Multipath Transfer with SCTP

draft-tuexen-tsvwg-sctp-multipath-00

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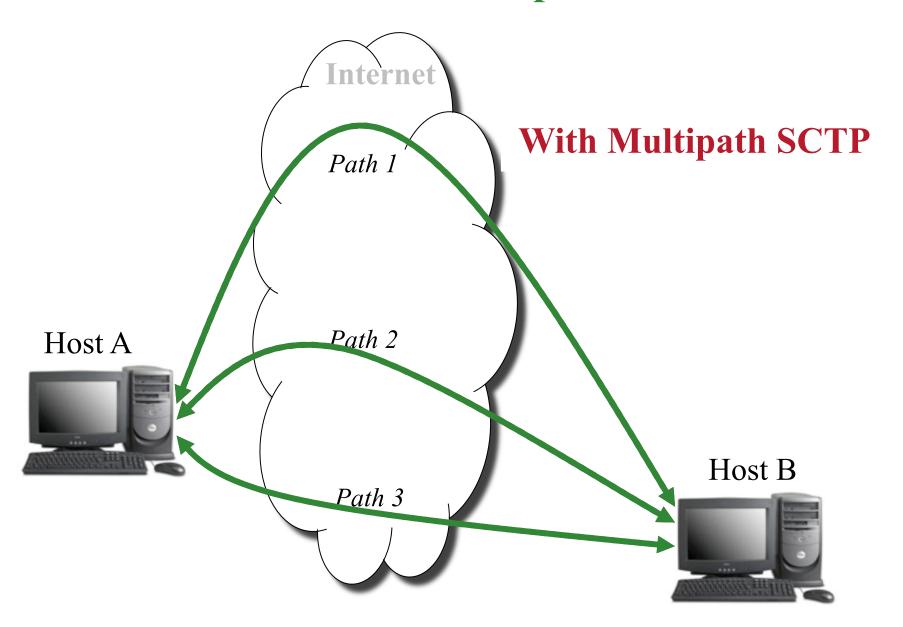# SCTP *multihoming*

SCTP natively provides *multihoming mechanisms*
– RFC4960 uses multihoming for fault tolerance
– Data transmissions always sent to *primary dest*

We have added *multipath* capability to RFC 4960
– Data transmissions sent to *all* destinations

10-second intro to multipath SCTP

With Multipath SCTP

Internet

Path 1

Path 2

Path 3

Host A

Host B

State of the Art

- Mechanisms have been defined and evaluated
  - 3 existing independent drafts (1 of which is expired)
  - Few papers (available on *www.fandm.edu/jiyengar*)

- Running code exists
  - Available as a sysctl in FreeBSD, as of v7.0 (2006)

- NEW! Now comes with Coupled Congestion Control!
  - Based on <draft-ietf-mptcp-congestion-00>

Two methods of standardizing

- One large document that contains all the mechanisms

  OR

- 3-4 smaller documents that cover these mechanisms, managing overlap with other use cases for these specific mechanisms
  - 4 algorithms (~20 pages)
  - NR-SACKS <draft-natarajan-tsvwg-nrsack-02> (~20 pages)
  - PF <draft-nishida-tsvwg-sctp-failover-00> (~10 pages)
  - Document to tie these pieces together (~10 pages)

- Can do most important parts without modifying SCTP header
  - critical subset *can* be implemented as sender-only mods