# Things you will need

1. Wireshark Allows opening pcap files -- not critical here.
2. OPRA Format Document -- find at opraplan.com or

https://assets.website-files.com/5ba40927ac854d8c97bc92d7/628bc18445cf7ec41d21ddfa\_OPRA%20Pillar%20Output%20Specification.pdf

1. PCAP Specification <https://www.netresec.com/?page=Blog&month=2022-10&post=What-is-a-PCAP-file#:~:text=A%20PCAP%20file%20is%20a,is%20short%20for%20Packet%20CAPture>.
2. opra\_pillar\_20220505-00-Incr-A\_10M.pcap – pcap of opra data.
3. hd opra\_pillar\_20220505-00-Incr-A\_10M.pcap | more – does a hex dump of file.

# What to do

1. Open File – discard initial PCAP Header, extraneous opening stuff after that
2. Read 21 byte Block header
   * length of block,
   * sequence number,
   * # of messages in block
3. Read each message block
   * If it is a quote check if there is a map entry for it
     1. Read symbol, price, size, exchange
     2. If price changes increment publish count
     3. Increment quote count
   * Otherwise increment othermessagecount.
4. Loop to 2
5. When done output every symbol total count, total quotecount, publish count