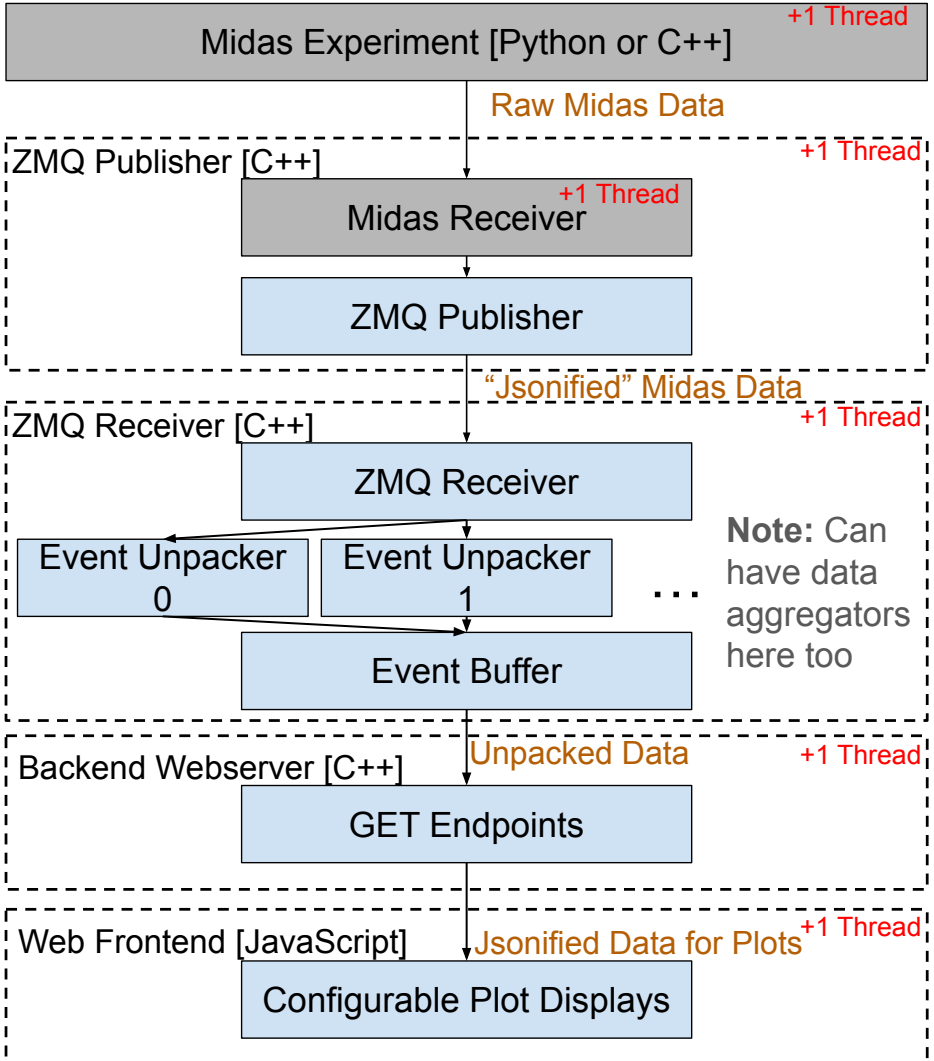
Data Pipeline 1

Pros:

- Modular
- Publisher works for any midas experiment
- Receiver allows configuration/hot swapping unpackers
- Allow offloading to different computers at both receiver and web frontend stage

Cons:

- More threads
- Somewhat redundant transfer points
- Many data copies could be bottleneck



Total Threads: **6**

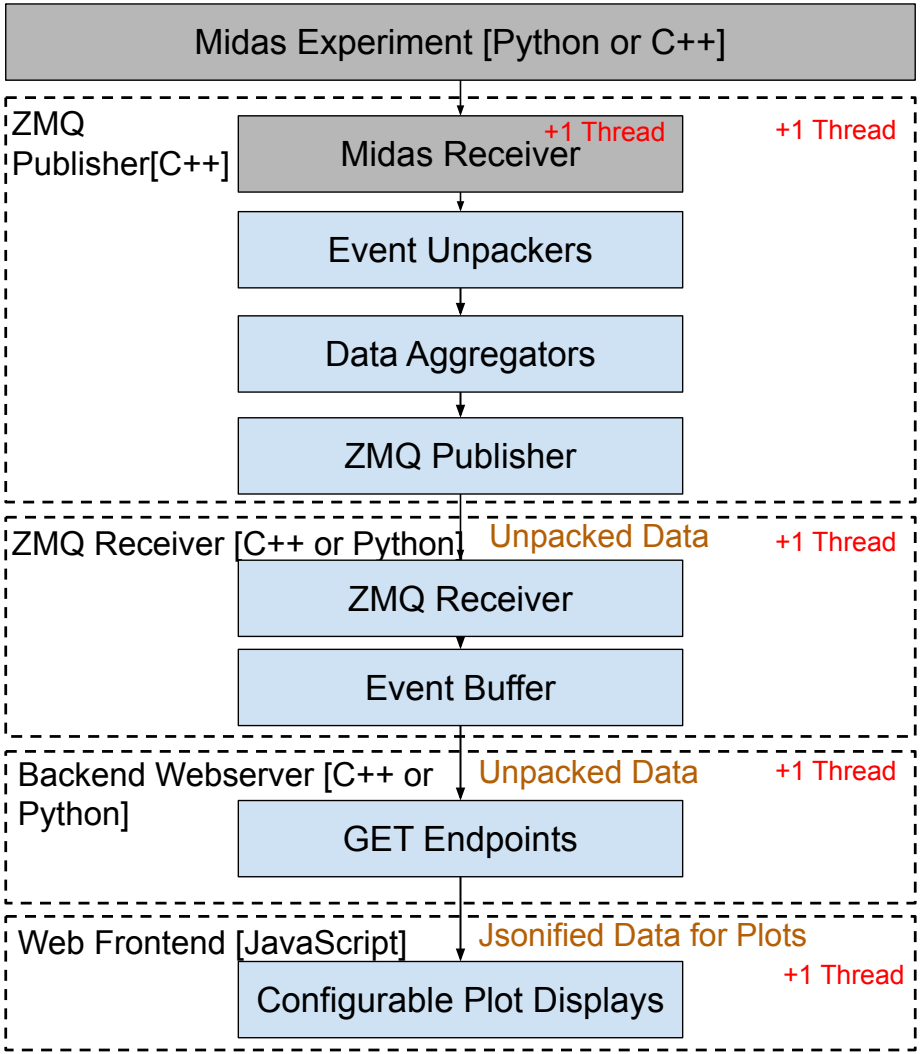
Data Pipeline 2

Pros:

- Smaller transfers (allows aggregating data early)
- Still works for any midas experiment
- Still allows hot swapping unpackers/aggregators

Cons:

- More threads
- More work loaded onto DAQ computer
- Somewhat redundant transfer points
- Less modular



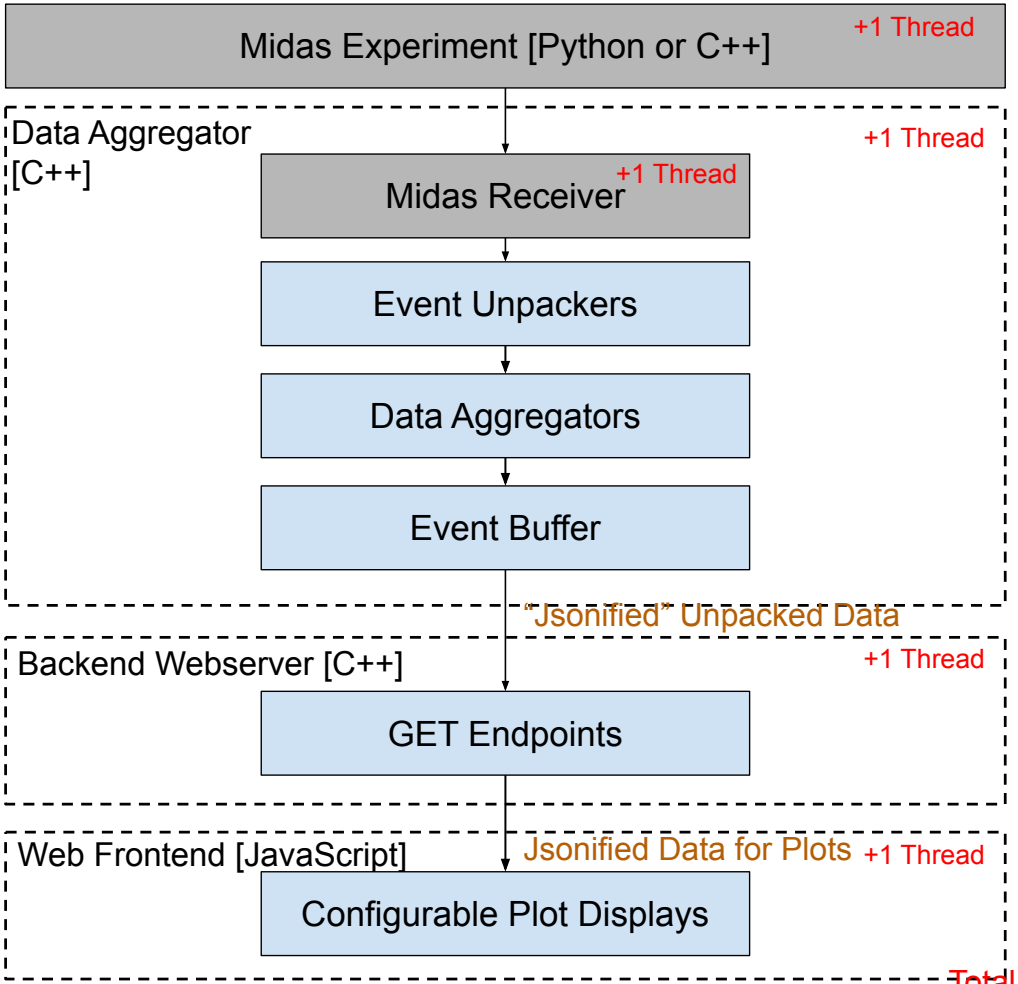
Data Pipeline 3

Pros:

- Smaller transfers (allows aggregating data early)
- Still allows hot swapping
- Still works for any midas experiment
- Reduces number of data transfers
- Fewer Threads

Cons:

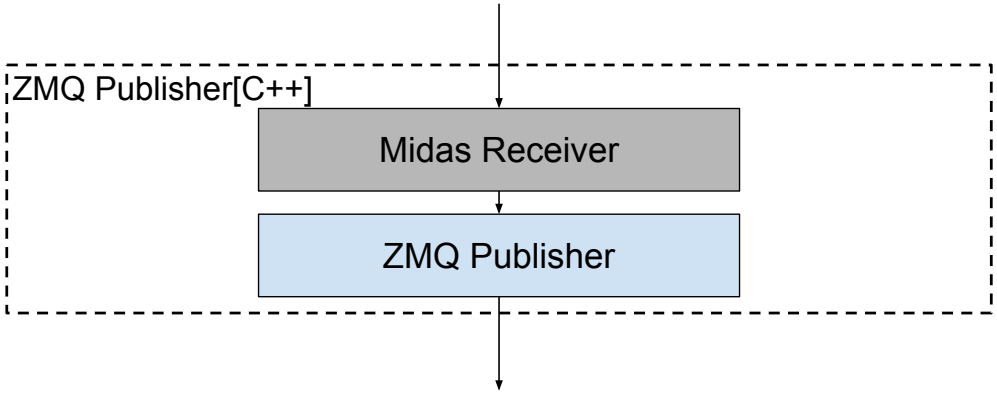
- Even more work loaded onto DAQ computer
  - DAQ now acts as a server for all clients viewing the webpage
- Not very modular
- Lose ZMQ features
- Requires re-factoring publisher to not use ZMQ
- Too many requests would slow down aggregator



Auxiliary Slides

ZMQ Publisher

- Publishes Data over ZMQ
- Allows for customizable “Processors” that generate data to be published
  - Data need not come from a midas experiment
- Can be used to unpack data, I would rather not
  - More stress on “experiment” computer
  - Less modular
    - This tool works for any midas experiment if we don’t unpack at this stage



ZMQ Receiver [unfinished slide]

- Receives data over ZMQ
- Plans:
  - Allow “registering” of unpackers
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