The KSK roll: From Concern to Calm(ish)

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2017-08-30

Overview

- My Paranoia
- Face Your Fears
- Reality

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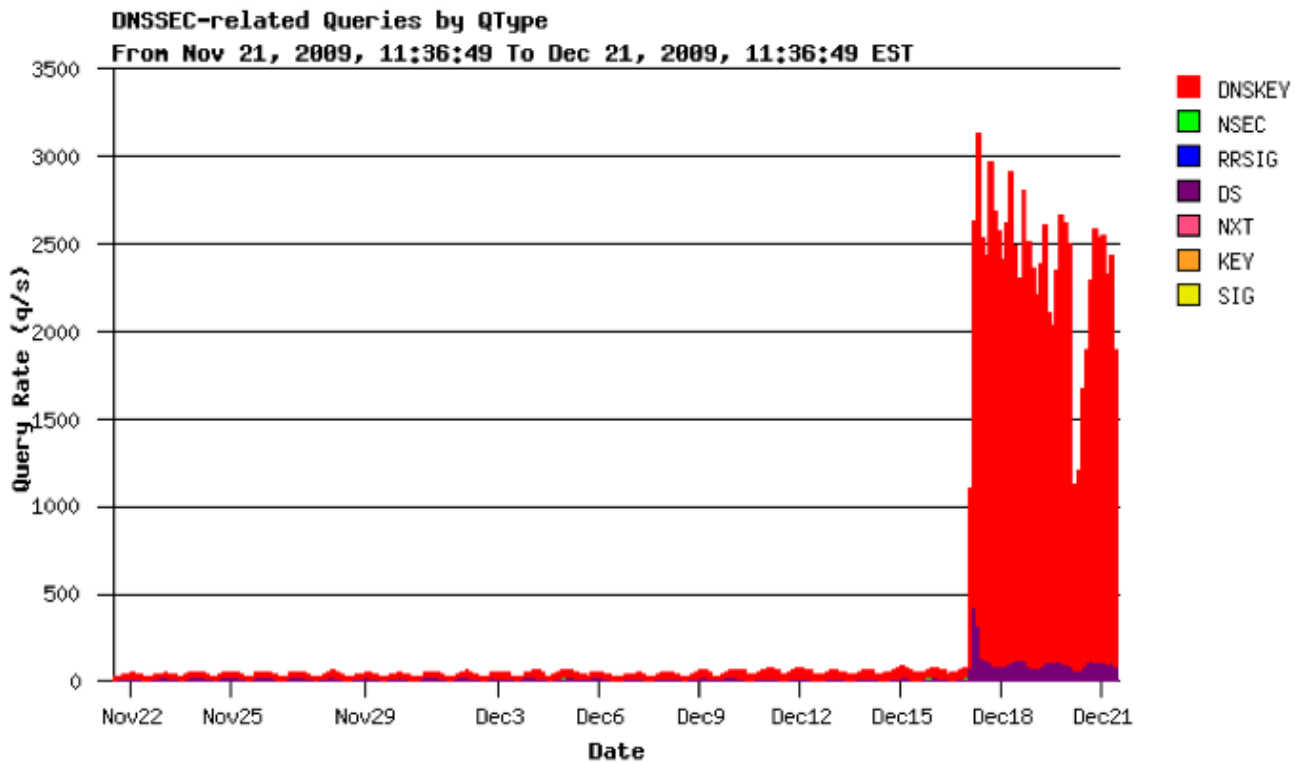
- It happened before, after all...



(Graph created by George Michaelson)

Face your fears

- Paranoia led to analyzing many days of data
  - Previous: misconfigured VPN software
  - Today: my failure to find much else

Who's in Danger?

- To find out who's in trouble, we need to know:
  1. What keys a validator is using
     - RFC8145
     - KSK signaling
     - Neither are complete signals!
  2. Are they validating
     - Is this possible?

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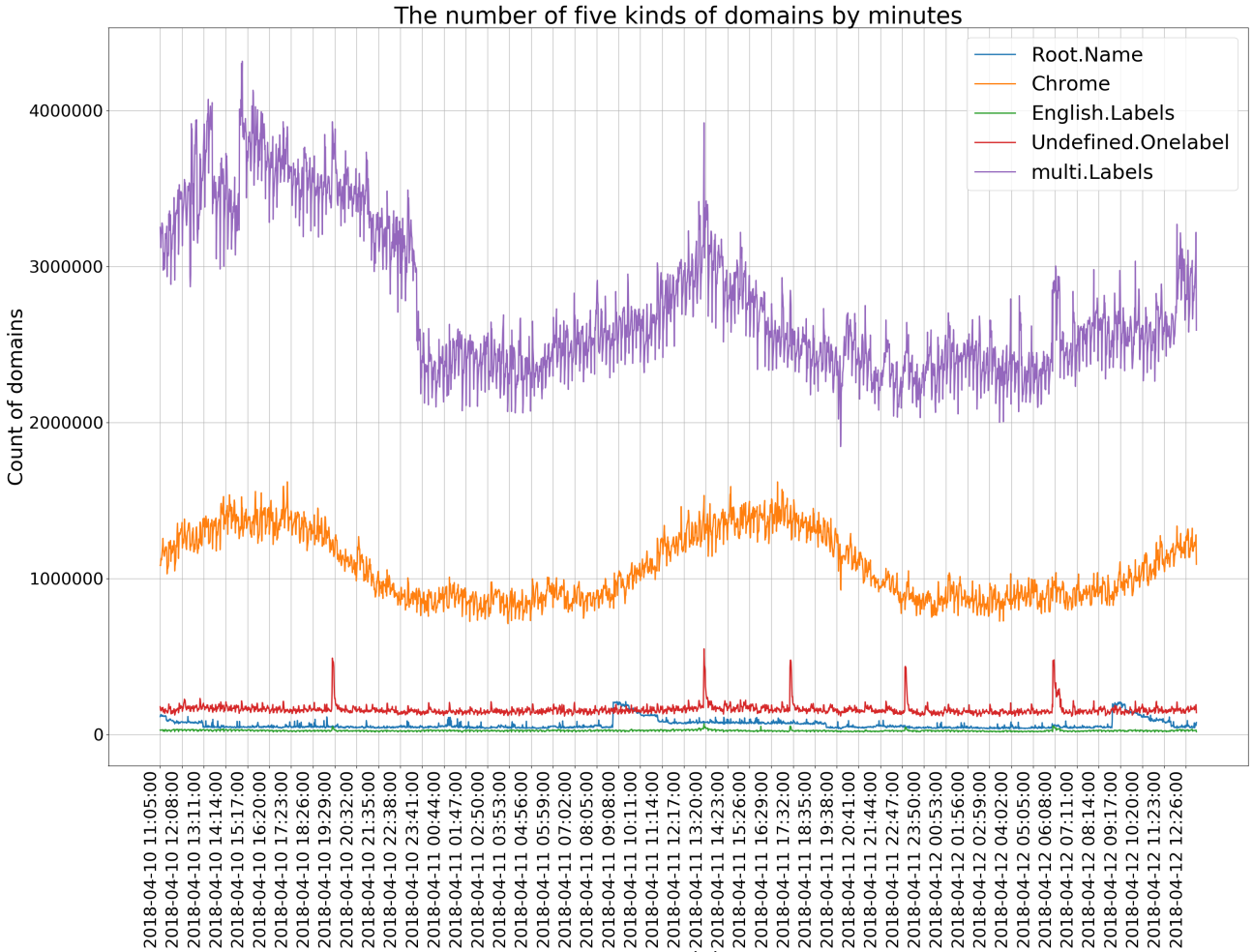
- Validating resolver hypothesis:
  - ~50% of queries should be for TLD/DS

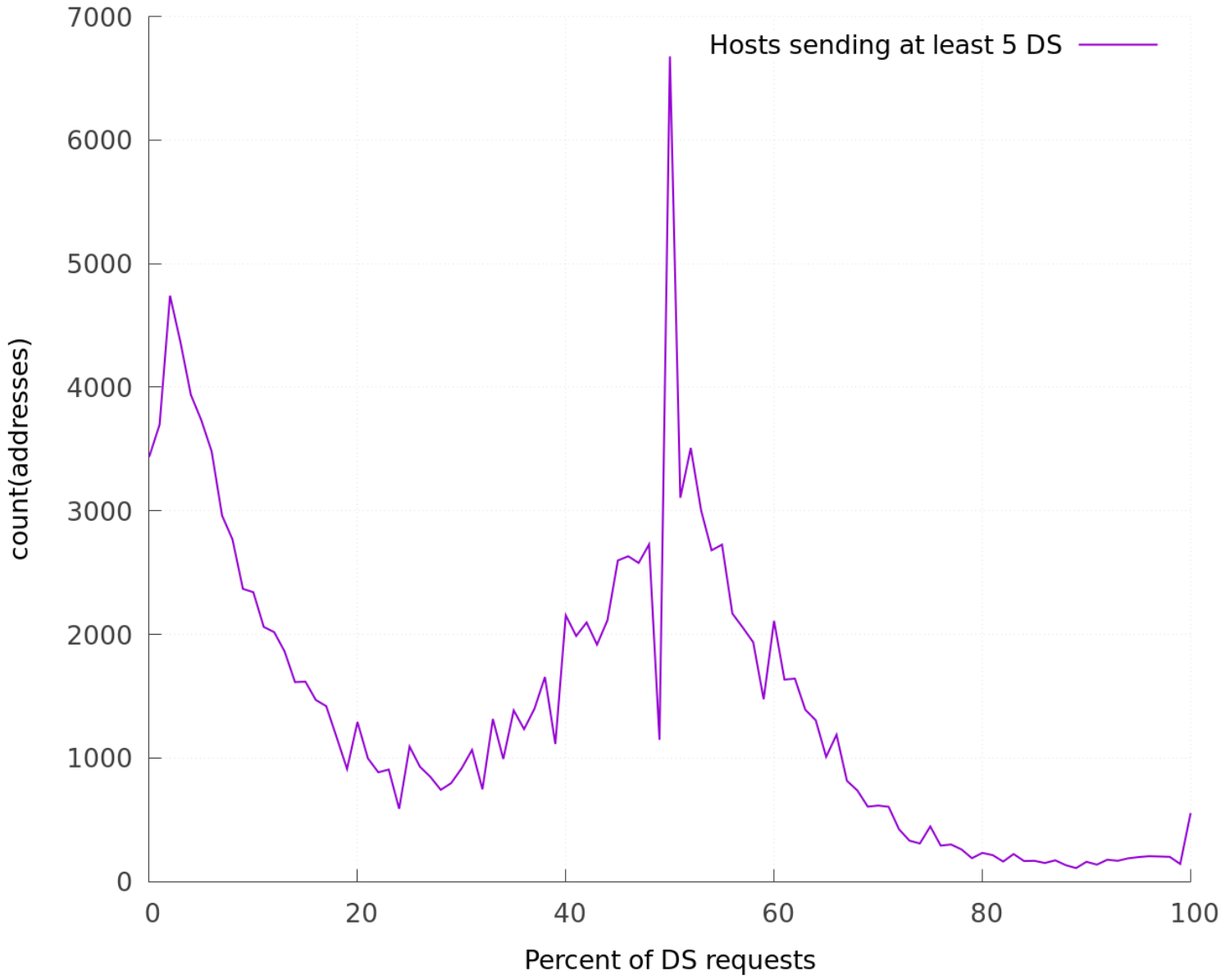
Data Cleaning

- First step: ignore non-root-zone queries
- Example: Chrome sends random strings (*orange line*)

Graph created by USC student Haoyu Jia



Results: Percentage of DS Queries



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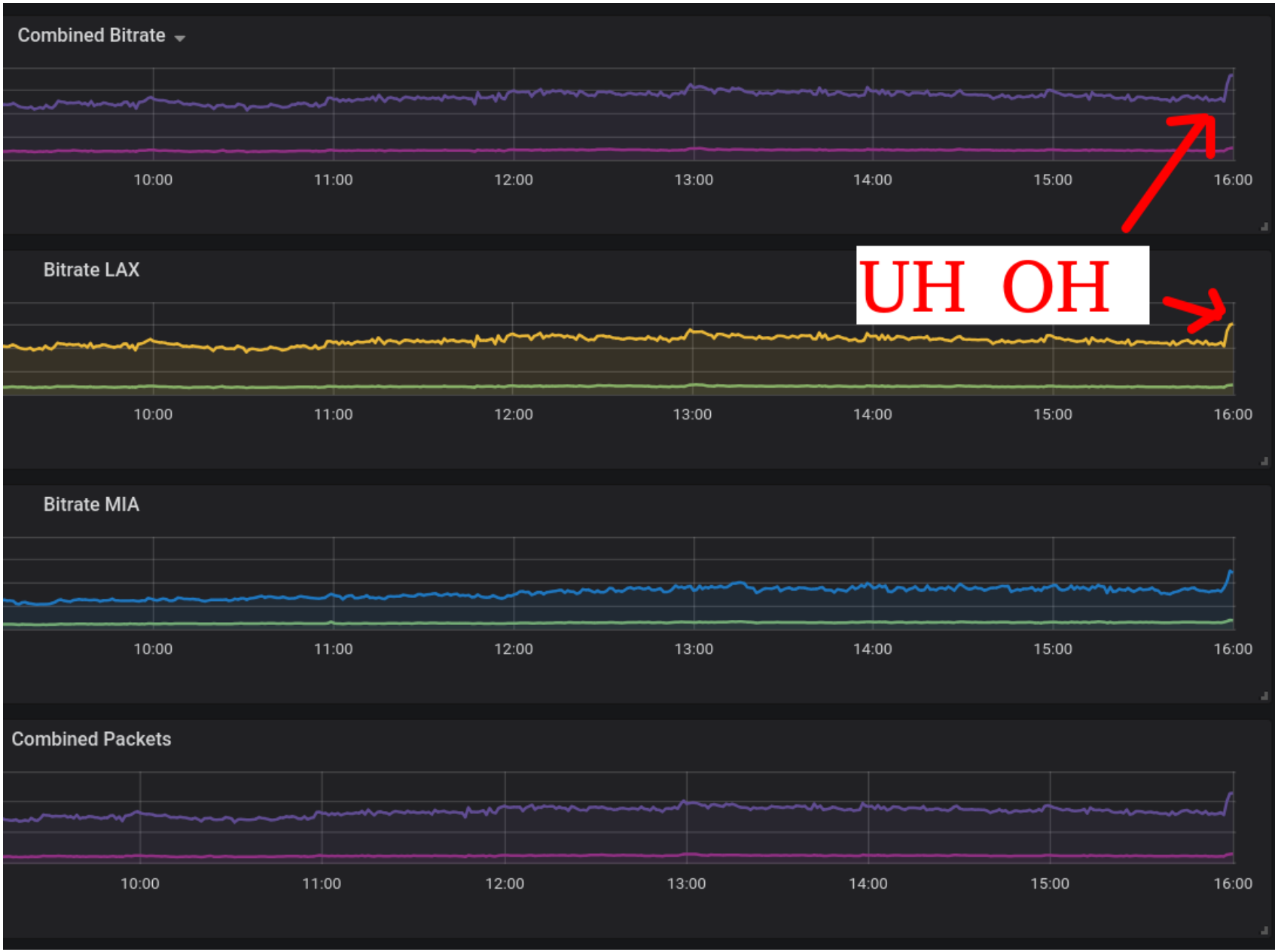
- Hint: No.

What actually happened?

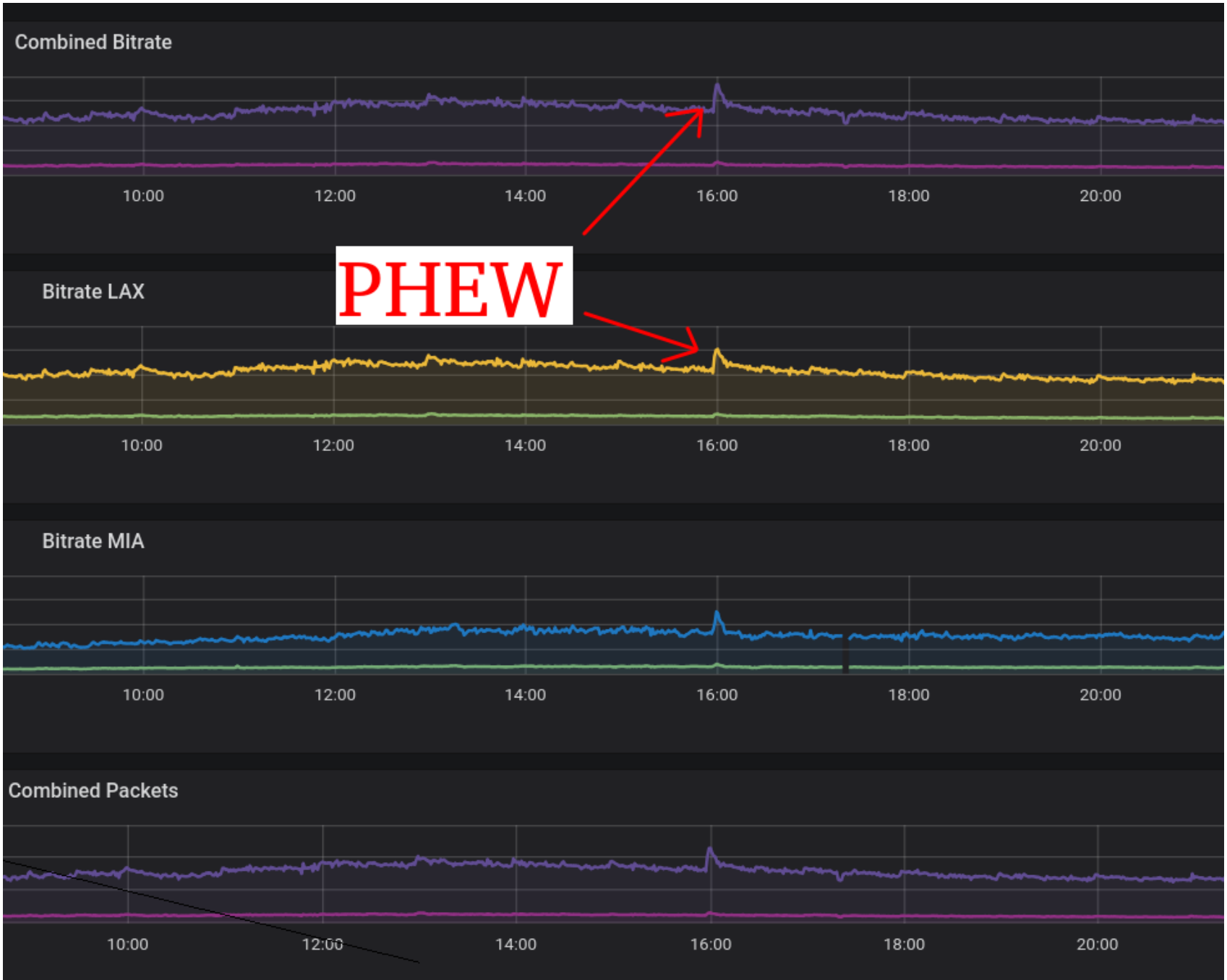
What did real life look like?

Just before the roll

Just starting the roll



Much later


Combined Bitrate
10:00
12:00
14:00
16:00
18:00
20:00
PHEW
Bitrate LAX
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14:00
16:00
18:00
20:00
Bitrate MIA
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12:00
14:00
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- "Strange things are afoot at the Circle K"