

artdaq Utilities - Feature #21811

Add a subconfiguration which contains ToySimulators that behave badly by design

01/30/2019 05:14 PM - John Freeman

Status:	Resolved	Start date:	01/30/2019
Priority:	Normal	Due date:	
Assignee:	John Freeman	% Done:	100%
Category:		Estimated time:	0.00 hour
Target version:		Spent time:	0.00 hour
Experiment:	-	Co-Assignees:	
Description			
<p>Back in the summer of 2016, a number of FHiCL parameters were added to the ToySimulator's ToyHardwareInterface which could instruct it to behave pathologically (e.g., throwing an exception after a given amount of time running). Given our group's commitment to testing, it seems like a good idea to take advantage of this feature. For this reason, I've added a subconfiguration in DAQInterface called "subconfig/component_special" which contains ToySimulators that behave badly in various ways. These include:</p> <ul style="list-style-type: none">• <code>component_throws_exception</code>: throws an exception, putting the boardreader into the "Error" state• <code>component_dies_from_exit</code>: boardreader dies because <code>std::exit</code> is called• <code>component_dies_from_abort</code>: boardreader dies because <code>std::abort</code> is called• <code>component_hangs</code>: <code>getNext_()</code> doesn't return because it encounters an infinite while loop• <code>component_fragment_size_blows_up</code>: the fragment size returned by the ToySimulator suddenly increases to 100 MB <p>These components have also been added to the <code>known_boardreaders_list_example</code> file. Note that the bad thing which happens occurs 30 seconds after running begins. If, e.g., I perform a run like this:</p> <pre>just_do_it.sh ./boot.txt 0 --config "subconfigs/component_push subconfigs/component_special subconfigs/dataloggers subconfigs/dispatchers subconfigs/eventbuilders subconfigs/metrics_disabled subconfigs/routingmaster_disabled" --comps "component01 component02 component_throws_exception"</pre> <p>then of the three boardreaders in the run, after 30 seconds one of them will go into the Error state.</p> <p>The advantage of having these components makes it easier to test how DAQInterface (and for that matter, artdaq) behaves not just when things go right, but when they go wrong.</p>			

Associated revisions

Revision a4bb98b5 - 01/30/2019 05:20 PM - John Freeman

JCF: in `known_boardreaders_list_mu2edaq`, add support for the pathological boardreaders described in Issue #21811

History

#1 - 01/30/2019 05:15 PM - John Freeman

For the record, the `component_special` subconfiguration was added in commit `b21bd04c6dfd71365f51832dbc97366fdcf25b5` on DAQInterface's `develop` branch.