Network Configuration Usability and World IPv6 Day

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Agenda

- Status Quo
- What's up Next?
- Discussion
- World IPv6 Day
What it should look like

Level 3: OS Independent
Remote API
Matahari among others

Level 2: Shell/GUI
Slightly Abstracted
NetworkManager / netcf

Level 1: Shell / Advanced User
ncfg

Userspace
libnl
libsysfs

Kernel
Netlink
sysfs
Status libnl

- Libnl 3.0 released
  - Core API has not changed much since 2.0
  - Python interface (demo)
  - Asciidoc based Documentation (demo)
  - Unified TC interface
Status ncfg

• ncfg (demo)
  • Experimental
  • Based on libnl-python
  • Focus on usability
Whats up Next?

- Netlink Dump Filters
  - Limit what is included in a dump
  - Retrieve link statistics only
What's up Next?

- Automatic Dump Retry
  - Brought up by Johannes Berg
  - Signal to userspace if data changed underneath while dumping
  - libnl caches: start over
Discussion

• Netlink based ethtool interface integrated
  • IFLA_ETHTOOL
  • RFC: How to bundle multiple requests?
  • Problem: Driver API is ioctl based, can fail at any moment
  • => Commit/Rollback or extend all drivers?
World IPv6 Day

- Success but nobody cared too much except for Google
- No spectacular bugs
- Quite a few sites stay enabled after the day
World IPv6 Day
Linux Issues

• No way to allow DHCP client packets in ip6tables without opening holes yet
• Needs conntrack module like like netbios
World IPv6 Day
Linux Issues

- ping6 always uses the first address returned by getaddrinfo()
- ... even if it is an IPv4 address.
World IPv6 Day
Linux Issues

• Some distros ship useless gai.conf
Merci