

# Rationale, Design, and Implementation of the Network Neutrality Bot

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# Network neutrality

Network neutrality is a cornerstone of the Internet.

# Problem

- ▶ How do we know whether ISPs respect network neutrality?
- ▶ Broadband contracts allow them to do almost as they please.
- ▶ Deep information asymmetry for users.

# Objective

Better understanding of the *actual* practices.

# Method

- ▶ Lightweight “bot” program for interested users.
- ▶ Distributed QoS measurements using various protocols.
- ▶ Bottom-up collection of the results.

# Development

- ▶ Written in Python.
- ▶ Open-source (GPLv3).
- ▶ Public Git repositories:
  - ▶ `http://github.com/neubot/neubot`
  - ▶ `http://github.com/bassosimone/neubot`

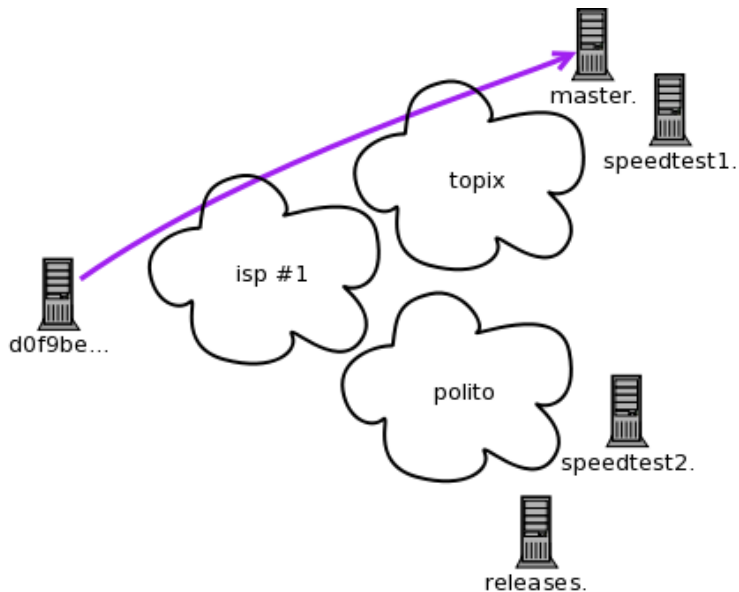
# Releases

- ▶ A patch release every 7-10 days (*release early, release often*).
- ▶ A minor release every 2-3 months.
- ▶ A major release “when needed” .
- ▶ The first public release (Neubot 0.3) to be available soon.
  - ▶ We're working at <http://www.neubot.org> and to write documentation.

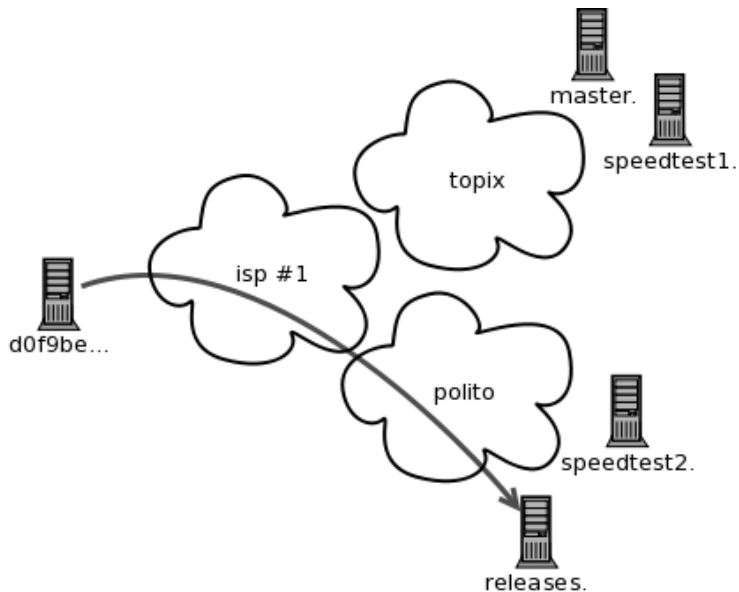
# A quick tour of Neubot 0.3



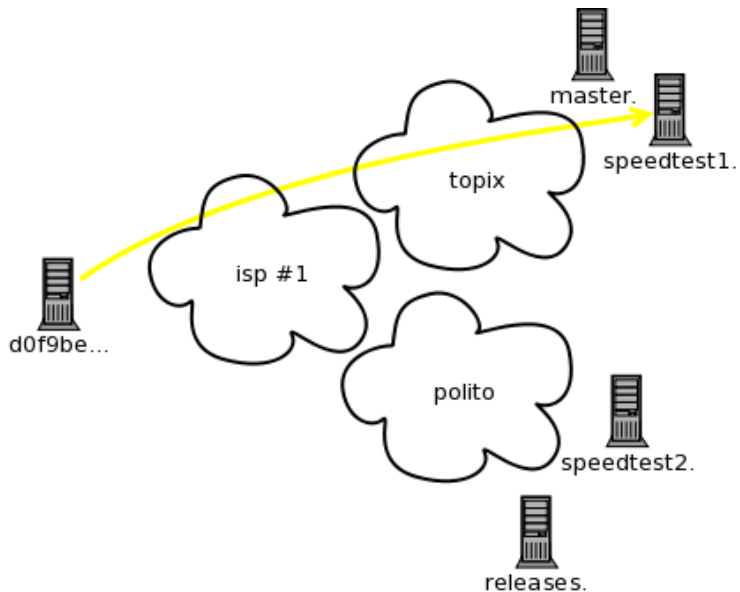
# Rendezvous



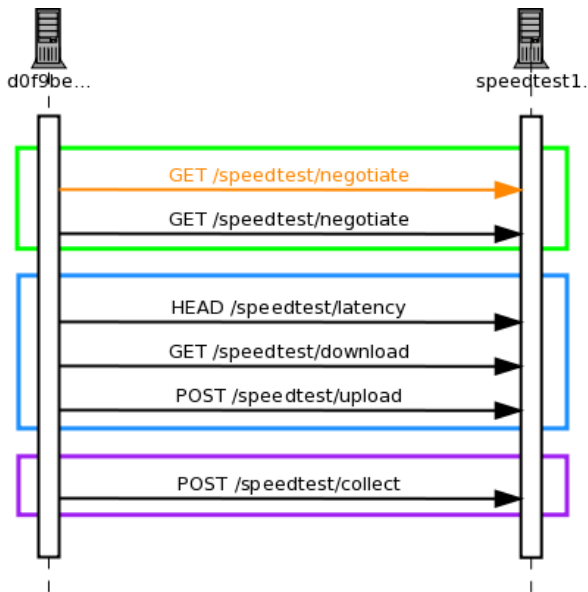
# Updates



# Speedtest

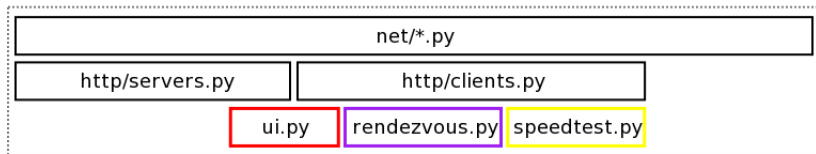
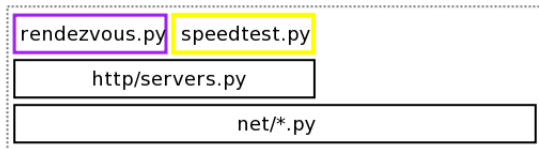


# Speedtest details



# Components

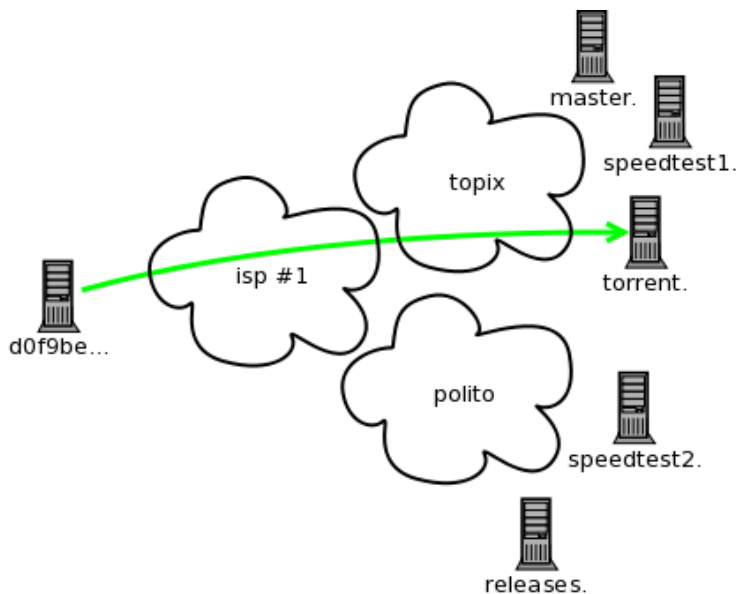
## Neubot server



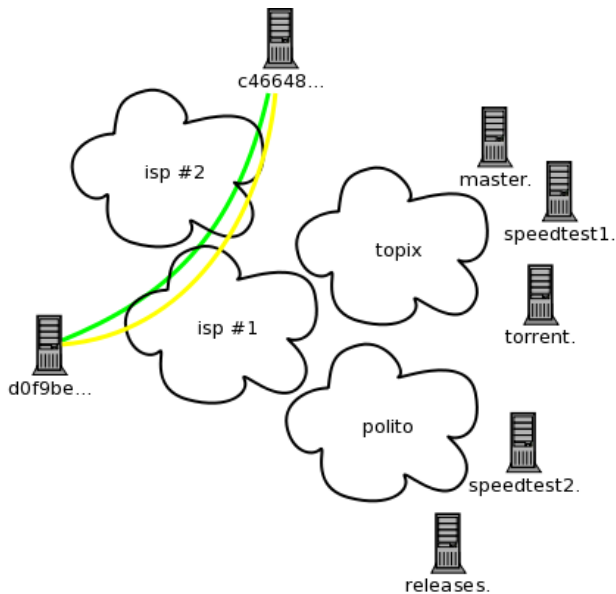
## Neubot agent

What's next?

# BitTorrent



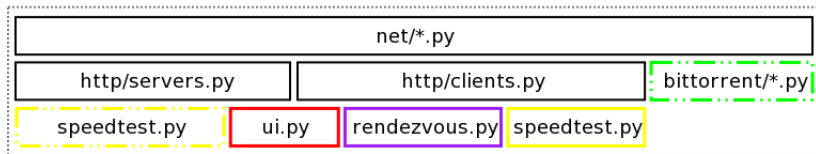
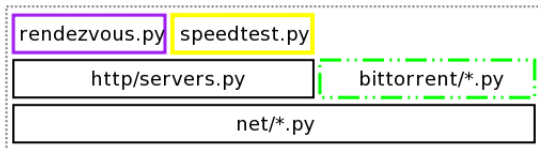
# Peer-to-peer





## Components (2)

Neubot server



Neubot agent

# Thank you

- ▶ Author

- ▶ `simone.basso@polito.it`

- ▶ Website

- ▶ `http://www.neubot.org`

- ▶ `http://nexa.polito.it/neubot`

- ▶ Git tree

- ▶ `http://github.com/neubot/neubot`

- ▶ `http://github.com/bassosimone/neubot`