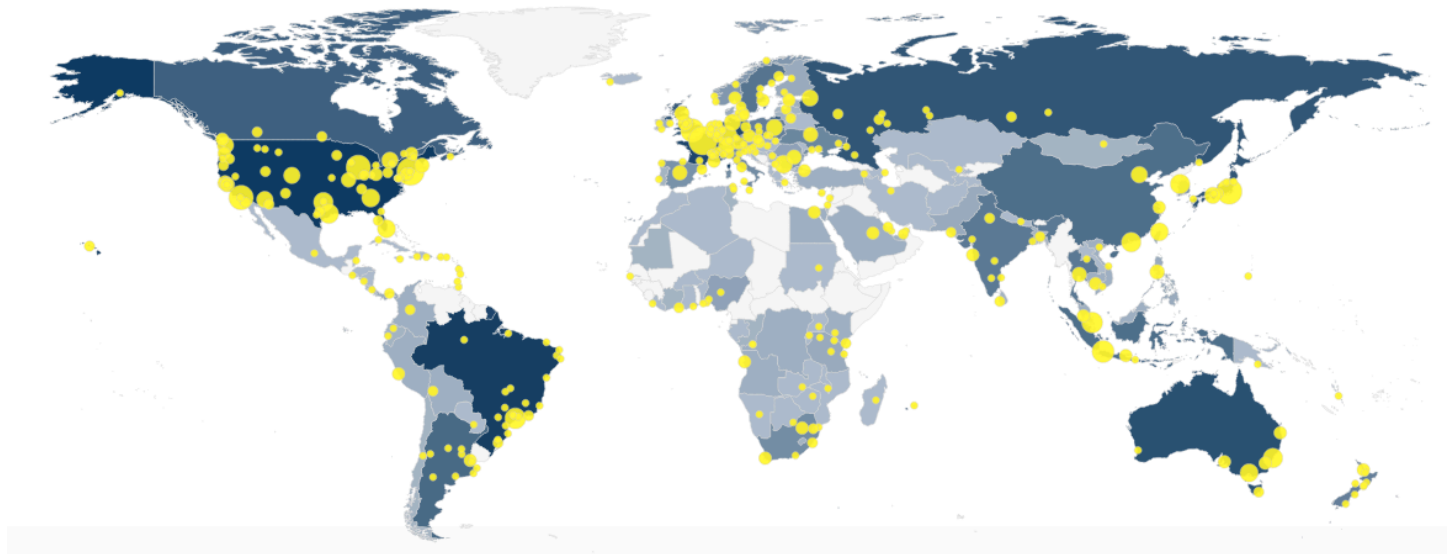


# Universal Looking Glass

<http://bit.do/universallg>

<http://tiny.cc/ulg-{frontend, backend}>



Joint work during the RIPE NCC IXP Tools Hackathon: Benedikt Rudolph, Mathias Handsche, Orlin Tenchev, Alexander Ilin and Mikhail Grishin

# Purpose

- Explore data from route collectors
  - Many collectors, worldwide
  - Support many collection projects
  - Support MRT format
- Analysis in familiar Looking Glass UI



Universal Looking Glass

Home

## Route Collectors

List

Map

Search:

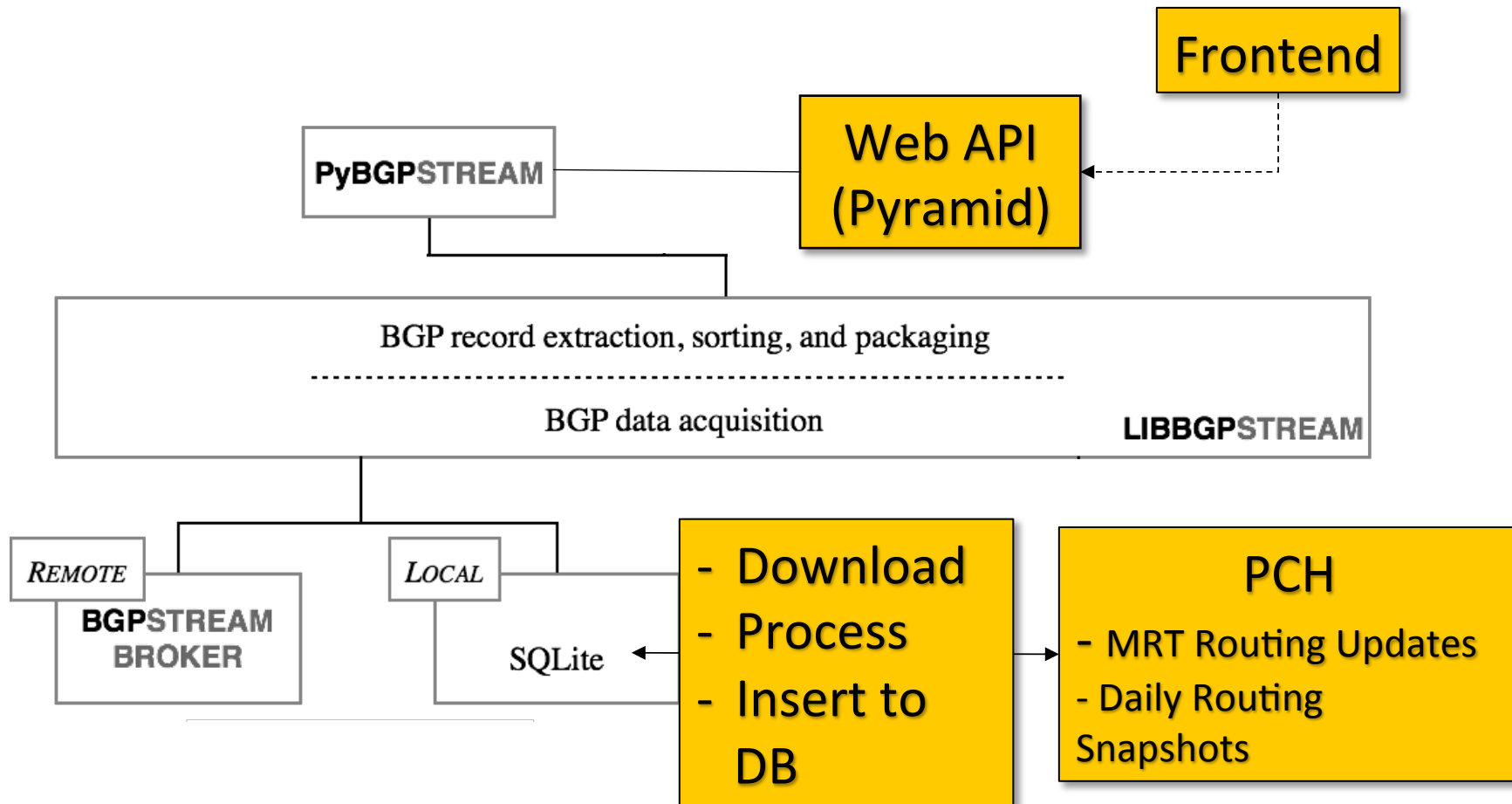
Collector	Exchange	City	Country	IX Website	PeeringDB
ams	AMS-IX	Amsterdam	NL	<a href="#">IX Website</a>	<a href="#">PeeringDB</a>

# Approach

- Collect MRT routing updates from PCH
  - For two days back
  - For two route collectors
- Indexed in a database (SQLite)
- Analysis based on BGPStream (CAIDA)
  - Also supports RIPE RIS, Open BMP, ...
- Provide JSON-API
- Provide web interface view of the API
  - Route collectors available
  - Neighbors per route collector + PeeringDB Link
  - Prefixes per neighbor



# Architecture: Backend



# UI: Route Collectors View



Universal Looking Glass







Home

## Route Collectors

List

Map

Search:

Collector 	Exchange 	City 	Country 	IX Website 	PeeringDB 
<a href="#">ams</a>	AMS-IX	Amsterdam	NL	<a href="#">↗</a>	<a href="#">↗</a>
<a href="#">amsix-ord</a>	AMS-IX Chicago	Chicago	US	<a href="#">↗</a>	<a href="#">↗</a>
<a href="#">amsix-sfo</a>	AMS-IX BA	San Francisco/San Jose	US	<a href="#">↗</a>	<a href="#">↗</a>
<a href="#">atl</a>	Digital Realty   Telx Atlanta	Atlanta	US	<a href="#">↗</a>	<a href="#">↗</a>
<a href="#">ber</a>	BCIX	Berlin	DE	<a href="#">↗</a>	<a href="#">↗</a>

# UI: Neighbours View



Universal Looking Glass





[Home](#)

[Peer](#)

## Neighbours seen by route-collector.ams.pch.net

Show  entries

Search:

Neighbor 	AS 	Holder 	Received Prefixes 
<a href="#">90.14.11.107</a>	56733	PROXIMIT-AS , FR	180
<a href="#">90.14.11.110</a>	11423	CALREN-2 - CENIC, US	254
<a href="#">90.14.11.111</a>	28571	UNIVERSIDADE DE SAO PAULO, BR	76
<a href="#">90.14.11.113</a>	13866	CCOUNTRY - Computer Country, US	397
<a href="#">90.14.11.114</a>	42081	SPEEDY-NET-AS SPEEDY-NET Autonomous System Number, BG	116
<a href="#">90.14.11.116</a>	10016	MINC Minaminihon Information Processing Center Co Ltd, JP	173
<a href="#">90.14.11.119</a>	6882	RTRT-PEGASO , IT	327
<a href="#">90.14.11.124</a>	25205	--MISSING--	205
<a href="#">90.14.11.127</a>	33617	-Reserved AS-, ZZ	301
<a href="#">90.14.11.128</a>	17946	GUCC Gifu University, JP	317

Showing 1 to 10 of 32 entries

[Previous](#) [1](#) [2](#) [3](#) [4](#) [Next](#)

# UI: Prefixes View



Universal Looking Glas

[Home](#)

[Peers](#)

[Prefix](#)

## Neighbours 90.14.11.110 and route-collector.ams.pch.net

Search:

Prefix	Next Hop	AS Path
100.160.179.0/19	90.14.11.110	11423
101.110.183.0/16	90.14.11.110	11423
101.58.212.0/24	90.14.11.110	11423
102.189.253.0/20	90.14.11.110	11423
102.192.10.0/16	90.14.11.110	11423

# UI: Map of Collectors



Universal Looking Glass

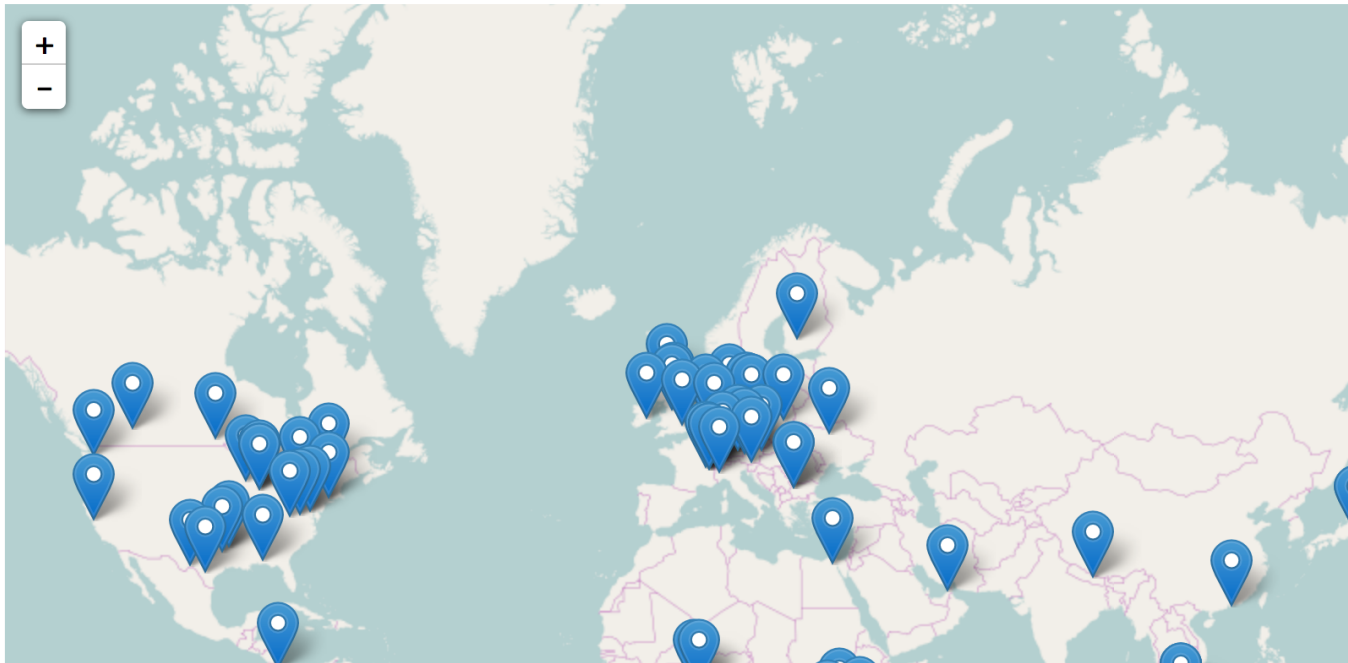
Home

## Route Collectors

List

Map

## Map of Route Collectors





# Future steps

- Regular updates from PCH to SQLite
- Download all PCH collector data
- Views to be added:
  - route collectors per ASN
  - route collectors per prefix