# Soleil Tango DB

Feedback on Soleil operation

# Introduction

- 30 tango db:
  - 29 on beamlines
  - 1 on the Machine
- A few numbers for the Machine:
  - *Server:  4319*
  - *Device:  14846*
  - *property_device: 179075*
  - *property_attribute_device:  184980*
- This presentation is a feedback from 10 years of operation and is meant to open discussion

# Problem 1: data inconsistency

- Machine example:
  - *Servers without device:-> 1680*
  - *Device without server-> 497*
  - *Properties without devices:-> 30228*
  - *Device property history without device:-> 155651*
- We have do risky manual clean-up with tricky SQL queries

# Solution?

- Review the db schema to introduce primary and foreign keys with cascade delete?

```
CREATE TABLE `server` (
`id` int(11) NOT NULL AUTO_INCREMENT,
 PRIMARY KEY (id),
…
)

CREATE TABLE ` device` (
`id` int(11) NOT NULL AUTO_INCREMENT,
PRIMARY KEY (id),
` server_id` int(11) NOT NULL,
FOREIGN KEY (server_id) REFERENCES server(id) ON DELETE CASCADE,
 …
)
```

# Problem 2: monitoring

- A major incident occurs on the Machine where some tables were locked up to several minutes.
- The main issues are:
  - SOLEIL massively use memorized attributes that insert values in the TangoDB.
  - that the IT team did not detect the incident until the user notified us.

# Solution?

- The Tango device raised alarms on KPI
- Add external MySQL monotoring tool:
  - MySQL monitor? (commercial)
  - …
- Only use memorized attributes when absolutly needed

# Problem 3: Database backup

- Today a mysql dump is performed once per day.
- During this dump (8 s on the machine), the CS is unavailable.

# Solution?

- Remove the service interruption with:
  - MySQL replication with dump on the replica?
  - MySQL backup (commercial)?
  - Other?

# Conclusion

- This presentation is just the beginning of a reflection and should be continued
- A more detailed report (7 pages) is available