PRIVA-STREAM: Private Collaborative Streaming

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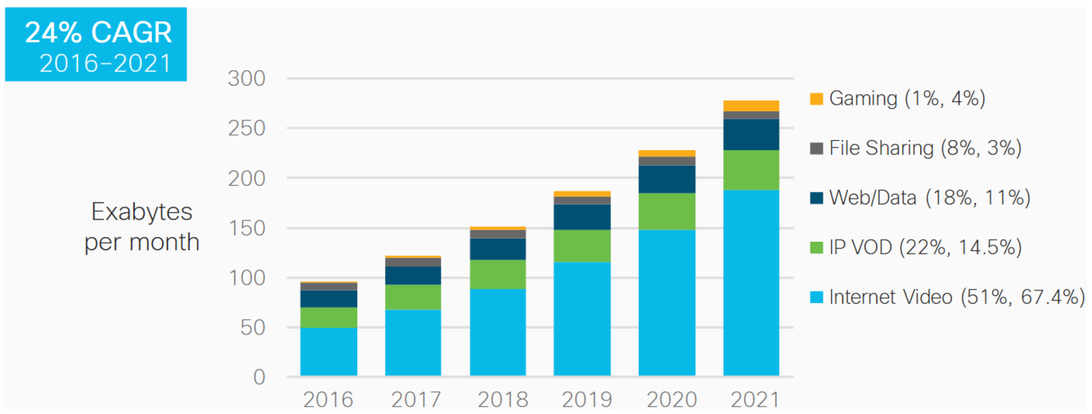
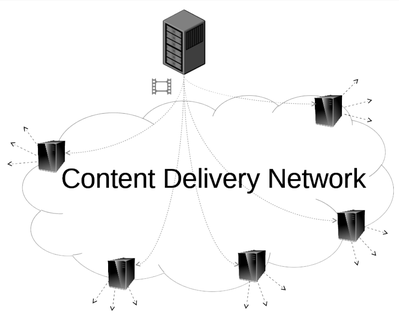
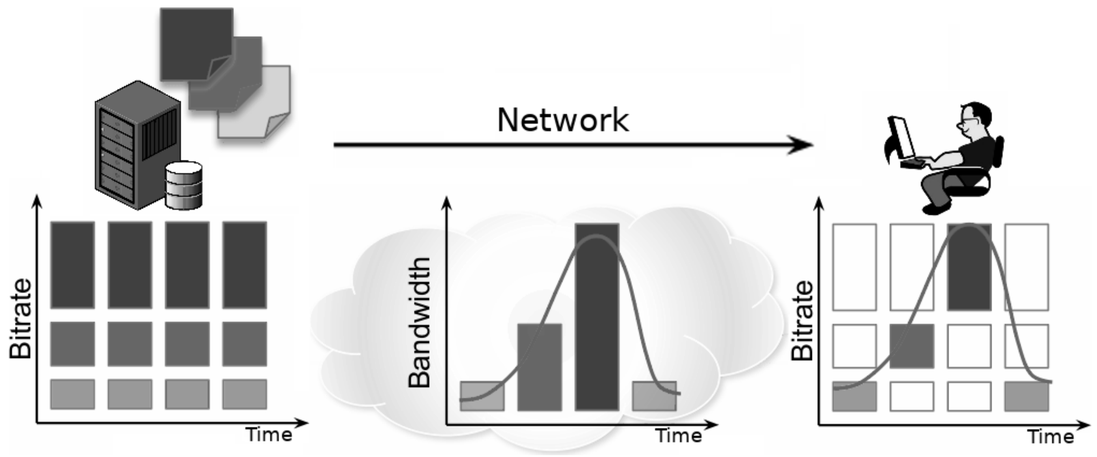
Video content consumption



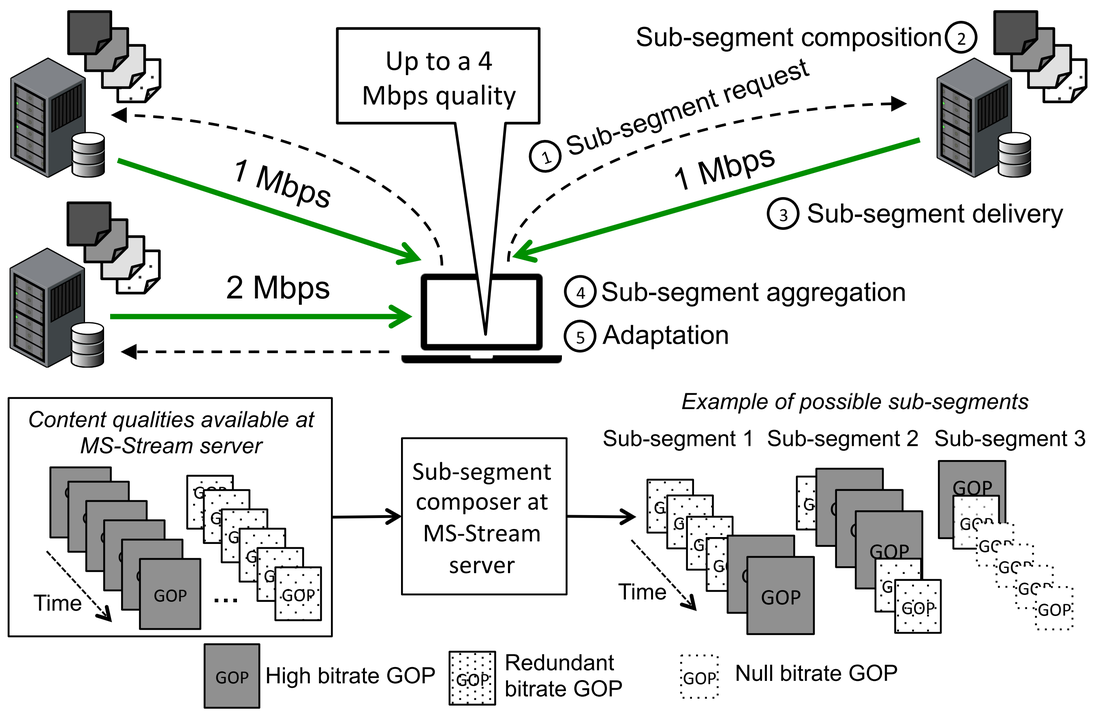
Content Delivery Networks (CDN)



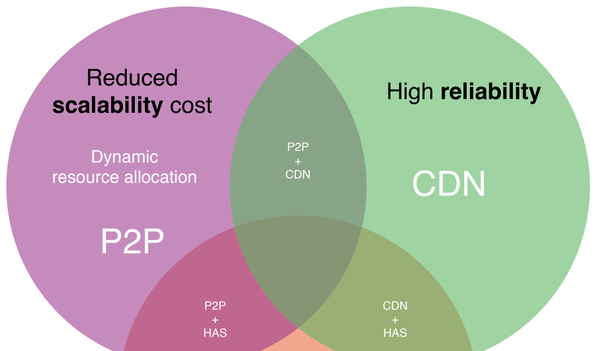
HTTP Adaptive Streaming (HAS)



MS-Stream: Multi-Source Streaming over HTTP



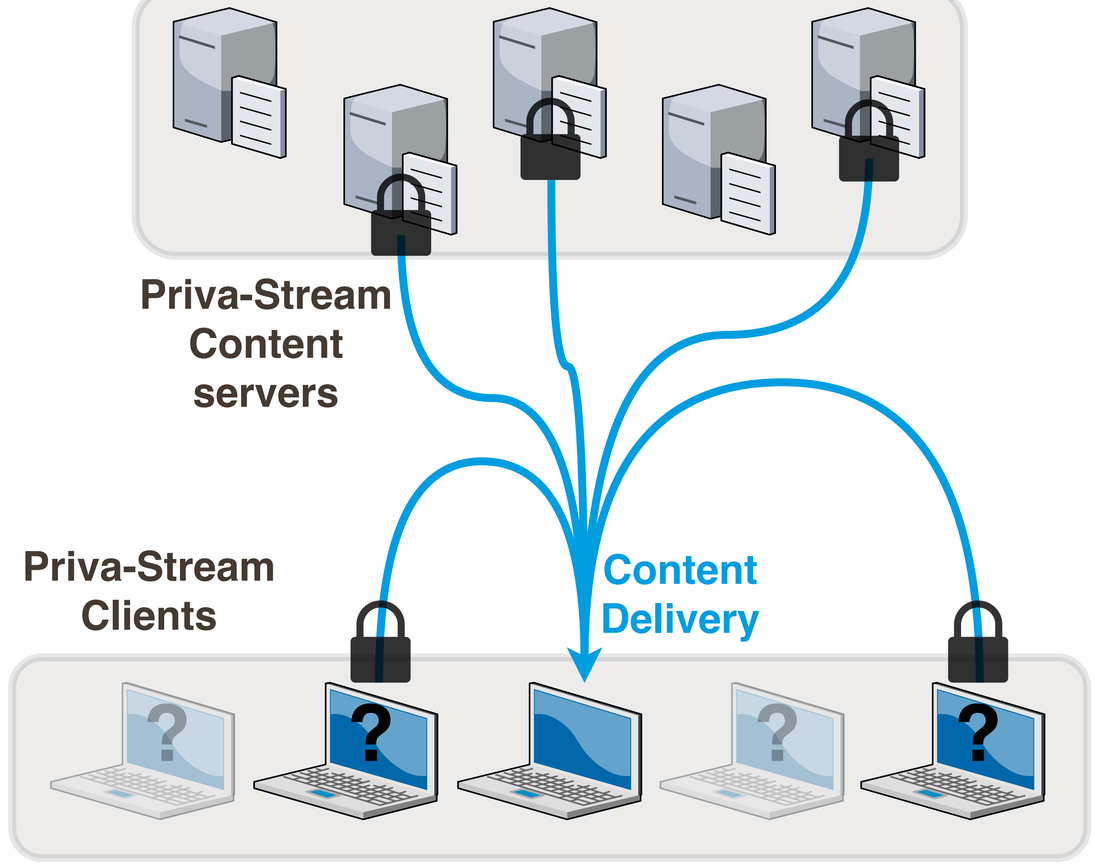
Problem statement



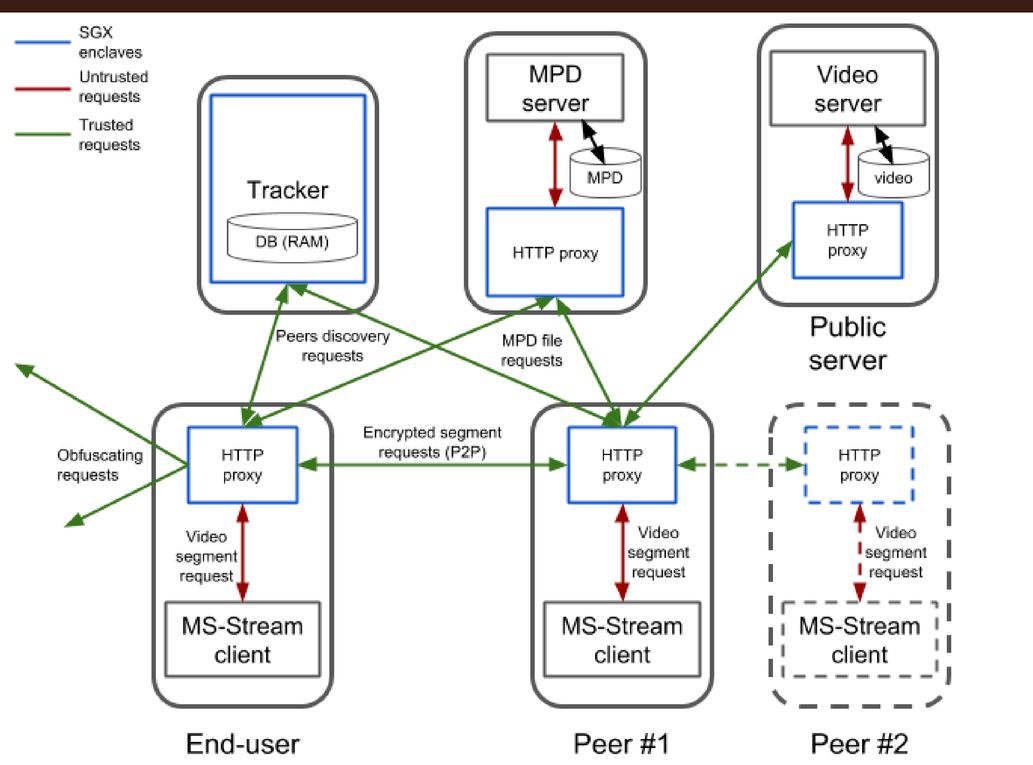
PRIVA-STREAM idea

- Reliability, QoE and scalability
  MS-Stream: Multiple-Source adaptive streaming over HTTP
- Incentive to contribute
  Rewarding: contributing users get a higher quality
- End-users privacy
  TEE (SGX): encryption, NAT and anonymity

PRIVA-STREAM overview

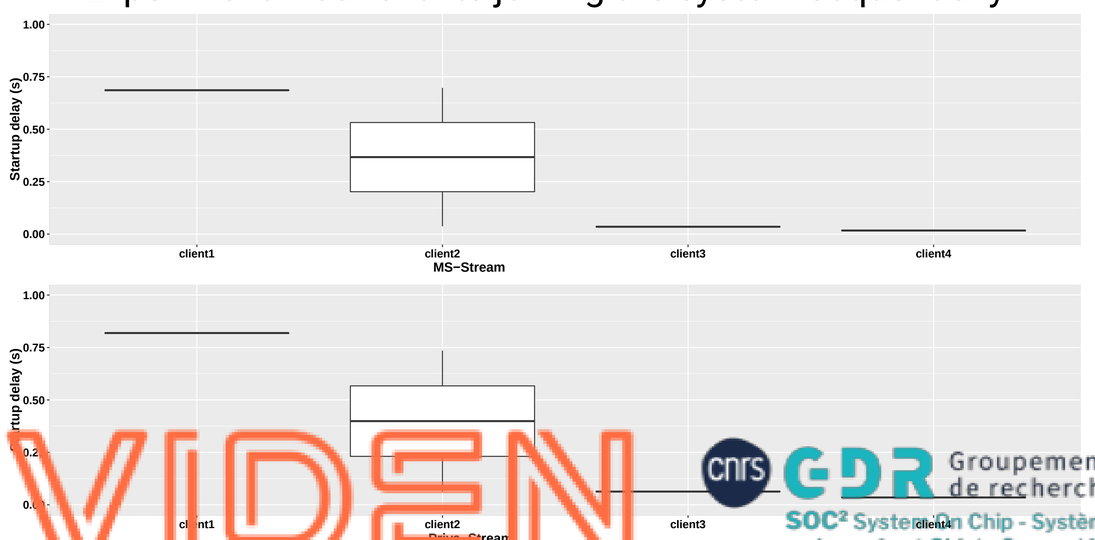


PRIVA-STREAM technical description



PRIVA-STREAM early results

Experiment: Four clients joining the system sequentially



Startup delay (s) - MS-Stream (top) vs PRIVA-STREAM (bottom)

http://2025.comsas-conference.fr/ Tuesday April 1, 2019