

art - Feature #3598

Obtaining more information from Timing service

03/13/2013 06:34 PM - David Brown

Status:	Closed	Start date:	03/13/2013
Priority:	Normal	Due date:	09/30/2013
Assignee:	Kyle Knoepfel	% Done:	100%
Category:	Infrastructure	Estimated time:	48.00 hours
Target version:	1.13.00	Spent time:	40.00 hours
Scope:	Internal	SSI Package:	art
Experiment:	Mu2e		
Description			
art provides a 'Timing' option for measuring the time spent in individual modules and/or events. The current implementation provides only cout printout, either once/module/event, or a summary (not module specific) at endjob. In order to analyze this data I have created an 'awk' script to analyze the non-summary data, finding the appropriate module by name, extract the data, and then create a file which can be read in by ROOT. It would be more convenient to have this data available in code. For example, if there were a boost::accumulator_set for each module, with tags mean, min, max, variance, ... those accumulators could get filled each event, and be made available through a Services interface to the endJob method, where the values could be extracted. This would also allow a module-by-module summary to be printed at endjob.			
Related issues:			
Related to art - Bug #2979: strange Timing_service printout		Closed	09/30/2013
Related to art - Bug #6344: Filter out output of some art services		Closed	05/23/2014

Associated revisions

Revision e7078a47 - 12/16/2014 01:39 PM - Kyle Knoepfel

Implement new TimeTracker_service per issue #3598

History

#1 - 08/06/2013 04:47 PM - Christopher Green

- Due date set to 09/30/2013
- Category set to Infrastructure
- Status changed from New to Accepted
- Target version set to 1.09.00
- Estimated time set to 48.00 h
- Scope set to Internal
- Experiment Mu2e added
- SSI Package art added

This is an eminently reasonable request. We would prefer to put the information in an optionally-persisted SQLite database accessible by clients of the service, since we will be expanding that facility anyway. Would this be acceptable to you?

#2 - 08/06/2013 04:48 PM - Christopher Green

- Tracker changed from Feature to Bug
- Status changed from Accepted to Feedback

#3 - 08/06/2013 04:48 PM - Christopher Green

- Tracker changed from Bug to Feature

#4 - 08/06/2013 05:13 PM - Christopher Green

From Dave Brown:

Hi Chris,

Does this mean SQLite becomes a required dependency for art? Will there be a code interface to this information during run-time in art, or will

this only support after-job analysis?

SQLite has been a required dependency for a long time now. There is already a (very basic) code interface at run-time, but this will need refinement and fleshing-out.

#5 - 08/07/2013 10:07 AM - Rob Kutschke

I suppose that, if we want to present the information as a data product, we could write a module that has only endRun behaviour, that interrogates the SQLite database and packages the information as a run-scope data product.

Dave: there is no such thing as a "file scope" data product but the SQLite data base can store file-scope information. There is a user interface to it but I have not used it yet.

#6 - 02/17/2014 12:27 PM - Christopher Green

- Target version changed from 1.09.00 to 521

#7 - 04/09/2014 11:23 AM - Christopher Green

- Target version changed from 521 to 1.10.00

#8 - 05/05/2014 11:53 AM - Christopher Green

- Target version changed from 1.10.00 to 1.14.00

#9 - 05/05/2014 11:59 AM - Christopher Green

- Target version changed from 1.14.00 to 1.13.00

#10 - 12/05/2014 02:52 PM - Kyle Knoepfel

- Assignee set to Kyle Knoepfel

#11 - 12/16/2014 02:22 PM - Kyle Knoepfel

- Status changed from Feedback to Resolved

- % Done changed from 0 to 100

In order to support users that depend on the current timing service printout format, we have retained Timing_service.cc as a legacy service. A new timing service, however, has been developed - **TimeTracker_service.cc** - that addresses the above issues. The new service is entirely sqlite3-driven.

See the [TimeTracker documentation](#) for details.

Implemented with [e7078a47887c46d97e977b05f4f985b0cc5b3aec](#).

#12 - 02/03/2015 01:32 PM - Christopher Green

- Related to Bug #6344: Filter out output of some art services added

#13 - 02/16/2015 10:32 AM - Christopher Green

- Status changed from Resolved to Closed