TANGO in the Cloud

TANGO meeting

ELI Beamlines Czech Republic
06/06/2018

www.thalesgroup.com
THALES TANGO / Panorama Supervisions in the world

**GERMANY**
ATLAS3000
90 J Laser System

- 50 devices
- 1 Hz
- 2 servers
- 1 workstation

**CHINA**
JIAOTONG
200 TW Laser System

- 30 devices
- 1 Hz
- 2 servers
- 1 workstation

**ROMANIA**
ELI-NP
2 x 10 PW Laser System

- 25 devices
- 1 Hz
- 2 servers
- 1 workstation

**ISRAEL**
WEIZMANN
2 x 100 TW Laser System

- 250 devices
- 100 TW - 10Hz
- 1 PW - 1Hz
- 10 PW - 1/60Hz
- 10 servers
- 32 workstations

**GERMANY**
ATLAS3000
90 J Laser System

- 25 devices
- 1 Hz
- 2 servers
- 1 workstation

**ISRAEL**
WEIZMANN
2 x 100 TW Laser System

- 30 devices
- 2 servers
- 1 workstation
THALES TANGO / Panorama Supervisions in the world

How to ensure availability and reliability of those systems all over the world?

→ By allowing HUMS* and Predictive Maintenance activities

* HUMS: Health and Usage Monitoring Systems
HUMS and Predictive Maintenance

Collection / Processing / Analysis / Visualisation

Cloud
HUMS and Predictive Maintenance

Collection / Processing / Analysis / Visualisation

Secured software and hardware solution

Cloud

Thales SCADA Box
Data Conversion / Networks Separations

IO-TALK Device Server
Acquisition / Restitution
THALES TANGO Use Cases

- **HUMS and Predictive Maintenance (with IO-TALK)**
- **Supervision HMIs for any medias: computers or tablets**
- **SCADA for any systems: from small to big ones**
- **Supervision HMIs dynamically definable by users**
THALES TANGO Use Cases

- SCADA for any systems: from small to big ones
- HUMS and Predictive Maintenance (with IO-TALK)
- Supervision HMIs for any medias: computers or tablets
- Supervision HMIs dynamically definable by users
SCADA for any systems

Aim: provide a turnkey SCADA solution for any small scale industrial system (e.g. experimental rooms)

Different media devices and OS

Various industrial and scientific equipment

- Camera
- Oscilloscope
- Motor
- Energy Meter
- Temperature Sensor
- Camera
- Motor
- Energy Meter
- Temperature Sensor
SCADA for any systems

**Aim:** provide a turnkey SCADA solution for any small scale industrial system (e.g. experimental rooms)

One SCADA solution, generic, scalable and competitive: Thales SCADA Box

Different media devices and OS

Various industrial and scientific equipment
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Supervision HMIs for any medias

Aim: enable local or remote Supervision HMIs, on fixed or mobile medias
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Aim: allow users to build their own Supervision HMIs with Synoptica

Step n°1:
- select and place widgets on a board
- connect them to TANGO attributes/commands

Step n°2:
- play the board
- use the custom Supervision HMI