Collection System Code Flow

main.cpp
Starts the system

Pass resource string identifying all the DAQs to connect to.

DAQ_Interface.cpp: daqBootStrap()

library
library.h/.cpp

Contains all global variables and functions used by all files.

(1)

Initialize()

Initializes the connection to the specified DAQ(s). This is called a session. The variable name that talks to the DAQs in the session is “driver” within the DAQ class. This connects to the DAQ(s) and sets parameters. Any low level parameter settings for DAQ(s) are and should be done here.

(2)

Begins the collection loop.

collectDaqData()

(3) Call collection cycle for DAQ(s).

DAQ.cpp

(4)

continuousRawData()

(5)

writeDaqDataToFile()

After X number of records are collected, index the data and associate with respective channels and write to file.

(6)

CSV_Output.cpp

Write to file

The time length of a file is set in the config file in seconds. The current default is 60 seconds or 1 minute.

(7)

Flush buffer

Release memory used by buffer. The buffer stores the data that is currently being held in memory before being written to disk.

(8)

Collect X number of records. One record represents one second. Hence, collect the specified time length of a file to be created.

(9)

Shutdown

When a signal to shutdown the system is received (currently by pressing ‘e’ for end on the keyboard), the current data stored in the buffer is written to file and the session with the DAQ(s) is closed.