The Status of MPTCP Deployment and Evaluation in the NorNet Testbed

Thomas Dreibholz, dreibh@simula.no
Simula Research Laboratory

3 March 2014
Contents

- Motivation
- The NorNet Testbed
- MPTCP Deployment
- Current Status
Motivation

MPTCP needs testing in realistic setups!

- **Wired networks**
  - Data centres, fibre, DSL, ...

- **Wireless networks**
  - 2G, 3G (UMTS, CDMA), 4G (LTE), WLAN, ...

- We have an open testbed platform for both: NorNet!
  - Similar to PlanetLab/OneLab, G-Lab, etc.

[https://www.nntb.no](https://www.nntb.no)
The NorNet Testbed

**Wired sites**
- 11 in Norway + 1 DE, 1 SE, 1 CN
- Up to 3 ISPs (IPv4 + IPv6 if available)
- Usually 4 servers per site
- VMs: Fedora Linux 18, LXC
- **Linux kernel MPTCP v. 0.88 in test**
- Custom VMs possible (e.g. FreeBSD)

**Wireless nodes**
- Ca. 400, distributed all over Norway
- Custom-made ARM embedded system
- Debian Linux
- **Linux kernel MPTCP v. 0.88**
- Up to 4x UMTS, 1x CDMA
- 1x wired, 1x WLAN
Ongoing MPTCP Research in NorNet

- MPTCP performance in heterogeneous networks
  - Evaluation of the current state of the art for MPTCP (i.e. Linux MPTCP v. 0.88)
  - Combination of multiple 3G paths
  - Some 2G/3G/4G paths
  - Combination with WLAN paths
- Performance improvements under development – more details soon!

Interested in using NorNet? Talk to us!
“NorNet wants to be a building block of the railroad to heaven” ...

... and not be another unused testbed that paves the road to hell!

See https://www.nntb.no for details!