

CGN Log Reduction

draft-donley-behave-deterministic-cgn

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CGN Logging Generates Huge Data Volumes

- Subscribers generate around 33,000 connections/day
 - 150-byte log messages x 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?