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Hdb

Historical Database Archiver at Elettra

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Current HDB status at Elettra

Elettra: ~1300 tango attributes – 6 servers;

Fermi: ~450 tango attributes - 1 server, increasing;

Configuration, start and stop with ***Mambo***

log visualization with ***E-Giga***

Current HDB status at Elettra

Storage policy : hold on-line only the last 2 runs

Older data loaded on requests

sql scripts are under development

new tables for keeping track of off-line data?

MySQL database engine

master/slave configuration:

E-Giga does complex queries on replicated db

Replicated db is outside the firewall

Replica mechanism is delicate ...

Current HDB status at Elettra

Tango devices must run before HDB
tricky at startup!

Sometimes it is difficult to diagnose why an attribute is not
being logged

An experiment (not a fork!)

qHdb

Historical Database Archiver based on Qtango:

C++ -> Java

Atk -> Qtango

Used to test some ideas and features (we are more confident with C++)

Diagnostics

Users ask the reason why attributes are missing in the historical database:

The device server stores QTango connection messages and errors:

easy to find out which Tango devices are not being archived and *why* directly from device server;

SQL database error reporting;

qHdb device servers export an interface of commands and attributes fully compatible with QTango widgets (no logic in the GUI).

Simple Tango Device server interface

```
startArchiving(DevVoid);
```

```
stopArchiving(DevVoid);
```

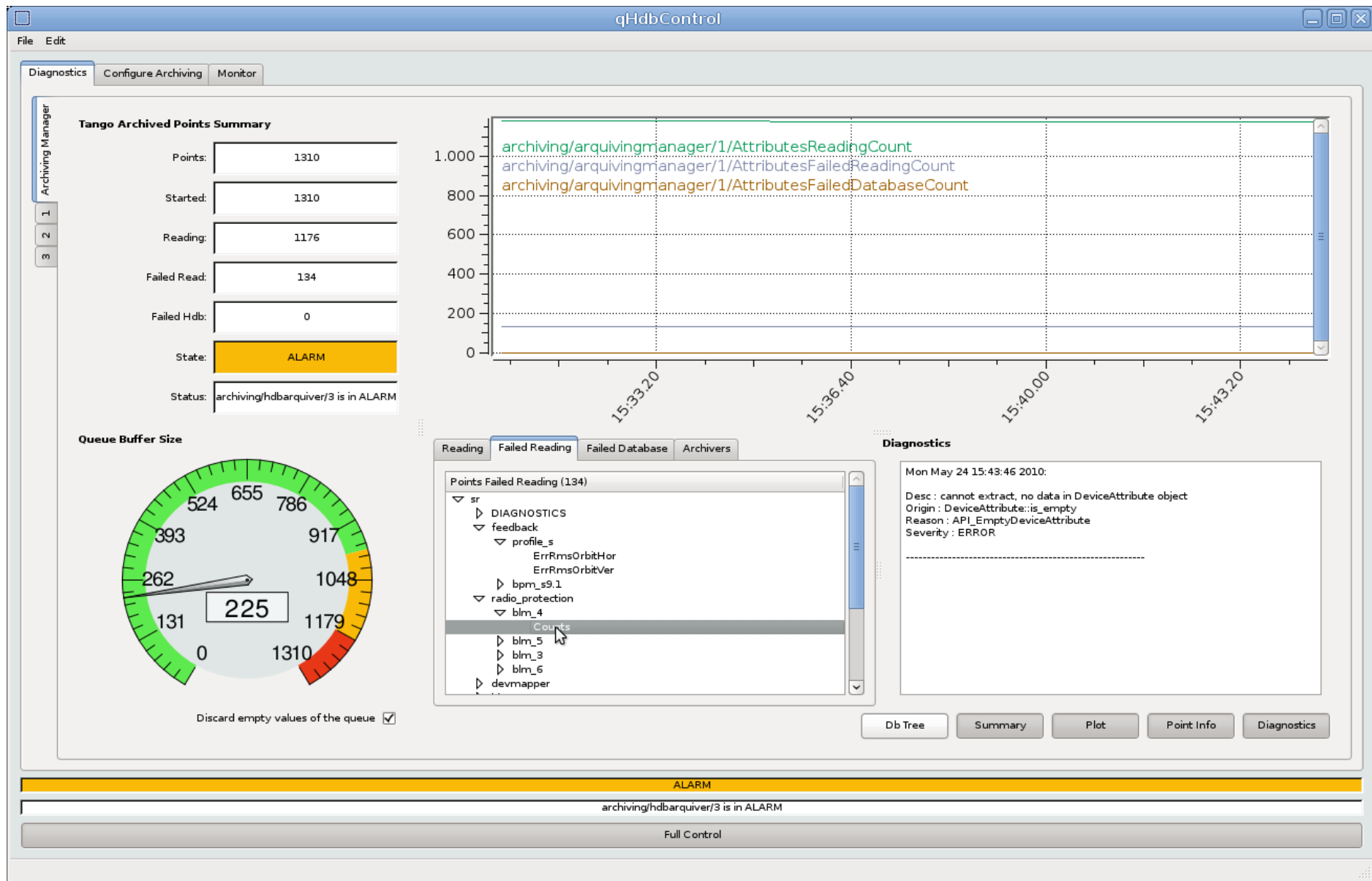
```
addAttributes(DevVarStringArray attList);
```

```
removeAttributes(DevVarStringArray attList);
```

Database schema fully compatible with java

Hdb Archiver (amt, apt, adt).

Simple Tango Device server interface: easy to develop a QTango GUI



Simple Tango Device server interface: easy to develop a QTango GUI (configure)

The screenshot displays the qHdbControl GUI. On the left is a tree view of device servers under 'tom:20000', including 'masteroscillator_sr', 'ampli2w_a5.1', 'ampli15w_a5.1', 'radio_protection', 'interlock', 'injection', and 'kicker_s12.x'. The 'VoltageSet' device is selected, showing its 'Voltage' property. The main area shows a table of points with a context menu open over the 'kicker_s12.2' point. The table columns are Point, Start Date, Stop Date, Refresh Mode, and Period [ms].

Point	Start Date	Stop Date	Refresh Mode	Period [ms]
sr				
rf				
txa_s9.1	2010-01-22 09:30:49	-	AUTO_REFRESH	60000
v_hv	-	-	AUTO_REFRESH	3000
v_focus	-	-		
masteroscillator_sr				
FreqMHz	2010-01-22 09:18:43	-		
injection				
kicker_s12.2	2010-01-22 09:44:49	2010-01-22 09:27:59		
VoltageSet				
Voltage				

The context menu for 'kicker_s12.2' includes: AUTO_REFRESH, USER_EVENT_REFRESH, CHANGE_EVENT_REFRESH, PERIODIC_EVENT_REFRESH, ARCHIVE_EVENT_REFRESH (highlighted), and POLLED_REFRESH.

On the right, the 'Device Servers' panel shows an 'ALARM' indicator and a message 'archiving/hdbarquiver/3 is in ALARM'. Below this are buttons for 'Start Archiving', 'Stop Archiving', 'Load From Db', and 'Init'. At the bottom of the GUI, a status bar also displays 'ALARM' and 'archiving/hdbarquiver/3 is in ALARM', along with 'Full Control' and control buttons like 'Delete Selection', 'Profiles', 'Start', 'Stop', and 'Show Logs'.