Networking TS - Editor's Report

History

N4711 is the sixth working draft for the Networking TS, revising N4656. This draft has the same content as the final document sent to ISO for publication with the addition of the resolution of LWG 2779.

Since the previous working draft there were a large number of editorial changes as well as the changes made in response to NB ballot comments (as approved in Toronto). The record of response to the ballot comments is in N4708.

Ballot comment resolutions

- [socket.algo.connect] Fix function signatures
  - Fixes NB US-14 (PDTS).
- [references] Add references an un-note "herein" paragraph. [namespaces] Update LFTS namespace to fundamentals_v2.
  - Fixes NB US-8 (PDTS).
- [buffer.reqmts.size] Add subclause for buffer_size customization point
  - Fixes NB GB-9 (PDTS)
- [async.reqmts.protoallocator] Remove "constructor"
  - Fixes NB GB-2 (PDTS)
- [async.reqmts.executor] Introduce type Func
  - Fixes NB GB-5 (PDTS)
- [async.reqmts.service] Remove "user-defined"
  - Fixes NB US-12 (PDTS)
- [buffer.synop], [buffer.seq.access] Add "noexcept". [buffer.reqmts.mutablebuffersequence]
Require buffer ops to be non-throwing

- Fixes NB GB-11 (PDTS)

- [socket.dgram], [socket.stream] Add same type requirements. [socket.reqmts.native] Define how specification uses native_handle_type

  - Fixes NB GB-13 (PDTS)

- [socket.acceptor.cons] Add postcondition for native_handle()

  - Fixes NB GB-17 (PDTS)

- [socket.streambuf.cons] Add constructor postconditions for error()

  Fixes NB GB-18 (PDTS)

- [socket.streambuf.cons] State move assignment effects on rhs

  - Fixes NB GB-19 (PDTS)

- [internet.synop] Rename host_not_found_try_again enumerator

  - Fixes NB GB-20 (PDTS)

- [async.reqmts.executor] Move defer requirements to new row

  - Fixes NB US-10 (PDTS)

- [socket.basic], [socket.acceptor] Add release member functions

  - Fixes NB GB-15 (PDTS)

- [async.reqmts.executor] add reentrancy statement for dispatch

  - Fixes NB GB-3 (PDTS)

- [async.exec.ctx] Add reentrancy statements about services

  - Fixes NB GB-6 (PDTS)

- [io_constext.io_context] Add reentrancy statement for run functions

  - Fixes NB GB-8 (PDTS)

**Issue resolutions**

- [buffer.reqmts.mutablebuffersequence], [buffer.reqmts.constbuffersequence] relax

  - LWG 2779
Editorial changes:

- Lots of hyphenation hints, and editorial rephrasing and reformatting, to avoid text overflowing into the right margin.

- [internet.tcp], [internet.udp] Change "POSIX header file <...>" to "POSIX <...> header"

- [socket.dgram.op] replace "\effects Returns" with "\returns"

- [socket.streambuf.virtual] Replace \effects Returns with \returns

- [internet.reqmts.opt.mcast] Change variable names in table

- [internet.*] Don't qualify std::addressof

- [buffer.read], [buffer.async.read], [buffer.write], [buffer.async.write] Use variable templates

- [socket.streambuf.virtual] Clarify return values

- Improvements to the index of implementation-defined behaviour.

- Cross-references added from synopses to the relevant wording.

- [async.system.exec.ops], [async.strand] use "is false" instead of "== false"

- [async.system.exec.ops] add parentheses to "calls f1"

- [async.strand.ops], [internet.network.v4.members], [internet.network.v6.members] use "is true" instead of "== true"

- [buffer.mutable] fix grammar and add hyphenation hints

- [internet.address.v6.comparisons] Use std::tie to simplify expression

- [socket.streambuf.virtual] -> [socket.streambuf.virt] rename

- [async.use.future.result] improve formatting in async_result semantics table

- [err.report.async] add parentheses around cross-reference

- Change Terms & Definitions to match ISO drafting directives. Move definition of "orderly shutdown" to [buffer.stream]. Change POSIX reference to ISO/IEC 9945:2009 and correct byte order section numbers, as per http://www.iso.org/obp

- [async.reqmts.async.token], [async.reqmts.async.lifetime], [buffer.creation], [buffer.async.write] change "must" to "shall"