

artdaq - Bug #20403

SBND - SHM - artdaq::SharedMemoryManager::GetBufferForReading() skipping/dropping buffers/fragments/events

07/23/2018 09:37 AM - Ron Rechenmacher

Status:	Closed	Start date:	07/23/2018
Priority:	Normal	Due date:	
Assignee:		% Done:	0%
Category:	Known Issues	Estimated time:	0.00 hour
Target version:	artdaq_core v3_04_02	Co-Assignees:	
Experiment:	-		
Description			
When looking into an SBND/lariat subrun issue, we noticed missing events. I've seen GetBufferForReading() skip an event. The issue does not appear to happen when TCP transfers are force.			
Related issues:			
Related to artdaq - Idea #20442: Evaluate the shared memory interplay between...		New	07/25/2018
Related to artdaq - Bug #20373: SBND VST - subrun change from fragment genera...		New	07/19/2018

History

#1 - 07/23/2018 09:39 AM - Ron Rechenmacher

```
/home/ron/work/artdaqPrj/demo21-om/DAQInterface
mu2eddaq10 :^) pidlist="36559 36556 39357 36557 39305" # PIDs of BR, EB, EBart, DL, DLart
--2018-07-22_16:08:38--
/home/ron/work/artdaqPrj/demo21-om/DAQInterface
mu2eddaq10 :^) first=0
--2018-07-22_16:08:38--
/home/ron/work/artdaqPrj/demo21-om/DAQInterface
mu2eddaq10 :^) for PID in $pidlist;do
> if [ $first -eq 0 ];then
> first=1
> else
> echo ===== $PID Read=====
> tshow\
> | egrep "[0-9] *$PID .*ReadFragmentHeader: read active_buffer=[0-9]* sequence_id=(41|42|43|44)\$" \
> | tdelta -d 1 -ct 1 | cat
> fi
> echo ===== $PID Write=====
> tshow\
> | egrep "[0-9] *$PID .*Sending fragment with seqID=(41|42|43|44) (\$| )" \
> | tdelta -d 1 -ct 1 | cat
> done
===== 36559 Write=====
4536491 07-22 15:39:37.353500 0 36559 39408 19 SharedMemoryFragmentManager d13 . Sending
fragment with seqID=44 using buffer 5
4536816 07-22 15:39:37.353243 257 36559 39408 19 component01_ShmemTransfer d05 . transfer
_between_0_and_1_SEND: Sending fragment with seqID=44
4537056 07-22 15:39:37.353085 158 36559 39408 19 SharedMemoryFragmentManager d13 . Sending
fragment with seqID=43 using buffer 4
4537104 07-22 15:39:37.353060 25 36559 39408 19 component01_ShmemTransfer d05 . transfer
_between_0_and_1_SEND: Sending fragment with seqID=43
4537376 07-22 15:39:37.352905 155 36559 39408 19 SharedMemoryFragmentManager d13 . Sending
fragment with seqID=42 using buffer 3
4537431 07-22 15:39:37.352875 30 36559 39408 19 component01_ShmemTransfer d05 . transfer
_between_0_and_1_SEND: Sending fragment with seqID=42
4537688 07-22 15:39:37.352680 195 36559 39408 19 SharedMemoryFragmentManager d13 . Sending
fragment with seqID=41 using buffer 2
4537741 07-22 15:39:37.352639 41 36559 39408 19 component01_ShmemTransfer d05 . transfer
_between_0_and_1_SEND: Sending fragment with seqID=41
===== 36556 Read=====
4525695 07-22 15:39:37.360928 0 36556 39404 23 SharedMemoryFragmentManager d22 . ReadFrag
mentHeader: read active_buffer=5 sequence_id=44
4526065 07-22 15:39:37.360708 220 36556 39404 23 SharedMemoryFragmentManager d22 . ReadFrag
mentHeader: read active_buffer=4 sequence_id=43
4526405 07-22 15:39:37.360426 282 36556 39404 23 SharedMemoryFragmentManager d22 . ReadFrag
```

```

mentHeader: read active_buffer_=3 sequence_id=42
4526699 07-22 15:39:37.360250      176 36556 39404 23      SharedMemoryFragmentManager d22 . ReadFrag
mentHeader: read active_buffer_=2 sequence_id=41
===== 36556 Write=====
problem finding column associated with "1" in first line
===== 39357 Read=====
problem finding column associated with "1" in first line
===== 39357 Write=====
4509116 07-22 15:39:37.372705      0 39357 39357 6      SharedMemoryFragmentManager d13 . Sending
fragment with seqID=44 using buffer 0
4509124 07-22 15:39:37.372695      10 39357 39357 6      _ShmemTransfer d05 . transfer
_between_1_and_2_SEND: Sending fragment with seqID=44
4509303 07-22 15:39:37.372335      360 39357 39357 6      SharedMemoryFragmentManager d13 . Sending
fragment with seqID=43 using buffer 9
4509311 07-22 15:39:37.372326      9 39357 39357 6      _ShmemTransfer d05 . transfer
_between_1_and_2_SEND: Sending fragment with seqID=43
4509472 07-22 15:39:37.372010      316 39357 39357 6      SharedMemoryFragmentManager d13 . Sending
fragment with seqID=42 using buffer 8
4509480 07-22 15:39:37.371997      13 39357 39357 6      _ShmemTransfer d05 . transfer
_between_1_and_2_SEND: Sending fragment with seqID=42
4509696 07-22 15:39:37.371652      345 39357 39357 6      SharedMemoryFragmentManager d13 . Sending
fragment with seqID=41 using buffer 7
4509732 07-22 15:39:37.371633      19 39357 39357 6      _ShmemTransfer d05 . transfer
_between_1_and_2_SEND: Sending fragment with seqID=41
===== 36557 Read=====
4479856 07-22 15:39:38.003701      0 36557 39352 21      SharedMemoryFragmentManager d22 . ReadFrag
mentHeader: read active_buffer_=0 sequence_id=44
4493909 07-22 15:39:37.726294      277407 36557 39352 21      SharedMemoryFragmentManager d22 . ReadFrag
mentHeader: read active_buffer_=8 sequence_id=42
4509644 07-22 15:39:37.371688      354606 36557 39352 21      SharedMemoryFragmentManager d22 . ReadFrag
mentHeader: read active_buffer_=7 sequence_id=41
===== 36557 Write=====
problem finding column associated with "1" in first line
===== 39305 Read=====
problem finding column associated with "1" in first line
===== 39305 Write=====
4397168 07-22 15:39:38.798920      0 39305 39305 7      SharedMemoryFragmentManager d13 . Sending
fragment with seqID=44 using buffer 5
4397227 07-22 15:39:38.798889      31 39305 39305 7      _ShmemTransfer d05 . transfer
_between_2_and_3_SEND: Sending fragment with seqID=44
4398350 07-22 15:39:38.798028      861 39305 39305 7      SharedMemoryFragmentManager d13 . Sending
fragment with seqID=42 using buffer 4
4398398 07-22 15:39:38.798003      25 39305 39305 7      _ShmemTransfer d05 . transfer
_between_2_and_3_SEND: Sending fragment with seqID=42
4399583 07-22 15:39:38.797330      673 39305 39305 7      SharedMemoryFragmentManager d13 . Sending
fragment with seqID=41 using buffer 3
4399619 07-22 15:39:38.797311      19 39305 39305 7      _ShmemTransfer d05 . transfer
_between_2_and_3_SEND: Sending fragment with seqID=41
--2018-07-22_16:13:37--

```

#2 - 07/23/2018 03:22 PM - Ron Rechenmacher

- Subject changed from `artdaq::SharedMemoryManager::GetBufferForReading()` skipping buffer to SBND - SHM - `artdaq::SharedMemoryManager::GetBufferForReading()` skipping/dropping buffers/fragments/events

#3 - 07/25/2018 02:09 PM - Ron Rechenmacher

- Related to Idea #20442: Evaluate the shared memory interplay between "broadcast," "reliable," "overwrite" and "drop" design/functionality (and corresponding fcl config) added

#4 - 07/25/2018 02:10 PM - Ron Rechenmacher

- Related to Bug #20373: SBND VST - subrun change from fragment generator not working added

#5 - 09/27/2018 08:36 AM - Eric Flumerfelt

- Category set to Known Issues

- Status changed from New to Closed

- Target version set to `artdaq_core v3_04_02`

We have removed buffer sequence ID checking when in non-broadcast modes.