

Proposed UXC Racks layout for RE4 LV System

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Hardware Information

- Rack space is needed for the following RE4 hardware :
 - Link Board Box(LBB) for RE4 signal cables.
 - 3 LBBs per tower.
 - i.e. one per level (X2, X3, X4).
 - MAO and EASY Crate for RE4 Low Voltage Cables.
 - One MAO per station/disc.
 - 1 EASY Crate per tower.

Proposed rack layout for X2A52

Rack Operation

Rack Information

DB Label: **X2A52**
 Detector: CSC,RPC
 Usage:
 Responsible: YE-TOWERS

Electrical Equipment Information

Power PLC name: **PLC_UX55**
 Equipment name: **X2A52_X1R51**
 Equipment type: **Type_109**

Breaker Command information

Send command:
 Last sent command:
 ON 2010.06.08 04:02
 Last received response:
 COMMAND EXECUTED 2010.06.08 04:05

Electrical Equipment status

Property	Value
EmergencyStop_Fault	FALSE
User_Fault_1	FALSE
User_Fault_2	FALSE
User_Fault_3	FALSE
Temperature_Alert_Active	TRUE
Smoke_Alert_Active	TRUE
EmergencyStop_Alert_Active	FALSE
UserAlert_1_Active	FALSE
UserAlert_2_Active	FALSE
User_Alert_3_Active	FALSE
Temperature_Interlock_Active	TRUE
Smoke_Interlock_Active	TRUE
EmergencyInterlock_Active	FALSE
User_Interlock_1_Active	FALSE
User_Interlock_2_Active	FALSE

Rack Layout (Front View):

- 56: Green section
- 55: Green section
- 54: Green section
- 53: Green section
- 52: Green section
- 51: Turbine 4U
- 50: Turbine 4U
- 49: Heat exchanger 1U
- 48: Heat exchanger 1U
- 47: Heat exchanger 1U
- 46: Heat exchanger 1U
- 45: Heat exchanger 1U
- 44: Heat exchanger 1U
- 43: Heat exchanger 1U
- 42: Heat exchanger 1U
- 41: Heat exchanger 1U
- 40: Heat exchanger 1U
- 39: Heat exchanger 1U
- 38: Heat exchanger 1U
- 37: Heat exchanger 1U
- 36: Heat exchanger 1U
- 35: Heat exchanger 1U
- 34: Heat exchanger 1U
- 33: Heat exchanger 1U
- 32: Heat exchanger 1U
- 31: Heat exchanger 1U
- 30: Heat exchanger 1U
- 29: Heat exchanger 1U
- 28: Heat exchanger 1U
- 27: Heat exchanger 1U
- 26: Heat exchanger 1U
- 25: Heat exchanger 1U
- 24: Heat exchanger 1U
- 23: Heat exchanger 1U
- 22: Heat exchanger 1U
- 21: Heat exchanger 1U
- 20: Heat exchanger 1U
- 19: Heat exchanger 1U
- 18: Heat exchanger 1U
- 17: Heat exchanger 1U
- 16: Heat exchanger 1U
- 15: Heat exchanger 1U
- 14: Heat exchanger 1U
- 13: Heat exchanger 1U
- 12: Heat exchanger 1U
- 11: Heat exchanger 1U
- 10: Heat exchanger 1U
- 9: Link Board Box
- 8: Heat exchanger 1U
- 7: Heat exchanger 1U
- 6: Heat exchanger 1U
- 5: Heat exchanger 1U
- 4: Heat exchanger 1U
- 3: Heat exchanger 1U
- 2: Air deflector 2U
- 1: Air deflector 2U

RE4 hardware

- RE4 EASY Crate
- RE4 MAO
- LBB RE4

Electrical Parent trees

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X2A52_X1R51: ON
├── EXD4_55_JDB
├── EXD4_55
│   └── EXD4_55_TW_4
│       └── X2A52_X1R51
  
```

Position in room

CLOSE

For Help, click Help Topics on the Help Menu.

Proposed rack layout for X3A51

Rack Operation

Rack Information
 DB Label: **X3A51**
 Detector: CSC
 Usage:
 Responsible: YE-TOWERS

Electrical Equipment Information
 Power PLC name: **PLC_UX55**
 Equipment name: **X3A51**
 Equipment type: **Type_109**

Breaker Command information
 Send command:
 Last sent command: 1970.01.01 01:00
 Last received response: UNKNOWN Response!!! 2010.03.09 18:43

Electrical Equipment status

Property	Value
Breaker_Closed	TRUE
Breaker_Open	FALSE
CircuitBreaker_Trigger_Fault	FALSE
DSS_Interlock	FALSE
Locked	FALSE
Opening_Fault	FALSE
Closing_Fault	FALSE
AuxilBreaker_1_Closed	TRUE
AuxilBreaker_1_Fault	FALSE
AuxilBreaker_2_Closed	TRUE
AuxilBreaker_2_Fault	FALSE
Turbine_is_Running	TRUE
Turbine_Fault	FALSE
Temperature_Fault	FALSE
Fire_Fault	FALSE

Electrical Parent trees

X3A51: ON
 EXD4_55_IDB
 EXD4_55
 EXD4_55_TW_4
 X3A51

X3J51 X3A51 LV: ON
 EXD10_55_IDB
 EXD10_55
 EXD10_55_TW_1
 X3J51_X3A51_LV

Position in room

1 LBB for RE4.
 RE MAO can be moved down

Far X3 YE+3



Proposed rack layout for X2J52

Rack Operation

Rack Information
 DB Label: **X2J52**
 Detector: CSC, RPC
 Usage:
 Responsible: YE-TOWERS

Electrical Equipment Information
 Power PLC name: **PLC_UX55**
 Equipment name: **X2J52_LV**
 Equipment type: **Type_104**

Breaker Command information
 Send command:
 Last sent command: ON 2010.06.08 04:33
 Last received response: **COMMAND EXECUTED** 2010.06.08 04:36

Electrical Equipment status

Property	Value
Breaker_Closed	TRUE
Breaker_Open	FALSE
CircuitBreaker_Trigger_Fault	FALSE
DSS_Interlock	FALSE
Locked	FALSE
Opening_Fault	FALSE
Closing_Fault	FALSE

Electrical Parent trees

X2J52_LV: ON
 EXPD20_55_JDB
 EXPD20_55
 EXPD20_55_TW_2
 X2J52_LV

X2J52_X1U51: ON
 EXPD4_55_JDB
 EXPD4_55
 EXPD4_55_TW_1
 X2J52_X1U51

RE 4 LBB

LBB RE4

Position in room

CLOSE

Proposed rack layout for X3J51

Rack Operation

Rack Information
 DB Label: **X3J51**
 Detector: CSC
 Usage:
 Responsible: YE-TOWERS

Electrical Equipment Information
 Power PLC name: **PLC_UX55**
 Equipment name: **X3J51**
 Equipment type: **Type_109**

Breaker Command information
 Send command:
 Last sent command: TEST 2010.06.08 15:50
 Last received response: **COMMAND EXECUTED** 2010.06.08 15:50

Electrical Equipment status

Property	Value
EmergencyStop_Fault	FALSE
User_Fault_1	FALSE
User_Fault_2	FALSE
User_Fault_3	FALSE
Temperature_Alert_Active	TRUE
Smoke_Alert_Active	FALSE
EmergencyStop_Alert_Active	FALSE
UserAlert_1_Active	FALSE
UserAlert_2_Active	FALSE
User_Alert_3_Active	FALSE
Temperature_Interlock_Active	TRUE
Smoke_Interlock_Active	FALSE
EmergencyInterlock_Active	FALSE
User_Interlock_1_Active	FALSE
User_Interlock_2_Active	FALSE

Electrical Parent trees

X3J51: ON
 EXD4_55_JDB
 EXD4_55
 EXD4_55_TW_2
 X3J51

X3J51 X3A51 LV: ON
 EXD10_55_JDB
 EXD10_55
 EXD10_55_TW_1
 X3J51_X3A51_LV

Position in room

RE4 LBB. PC FO Crate needs to be move up by one unit

Near X3 YE+3



Proposed rack layout for X4J51

Rack Operation

Rack Information

DB Label: **X4J51**
Detector: CSC,RPC
Usage:
Responsible: YE-TOWERS

Electrical Equipment Information

Power PLC name: **PLC_UX55**
Equipment name: **X4J51_X5U51**
Equipment type: **Type_109**

Breaker Command information

Send command:
Last sent command: 1970.01.01 01:00
Last received response: 1970.01.01 01:00

Electrical Equipment status

Property	Value
EmergencyStop_Fault	FALSE
User_Fault_1	FALSE
User_Fault_2	FALSE
User_Fault_3	FALSE
Temperature_Alert_Active	TRUE
Smoke_Alert_Active	TRUE
EmergencyStop_Alert_Active	TRUE
UserAlert_1_Active	TRUE
UserAlert_2_Active	TRUE
User_Alert_3_Active	TRUE
Temperature_Interlock_Active	TRUE
Smoke_Interlock_Active	TRUE
EmergencyInterlock_Active	TRUE
User_Interlock_1_Active	TRUE
User_Interlock_2_Active	TRUE

Electrical Parent trees

X4J51_X5U51: ON

- EXD4_66_JDB
 - EXD4_66
 - EXD4_66_TW_2
 - X4J51_X5U51

Proposed rack layout for X2S52

Rack Operation

Rack Information
 DB Label: **X2S52**
 Detector: CSC, RPC
 Usage:
 Responsible: YE-TOWERS

Electrical Equipment Information
 Power PLC name: **PLC_UX55**
 Equipment name: **X2S52_X1L51**
 Equipment type: **Type_109**

Breaker Command information
 Send command:
 Last sent command:
 ON 2010.05.08 04:02
 Last received response:
 COMMAND EXECUTED 2010.05.08 04:05

Electrical Equipment status

Property	Value
EmergencyStop_Fault	FALSE
User_Fault_1	FALSE
User_Fault_2	FALSE
User_Fault_3	FALSE
Temperature_Alert_Active	FALSE
Smoke_Alert_Active	FALSE
EmergencyStop_Alert_Active	FALSE
UserAlert_1_Active	FALSE
UserAlert_2_Active	FALSE
UserAlert_3_Active	FALSE
Temperature_Interlock_Active	FALSE
Smoke_Interlock_Active	FALSE
EmergencyInterlock_Active	FALSE
User_Interlock_1_Active	FALSE
User_Interlock_2_Active	FALSE

Electrical Parent trees
 X2S52_X1L51: ON
 EXDB_55_JDB
 EXDB_55
 EXDB_55_TW_4
 X2S52_X1L51

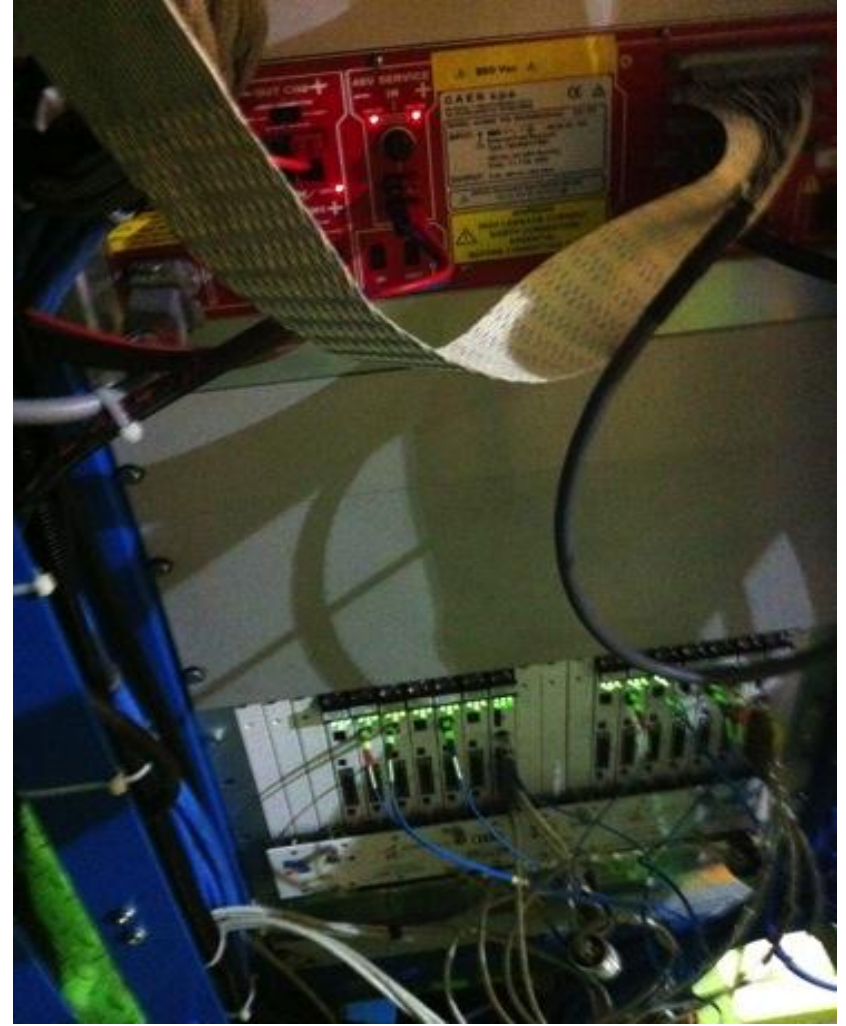
RE4 EASY Crate
RE4 MAO
LBB RE4

RE4 LBB, MAO and EASY Crate

Position in room

CLOSE

Far X3 YE-3



Proposed rack layout for X4S51

Rack Operation

Rack Information

DB Label: **X4S51**
 Detector: CSC,RPC
 Usage:
 Responsible: YE-TOWERS

Electrical Equipment Information

Power PLC name: **PLC_UX55**
 Equipment name: **X4S51_LV**
 Equipment type: **Type_104**

Breaker Command information

Send command:
 Last sent command:
 Last received response:

Electrical Equipment status

Property	Value
Breaker_Closed	TRUE
Breaker_Open	FALSE
CircuitBreaker_Trigger_Fault	FALSE
DSS_Interlock	FALSE
Locked	FALSE
Opening_Fault	FALSE
Closing_Fault	FALSE

Electrical Parent trees

X4S51_LV: ON

- EXD20_55_JDB
 - EXD20_55
 - EXD20_55_TW_2
 - X4S51_LV

X4S51_X5L51: ON

- EXD8_55_JDB
 - EXD8_55
 - EXD8_55_TW_5
 - X4S51_X5L51

Rack Layout Diagram (Front View)

Vertical axis labels: 56, 55, 54, 53, 52, 51, 50, 49, 48, 47, 46, 45, 44, 43, 42, 41, 40, 39, 38, 37, 36, 35, 34, 33, 32, 31, 30, 29, 28, 27, 26, 25, 24, 23, 22, 21, 20, 19, 18, 17, 16, 15, 14, 13, 12, 11, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1

Equipment in rack (from top to bottom):

- Turbine 4U (rows 52-55)
- Link Board Box (rows 47-48)
- ME Alignment (rows 42-43)
- Heat exchanger 1U (rows 36-37)
- DSS (rows 20-21)
- LBB RE4 (rows 11-12)
- Heat exchanger 1U (rows 7-8)
- ME Maraton (rows 6-7)
- Heat exchanger 1U (rows 3-4)
- Air deflector 2U (rows 2-3)

RE4 LBB (Label with arrow pointing to LBB RE4)

Position in room (Floor plan diagram)

CLOSE (Button)

Proposed rack layout for X2V52

Rack Operation

Rack Information
 DB Label: **X2V52**
 Detector: CSC, RPC
 Usage:
 Responsible: YE-TOWERS

Electrical Equipment Information
 Power PLC name: **PLC_UX55**
 Equipment name: **X2V52_LV**
 Equipment type: **Type_104**

Breaker Command information
 Send command:
 Last sent command:
 ON 2010.06.08 04:37
 Last received response:
 COMMAND EXECUTED 2010.06.08 04:46

Electrical Equipment status

Property	Value
Breaker_Closed	TRUE
Breaker_Open	FALSE
CircuitBreaker_Trip_Fault	FALSE
DSS_Interlock	FALSE
Locked	FALSE
Opening_Fault	FALSE
Closing_Fault	FALSE

Electrical Parent trees

X2V52 LV: ON
 EXD20_55_IDB
 EXD20_55
 EXD20_55_TW_2
 X2V52_LV

X2V52 X1E51: ON
 EXD6_55_IDB
 EXD6_55
 EXD6_55_TW_2
 X2V52_X1E51

RE4 LBB (indicated by a blue arrow pointing to the yellow LBB RE4 box)

Position in room

CLOSE

Proposed rack layout for X3V51

Rack Operation

Rack Information

DB Label: **X3V51**
Detector: CSC
Usage:
Responsible: YE-TOWERS

Electrical Equipment Information

Power PLC name: **PLC_UX55**
Equipment name: **X3S51_X3V51_LV**
Equipment type: **Type_104**

Breaker Command information

Send command:
Last sent command: TEST 2010.05.12 17:52
Last received response: **COMMAND EXECUTED** 2010.05.12 17:53

Electrical Equipment status

Property	Value
Breaker_Closed	TRUE
Breaker_Open	FALSE
CircuitBreaker_Trigger_Fault	FALSE
DBS_Interlock	FALSE
Locked	FALSE
Opening_Fault	FALSE
Closing_Fault	FALSE

Electrical Parent trees

X3S51_X3V51_LV: ON

- EXD10_55_JDB
 - EXD10_55
 - EXD10_55_TW_2
 - X3S51_X3V51_LV

X3V51: ON

- EXD8_55_JDB
 - EXD8_55
 - EXD8_55_TW_2
 - X3V51

LBB RE4

Position in room

CLOSE

The rack is almost full already and 4 individual units are available on different positions in the rack. Needs to move hardware in approximately half of the rack.

Near X3 YE-3



Proposed rack layout for X4V51

Rack Operation

Rack Information

DB Label: **X4V51**
 Detector: CSC,RPC
 Usage:
 Responsible: YE-TOWERS

Electrical Equipment Information

Power PLC name: **PLC_UX55**
 Equipment name: **X4V51_X5E51**
 Equipment type: **Type_109**

Breaker Command information

Send command:
 Last sent command: 1970.01.01 01:00
 Last received response: 1970.01.01 01:00

Electrical Equipment status

Property	Value
EmergencyStop_Fault	FALSE
User_Fault_1	FALSE
User_Fault_2	FALSE
User_Fault_3	FALSE
Temperature_Alert_Active	TRUE
Smoke_Alert_Active	TRUE
EmergencyStop_Alert_Active	TRUE
UserAlert_1_Active	TRUE
UserAlert_2_Active	TRUE
User_Alert_3_Active	TRUE
Temperature_Interlock_Active	TRUE
Smoke_Interlock_Active	TRUE
EmergencyInterlock_Active	TRUE
User_Interlock_1_Active	TRUE
User_Interlock_2_Active	TRUE

Electrical Parent trees

X4V51_X5E51: ON

- EXDB_55_JOB
- EXDB_55
 - EXDB_55_TW_2
 - X4V51_X5E51

Conclusion

- Currently we do not see any significant problem of space for RE4 hardware in X2 and X4 racks .
 - Needs discussion with CSC colleagues for final version of RE4 racks layout.
- Racks in X3 require some adjustments of already installed hardware to install RE4 LBB.
 - Most crucial rack is **X3V51**