CGN Log Reduction
draft-donley-behave-deterministic-cgn

Chris Donley | March 26, 2012
CGN Logging Generates Huge Data Volumes

- Subscribers generate around 33,000 connections/day
  - 150-byte log messages \(\times\) 33,000 connections/day = 5MB/day/sub
  - 1M-sub ISP will generate 150 TB of data/month (1.8 PB/yr)
  - Assuming 50,000 subs/CGN = 23 Mbps of logging traffic
- PER CGN!!!
  - Imagine DB search times...

- Conclusion: per-connection CGN logging is not scalable
- However.....
Deterministic CGN

• Supports both v4 and v6
• Uses an algorithm to allocate ports per subscriber
  – Abuse Response reverses algorithm to identify inside address
  – Eliminates the need for most logging (except for power users)
  – Reduces privacy impact on subscribers
• Logging only required for subs that exceed predefined port ranges
  – Uses bulk port logging for overflow log
• Reduces logging volumes 100 K – 1 M x vs. per-connection logging
Changes since -00

• Reviewed in BEHAVE and v6ops
• Reviewed with public safety community
• Incorporated feedback from both working groups and public safety officials
• Minor cleanup
Next Steps

• WG draft?