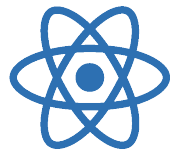


ENOG13 Saint Petersburg

Diego Luis Neto
SW developer @ NL-ix



BIRD route-server configuration?
Click, DONE!



Route-server limitations

No peers selection possibility

Not transparent

Manual and time consuming

No Latency control

Challenges

Maximum **flexibility** for **peers selection**

Automated

Easy setup and usage for peers

Secure

Fault tolerant and **feedback rich**

Easy to integrate

NL-ix route-server configurator

Full fine-grained control

(IP, location, latency)

Support for **filtering** and **prepending**

Completely automated


Sexy web interface

Modular design + API/WebHooks

100% Open-Source based

DEMO

NL-ix route-server configurator



port euNetworks Amsterdam A...

latency: 30ms

apply

NERDNET

sessions (368 of 368)blocked (347)

Select the members you wish to peer with, then click [Apply]

2005 LAN Services (AS: 41677)
IP: 193.239.116.133
DC: Digital Realty Wenkebachweg (Amsterdam)

Afilias (AS: 12041)
IP: 193.239.116.185
DC: GlobalSwitch Amsterdam (Amsterdam)

AFNIC (AS: 2484)
IP: 193.239.116.211
DC: Datacenter United Brussels DC (Brussels)

BelCloud Hosting Corporation (AS: 44901)
IP: 193.239.118.19
DC: Telepoint Sofia (Sofia)

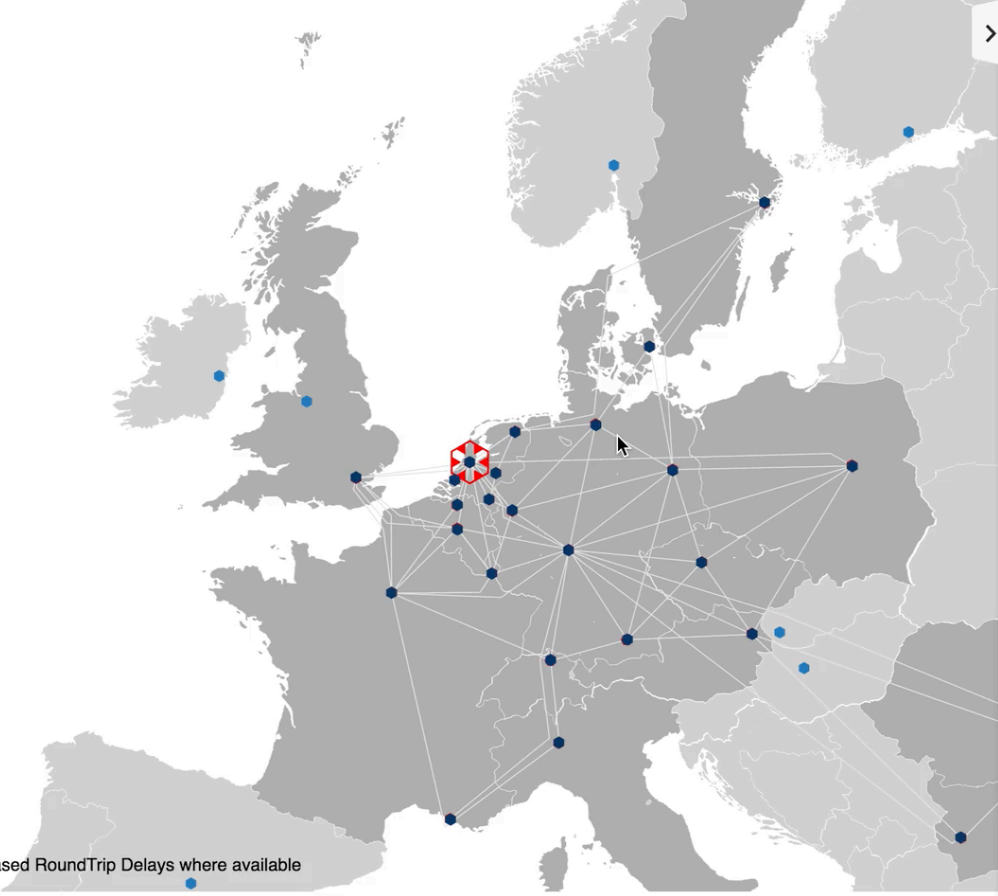
Connectivity Architects Limited t/a CMC (AS: 25818)
IP: 193.239.116.225
DC: interxion FRA4 (Frankfurt)

Connectivity Architects Limited t/a CMC (AS: 25818)
IP: 193.239.116.229
DC: Telehouse North (London)

Console Network Solutions (AS: 43531)
IP: 193.239.117.49
DC: Equinix AMS7 (Amsterdam)

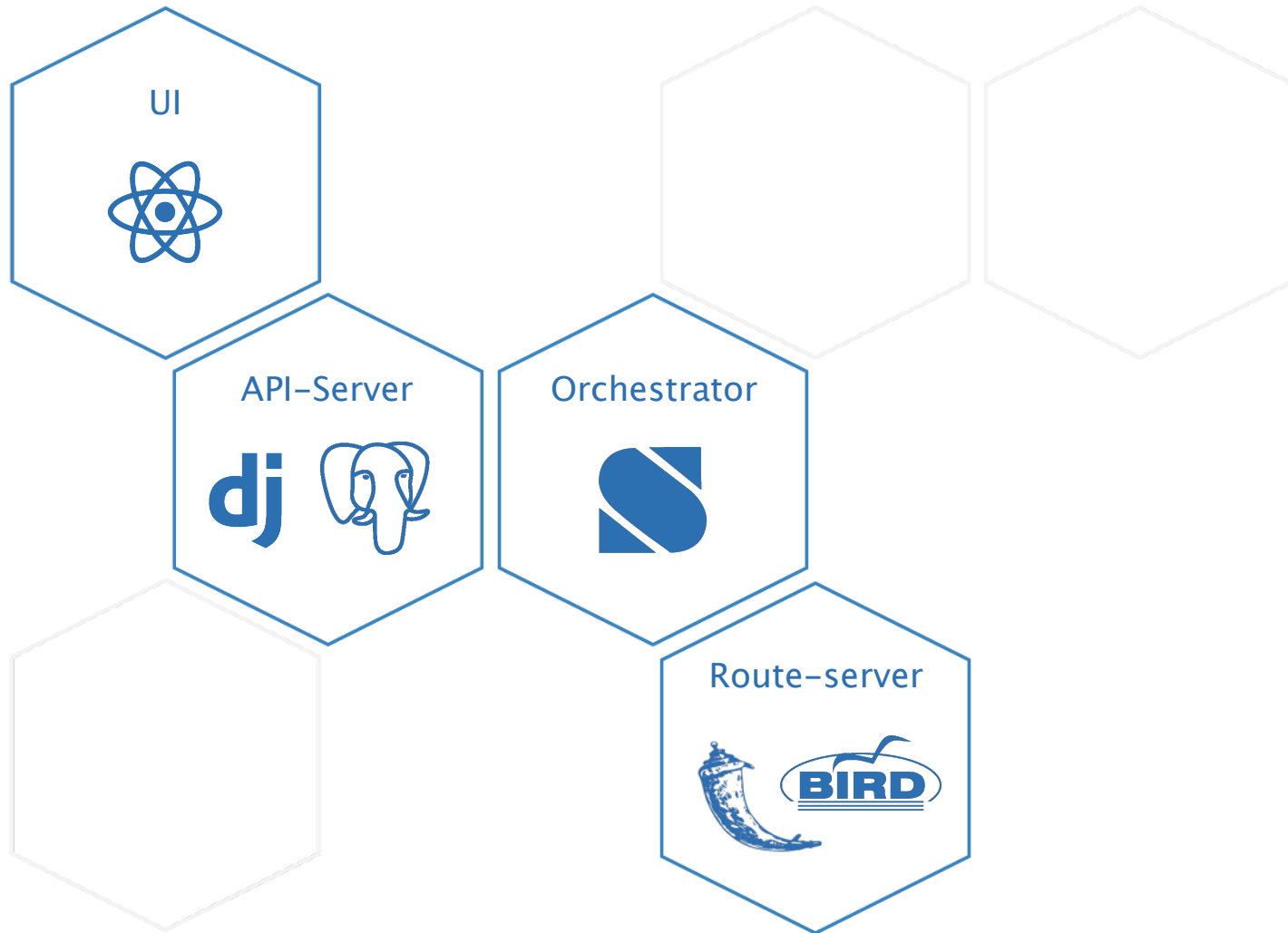
Decco (AS: 35782)

selection mode ☒ filter ☐ prepend



Measurement are ITU-T Y, 1731 ETH-DM based RoundTrip Delays where available

Architecture



Stackstorm?

Brocade product

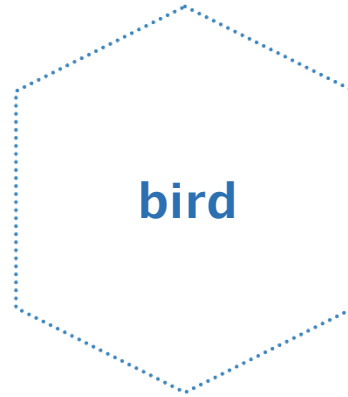
Runs on **Linux**, made with/for **Python**
coherent with NL-ix tech stack

Actions, rules, workflows, audit

Plugin structure

Wide selection of available packs
(<https://exchange.stackstorm.org/>)

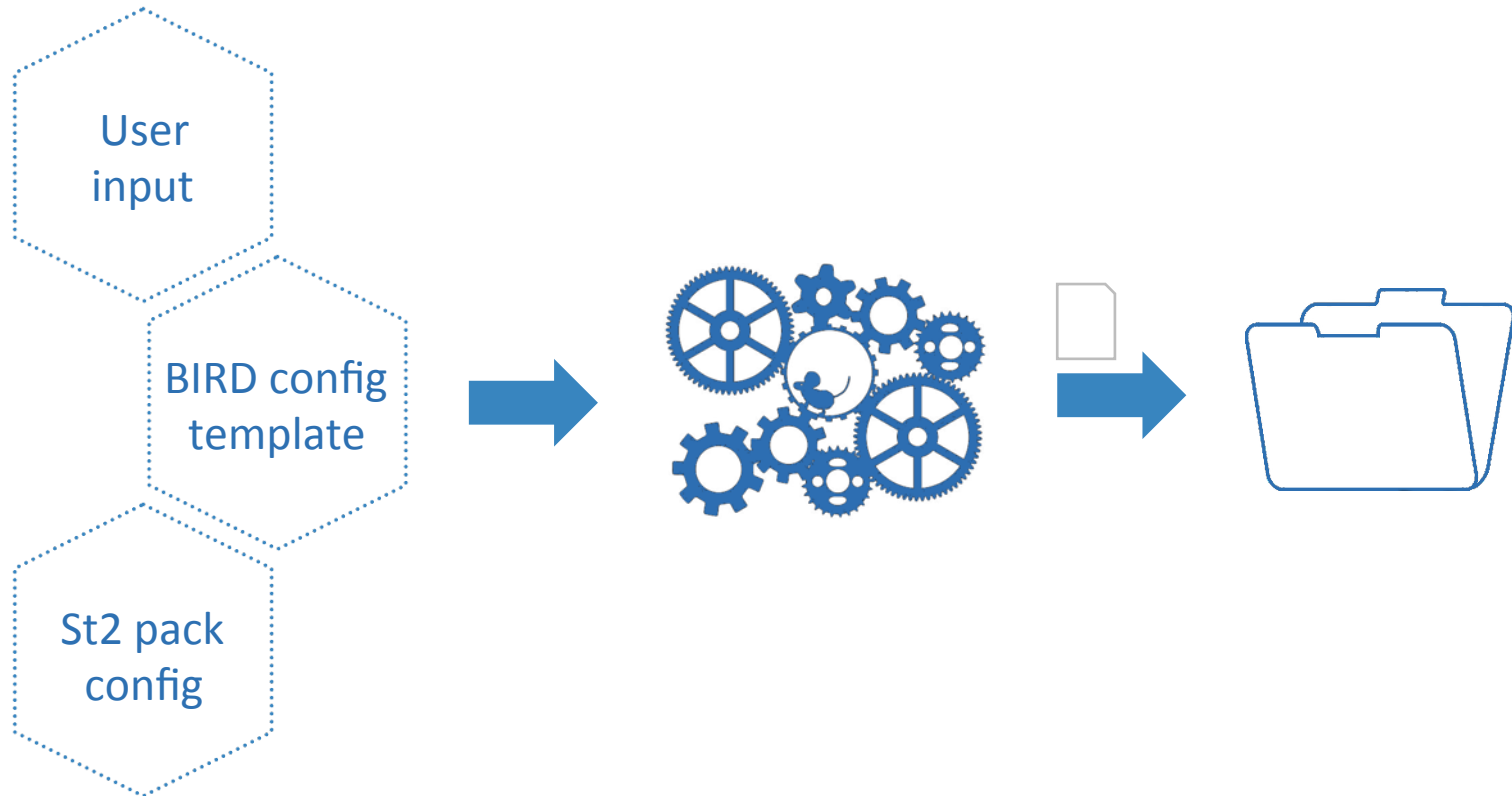
BIRD St2 pack



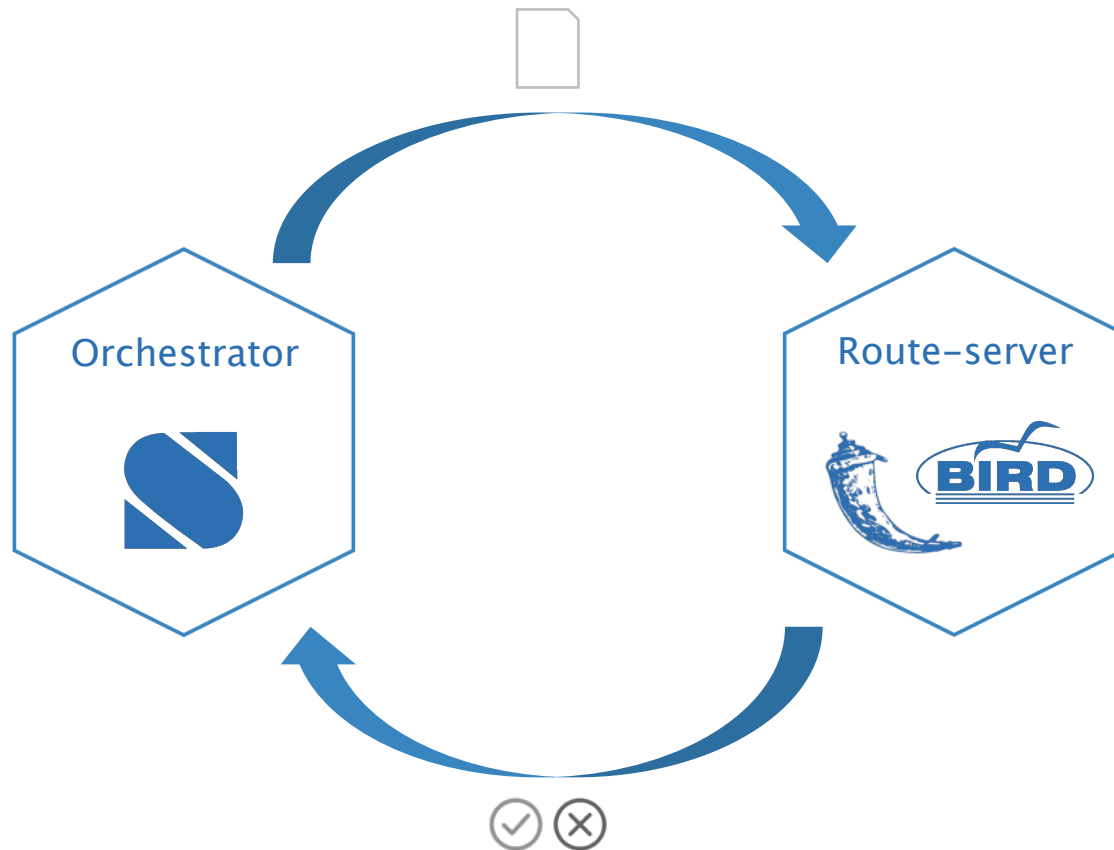
Generic St2 pack for BIRD configuration

BIRD config file generation and deployment

Generate config



Deploy config



bird-proxy ?



Flask (Python) application

BIRD control via HTTP(S)

Endpoint for BIRD config file deployment
(open for expansions)

Security

Django REST framework **authentication**

Application **RRBAC**

User **confirmation token**

St2 **API-key** authentication

BIRD-proxy **secret key**

BIRD-proxy endpoints **design**

NL-ix route configurator



Available for all NL-ix peering members



Open BIRD automation core

Info

- dlneto@nl-ix.net (tech)
 - nlix@nl-ix.net (general info)
-

Q&A