NDNfd Development

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The network daemon

Where the network layer of the architecture is implemented.

Internal functionality

• CS/PIT/FIB, Forwarding strategy

Lower-layer interface

• Interface with underlying links

Upper-layer interface

• Interface with apps/libraries
From ccnd to NDNfd

Internal functions

• Better code modularity
• Better table structures and lookup algorithms
• More choices of strategy

Lower-layer interface

• New packet format: simplification and improvement
• Local link-level functionality
• Support more types of links

Upper-layer interface

• Expose all internal functionality
• Make programmer’s life happier
What we have done so far?

Internal Functions

• Research on strategies, and new table structures/algorithms.
• Code
  • Ndnfd, V-NDN, ndnSIM, QualNet simulator…

Lower-layer interface

• Initial draft on packet format
• First sketch of link-level protocol working.

Upper-layer interface

• App/library API
Efforts outside of the NDN team

PARC
  - CCNx 1.0 release coming early next year
  - New packet format, new protocol spec, new code base.

Cisco
  - New packet format
  - Packet forwarding demo at SIGCOMM

Others
  - ccn-lite
Our Plan

Need the new NDNfd quickly
  • *When?*

Divide and conquer
  • Internal functions
  • Lower-layer interface
  • Upper-layer interface
  • *When, who, how?*

Testbed deployment: all

Code management: WashU/UCLA

Community building and code contribution policy