Publisher Protocol

Revision history

Version	Date	Author	Comment
v0.5	11/22/2015	Wei Wang	Initial draft
V0.6	11/23/2015	Wei Wang	Added a level setting to control how much log message is displayed Added Reporter spec Added tid for Item_Stop Added error field for the sequence end event
v0.7	11/30/2015	Wei Wang	Added pdca field in the data for the item_start and item_finish events. Added logs field in the sequence end event
v0.8	12/02/2015	Wei Wang	Added the name and version field to sequence_start event

Publisher

- All publisher should publish to channel 101. Here is how you should subscribe to the publisher in python:

      subscriber.setsockopt(zmq.SUBSCRIBE, zmqports.PUB_CHANNEL)

- Every published information should have four parts: timestamp, publisher identity, verbosity level, and data.

Field	Meaning
timestamp	The time when the publish method is called on the source side. Should be in the format of hh:mm:ss.milisecond
verbosity level	This is a hint to the subscriber. Messages of all levels are always sent by the publisher, but the subscriber can choose to ignore messages below certain priority. There priorities are defined: REPORTER=0, CRITICAL=1, INFO=2, DEUBG=3
publisher identity	The identity of the publisher. Tells the subscriber where the message comes from.
data	The actual message. Data format can be customized for different application layer requirements

This is how you receive a message in a subscriber in python:

```
topic, ts, level,origin, data =
self.subscriber.recv_multipart(zmq.NOBLOCK)
```

Reporter

Reporter is an application layer protocol built on top of the publisher protocol. It defines a JSON based format for the date field of the publisher protocol. All data from the reporter should be sent at verbosity level 0 and subscribers should parse the data field of a published message for Reporter data if the verbosity level is 0.

Field	Content
event	Vallid events are: SEQUENCE_STARAT, SEQUENCE_END, ITEM_START, ITEM_FINISH, ATTRIBUTE_FOUND
data	See the next table for data definition of different events

There is no slot value in the event data, because the subscriber should already know form the port it subscribes to.

Event Type	Valid Fields	Content
SEQUENCE_ START	name	name of the sequence
	version	version of the sequence
ATTRIBUTE_ FOUND	name	name of the attribute
	value	value of the attribute
ITEM_START	group	group of the test
	tid	test id of the test
	unit	unit of the result
	low	low limit
	high	high limit
	pdca	True of False. This indicates if the result should be sent to PDCA
ITEM_END	tid	test id of the test
	value	return value of the test. May or may not be empty
	result	True is pass. False is fail. -1 is error
	error	this field only exists if result is -1. This holds the error message
	pdca	True of False. This indicates if the result should be sent to PDCA
SEQUENCE_ END	result	overall pass/fail result of the sequence. 0 is fail, 1 is pass, -1 is aborted
	error	this field only exists if the result -1.

Event Type	Valid Fields	Content
	logs	A comma separated list of log paths from this run