



FRROUTING

FRRouting Overview and Current Status

Martin Winter
NetDEF / OpenSourceRouting

What is FRR ?

(for the not so technical People)



- ▶ **Open Source (GPLv2+) Routing Stack**
- ▶ **Implements RIP, RIPng, OSPF (v2&v3), ISIS, BGP, PIM, LDP, NHRP, Babel, EIGRP, ...**
- ▶ **Fork of Quagga**
- ▶ **Works on Linux and most BSD based systems**
- ▶ **For use in many Clouds as virtual routers, white box vendors and network providers (full routing stack)**

FRR - Who is behind the Fork?



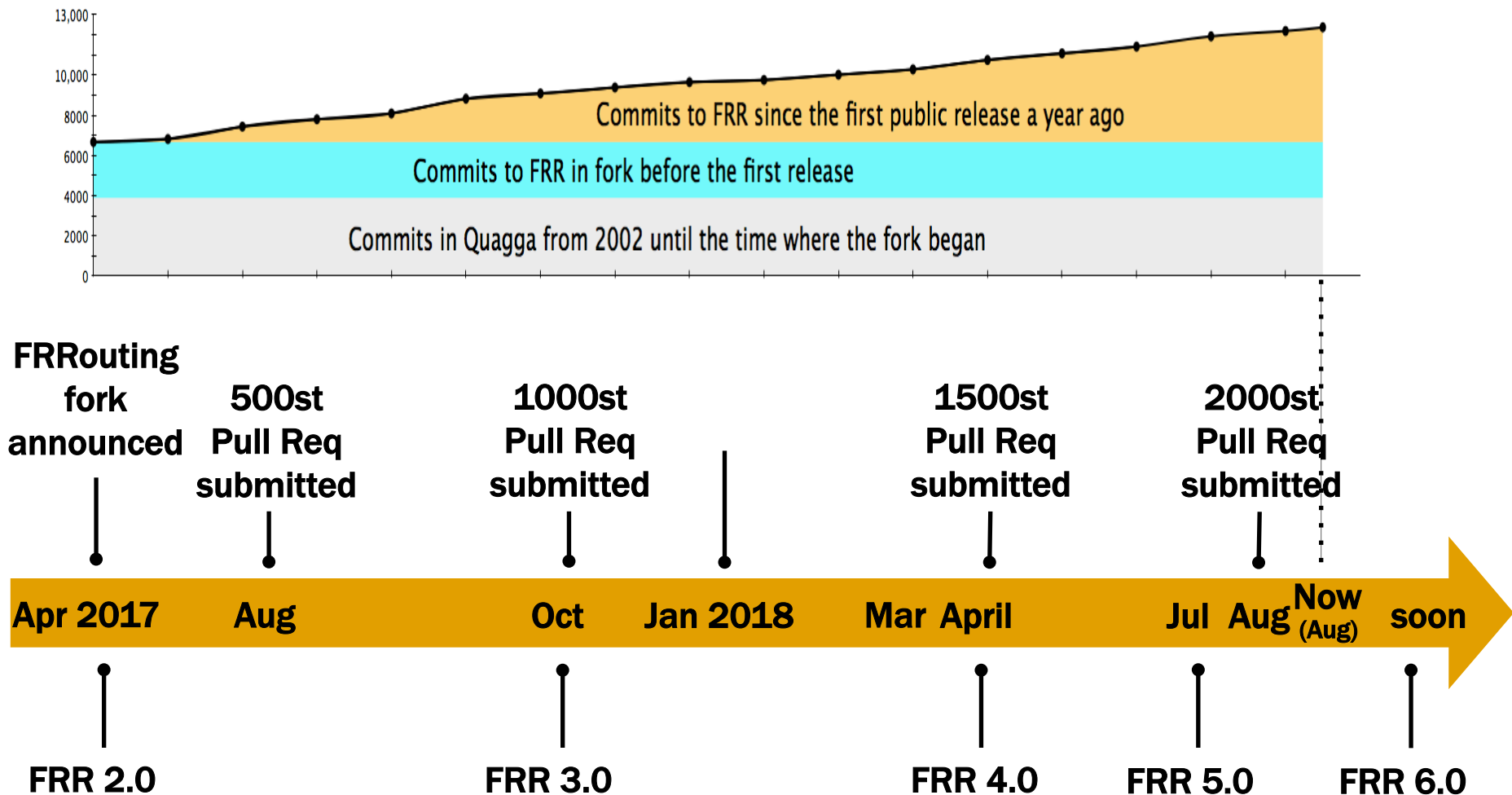
FRR - What's different?



- ▶ **Methodical vetting of submissions**
- ▶ **Extensive automated testing of contributions**
- ▶ **Git Pull Requests**
- ▶ **Github centered development**
- ▶ **Elected Maintainers & Steering Committee**
- ▶ **Common Assets held in trust by Linux Foundation**

What happened since the fork?

Code size doubled



FRR Major features added since Fork

▶ **2.0 (April 2017)**

- RFC 5549 Unnumbered Support (most protocols)
- LDP IPv4/IPv6
- VRF lite
- JSON output support

▶ **3.0 (Oct 2017)**

- BGP EVPN base
- PIM Sparse Mode
- NHRP

▶ **4.0 (March 2018)**

- BGP RPKI
- BGP EVPN Type 3 & 4
- BGP MPLS Ethernet VPN & Multicast
- BABEL
- EIGRP

FRR Major features added since Fork

▶ **[continue] 4.0 (March 2018)**

- Static VRF route leaking
- OSPFv2 Segment Routing

▶ **5.0 (July 2018)**

- PIM Multicast Trace [draft-ietf-idmr-traceroute-ipm]
- IS-IS 3-way Handshake [RFC5303]
- BGP VPN-VRF route leaking per [RFC4364]
- BGP VRF with NETNS backend
- New Policy Based Routing Daemon

▶ **6.0 (Upcoming – expected early Oct 2018)**

- BFD daemon
- Openfabric Support [draft-white-openfabric]
- Static Routes moved from zebra to it's own daemon
- IS-IS Src-Dest Routing [draft-ietf-isis-ipv6-dst-src-routing]

FRR – Packages



On <https://github.com/FRRouting/frr/releases>

- **Ubuntu 12.04 / 14.04** for 64bit Intel
- **Ubuntu 16.04** for 32/64bit Intel, ARM7, ARM8
- **Debian 8** for 64bit Intel
- **Debian 9** for 64bit Intel, ARM7, ARM8
- **CentOS 6 / 7** for 64bit Intel

FreeBSD

In the official ports

Alpine Linux, Gentoo Linux, OpenWRT

Build instructions available



The logo for FRRouting, featuring a stylized orange and brown circular design with a central dot and concentric arcs, resembling a signal or a stylized 'F' and 'R' combined.

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<https://frrouting.org>
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Mailing lists: lists.frrouting.org

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