Features of the User Datagram Protocol (UDP) and Lightweight UDP (UDP-Lite) Transport Protocols

draft-fairhurst-taps-transports-usage-udp-01

Gorry Fairhurst & Tom Jones
University of Aberdeen, Scotland
Draft overview

Describes how UDP & UDP-Lite expose services to an application.

How an application can configure and use features of a transport service.

Three stage “TAPS” process to reduce the documented UDP API into a set of primitives (draft-ietf-taps-transports-usage).

The primitives can be used to compare UDP/UDP-L (and its transport features) with other Transports.
Describes how UDP & UDP-Lite expose services to an application.
It's UDP: There are connected and unconnected models!!

**Establishment:**
- connect
- accept

**Data:**
- send (connected or unconnected)
- recv (connected or unconnected)

**Maintenance:**
- set options
UDP Options

UDP Checksum methods
   DISABLE_CHECKSUM, REQUIRE_CHECKSUM

UDP-L Checksum methods
   SET_CHECKSUM_COVERAGE; SET_MIN_COVERAGE

Path MTU Discovery (UDP & UDP-L)
   GET_INTERFACE_MTU; SET_DF

Network Usage (UDP & UDP-L)
   SET/GET_IP_OPTIONS; SET/GET_TTL; SET/GET_IPV6_UNICAST_HOPS; SET_DSCP; SET/GET_ECN; ERROR_REPORT
Multicast UDP

See Appendix B

Some basic differences
(e.g., IPv6_MULTICAST_IP;
IP_MULTICAST_TTL/IPV6_MULTICAST_HOPS)

Group Membership Control

IPV6_MULTICAST_JOIN_GRP
IPV6_MULTICAST_ADD_MEMBERSHIP
IPV6_MULTICAST_LEAVE_GRP
IPV6_MULTICAST_DROP_MEMBERSHIP
… etc
Changes in rev -01

Added:

REQUIRE_CHECKSUM

Normative ref to: draft-ietf-tsvwg-rfc5405bis
Next Steps

Is this what is needed by the TAPS WG?

Please read and send comments to authors/TAPS list.

Is anyone interested in reviewing the multicast API?