

Run II Event Builder Upgrade Status Report

CDF DAQ Meeting
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Run II Event Builder Upgrade Status Report

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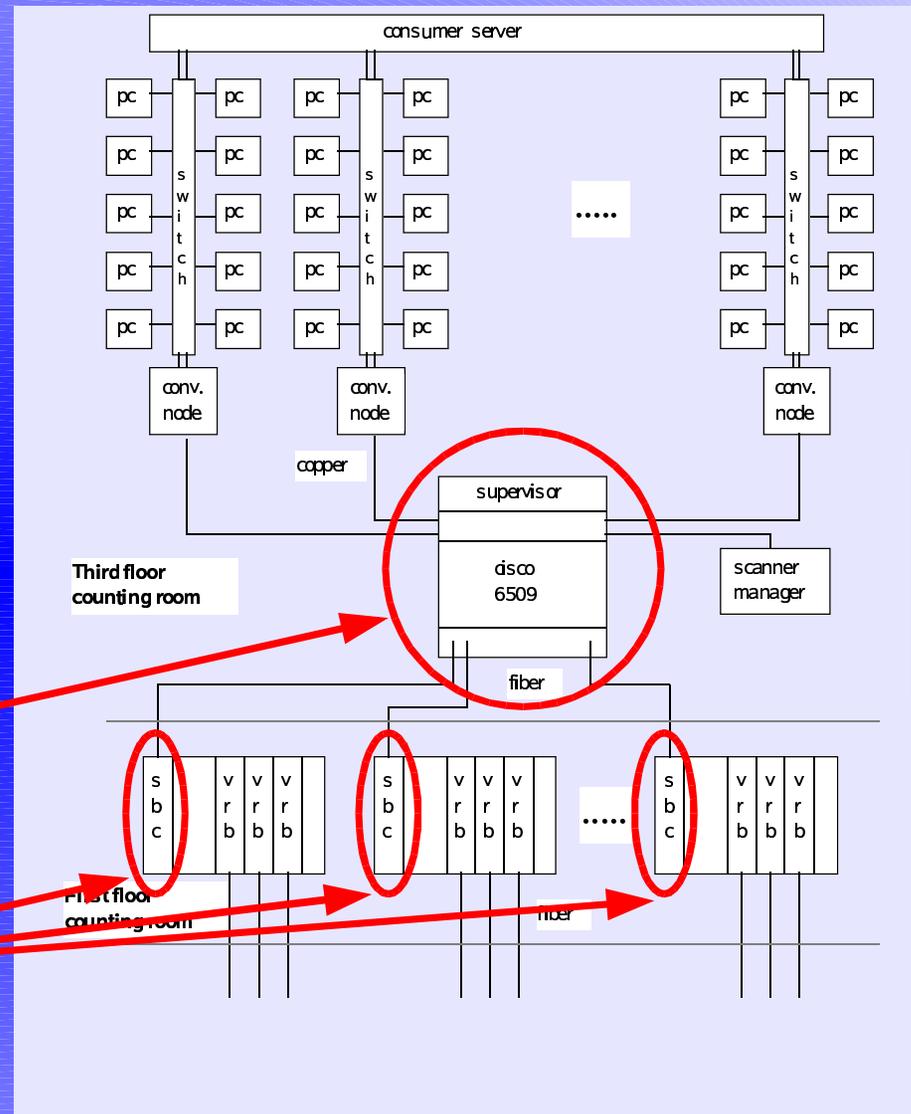
Run II Event Builder Upgrade Status Report

x Specification

	Run IIb	RunIIa
Rate:	1kHz	300Hz
Event size:	500kB	250kB
Throughput:	500MB/s	75MB/s

New Cisco 6509 switch

New VMIC 7805 boards (SCPU)



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x Milestones

Baseline

05/15/2004:
order VMIC 7805 boards

09/01/2004: **Summer shutdown**
system test with real data

12/01/2004:
system commissioning
completed

08/01/2005: **Summer shutdown**
finished installation and
commissioning

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x Test Stand

VME crate



Gigabit switch



“L3” nodes



1000 BaseT / Gbit

100 BaseT / boot

Small switch



Hardware:

- 2 VMIC 7805 boards
- 16 “L3” nodes
- 6509 switch (final system)
- 3750 switch (test stand)

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x Test Stand

VMIC 7805 boards did not work with some adapter cards.

- Developed alternative solutions.

Fragile

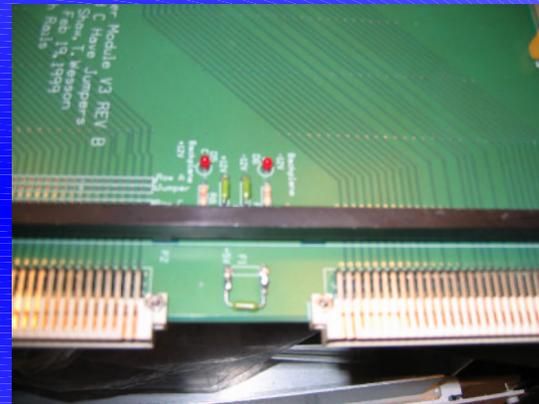


Expensive (~ \$300 each)



- Found the problem: 5A fuse.

Replaced fuse on adapter card



- We have 4-5 adapter cards in the test stand.

- Reuse adapter cards from the current system, but replace fuses for the new system.

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x Test Stand

6509 Cisco switch:

- complete overkill

VMIC 7805 board:

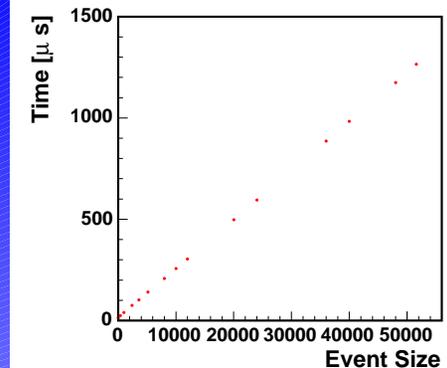
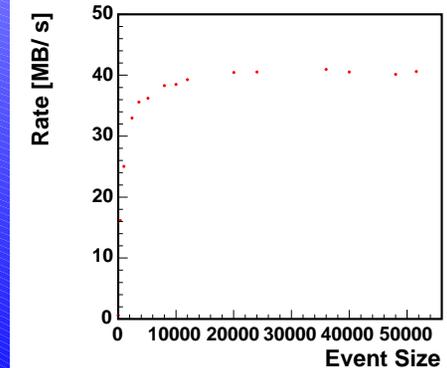
- dma transfer of 160B (byte count) + 16kB (data)

rate ~34MB/s

- send data through the switch to L3 node

rate ~28MB/s

- universe chip not in fast mode / code not optimal



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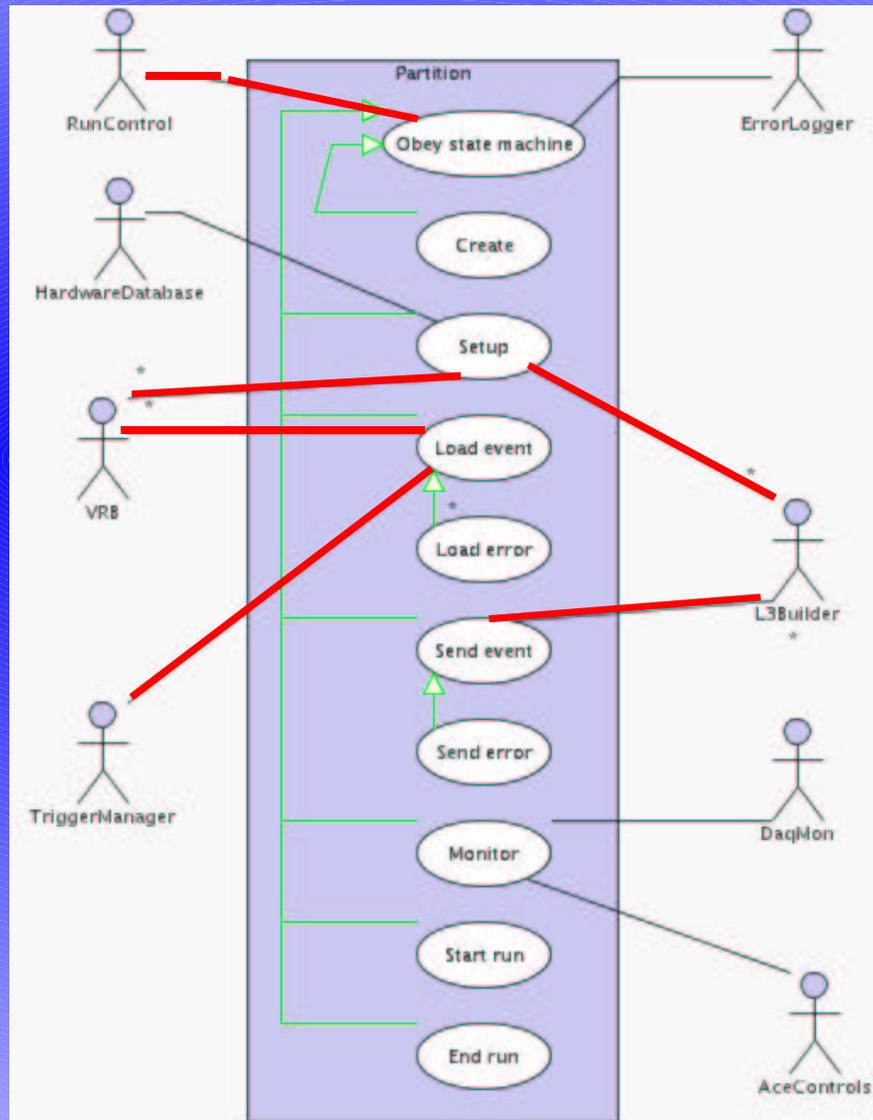
x Interfaces to other Systems

Run Control:
changes to RC
messages

VRB: DAQ
Silicon
COT

Trigger Manager*:
replace scramnet
with ethernet
interface

*needed (09/01/2004)



L3 Builder:
replace scramnet
with
ethernet interface

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x Summary

The hardware for the test stand is in place.

6509 Cisco switch is tested.

VMIC 7805 boards are tested.

Order for VMIC 7805 boards will go out soon.

Trigger Manager needs to replace scamnet by ethernet
for system test with real data (09/01/2004).

Overall design requirements are documented.