HIPL – HIP for Linux

Status and „call for hands“

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What is HIPL

• “HIP for Linux” implementation of HIP
• Features
  – HIP handshake (RFC5201)
  – Mobility & multihoming
  – Firewall / HIP middlebox
• Platforms:
  – Linux
  – Embedded Linux (Maemo/n900, openWRT)
  – WIP: Android
• Framework to implement extensions
The Future of HIPL Development

Projects

HIIT

RWTH Aachen

Aalto University

Developer community

YOU

RWTH

HIIT

Aalto
Developer Community

• Transitioning to a more open developer base
  – Every one is welcome to contribute
  – Projects, individuals, companies
  – Coordinator rene.hummen@cs.rwth-aachen.de

• More attractive hosting
  – http://launchpad.net/hipl/
  – http://www.ohloh.net/p/hipl

• Mailing list http://www.freelists.org/list/hipl-dev
  – Intensive code reviews and discussion
Why contribute?

• Get involved with an active OSS project
• Learn more about HIP
• Experiment with embedded and mobile Linux
• Get your code into HIPL
• Get help from active developer community

→ We are actively looking for developers

http://launchpad.net/hipl/
User Community

• We’d like more feedback from community
  – What are you using HIPL for?
  – What features are you using?
  – Which features are good/bad?
  – Are there bugs that bug you?
  – What is missing?

• Contact us, subscribe to user mailinglist, irc
  – Contact: rene.hummen@cs.rwth-aachen.de
  – ML: http://www.freelists.org/list/hipl-users
  – IRC: irc://irc.freenode.net/hipl
Future

• Focus on simple-to-use HIP mobility
• RFC5201-bis – Standards Track HIP
  – New Cipher Suites
  – New feature negotiation
  – More suitable for lightweight devices
• In-network security
  – HIP authentication towards firewalls
• Bridging heterogeneous networks
• Fully automated home VPN
• Cloud security and HIP
Current Maintenance Efforts

- Refinement of functionality to be maintained
  - Removed experimental and unmaintained parts:
    - HIP proxy
    - DHT lookup and i3
    - And many more...
- Functionality was split into core and modules
  - Current focus on hipd
  - Modules: update, heartbeat, userspace ipsec
  - Modularization is still incomplete (code dependencies)
- Automatic compilation testing
  (on supported platforms)
- Automatic run-time testing
Current Efforts (cnt’d)

• Construction of a permanent open test bed
  – PC as responder
  – WRT160nl as router/firewall
  – N900/netbook as initiator
  – Infrastructure (DNS)

• Infrastructure for continuous system testing
  – Simple packaging
  – Scripted runs

• Unit-testing for newly added code