FRRRouting Overview and Current Status

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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

Commits to FRR since the first public release a year ago
Commits to FRR in fork before the first release
Commits in Quagga from 2002 until the time where the fork began


FRR 2.0 FRR 3.0 FRR 4.0 FRR 5.0 FRR 6.0
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