

Internet Capacity Sharing Architecture Design Team

IETF-80 Mar 2011

“relaunch!”

- we have a design team (again)
- and some (apparent) consensus on action
- to write an informational IRTF RFC
- problem space: network capacity sharing
 - accounting for and being able to allocate or limit
 - a share of the distributed network resources
 - identify goals that are useful, not useful but harmless, harmful
 - identify solutions harmful to others with more useful goals
- scenarios discussed:
 - residential access network (e.g. Comcast’s RFC 6057)
 - multi-tenanted data centre

people

met today

- Murari Sridharan
- Michael Welzl
- Gorry Fairhurst
- Bruce Davie
- Fred Baker
- Bob Briscoe

in the background

- Mark Handley
- Matt Mathis

what we don't want to do

- not aiming to recommend solutions
- not the 'account identifier' problem
 - needs solving in the data centre, but not our problem here
- not polemic like "Flow-rate fairness, Dismantling a Religion"
 - but a similar main message...

* flow = 5-tuple here

what *are* we saying?

- focus on goals enforced in the network
- flow* equality is a non-goal
- flow fairness on end-systems misguided but harmless
- but enforcing flow-equality in the network is harmful
 - need to explain why
 - willing to give examples
- point to good practice even if not ideal
 - Comcast's RFC 6057: during peak demote class of high volume users
- misguided but only weakly harmful
 - 'fair' queuing per site
- harmful (e.g to goals of LEDBAT-like transports)
 - approx fair drop (AFD), CHOKe
 - 'fair' queuing per flow

* flow = 5-tuple here

Internet Capacity Sharing Architecture

Q&A