



Quattor (CDB) for Inventory Purposes

- Hardware Schema
- CC Tracker
- HMS (Hardware Management System) workflows
- Reports
- Hardware allocation requests

CERN Hardware Schema



```
type structure hardware_base = {  
  "model"      : string  
  "vendor"     : vendorname  
  "location"   : string  
  "serialnumber" : string  
  "contract"   ? structure_contract  
  "rack"       : structure_rack  
  "recycled"   : string with match (self, 'yes|no')  
  "headnode"   ? structure_headnodecard  
  "mperf"      ? double  
  "hepspec06"  ? double  
  "power"      ? structure_power  
};
```

```
type structure_contract = {  
  "warrantyid" : warrantyid  
};
```

```
type structure_power = {  
  "idle"       ? double  
  "load"       ? double  
  "loadratio"  : double = 0.5  
  "average"    ? double  
};
```

```
type structure hardware_cern = {  
  include structure_annotation  
  "ram"      : structure_ram[]  
  "cards"    : structure_cards_cern  
  include structure hardware_base  
  "cpu"      : structure_cpu_cern[]  
  "cpucount" ? long  
  "bios"     ? structure_bios  
  "lsfmodel" ? string  
  "tplname"  ? string #for automatic scripts"  
  "tapedrives" ? structure_tapedrive[]  
};
```

Locating hw: "CC Tracker"



The screenshot displays the CTracker V1.6 application window. The title bar reads "CTracker V1.6". The menu bar includes "File", "View", "Tools", "Window", and "Help". Below the menu bar is a search bar containing "lxb8410" and buttons for "Search", "Delete", "Rename", "Toggle planned", "Show Related Objects", "Lemon Status", "Properties", and "Update". A secondary toolbar contains buttons for "Add Rack", "Add PDU", "Add UPS", "Add SILO", "Add Normabarre", and "Add Object". The main interface has several tabs: "0513-R-0050", "0513-S-0034", "0613", "Logical View", "Computer Center - at a glance", and "Power View". The "Show Room" section on the left lists a hierarchy of racks (RE43-RE58) and enclosures (enc0055-enc0060, lxb8409-lxb8416). The main display area shows a floor plan of room 0513-R-0050 with a grid of server racks. A red highlight is visible on one of the racks in the lower-left quadrant of the room layout. The Windows taskbar at the bottom shows the Start button, several open applications (SDB: service - m..., Microsoft Power..., lxadm.cern.ch - ..., Inbox - Microsoft...), and the CTracker V1.6 application. The system clock shows 11:53 AM.



HMS: Install

Remedy User - [HMS (Modify)]

File Edit View Tools Actions Bulk Window Help

Matching HMS 0.02

Host Name	Old Host Name	Serial Number	Status	Category	Create Date	Modified Date	Last Modified By
lxbrb2404	none	SN0100010185-2	Closed	Install	11/4/2008 2...	12/15/2008 ...	jjmarin

Modify HMS 000000000032265 Save

Hardware Management System

Logs Diary Enclosures

Machine Details Ticket Details LAN/CDB Details Serial Console Test Results Messages Cross-Checking

[plan](#)
[profile](#)
[template](#)

Host Name
lxbrb2404

Category
Install

Install Status
Closed

Diary Entries

Contact SM

Service Manager Email
tim.bell@cern.ch, helge.meinhard@cern.ch, ...

Rack: RB24 Building: 513C

Serial Number: SN0100010185-2

Manufacturer: cpi Model (for Lan DB): server System Administration: D

Operating System - Version: SLC4 Operating System - Name: Linux Final Cluster: lxspare_x86_64_slc4

Arch: Cluster: lxburn_x86_64_slc4

Resources:

Customization: Quattor Style Profile: Yes

1 Selected Number 1 of 1 lefebure sunar01

Start SDB: ser... Microsoft... lxadm - d... Inbox - M... CCTracke... Remedy... Exceed 12:07 PM

HMS:Install



Remedy User - [HMS (Modify)]

File Edit View Tools Actions Bulk Window Help

Matching HMS 00:06

Host Name	Old Host Name	Serial Number	Status	Category	Create Date	Modified Date	Last Modified By
lxbrb2404	none	SN0100010185-2	Closed	Install	11/4/2008 2...	12/16/2008 ...	jmarin

Modify HMS 00000000032265 Save

Hardware Management System

Logs | Diary | Enclosures

Machine Details | Ticket Details | LAN/CDB Details | Serial Console | Test Results | Messages | Cross-Checking

ITCM: Additional Instructions Stress Test Yes No

CDB Details

CDB Hardware Type: cp_08_10 CDB Response: lxbrb2404

LAN DB Details

Automatic LAN DB Update: Yes

Responsible - 1st Name	Surname	Division	Preserve IP
FS	ADMINISTRATOR	IT	No

Switch Name	Port Number	Cable Number	Slot Number (for outlet)
F513-C-IP158-SHPYL-10	24	26470	4

MAC Address	Card Type	External Connectivity
00xx00xx00xx	GigabitEthernet	OUTGOING
11xx11xx11xx		GigabitEthernet

WARNING: Security team must approve incoming connections (computer.security@cern.ch)

LAN DB Response: In progress...

MAC Address 4: BMC Address:

Host Name: lxbrb2404
Category: Install
Install Status: Closed

Diary Entries

Contact SM

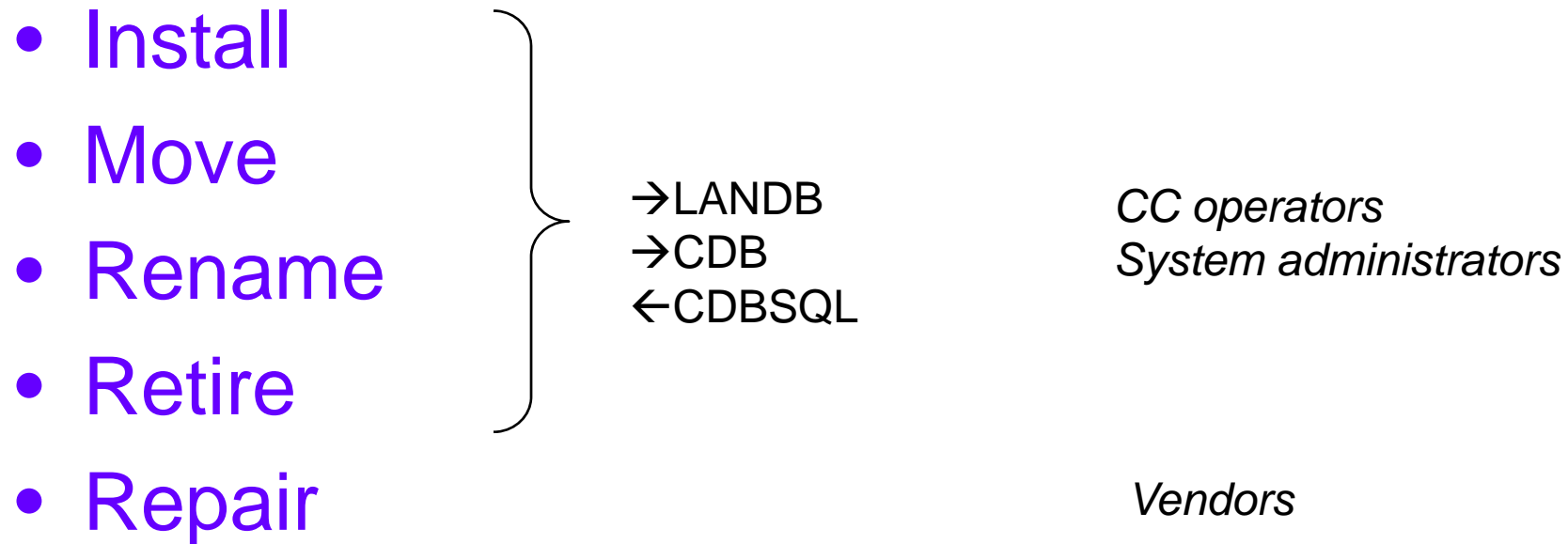
Service Manager Email: tim.bell@cern.ch, helge.meinhard@cern.ch

1 Selected Number 1 of 1 lefebure sunar01

Start SDB: ser... Microsoft... lxadm - d... Inbox - M... CCTracke... Remedy... Exceed 12:11 PM



HMS Workflow



HW Allocation Requests

- Web-form
 - possibility to choice a hw model



Data usage: examples

- find all Elonex console headnodes with their serial numbers
- find all Melrow systems
- list all Seil machines that were retired in 2008
- how many power supplies were replaced in 2008 and for which vendors

Advantages :

- Single interface / single workflow
- Power consumption, location, warranty, sysadmin contract type
- Still needed: machine on critical UPS or not