rsplib

Michael Tüxen

tuexen@fh-muenster.de

What is the rsplib?

- Written by Thomas Dreibholz (dreibh@exp-math.uni-essen.de).

- It runs on kernel SCTP (Linux, FreeBSD and Mac OS X) and on the userland prototype implementation sctplib with socketapilib.

- Written in C and published under GPL.

- Available from http://www.sctp.de and http://tdrwww.exp-math.uni-essen.de/dreibholz/rserpool/

- Provides also graphical demo programs.

IDs implemented

- Implements
  - draft-ietf-rserpool-asap-13.txt
  - draft-ietf-rserpool-enrp-13.txt
  - draft-ietf-rserpool-common-param-10.txt
  - draft-ietf-rserpool-policies-02.txt
- Provides for the PE and PU side a socket API as described in
  - draft-ietf-rserpool-api-00.txt

Status

- It has been
  - used for many experiments regarding policies. Results have been published.
  - tested in PlanetLab using a lot of nodes (PUs, PEs, and NSes).
  - used for testing SCTP implementations :-)
- It (still) needs to be ported to Solaris…

Demo

- Pool of echo servers.
- Nodes find each other using multicast.
- Failover
  - between NSes.
  - Between PEs.
- Also avaliable:
  - Very nice GUI based Demonstration tool.
  - and more…

Socket API

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Status

- draft-ietf-rserpool-api-00.txt has expired.
- It provides function prototypes but misses almost all structures and arguments.
- It contains text describing functions and also two examples. Unfortunately, the examples does not match the text…

Issues (1)

- rsp_initialize is used in the code, but not described in the text.

- It needs to be changed to return an identifier describing the operational scope. Sockets should belong to only one operational scope.

Programming model

- Single threaded versus multithreaded.
- Neither the examples nor the text show rsp_select().
- Do you match an rsp_recv() call to a
  - recv() call.
  - select() call.

Future

- Update the ID by providing the missing structures and prototypes.

- Update the examples.

- Bring the text in sync with the examples.

- And resubmit the ID…