BIRD v2 update

New features, in-progress features, and one dirty trick

Maria Jan Matejka • jan.matejka@nic.cz • 23 May 2019
Custom route attributes

- New feature since v2.0.4
- attribute int is_blackhole;
  ...
  filter { ...
    if (myas, 666) ~ bgp_ext_community then
      is_blackhole = 1;
    else
      is_blackhole = 0;
  ...
}
- Types: int, IP addr, community list, BGP path
Filter benchmark tool: protocol perf

- Run random routes through the given filter
- Collect data from log

Perf v2.0.4-57-g96d757c1 perf_none
exp=16 times:
gen=4320081 temp=1939327
update=2936133 withdraw=1620441

- Date, time, version, protocol instance name, $2^{16} = 65536$ routes, 2.9 ms update time
Import table

- Store routes **before** import filter is run
- Filter reload without route refresh
- Eats some memory to store the routes
- Compatible with `import keep filtered;`
- Configure as `import table on; in channel config`
Route autoreload on RPKI change

- Is NOT MERGED YET
- Dirty workaround
  - Set debug \{ routes \}; in RPKI protocol config
  - Parse log by script and detect ROA changes
  - Invoke reload in in CLI for every affected protocol
- To be released in several months, hopefully
- Import table will be required to do autoreload
Faster filters

- Not finished yet
- New (and faster!) filter interpreter
- Thread safe execution
- Type check in configure time
- Better data model
You can upgrade now

BIRD 2 is the new BIRD

Maria Jan Matejka  •  jan.matejka@nic.cz