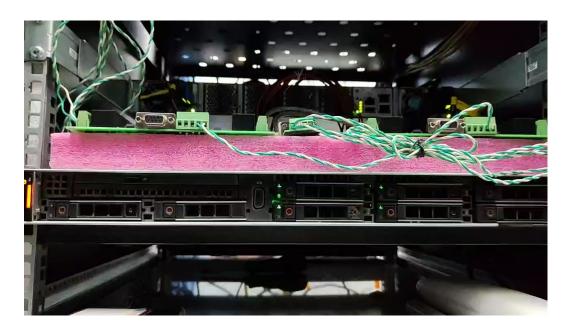# Update on Tianlai Hardware Status

Jixia Li

2024/11/26

Cylinder FRB detect system

- Cylctrl server system SSD failed.
  - Server sent to Guangdong for repair.

Timestamp ▾	Message
2024-11-04 01:30:01	Fault detected on drive 0 in disk drive bay 1.
2024-11-04 01:29:59	Fault detected on drive 1 in disk drive bay 1.
2024-11-04 01:29:16	Drive 1 in disk drive bay 1 is operating normally.
2024-11-04 01:29:13	Drive 0 in disk drive bay 1 is operating normally.
2024-11-02 03:41:21	Fault detected on drive 0 in disk drive bay 1.
2024-11-02 03:41:19	Fault detected on drive 1 in disk drive bay 1.
2024-11-02 03:40:33	Drive 1 in disk drive bay 1 is operating normally.
2024-11-02 03:40:30	Drive 0 in disk drive bay 1 is operating normally.
2024-11-02 03:35:58	An unsupported event occurred.
2024-11-02 03:35:58	A problem was detected during Power-On Self-Test (POST).
2024-11-02 03:34:53	Fault detected on drive 1 in disk drive bay 1.
2024-11-02 03:34:50	Fault detected on drive 0 in disk drive bay 1.
2024-11-01 11:20:52	Multi-bit memory errors detected on a memory device at location(s) DIMM_A4.
2024-11-01 11:20:52	An OEM diagnostic event occurred.
2024-11-01 11:20:51	An OEM diagnostic event occurred.
2024-11-01 11:20:51	An OEM diagnostic event occurred.
2024-11-01 11:20:51	An OEM diagnostic event occurred.

Cylinder FRB detect system

- Cylctrl server system SSD failed.
  - Server sent to Guangdong for repair.
- Cuda problem remains.
  - Error occurred occasionally on cylfrbgpu2.
  - Compatibility?


```
observer@cylfrbgpu1:~/control_all_frb          _  □  ×

File  Edit  View  Search  Terminal  Help
cylfrbgpu2: ERROR: Pipeline creation failed
cylfrbgpu2:         Invalid device index
cylfrbgpu2: Could not setCudaDevice to 1: invalid device ordinal
cylfrbgpu2: ERROR: Pipeline creation failed
cylfrbgpu2:         Invalid device index
cylfrbgpu2: Could not setCudaDevice to 1: invalid device ordinal
cylfrbgpu2: ERROR: Pipeline creation failed
cylfrbgpu2:         Invalid device index
cylfrbgpu2: Could not setCudaDevice to 1: invalid device ordinal
cylfrbgpu2: ERROR: Pipeline creation failed
cylfrbgpu2:         Invalid device index
cylfrbgpu2: Could not setCudaDevice to 1: invalid device ordinal
cylfrbgpu2: ERROR: Pipeline creation failed
cylfrbgpu2:         Invalid device index
cylfrbgpu2: Could not setCudaDevice to 1: invalid device ordinal
cylfrbgpu2: ERROR: Pipeline creation failed
cylfrbgpu2:         Invalid device index
cylfrbgpu2: Could not setCudaDevice to 1: invalid device ordinal
cylfrbgpu2: ERROR: Pipeline creation failed
cylfrbgpu2:         Invalid device index
cylfrbgpu2: Could not setCudaDevice to 1: invalid device ordinal
cylfrbgpu2: ERROR: Pipeline creation failed
cylfrbgpu2:         Invalid device index
```

Cylinder correlator system

- No-correlation problem between roach boards turns out to be caused by false output of 1PPS signal.

- Upgrade GPU card from GTX690 to RTX3080 for 2 Xengine servers.

- Roach 7 netboot resolved by setting environment variables in u-Boot.

Dish correlation system

Pol.	Dish No.	Feed	LNA	cable	Optic Transmitter	Optic Cable	Optic Receiver	Filter	Mixer	ADC	Status		
1	1												
2	1												
3	2												
4	2												
5	3												
6	3												
7	4												
8	4												
9	5				Bad		Undetermined	Undetermined	Undetermined		Bad		
10	5												
11	6												
12	6												
13	7												
14	7												
15	8												
16	8						Undetermined	Undetermined	Undetermined		Bad		
17	9												
18	9	Undetermined	Undetermined	Undetermined	Undetermined	Undetermined					Bad	信号弱20dB	
19	10												
20	10												
21	11												
22	11												
23	12				Bad	Need check	Need check	Need check	Need check	Need check	Bad		
24	12						Undetermined	Undetermined	Undetermined		Bad		
25	13												
26	13												
27	14												
28	14												
29	15												
30	15												
31	16												
32	16												

Legend:
- Normal (green)
- Bad (red)
- Undetermined (orange)
- Need check (grey)

New dish antennas built.
Need connection (power cable and serial cable).
Update control program.