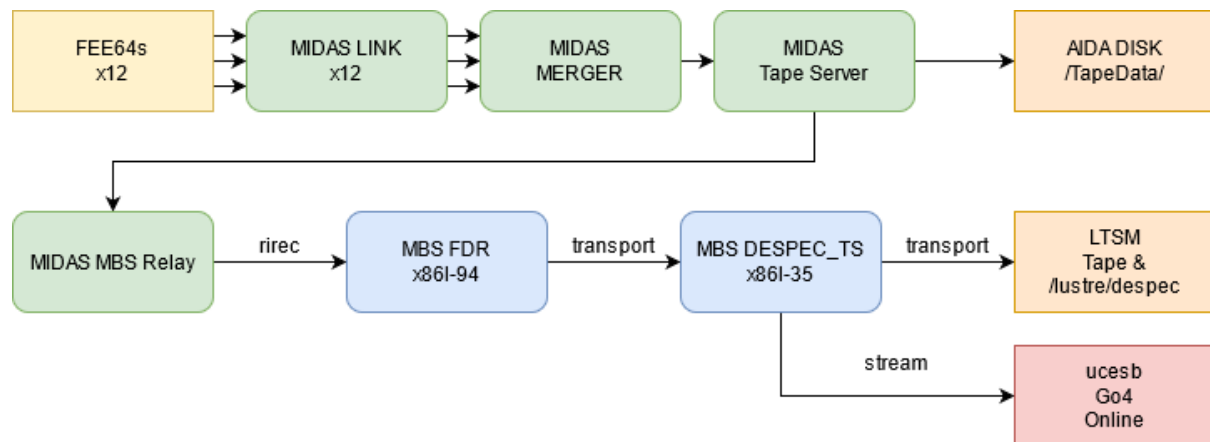


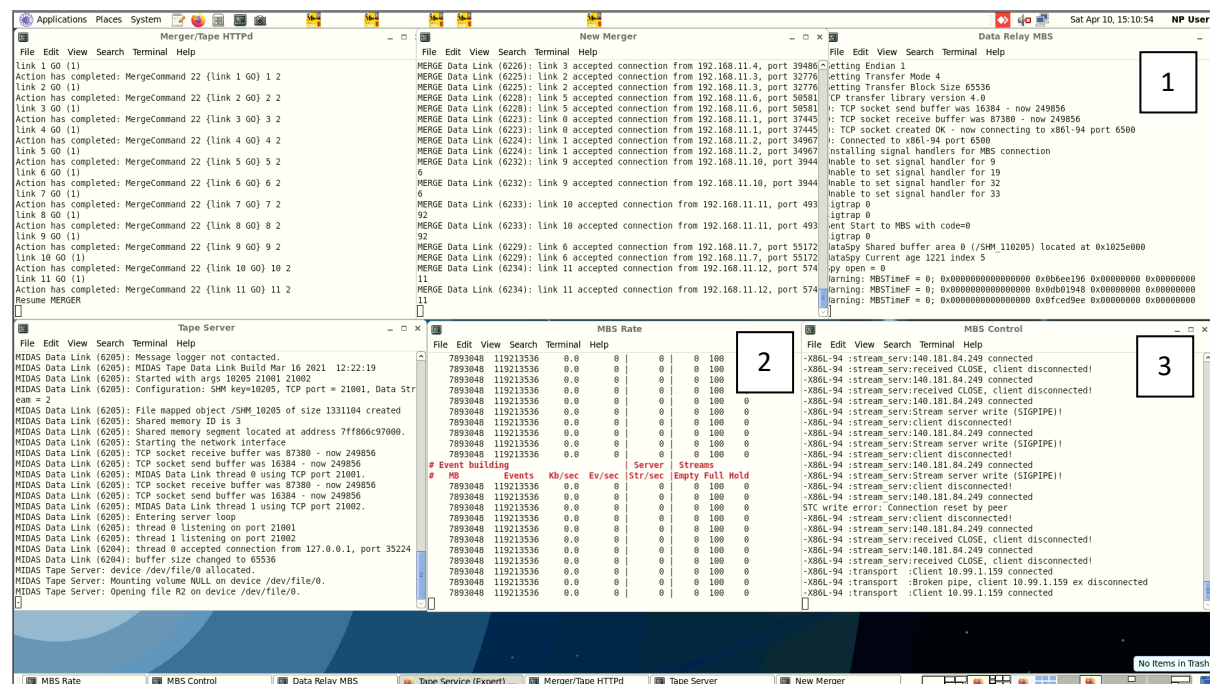
# AIDA and MBS Tips and Troubleshooting



AIDA Data Flow through MBS:

Green = Processes running on the AIDA workstation aida-3

Blue = MBS nodes



MBS windows are opened with the merger windows on Workspace 3, the key windows are:

1. MBS Relay – Transfers AIDA data from the tape Server to MBS
2. MBS Rates – Monitors the rates of the AIDA Data Receiver MBS System
3. MBS Control – Control for the AIDA Data Receiver MBS System

### **Things to check regularly:**

Verify the rate (Kb/sec) in MBS is the same (roughly) as you see in the Tape Server page

Confirm that the streams "Full" is not 100 as data will be lost between the Tape and MBS (example above is from a frozen MBS connection)

### **If the rate is 0:**

If all streams are full (empty column is 0) for a while, the issue is the MBS time sorter not accepting the data. Probably this means a different DAQ has failed. Inform the DESPEC shifters!!

If streams are empty but rate is 0 then AIDA is not producing data or not sending it to MBS:

Usually this is AIDA itself so check that AIDA is working properly, and you see data in the Tape Server. Make sure a file is opened in the Tape server.

If the tape server has data and MBS does not, you can check the MBS link:

Confirm in the MBS Relay (1) and MBS Control (3) that the connection has been made. Notices about the MBS Relay connection in the MBS Control window begin with "rirc". Messages from "transport" relate to the connection between the MBS FDR and the DESPEC time sorter.

If the MBS system or Tape Server were restarted you may need to restart the MBS relay to ensure they connect properly.

As a last resort you may want to restart the MBS FDR, this should be done in full communication with the DESPEC shifters as they will need to take action from the DESPEC Time Sorter as well.

1. Ask that AIDA is removed from the Time Sorter or the sorter is shut down.
2. Press ctrl+Z in MBS control window to stop MBS.
3. Type "resl" to close all MBS tasks.
4. Make sure you are in mbsrun/s460/aida\_to\_mbs (check pwd)
5. Type "mbs -dabc" to start MBS again.
6. Type @startup to start the MBS FDR
7. Restart the MBS relay task and confirm they connect.
8. Restart the rate task in window (2) (press up once to rerun the last command)
9. Confirm you see rate in MBS now.
10. Ask that AIDA is added to the Time Sorter or the sorter is started again.

### **Tape Server/Files**

Before closing an AIDA file, or otherwise changing the Tape Server, inform the DESPEC shifters, as when an AIDA file is closed, no data goes to MBS. In general AIDA files are kept open continuously during the experiment.

Data can be sent to MBS without being written to disk by enabling the "No Storage" option in the Tape Server control page.

## Example Rate Screenshots indicating problems:

MBS Rate									
File	Edit	View	Search	Terminal	Help				
7893053	119213607	0.0	0	0	100	0	0		
7893053	119213607	0.0	0	0	100	0	0		
0	0	0.0	0	0	100	0	0		
0	0	0.0	0	0	100	0	0		
0	0	0.0	0	0	100	0	0		
0	0	0.0	0	0	100	0	0		
0	0	0.0	0	0	100	0	0		
Killed									
X86L-94 despec > rate -st -nev -rev -ndata -rdata									
-st[reams] # stream usage									
Interval: 1 s. 100 streams a 100 buffers a 32768 b.									
# Event building				Server		Streams			
#	MB	Events	Kb/sec	Ev/sec	Str/sec	Empty	Full	Hold	
32	480	0.0	0	0	0	100	0	0	
39	588	7143.4	108	0	0	100	0	0	
46	694	7038.1	106	0	0	100	0	0	
53	794	6619.1	100	0	0	100	0	0	
60	910	7667.7	116	0	0	100	0	0	
67	1010	6619.1	100	0	0	100	0	0	
73	1108	6488.1	98	0	0	100	0	0	
80	1212	6881.3	104	0	0	100	0	0	
87	1320	7143.4	108	0	0	100	0	0	
94	1427	7110.7	107	0	0	100	0	0	

This indicates MBS is working properly, we see data flowing.

MBS Rate									
File	Edit	View	Search	Terminal	Help				
7893048	119213536	0.0	0	0	0	100	0		
7893048	119213536	0.0	0	0	0	100	0		
7893048	119213536	0.0	0	0	0	100	0		
7893048	119213536	0.0	0	0	0	100	0		
7893048	119213536	0.0	0	0	0	100	0		
7893048	119213536	0.0	0	0	0	100	0		
7893048	119213536	0.0	0	0	0	100	0		
7893048	119213536	0.0	0	0	0	100	0		
7893048	119213536	0.0	0	0	0	100	0		
7893048	119213536	0.0	0	0	0	100	0		
# Event building				Server		Streams			
#	MB	Events	Kb/sec	Ev/sec	Str/sec	Empty	Full	Hold	
7893048	119213536	0.0	0	0	0	0	100	0	
7893048	119213536	0.0	0	0	0	0	100	0	
7893048	119213536	0.0	0	0	0	0	100	0	
7893048	119213536	0.0	0	0	0	0	100	0	
7893048	119213536	0.0	0	0	0	0	100	0	
7893048	119213536	0.0	0	0	0	0	100	0	
7893048	119213536	0.0	0	0	0	0	100	0	
7893048	119213536	0.0	0	0	0	0	100	0	
7893048	119213536	0.0	0	0	0	0	100	0	
7893048	119213536	0.0	0	0	0	0	100	0	
7893048	119213536	0.0	0	0	0	0	100	0	
7893048	119213536	0.0	0	0	0	0	100	0	
7893048	119213536	0.0	0	0	0	0	100	0	
7893048	119213536	0.0	0	0	0	0	100	0	

There is a problem with the DESPEC MBS, as all the AIDA streams are full.

MBS Rate									
File	Edit	View	Search	Terminal	Help				
7893053	119213607	0.0	0	0	0	100	0	0	
# Event building				Server		Streams			
#	MB	Events	Kb/sec	Ev/sec	Str/sec	Empty	Full	Hold	
7893053	119213607	0.0	0	0	0	100	0	0	
7893053	119213607	0.0	0	0	0	100	0	0	
7893053	119213607	0.0	0	0	0	100	0	0	
7893053	119213607	0.0	0	0	0	100	0	0	
7893053	119213607	0.0	0	0	0	100	0	0	
7893053	119213607	0.0	0	0	0	100	0	0	
7893053	119213607	0.0	0	0	0	100	0	0	
7893053	119213607	0.0	0	0	0	100	0	0	
7893053	119213607	0.0	0	0	0	100	0	0	
7893053	119213607	0.0	0	0	0	100	0	0	
7893053	119213607	0.0	0	0	0	100	0	0	
7893053	119213607	0.0	0	0	0	100	0	0	
7893053	119213607	0.0	0	0	0	100	0	0	
7893053	119213607	0.0	0	0	0	100	0	0	
7893053	119213607	0.0	0	0	0	100	0	0	
7893053	119213607	0.0	0	0	0	100	0	0	
7893053	119213607	0.0	0	0	0	100	0	0	
7893053	119213607	0.0	0	0	0	100	0	0	
7893053	119213607	0.0	0	0	0	100	0	0	
7893053	119213607	0.0	0	0	0	100	0	0	
7893053	119213607	0.0	0	0	0	100	0	0	
7893053	119213607	0.0	0	0	0	100	0	0	

There is a problem with AIDA (or AIDA MBS), as there is no rate, but the streams are all empty.