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RESOLVER TRAFFIC: WHAT DOES IT LOOK LIKE?

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Background

- We look a lot at traffic between resolvers and authoritative servers
- and very little at traffic between recursive resolvers and they clients.
- Is it still the Internet? or maybe something similar to the Internet?

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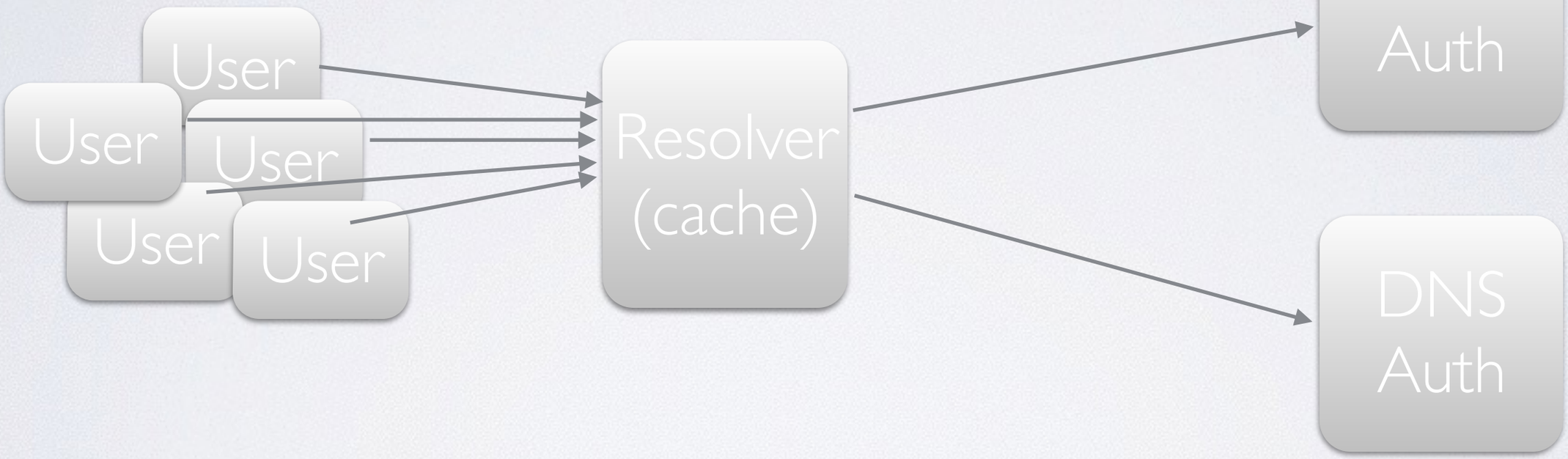
What traffic we are looking at



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Where is the data?

- Hard to get a hold of this sort of traffic
- Concerns about PII, exposing customer issues, etc

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How to look at the data

- PacketQ is an excellent tool
  - no longer maintained as open source but works for 90% of your needs
- Additional home-grown software to do the remaining analysis

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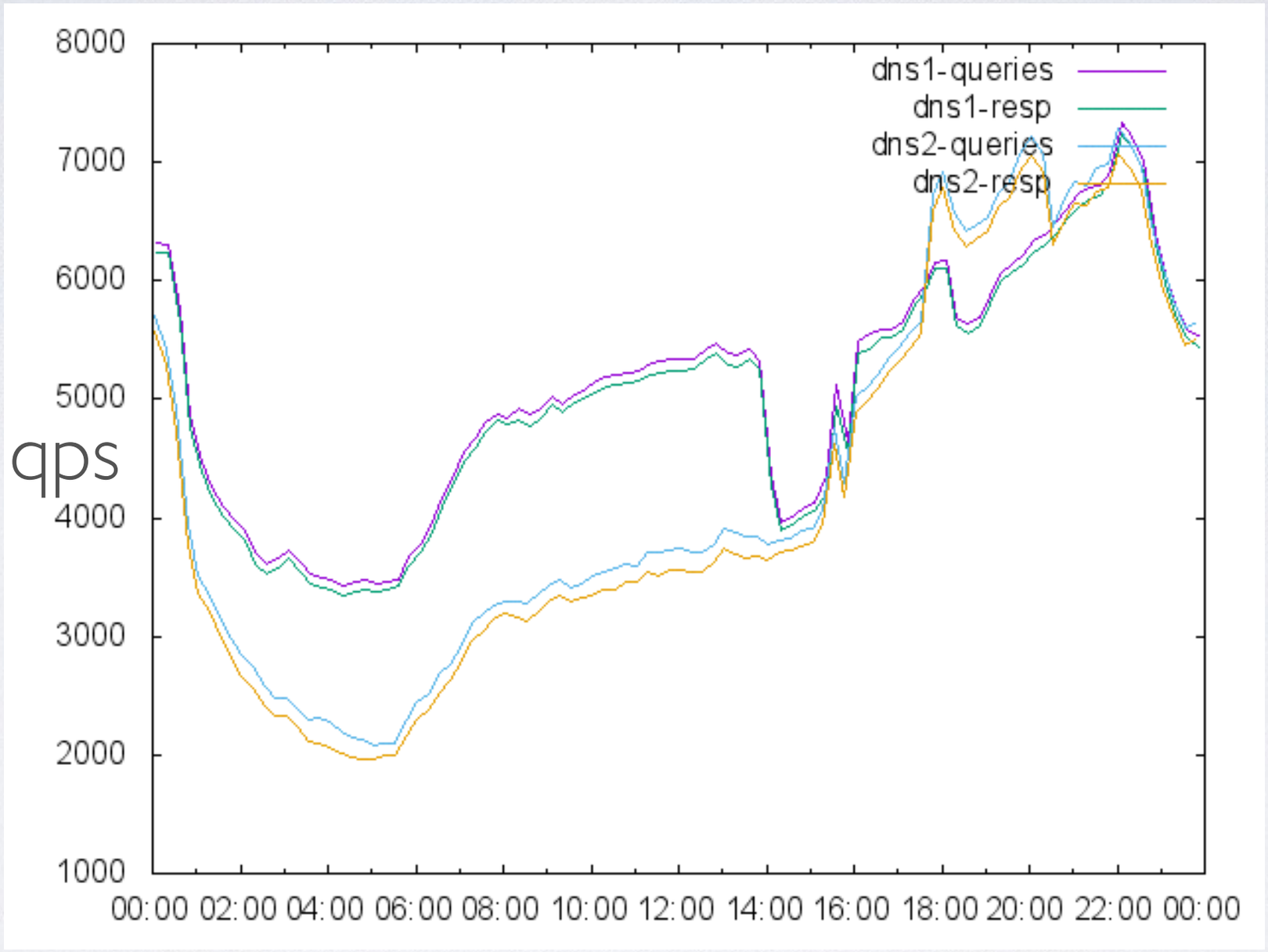
The sample



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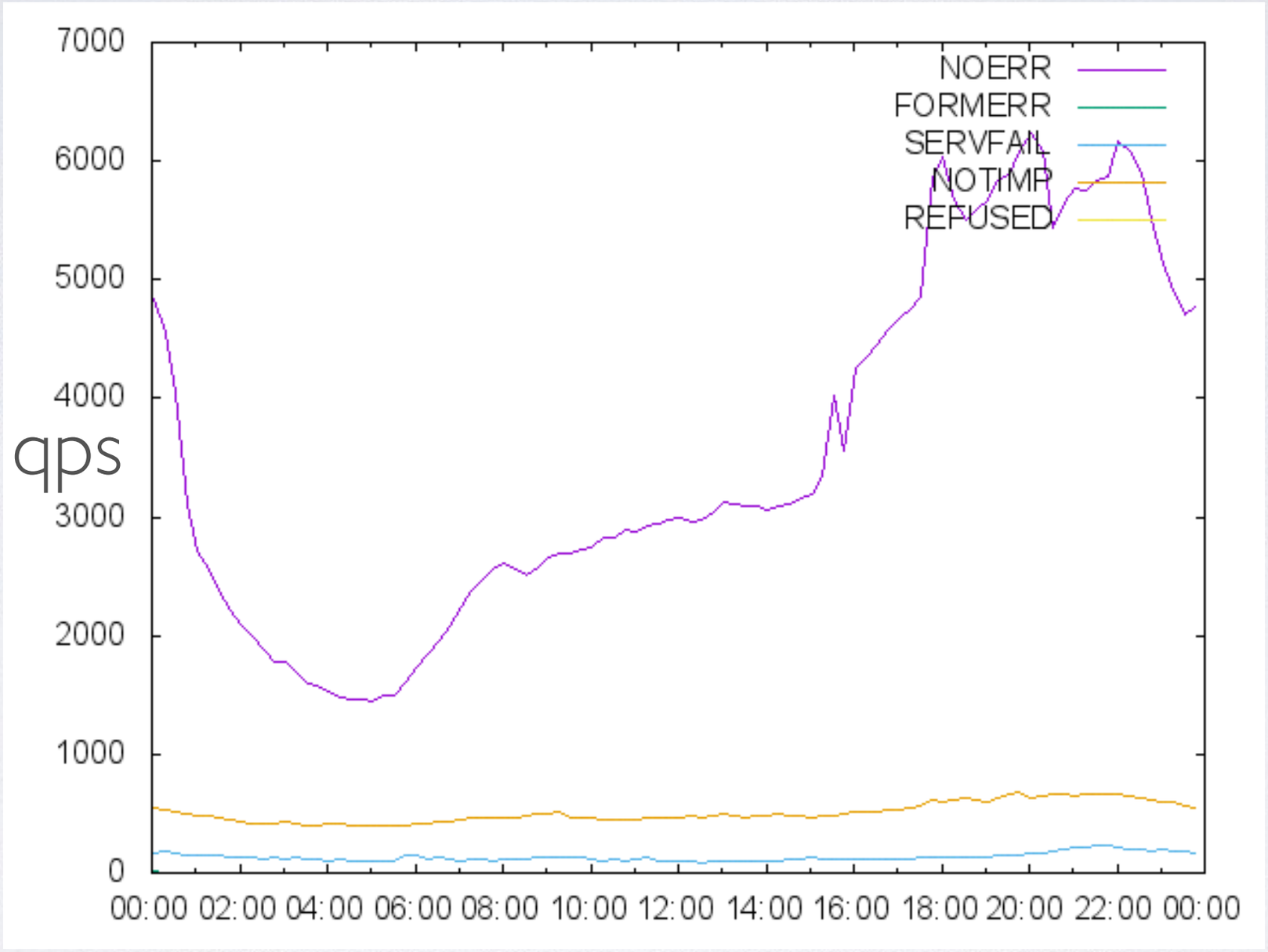
RCODE distribution



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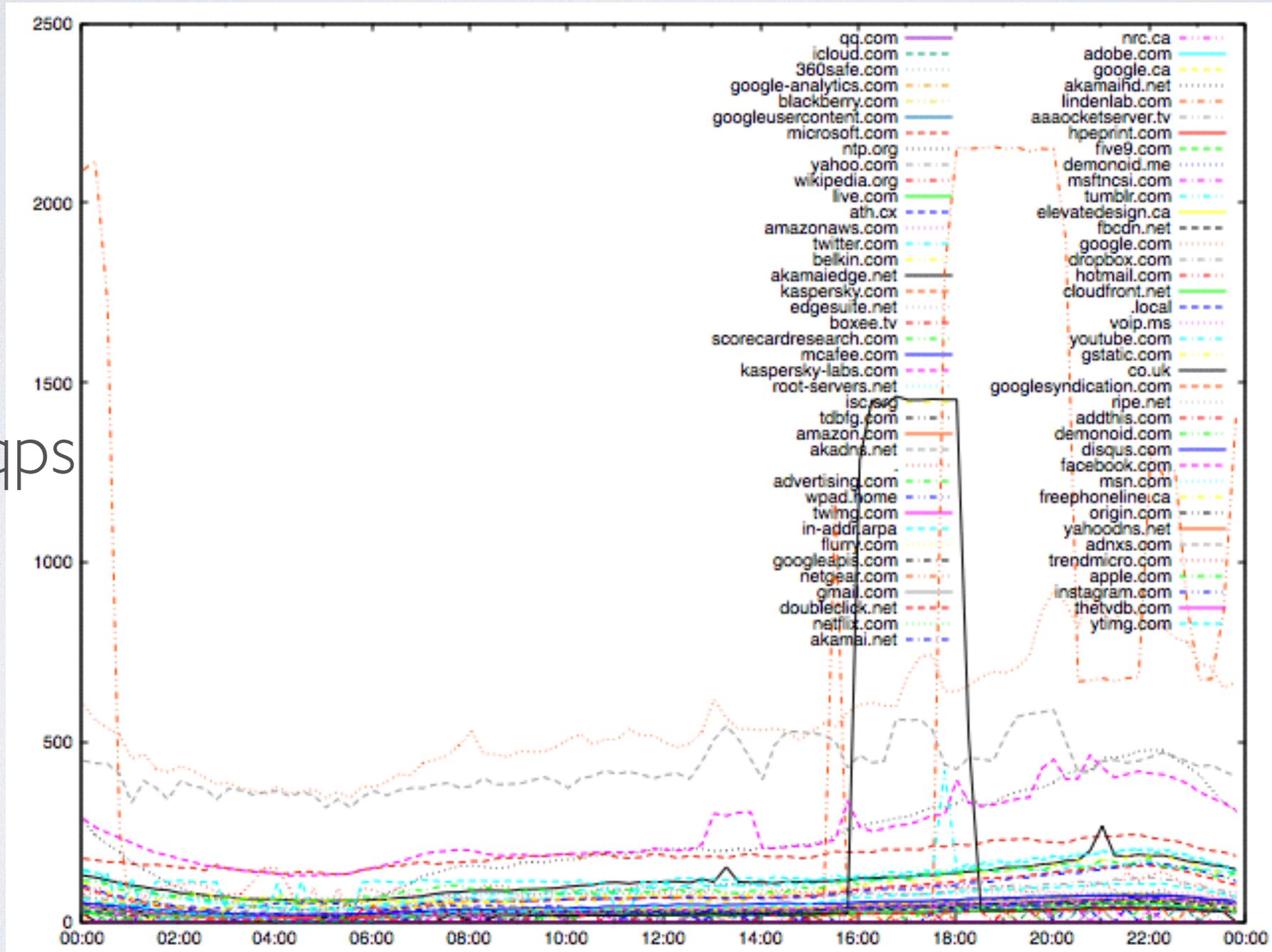
Domains



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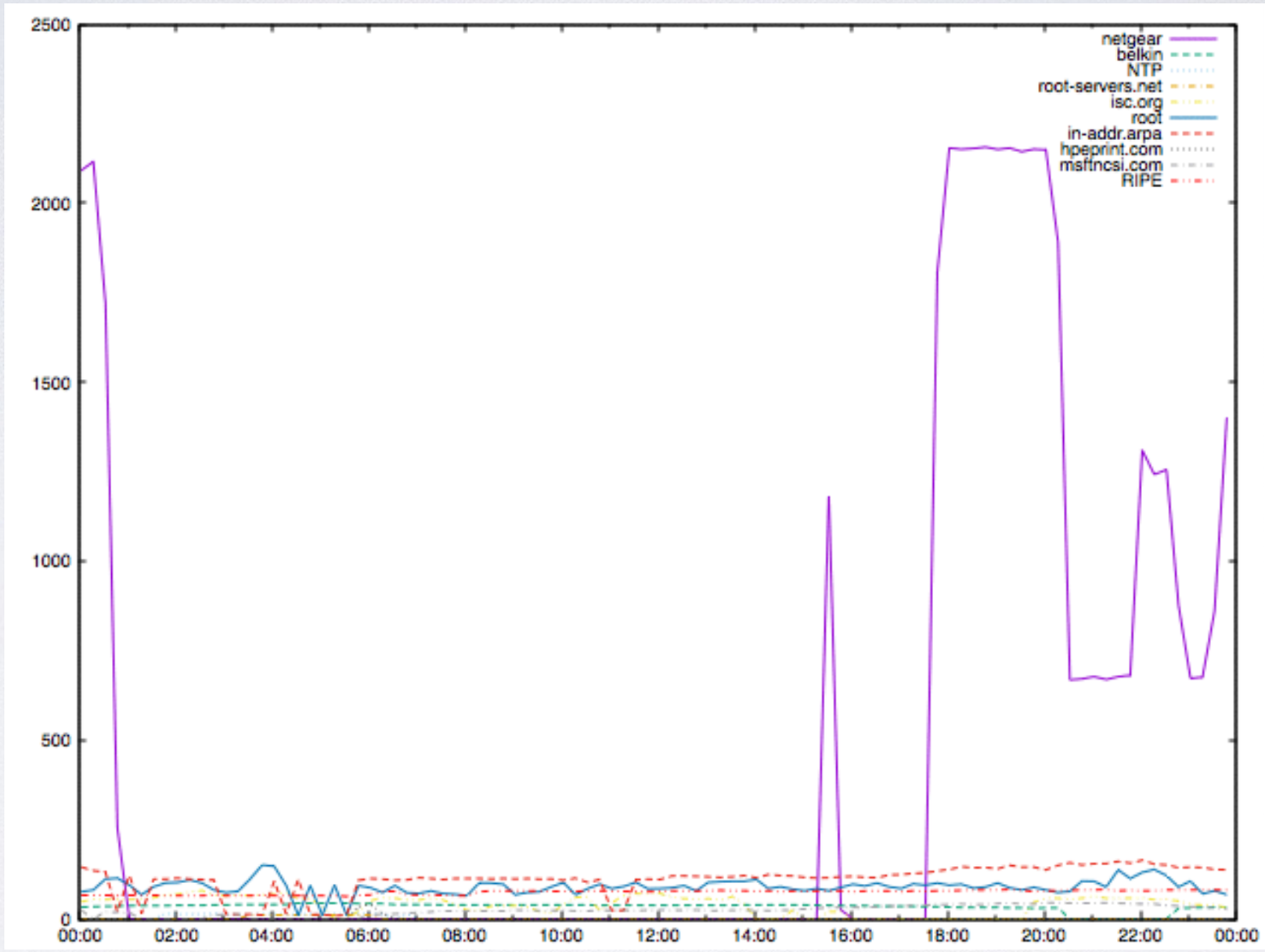
Infrastructure domains



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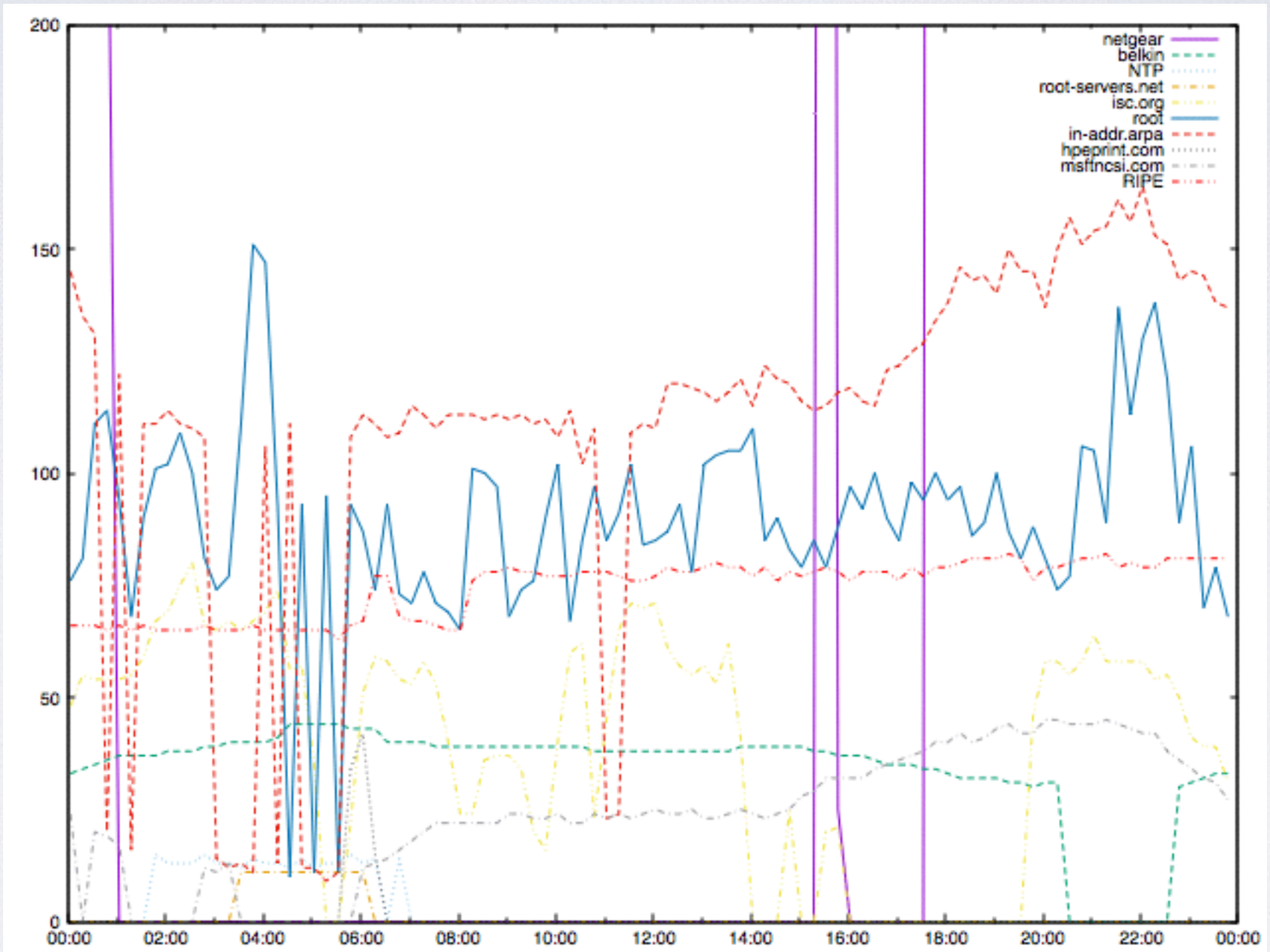
Infrastructure domains zoom



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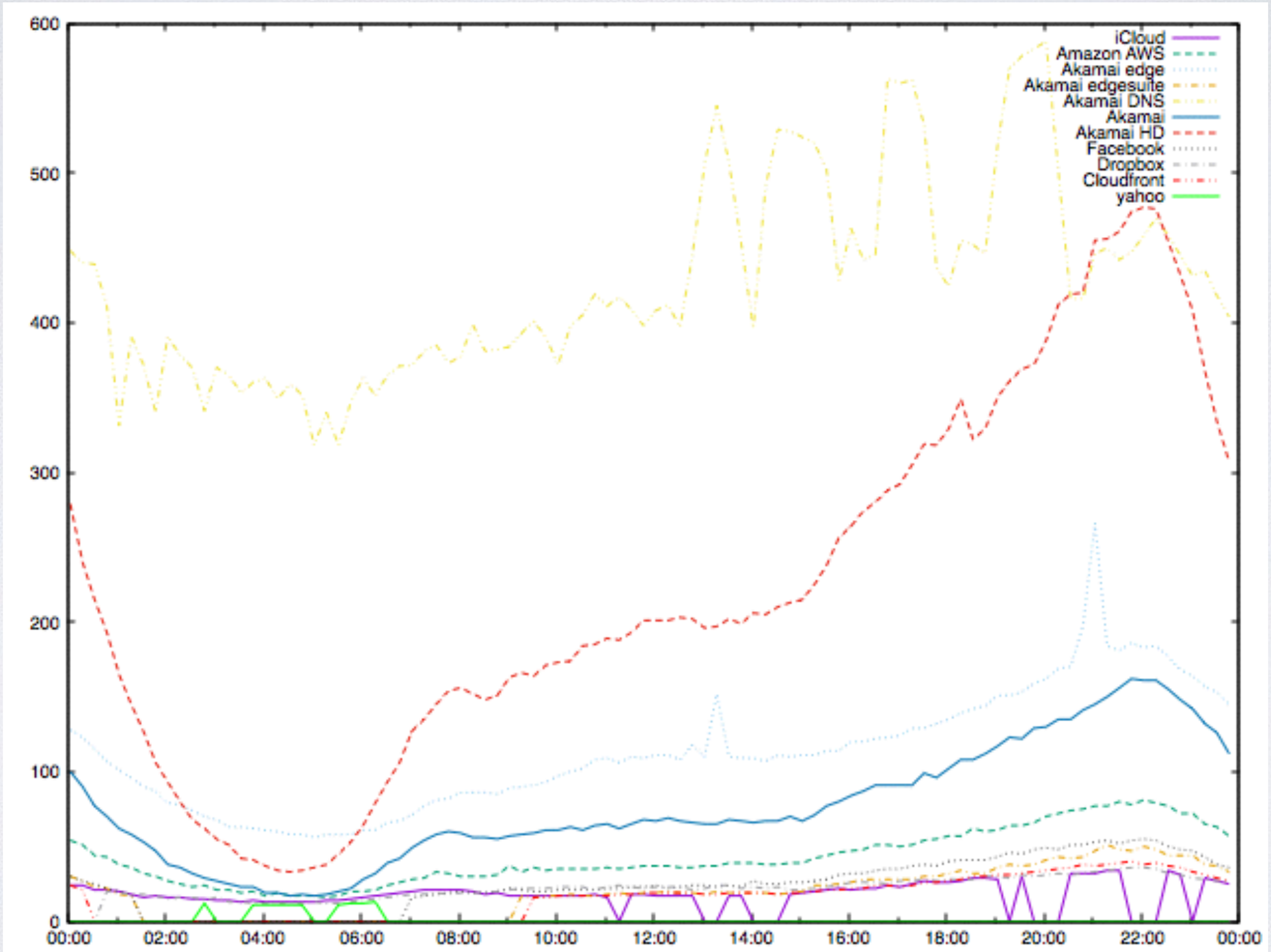
CDNs



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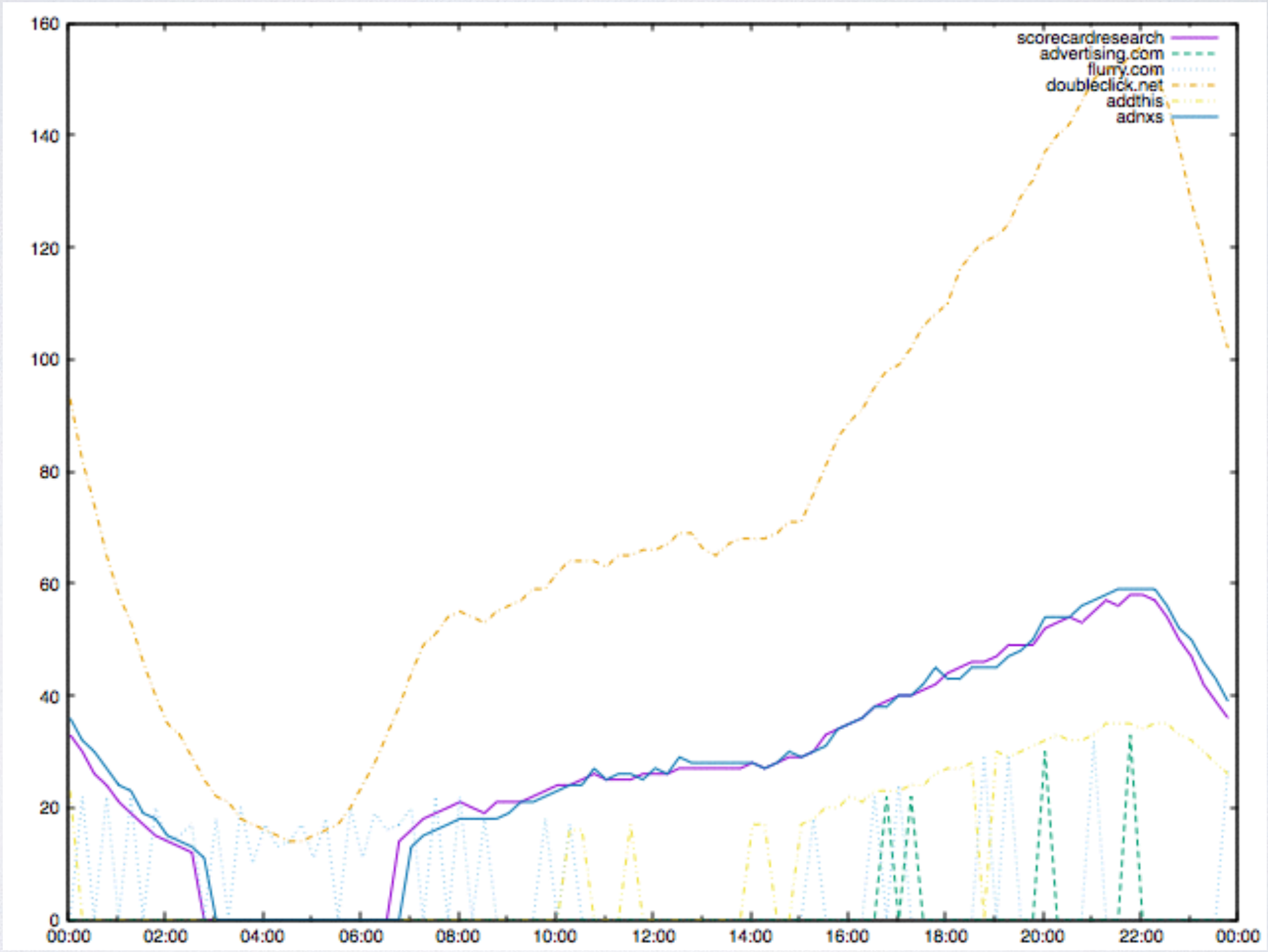
ADs



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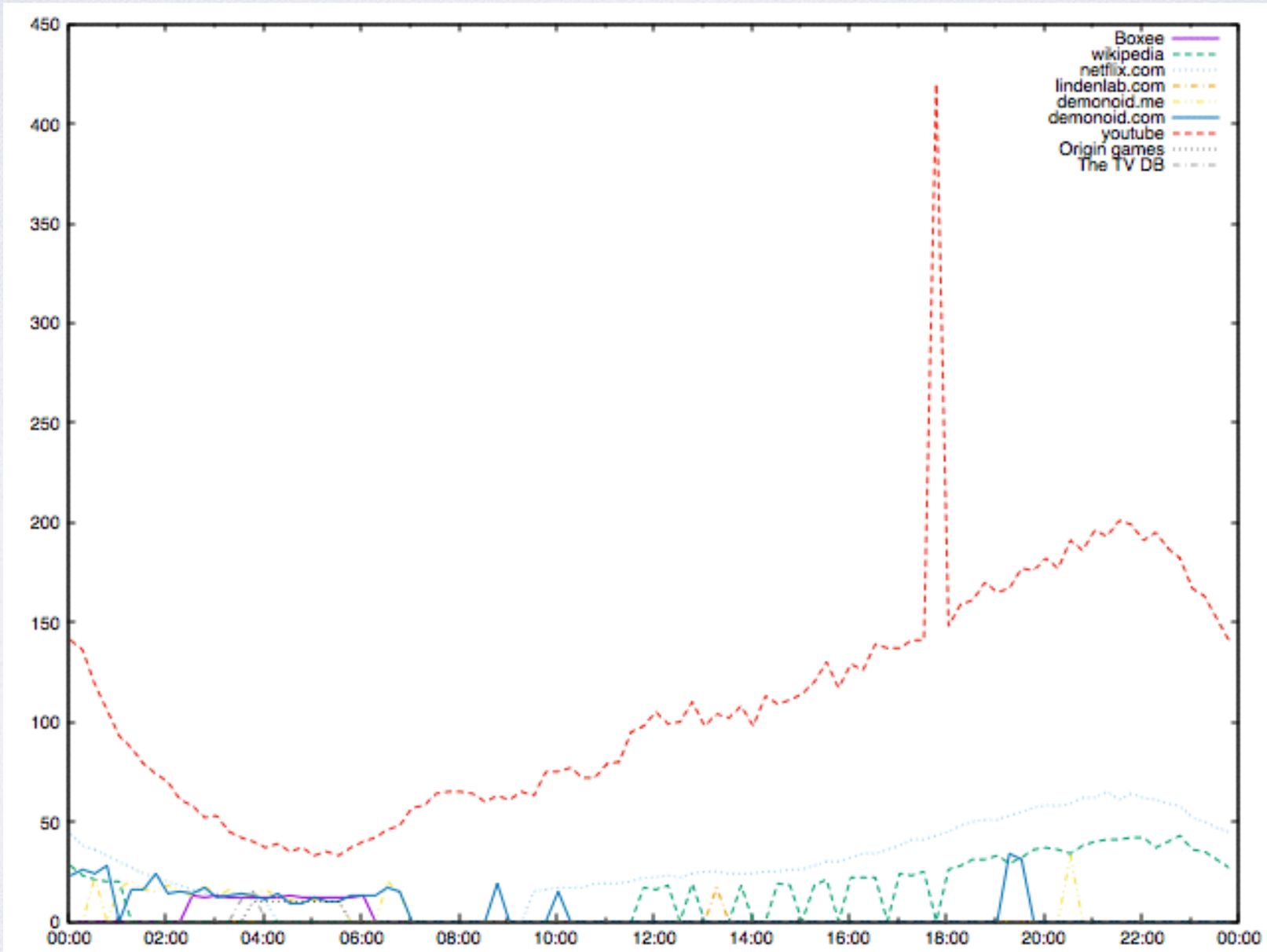
Entertainment sites



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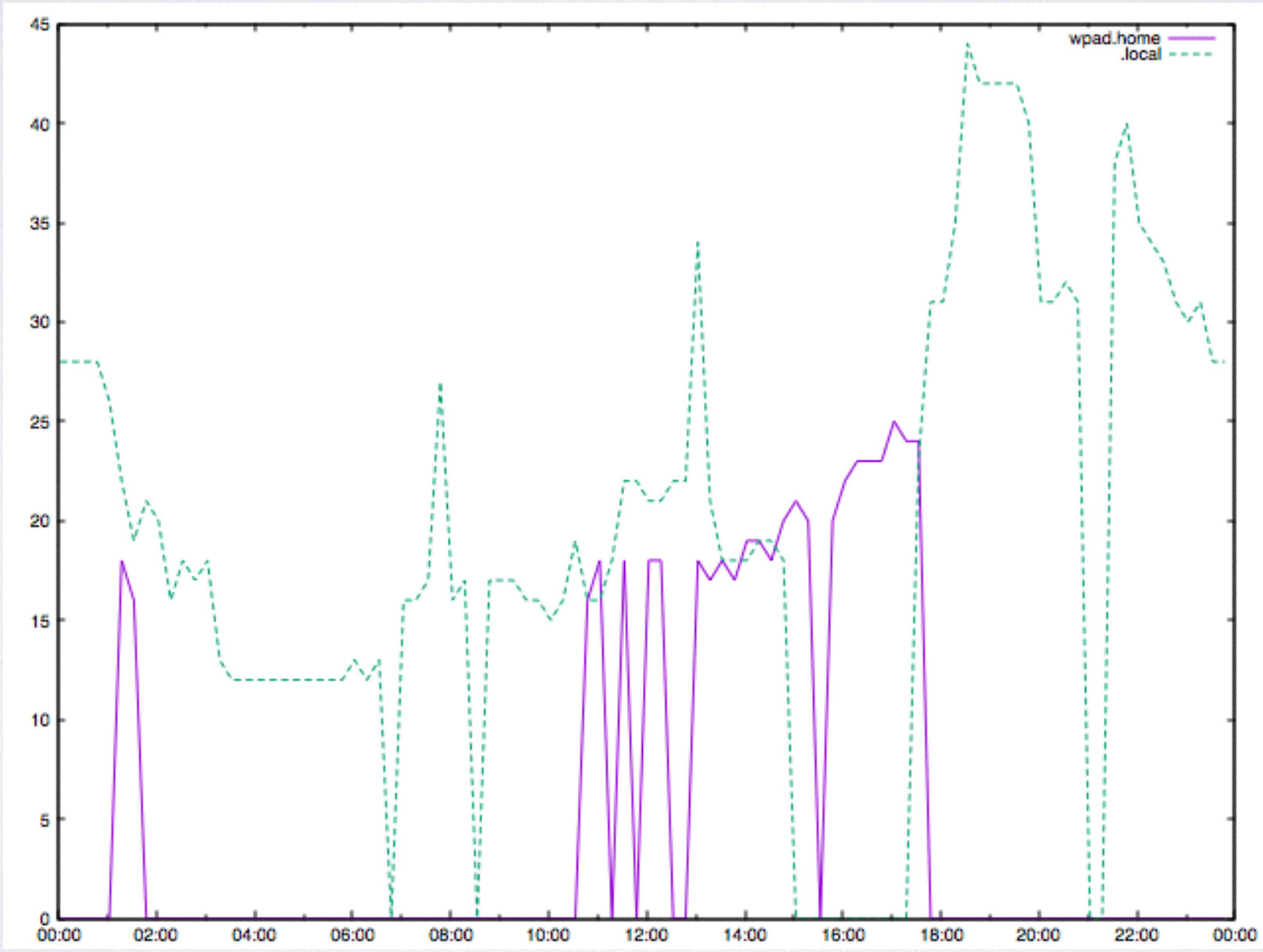
wtf sites



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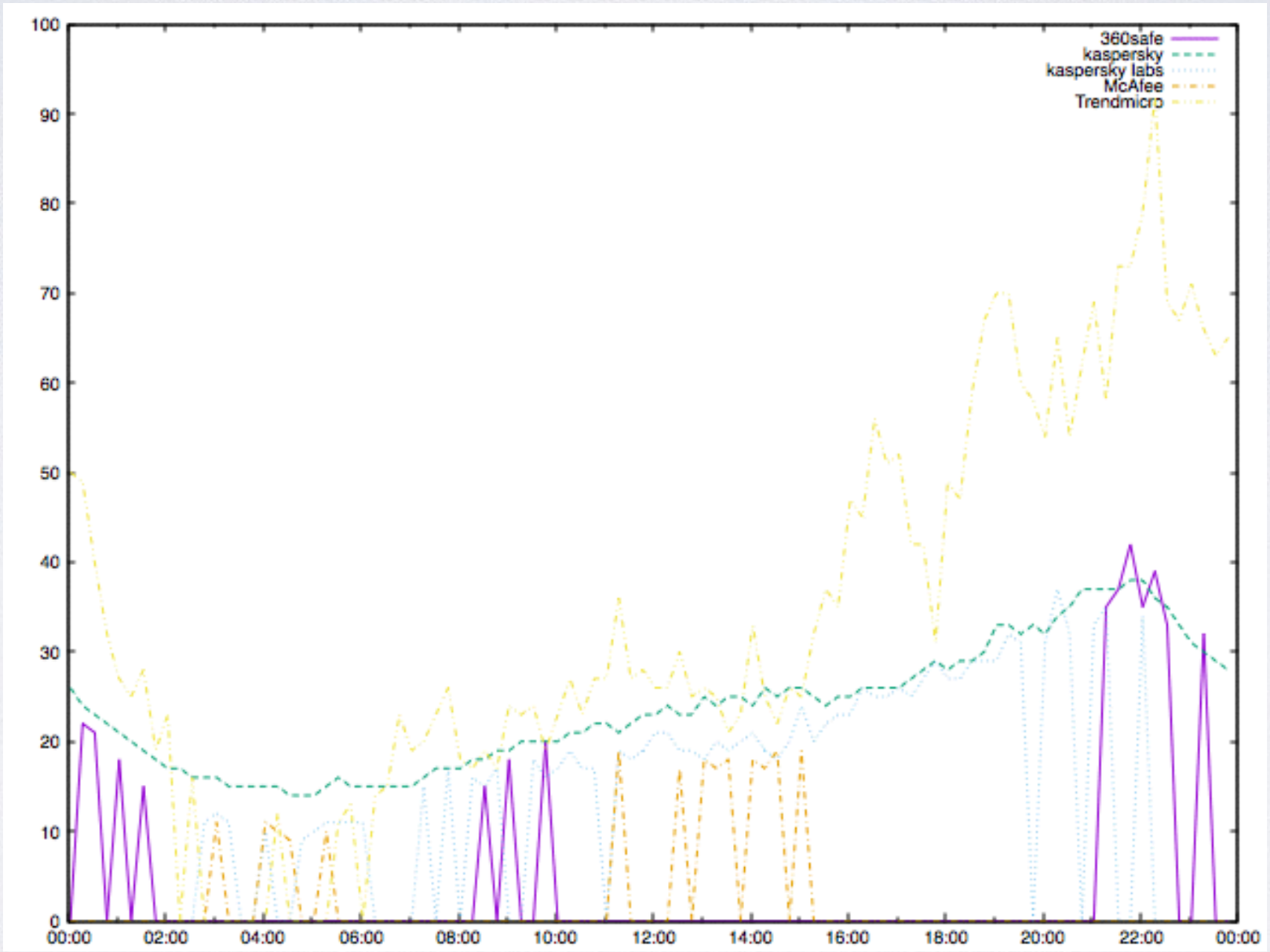
Security services



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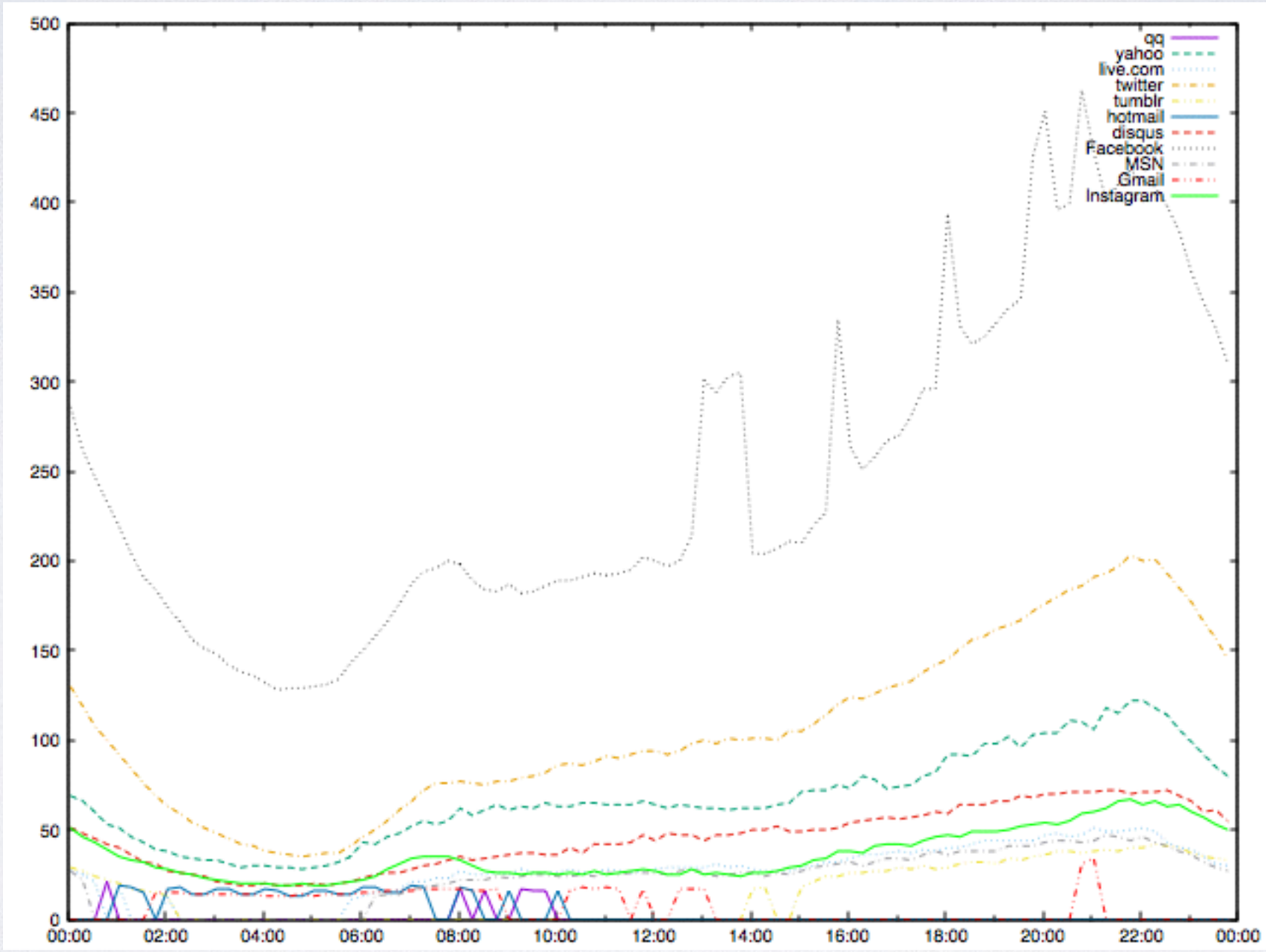
Social



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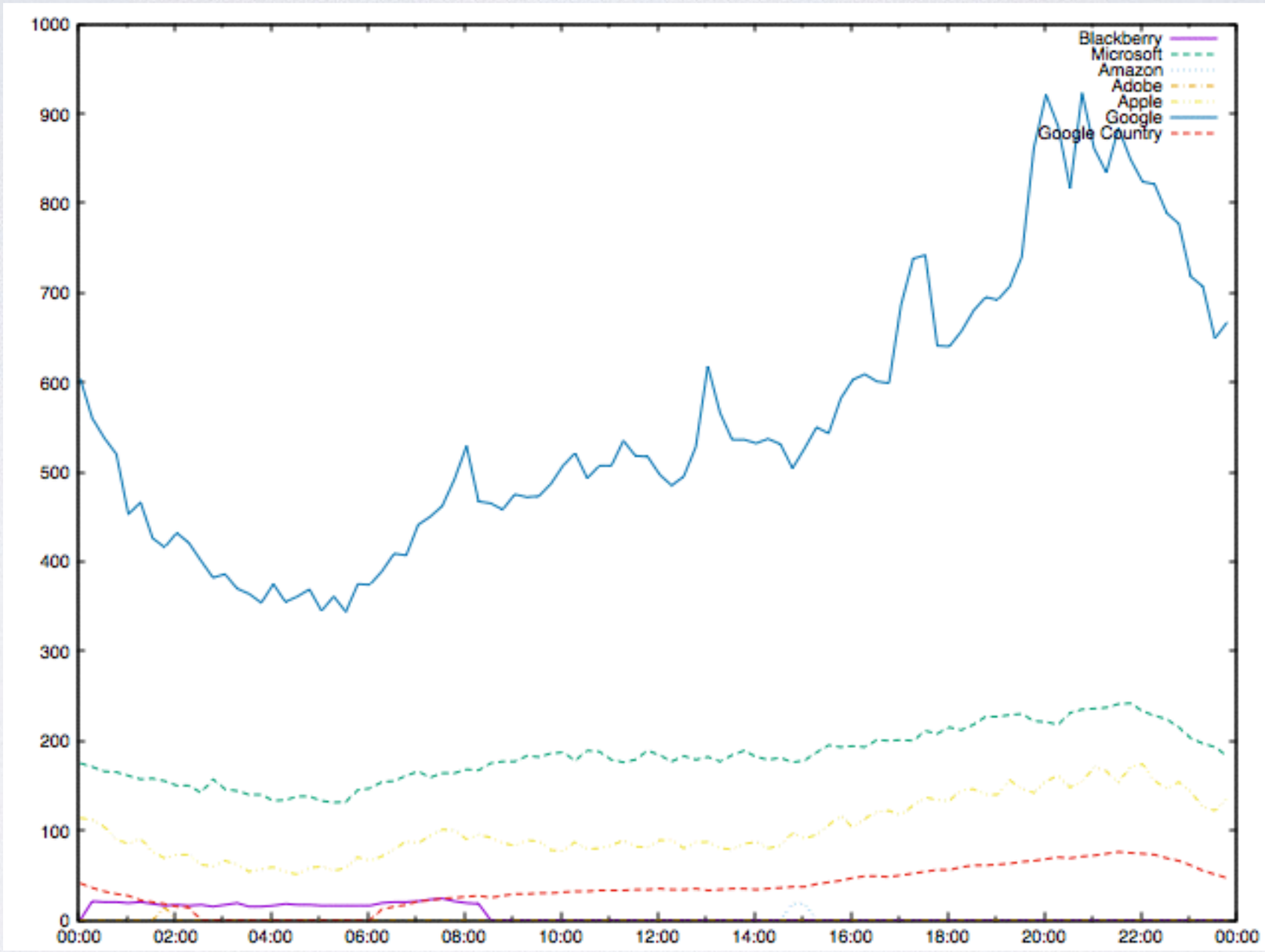
Main domains



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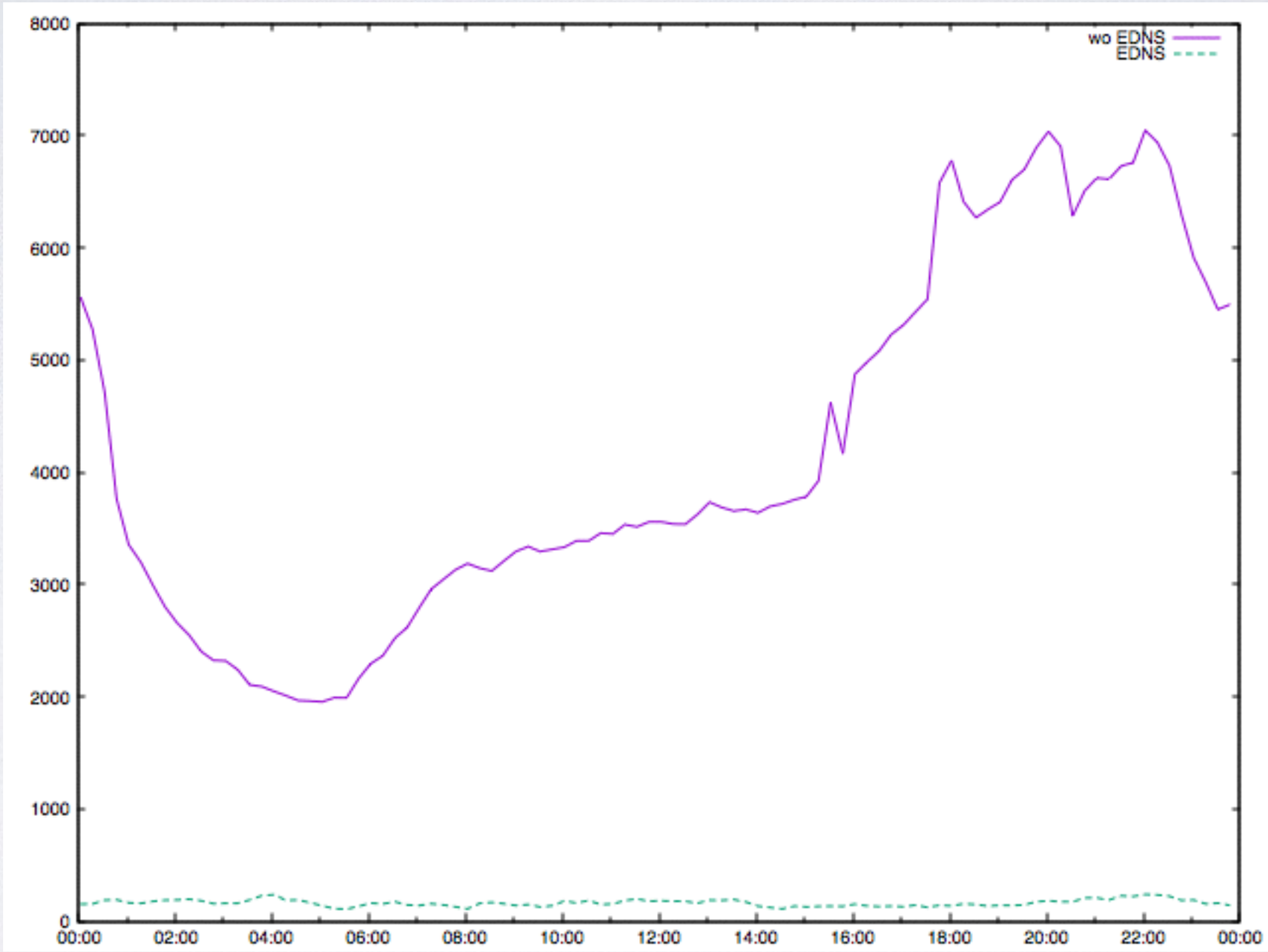
EDNS usage



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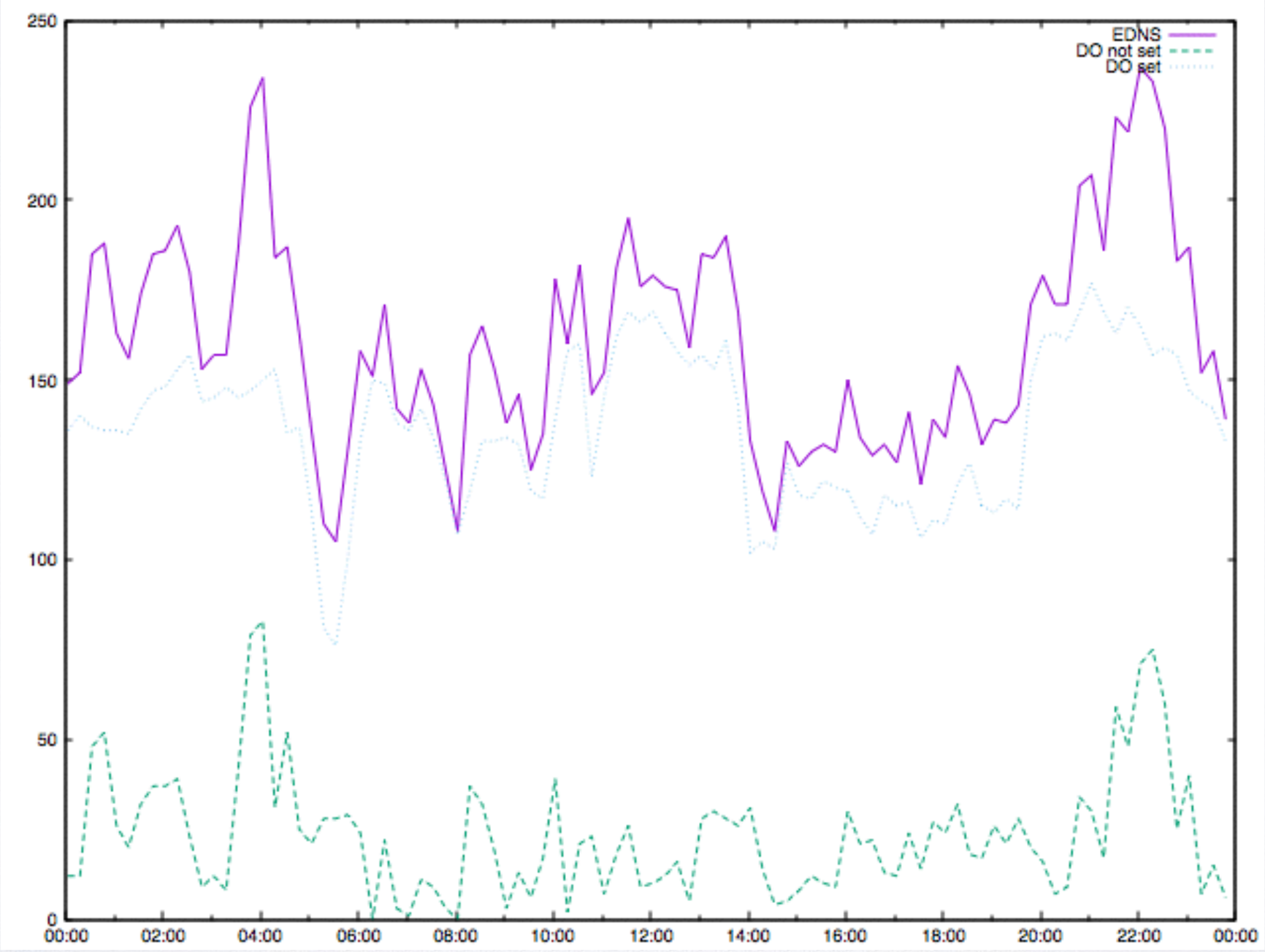
DNSSEC - do



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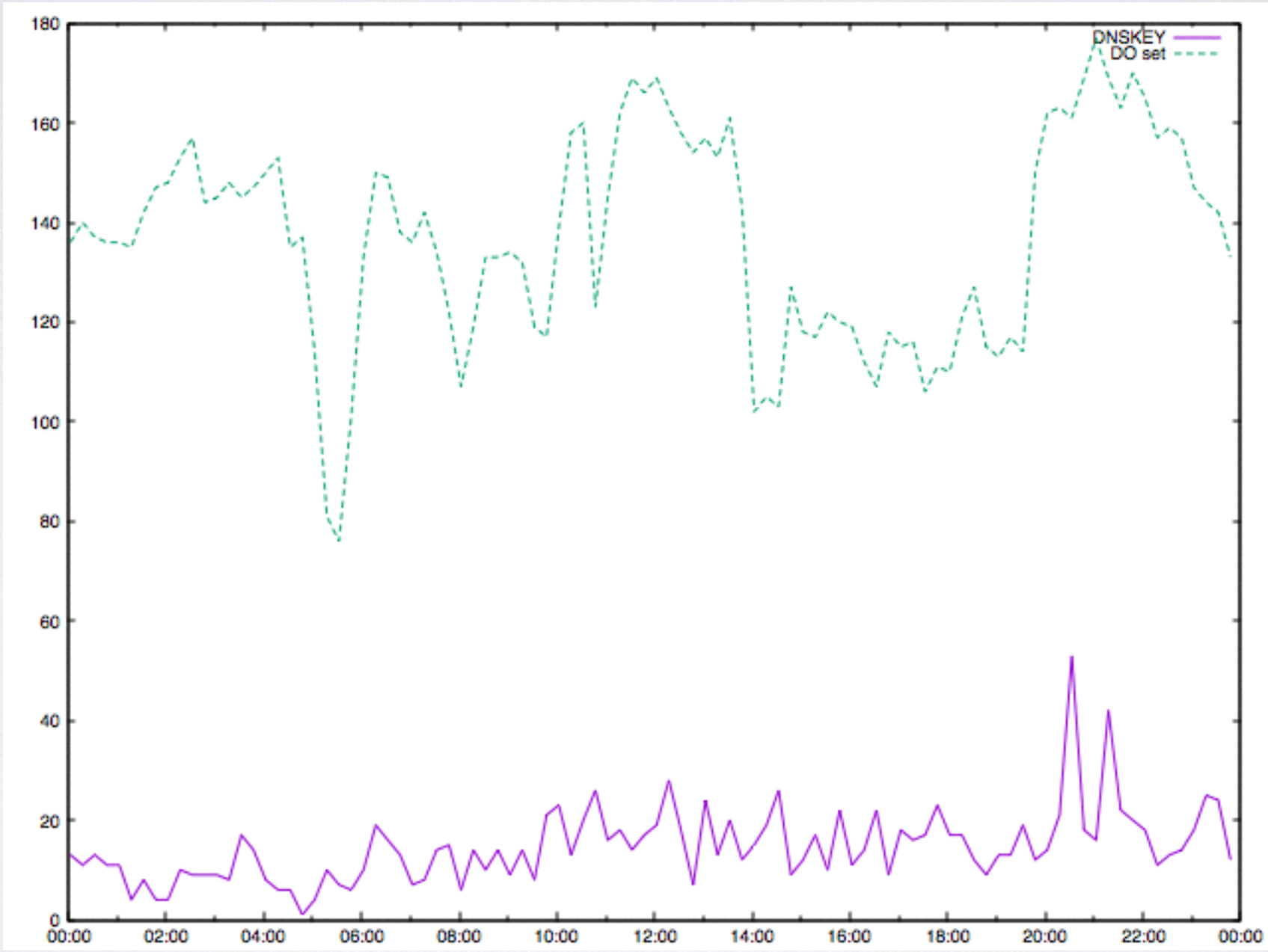
DNSSEC - dnskey



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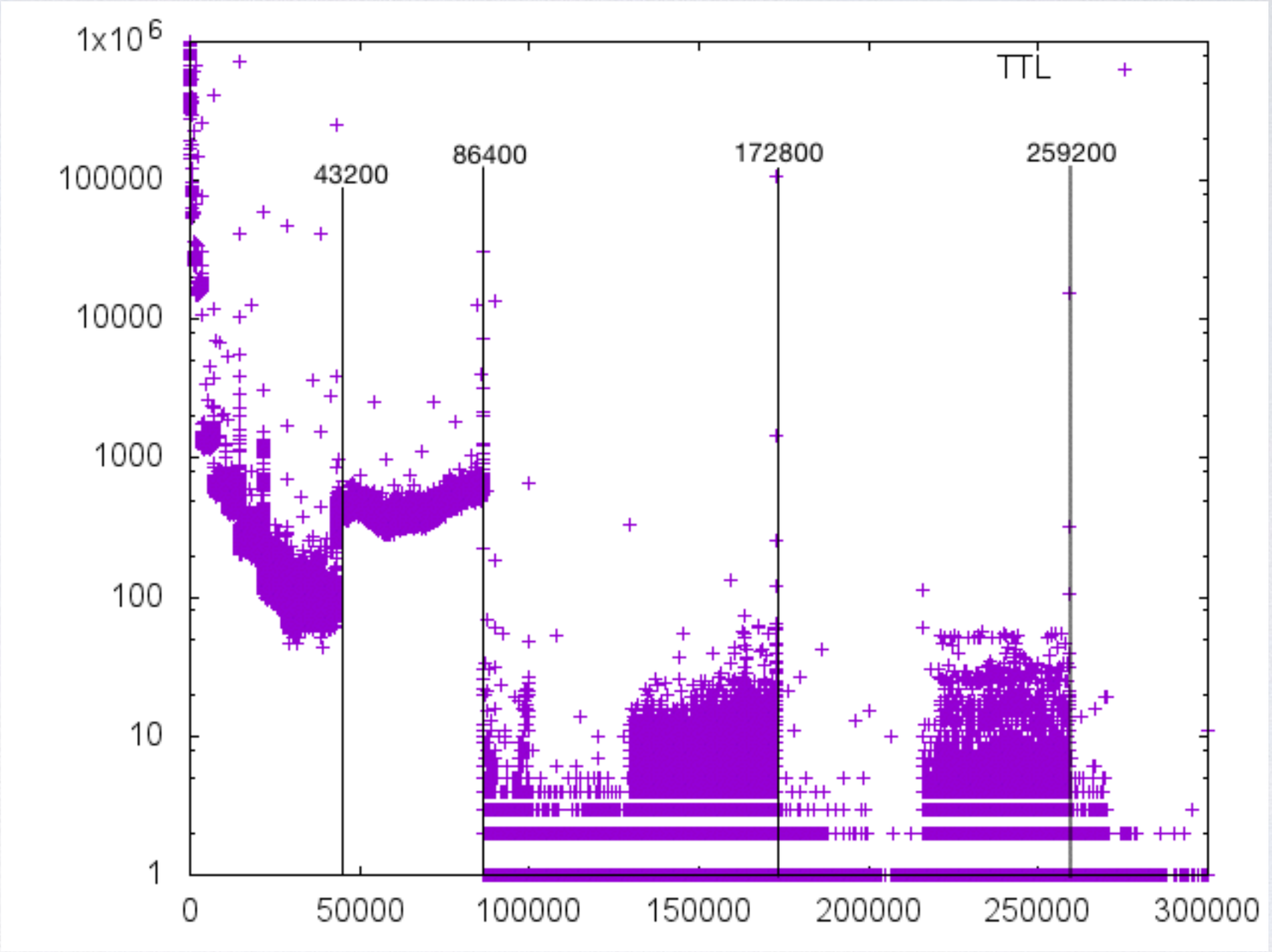
TTL



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What now?

- Study how parameter changes at resolves affect their behaviour towards clients
- Followup work: study impact of changes in server configuration and actions on load handling
  - how does min_ttl help/harm
  - can prefetch help? When and how?

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Acknowledgements

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Questions?