Triggers for Transport (TRIGTRAN)

IETF 56 BOF

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Agenda for TRIGTRAN IETF 56 BoF

- Introductions, Scribes, Jabber Scribes, Agenda-Bashing

  10 minutes

- Status Update and Strawman Statement of Work

  10 minutes

- Issues identified in Framework draft

  20 minutes

  – Short – please wait to argue…

- Questions leading to a WG charter

  50 minutes

  – Long – this is the time for enthusiastic discussion!

- Next Steps to a TRIGTRAN working group?

  30 minutes

  – Tell us what you really think…

Who Has Read the TRIGTRAN Drafts?

- Draft-dawkins-trigtran-framework-00.txt
  - New draft, mostly what we've worked on since IETF 55
  - Mixed bag, but includes a strawperson framework
- Draft-dawkins-trigtran-probstmt-01.txt
  - Minimal update removing stuff we tossed at IETF 55
  - We do expect a full editing pass after chartering

Things To Remember

- ## TRIGTRAN isn't L2Triggers
  - RTT-ish latency requirements, not milliseconds
- ## TRIGTRAN trigger delivery not guaranteed
  - No notification ACKs
  - Partial deployment scenarios

Status Since IETF 55 in Atlanta

- We set out to write a Framework document
  - Strawperson in nature
  - Lots of questions about justification
  - Lots of questions about being doomed from the start
- We've learned a lot in the meanwhile
- We think we can do "Connectivity Restored"
  - End-to-end, as an implicit notification
- We think we need a framework to do anything else
  - Probably explicit notification, maybe edge-to-end
- Do we need to do anything else? Pls. advise

Current View of Strawperson Triggers

- We really like "Connectivity Restored"
  - "Kicking TCP" from Phil Karn on PILC list, March 2000
  - Requires small change to TCP - duplicate packets in RTO
  - Safe, deployable, useful

- "Connectivity Interrupted" SHOULD make sense
  - But seems to be very application-dependent
  - DoS bait unless it's neutered
  - "Wait longer or give up immediately"?
  - Could be engineered, but not ready for prime time

- "Packets Discarded" is actually "handoff" in GPRS
  - Would telling the transport really help? Slow start?
  - Less ready for prime time

One Proposed Statement of Work

Engineering?

- Spin up the working group, and …
- Do "Connectivity Restored"
  - With an implicit trigger, end-to-end
  - Mobile host retransmit last packets on "link up"
  - Specify response for duplicate packets during RTO
  - Safe, good consensus, immediate benefit for users

?

- Investigate "Connectivity Interrupted" semantics
  - Transport might do something – but what?
  - Retry more times, or give up sooner – pick one!

Research?

- Investigate explicit mechanisms
  - Can we send out of band signals in the 2005 Internet?
- Build consensus on wish list for IRTF investigation
  - Horizontal handoff, non-congestion loss, corruption
  - Send wish list to Vern Paxson and ask for help

Issues from Framework draft

- We're presenting work we did
- "Connectivity Restored" needs little framework
- Other triggers aren't baked yet

Questions leading to a WG charter

- Does anything except "Connectivity Restored" make sense?

- Can our triggers be generated by existing subnetwork technologies?

- Can we agree on a list of reasonable responses?

- Is sending a wish list to the IRTF a Black Hole?

We've Learned From These People – Thanks!

- Mark Allman
- Ethan Blanton
- Armondo Caro
- Aaron Falk
- Gorry Fairhurst
- Sally Floyd
- Alan Hameed
- Tom Hiller
- John Ioannidis
- Seok Joo Koh
- John Loughney
- Reiner Ludwig

- Allison Mankin
- Pete McCann
- Gab Montenegro
- Kacheon Poon
- Pasi Sarolahti
- Yogesh Swami
- John Wryclawski
- Alper Yegin

- *Your feedback matters!*

Follow ups to TRIGTRAN mailing list

- General Discussion: trigtran@ietf.org
  - To Subscribe: trigtran-request@ietf.org
  - In Body: subscribe
  - Archives: www.ietf.org/mail-archive/working-groups/trigtran/current/maillist.html

- Strawperson problem statement and framework
  - draft-dawkins-trigtran-probstmt-01.txt
  - draft-dawkins-trigtran-framework-00.txt

- BOF agenda and description
  - http://www.ietf.org/ietf/03mar/trigtran.txt