# BIRD 2

## Overview and Future Outlook

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RIPE 86

# History

- BIRD 1        2000
- BIRD 1.0.12  2008
- BIRD 2        2017
- BIRD 1.6.8   2019
- BIRD 3        2023 ?

# BIRD 2 - Overt Changes

- BIRD with integrated IPv4/IPv6 support
- Multiple network types
- Multiprotocol BGP
- VPN NLRIs
- Flowspec NLRIs
- Extended next hops
- MPLS labels and switching rules

# BIRD 2 - Covert Changes

- Route table hash improvements
- Microsecond timers
- Bitmaps of exported routes
- Improved kernel interface

# Filter Improvements

- Redesigned interpreter code
- Faster (16-way) prefix sets
- Static type checking
- Local variables
- For loops and direct recursion
- Custom route attributes
- Improved error messages

# BGP

- Import / export tables
- BGP roles
- BGP accumulated IGP metric
- BGP extended next hop
- BGP confederations
- Dynamic BGP

# RPKI

- ROA records are just another net type
- RPKI-RTR protocol
- Automatic route revalidation

# OSPF

- OSPFv3 authentication
- Graceful restart
- Opaque LSAs

# Babel

- Multiprotocol Babel
- Authentication
- Extended next hop
- IPv6 source-specific routing

# BIRD 1 End of Life

- End of life at 2023-12-31
- Upgrade now to BIRD 2.13
- You can run split instances

https://gitlab.nic.cz/labs/bird/-/wikis/transition-notes-to-bird-2

# BIRD Outlook

- BGP Monitoring Protocol
- MPLS / L3VPN
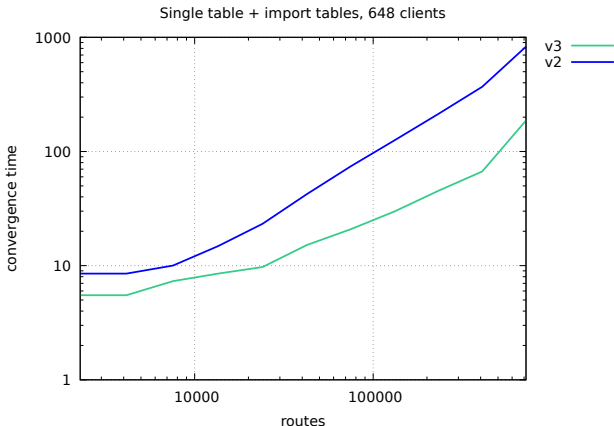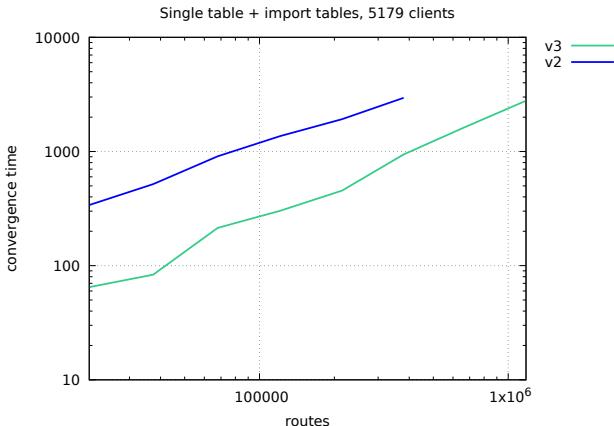- BGP ASPA
- SNMP support
- Conditional routes
- Route Merging

# BIRD 3

- Multithreaded BGP, RPKI, Pipe
- Asynchronous route exports
- Redesigned import / export tables

# RS Convergence Performance



Single table + import tables, 648 clients

# RS Convergence Performance



Single table + import tables, 5179 clients

# Support services

- Guaranteed response time
- Training services
- Product integration
- Contracted development

Questions?

https://labs.nic.cz/
https://bird.network.cz/