UDPing

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How do you monitor/troubleshoot this?
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Introducing UDPing

- Continuous stream of UDP packets from client to server
- At the client:
  - Packets are emitted in groups
  - Each packet is timestamped at the client
  - Serial number per packet (monotonically increasing)
- At the server:
  - Packets are timestamped at reception
  - Loss detection per group
  - Statistics emitted to statsd and/or stdout

github.com/yahoo/UDPing
UDPing Features

- True one-way measurement (depends on NTP)
- Traffic is spread across multiple next-hop gateways
- Source port manipulated to exercise multiple ECMP pathways
- Random payload size
- Poisson sampling avoids resonance and blind spots
- Multiple statistics per packet set
  - Count, expected count, latency sum, latency sum of squares, max latency

github.com/yahoo/UDPing
How Yahoo is deploying UDPing

- Phase 1: Point to point across single-hop backbone paths
- Phase 2: Full mesh across global backbone
- Phase 3 (future): Full mesh between availability zones
Thank You

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