGES

- Delays 2024 pledges installation
 - Delays on the quotations
- Storage
 - 4 x R760xd2, 24x20To SAS HDD

=> ~1.5 Po
- Compute
 - 5 x R6525 bi-EPYC 7643, RAM 16x32Go

=> ~14 kHS23
- Delivered, placed in racks.

Total in production

- Nb servers = 290
 - 30 > Storage 6,5 Po
 - 180 > Compute ~100 kHS23
 - 80 > Other
 - Services, VMs, Tests (dev&preprod)
- Foreman/Puppet
 - OS
 - CentOS 7
 - RHEL-like (Rocky) 8,9
- ALICE, ATLAS, CMS, CTA

French CA tale ...

View from a site admin/GRID user

- Once upon a time
 - GRID-FR (Renater)
 - became GRID2-FR (Renater)
 - became GRID-FR (Renater)
- Renater withdraw
- TCS through GEANT – Sectigo partnership
 - GEANT eScience for server certificates
 - GEANT TCS Authentication for personal certificates
- Then came the Tale of the DNs
- ...



DN of French CA ...

DC=org, DC=terena, C=FR, ST=Paris, O=CEA, CN=

- ST=Île-de-France == \xC3\x8E1e-de-France
 - O=COMMISSARIAT A L'ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES
 - O=CNRS
 - O=Centre national de la recherche scientifique
 - CN=Sébastien == S\\xC3\\xA9bastien
-
- 4 2 3 years later, we can now hope it will be stabilized, and do our *final* certificate registration on GGUS, GOCdb, VOMSes, CernAccount ,etc....
 - Easier and faster way of delivering certificates (servers & personal)



Questions Comments Remarks ?

- 1. HR org**
- 2. Computing @IRFU**
- 3. Securing the server rooms**
- 4. Power CAP**
- 5. GRIF/GRIF-IRFU**
- 6. GRIF-IRFU > LHCb**
- 7. French CA**

