

artdaq Utilities - Feature #23146

DAQInterface could provide on-demand information about individual artdaq process statuses

08/20/2019 09:36 AM - John Freeman

Status:	Reviewed	Start date:	08/20/2019
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:	Eric Flumerfelt
Description			
During a conversation I had with Eric and Ryan Rivera yesterday concerning how the OTSDAQ framework could benefit from DAQInterface functionality, it was suggested that it would be useful if DAQInterface could provide information to the external world on-demand about what the individual artdaq process statuses are. Currently it just reports whether or not there's a problem with the individual artdaq process statuses (e.g., a transition didn't go through as expected, or a process reported Error), and it does so in a printout to stdout, which is useful for human beings, but less so for controlling programs like OTSDAQ or a Run Control.			

Associated revisions

Revision 09affcb0 - 08/22/2019 02:09 PM - John Freeman

JCF: provide individual artdaq process states on demand

When `status_with_side_effects.sh` is executed (or, more generally, the `state_with_side_effects` XML-RPC command is sent to DAQInterface - yes, slightly different name than the script) DAQInterface will do the following:

It produces an ASCII file of the form `/tmp/artdaq_process_states_<username>_partition<partition #>`, with a list of the existing processes and their statuses. If "debug_level" is set to 5 or higher, the list will also appear in DAQInterface's stdout - note this very high level since the output tends to interfere with output from DAQInterface's main thread of execution.

This commit is designed to satisfy Issue #23146

Revision 1aab2fbb - 10/29/2019 10:36 PM - John Freeman

JCF: Issue #23146: rename the process-query function "artdaq_process_info" and have it return the full string over XML-RPC which it also writes to `/tmp/artdaq_process_info_${USER}_${DAQINTERFACE_PARTITION_NUMBER}`

History

#1 - 08/22/2019 02:24 PM - John Freeman

- % Done changed from 0 to 100

- Status changed from New to Resolved

This Issue is ready for review using the head of feature/issue23146_artdaq_process_info, commit 09affcb0f2dc46f08db0e2d5e54f6b02dd5ea396. First, to quote the commit comment:

```
JCF: provide individual artdaq process states on demand
```

```
When status_with_side_effects.sh is executed (or, more generally, the
state_with_side_effects XML-RPC command is sent to DAQInterface - yes,
slightly different name than the script) DAQInterface will do the following:
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It produces an ASCII file of the form /tmp/artdaq_process_states_<username>_partition<partition #>,
with a list of the existing processes and their statuses. If "debug_level" is set to 5 or higher, the
list will also appear in DAQInterface's stdout - note this very high level since the output tends to
interfere with output from DAQInterface's main thread of execution.
```

```
This commit is designed to satisfy Issue #23146
```

To be concrete, sending this command to DAQInterface for me created a file called `/tmp/artdaq_process_states_jcfree_partition1`; an example of its contents is:

```
component_throws_exception Error
```

```
EventBuilder1 Running
EventBuilder2 Running
DataLogger1 Running
```

and another is:

```
component_throws_exception Initializing
EventBuilder1 Ready
EventBuilder2 Ready
DataLogger1 Ready
```

i.e., the format is that each artdaq process gets its own row, with its label and then its state listed.

#2 - 10/14/2019 12:27 PM - John Freeman

- Status changed from Resolved to Work in progress

I'm un-resolving this issue thanks to an email Gray sent this morning in which he asked how one could find the port # of an artdaq process. Eric suggested it would be nice if this were something you could query DAQInterface about, and that appears to overlap with this issue. So, when `status_with_side_effects.sh` is executed, the output could not only be each artdaq process's state, but also useful info like its host, port, subsystem...basically the info in the `ranks.txt` file. E.g.:

```
component_throws_exception at mu2eddaq13:10500 (subsystem 1, rank 0) :      Initializing
EventBuilder1 at mu2eddaq11:10501 (subsystem 1, rank 1):                  Ready
EventBuilder2 at mu2eddaq11:10502 (subsystem 1, rank 2):                  Ready
DataLogger1 at mu2eddaq11:10503 (subsystem 1, rank 3):                    Ready
```

#3 - 10/17/2019 11:19 AM - Eric Flumerfelt

Is it also possible to return this string as the XMLRPC result?

#4 - 10/29/2019 10:53 PM - John Freeman

- Status changed from Work in progress to Resolved

With commit `d68caf7170e2a2226399f077c78566618ce4cd0f` at the head of `feature/issue23146_artdaq_process_info`, I'm (again) marking this issue as resolved. The following now holds:

- Via XML-RPC, you can call a function in DAQInterface called "artdaq_process_info" which for each artdaq process will list not only its state, but also its socket, subsystem and rank. Executing `artdaq_process_info.sh` with the desired DAQInterface partition as argument will perform this call.
- This info both gets saved to `/tmp/artdaq_process_info_${USER}_partition${DAQINTERFACE_PARTITION_NUMBER}` and is returned in string form by the XML-RPC call

#5 - 10/30/2019 10:09 AM - Eric Flumerfelt

- Status changed from Resolved to Reviewed

- Co-Assignees Eric Flumerfelt added

Code reviewed and tested. Merged into develop.