BIRD 3, quo volas?

Parallel execution is here.

Maria Matejka • **maria.matejka@nic.cz** • **CSNOG** • **Jun 21, 2022**

cz.nic | CZ DOMAIN REGISTRY

New filter engine (v2, since 2019)

- Thread-safe execution

- Faster also in single-thread

- Extensible and self-optimizing

- Community walking (branch `next` for 2.0.11)

- Simple recursion (branch `next` for 2.0.11)

Asynchronous route export (v3 only)

- Table updates stored in a journal

- Lockless table read (partially)

- Plans: asynchronous route import?

- Asynchronous CLI `show route` (in progress)

- Deadlock prevention
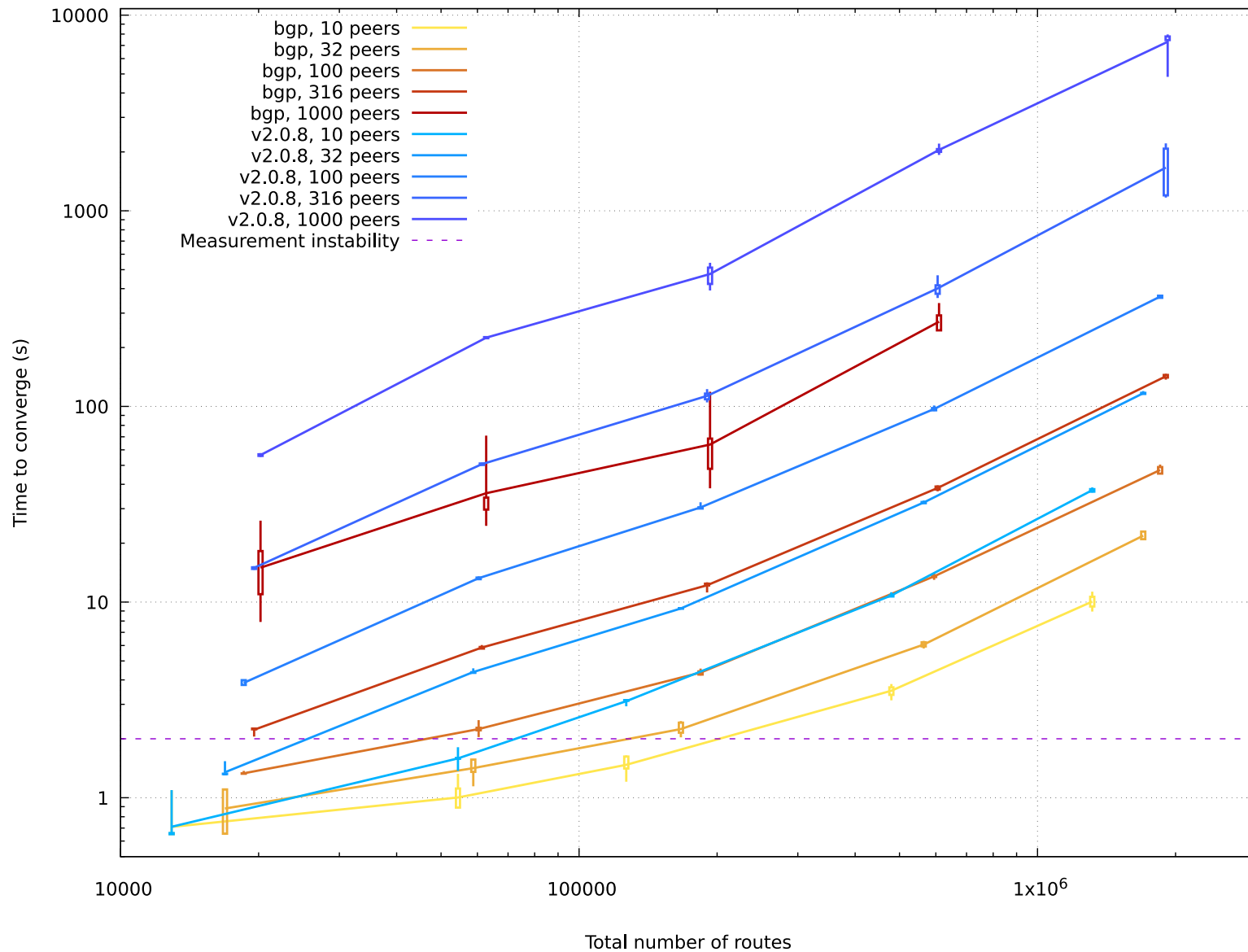
- Separate table cleanup thread
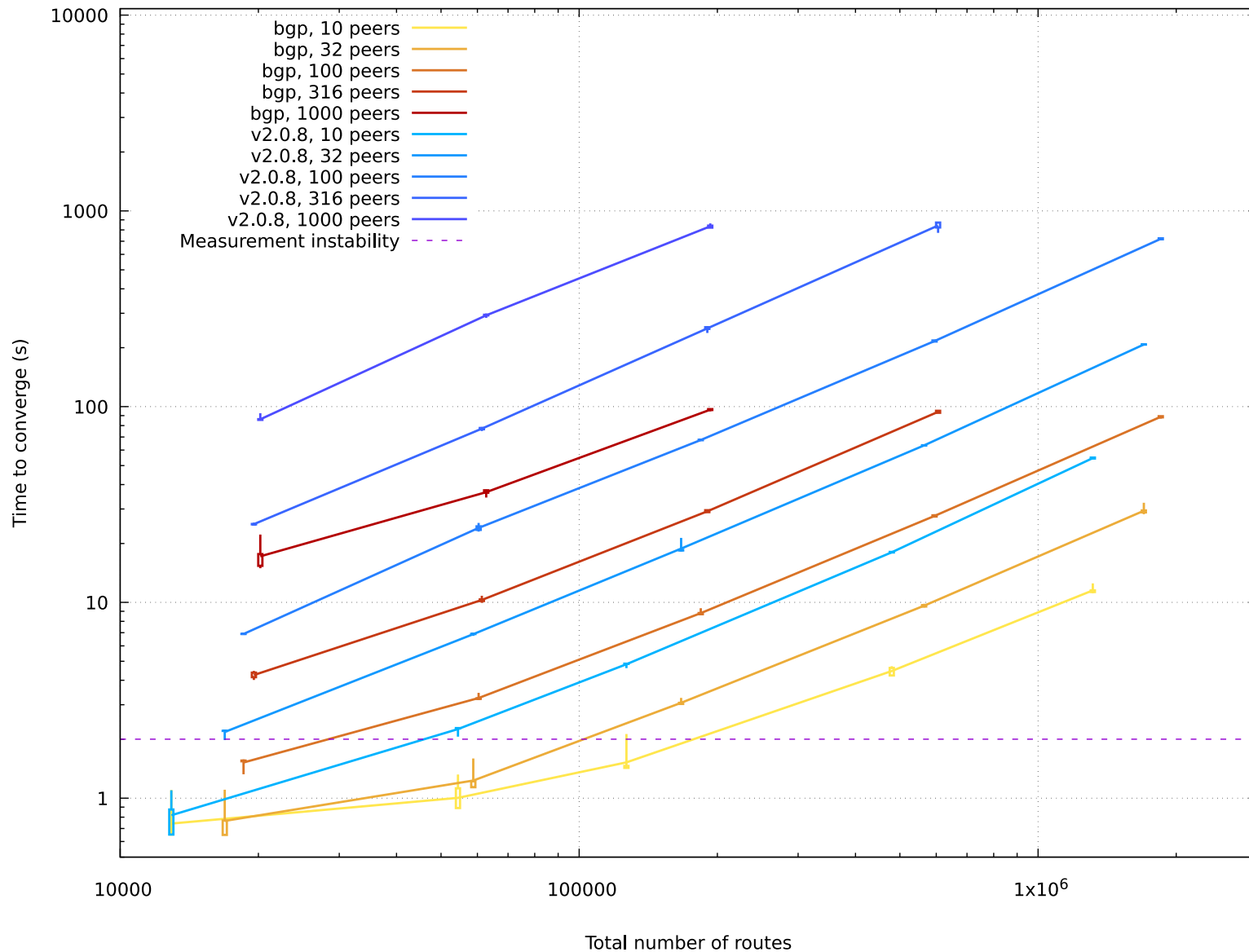
Protocol thread separation

- BFD (always had its thread)

- **BGP** (one thread per peer)

- **Pipe** (one thread per pipe)

- **RPKI**

- *Future: all protocols shall have their own thread*

Performance with a single table

Performance with 1 table per peer
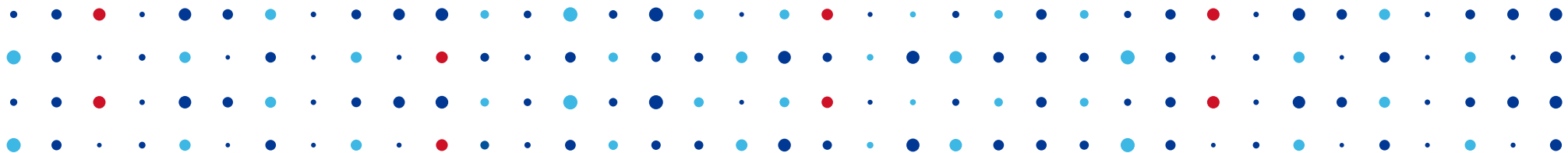
What is broken in 3.0-alpha0

- Calling ROA check from CLI

- Peak memory management

- Auxiliary Import / export table performance

- MRT dumps

- BMP, Flowspec validation (not present)

Upcoming features and changes

- JSON route export

- Unified route attribute names

- Non-blocking reconfiguration

- Non-blocking route synchronization (BSD)

Try BIRD 3 today!

Maria Matejka • **maria.matejka@nic.cz** • **CSNOG** • **Jun 21, 2022**