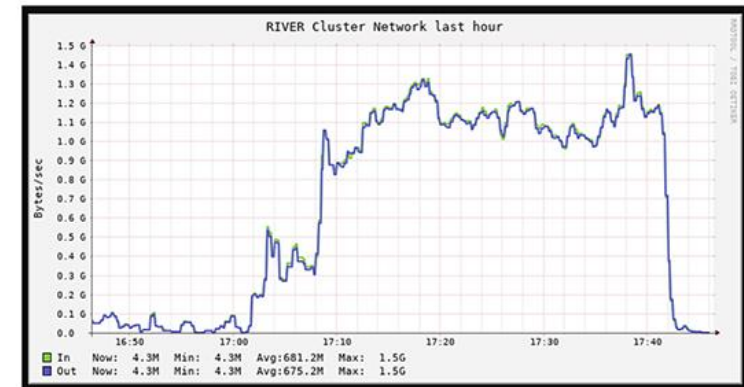# Thoughts Around This Effort

We wrote **Very Little Code** of our own! I learned some object lessons...

1. We should stop thinking about how we solve the problem. First ask – has someone else solved it?
2. Stop thinking about single-computer, single-process solutions – our data is big enough – time to think outside our knowledge base
3. It is not about what I can write – it is about the ecosystem
   - And taking advantage of everything out there
- Most efficient: collaborate with someone that knows the ecosystem and the tools
   - We stole: Kubernets, RabbitMQ, SQL, Postgress, minio, etc.

Testing on 10 TB xAOD input sample.
- Requested 100 columns from 7 collections (~30% of file)
- Scale up to 1,000 workers the River SSL Cluster
- Results in less than 30 minutes.
- Output rate was in excess of 300MB/s.