LATOURNETT "Production" DB

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Introduction - LATOURNETT

Current status:
- Discussing what is considered important to be saved internally at LAPP

Testing setup:
- Series of tests already organized and ready (documented out of the DB, but could be in too)
- The majority of information to be stored is just binary or a value, nothing complicated

Database organizaion:
- Slowly-changing information → (my)SQL-based DB appropriate (not time-series)
  - once structure is finalized can start working on implementation immediately
- Need to decide where information/database will be

Adressed use cases: For now, willing to store information about
- What constitutes LATOURNETT and RTM boards (which FPGAs, fireflies, IPMC, SFP cages are used for each)
- Results of production tests carried out at LAPP
- Status/location/"moves" of the boards to CERN
- Information about the (LAPP) maintenance operations
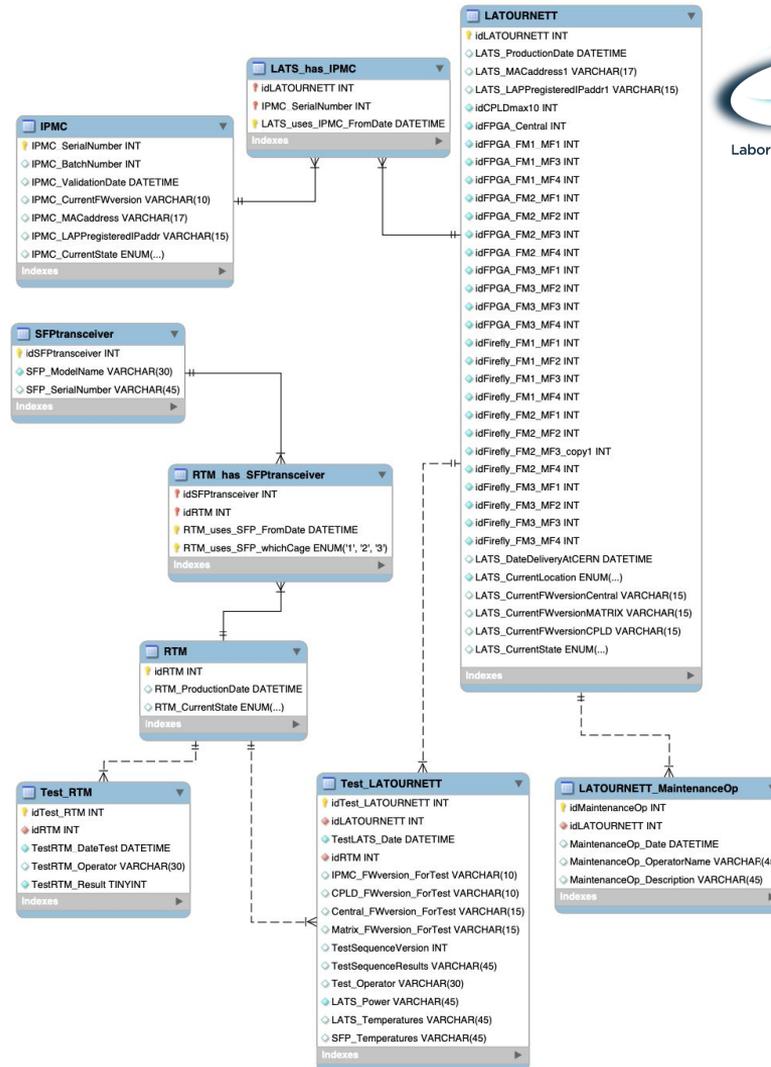 The rest (connectivity,...) is out of the scope of this DB a priori

Current scheme

What about those assumptions ?

1) All IPMCs are tested before LATOURNETT ? (if yes one can perhaps assign the IPMC primary key to the LATOURNETT "forever" ?)

2) are all LATOURNETT tested with a unique RTM or with one corresponding RTM ? (proposal on the right is generic enough to handle both)

3) "Versioning"/time-stamping of the information ("current" location or firmware versions for instance) not there yet but can be added if need be ?

4) need for storing IP addresses ?

LATOURNETT
- idLATOURNETT INT
- LATS_ProductionDate DATETIME
- LATS_MACaddress1 VARCHAR(17)
- LATS_LAPPregisteredIPaddr1 VARCHAR(15)
- idCPLDmax10 INT
- idFPGA_Central INT
- idFPGA_FM1_MF1 INT
- idFPGA_FM1_MF3 INT
- idFPGA_FM1_MF4 INT
- idFPGA_FM2_MF1 INT
- idFPGA_FM2_MF2 INT
- idFPGA_FM2_MF3 INT
- idFPGA_FM2_MF4 INT
- idFPGA_FM3_MF1 INT
- idFPGA_FM3_MF2 INT
- idFPGA_FM3_MF3 INT
- idFPGA_FM3_MF4 INT
- idFirefly_FM1_MF1 INT
- idFirefly_FM1_MF2 INT
- idFirefly_FM1_MF3 INT
- idFirefly_FM1_MF4 INT
- idFirefly_FM2_MF1 INT
- idFirefly_FM2_MF2 INT
- idFirefly_FM2_MF3_copy1 INT
- idFirefly_FM2_MF4 INT
- idFirefly_FM3_MF1 INT
- idFirefly_FM3_MF2 INT
- idFirefly_FM3_MF3 INT
- idFirefly_FM3_MF4 INT
- LATS_DateDeliveryAtCERN DATETIME
- LATS_CurrentLocation ENUM(...)
- LATS_CurrentFWversionCentral VARCHAR(15)
- LATS_CurrentFWversionMATRIX VARCHAR(15)
- LATS_CurrentFWversionCPLD VARCHAR(15)
- LATS_CurrentState ENUM(...)

LATS_has_IPMC
- idLATOURNETT INT
- IPMC_SerialNumber INT
- LATS_uses_IPMC_FromDate DATETIME

IPMC
- IPMC_SerialNumber INT
- IPMC_BatchNumber INT
- IPMC_ValidationDate DATETIME
- IPMC_CurrentFWversion VARCHAR(10)
- IPMC_MACaddress VARCHAR(17)
- IPMC_LAPPregisteredIPaddr VARCHAR(15)
- IPMC_CurrentState ENUM(...)

SFPtransceiver
- idSFPtransceiver INT
- SFP_ModelName VARCHAR(30)
- SFP_SerialNumber VARCHAR(45)

RTM_has_SFPtransceiver
- idSFPtransceiver INT
- idRTM INT
- RTM_uses_SFP_FromDate DATETIME
- RTM_uses_SFP_whichCage ENUM('1', '2', '3')

RTM
- idRTM INT
- RTM_ProductionDate DATETIME
- RTM_CurrentState ENUM(...)

Test_RTM
- idTest_RTM INT
- idRTM INT
- TestRTM_DateTest DATETIME
- TestRTM_Operator VARCHAR(30)
- TestRTM_Result TINYINT

Test_LATOURNETT
- idTest_LATOURNETT INT
- idLATOURNETT INT
- TestLATS_Date DATETIME
- idRTM INT
- IPMC_FWversion_ForTest VARCHAR(10)
- CPLD_FWversion_ForTest VARCHAR(10)
- Central_FWversion_ForTest VARCHAR(15)
- Matrix_FWversion_ForTest VARCHAR(15)
- TestSequenceVersion INT
- TestSequenceResults VARCHAR(45)
- Test_Operator VARCHAR(30)
- LATS_Power VARCHAR(45)
- LATS_Temperatures VARCHAR(45)
- SFP_Temperatures VARCHAR(45)

LATOURNETT_MaintenanceOp
- idMaintenanceOp INT
- idLATOURNETT INT
- MaintenanceOp_Date DATETIME
- MaintenanceOp_OperatorName VARCHAR(45)
- MaintenanceOp_Description VARCHAR(45)

Conclusion & outlook

Conclusion:

- Ready to start implementing DB as a container for the required info (if agreed on previous slides' content)
    - Everything can still be modified, but better decide early
- Will work also on interfaces to "feed in" the DB
- Need to decide on whether we store this DB (info) only for local (LAPP) purpose for now and then extract info to feed in the "ATLAS" (production/operations) DB or if we directly go for feeding in a CERN ATLAS DB (but in this case that'd mean including test results info "out" of LAPP)
    - Perhaps we start locally and move things to CERN if the discussions go in this direction ?

Outlook:

- The discussion will be extended to CERN for further proposal/ideas
- Start deciding on location and setup
- Start the implementation
- Feed in the DB with 2x4 next LATOURNETT+RTM boards

THANKS FOR THE ATTENTION

EXTRA MATERIAL

Testing information - list proposed

- LATOURNETT ID
- DNS NAME?
- MAC
- CPLD-Max10
  - ID
- FPGA Central
  - ID
- FPGA Matrix
  - ID
  - Temperature - TBC
  - FIREFLIES
    - ID
    - Temperature - TBC
- SFP
  - marque
  - modelle
  - temperature
  -
- IPMC
  - ID (?)

- power CARTE GLOBALE
- Histoire de maintenance
- Tests qui ne sont pas passés -> température/puissante a limite
- date de livraison
- date de fin du test
- date de transport
- date carte ou cern
- Placement de la carte (ou c'est trouve?)
- personne qui a fait le test/maintenance