

artdaq - Bug #21640

Memory leak in ContainerFragmentLoader

01/08/2019 01:43 PM - Eric Flumerfelt

Status:	Closed	Start date:	01/08/2019
Priority:	Normal	Due date:	
Assignee:	Eric Flumerfelt	% Done:	50%
Category:	Known Issues	Estimated time:	0.00 hour
Target version:	artdaq_core v3_04_09	Co-Assignees:	
Experiment:	-		
Description			
ContainerFragmentLoader was calling ContainerFragment::create_index_, then putting the generated index into the Fragment. However, it never deleted the array allocated by create_index_, causing BoardReaders that use ContainerFragment to leak memory at a rate proportional to the number of Fragments in the Containers.			
This bug was discovered during testing of the circular_buffer_mode_example with component03's usecs_between_sends set to 1000.			
Fix is on artdaq-core/bugfix/ContainerFragmentLoader_MemoryLeak			
Related issues:			
Related to artdaq - Bug #21267: Problems seen with large, and non-unique, req...		Closed	01/08/2019
Related to artdaq - Feature #21717: It would be nice for ContainerFragmentLoa...		Closed	01/18/2019
Related to artdaq - Support #21738: BoardReader memory usage increases with u...		Resolved	02/12/2019

History

#1 - 01/08/2019 01:46 PM - Eric Flumerfelt

- Status changed from New to Resolved
- % Done changed from 0 to 50

#2 - 01/11/2019 04:20 PM - Kurt Biery

- Related to Bug #21267: Problems seen with large, and non-unique, request windows added

#3 - 01/18/2019 08:12 AM - Kurt Biery

- Related to Feature #21717: It would be nice for ContainerFragmentLoader/Fragment/QuickVec to use fewer memcopy's when adding lots of fragments to a Container added

#4 - 01/22/2019 04:48 PM - Kurt Biery

In tests at protoDUNE, I saw the memory usage of the Trigger BoardReader increase to 3% of memory after 5 minutes and 5.5% after 10 minutes (with 1200 fragments per Container) without this code change. With this code change, it was 0.5% after 5 minutes, 0.7% after 10 min, and 1.2% after 20 min.

On mu2eddaq01 with the circular_buffer_mode_example (and nADCcounts set to 200), the memory increased to 20% after 5 minutes into a run without this code change. (and 30% after 8 minutes) With this code change, the BoardReader memory usage for component03 was 4.4% after 5 minutes and 6.4% after 8 minutes.

This fix clearly helps, so I will merge the associated branch to develop, but it seems like there still is some sort of memory issue. I will file a separate Redmine Issue for that.

#5 - 01/22/2019 05:01 PM - Kurt Biery

- Related to Support #21738: BoardReader memory usage increases with using circular_buffer_mode_example and nADCcounts of 200 added

#6 - 01/30/2019 02:30 PM - Eric Flumerfelt

- Status changed from Resolved to Reviewed

#7 - 02/01/2019 10:40 AM - Eric Flumerfelt

- Target version set to artdaq_core v3_04_09

- Status changed from Reviewed to Closed