

Route-Views Update

NANOG 29
Chicago, IL

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<http://www.routeviews.org>
help@routeviews.org

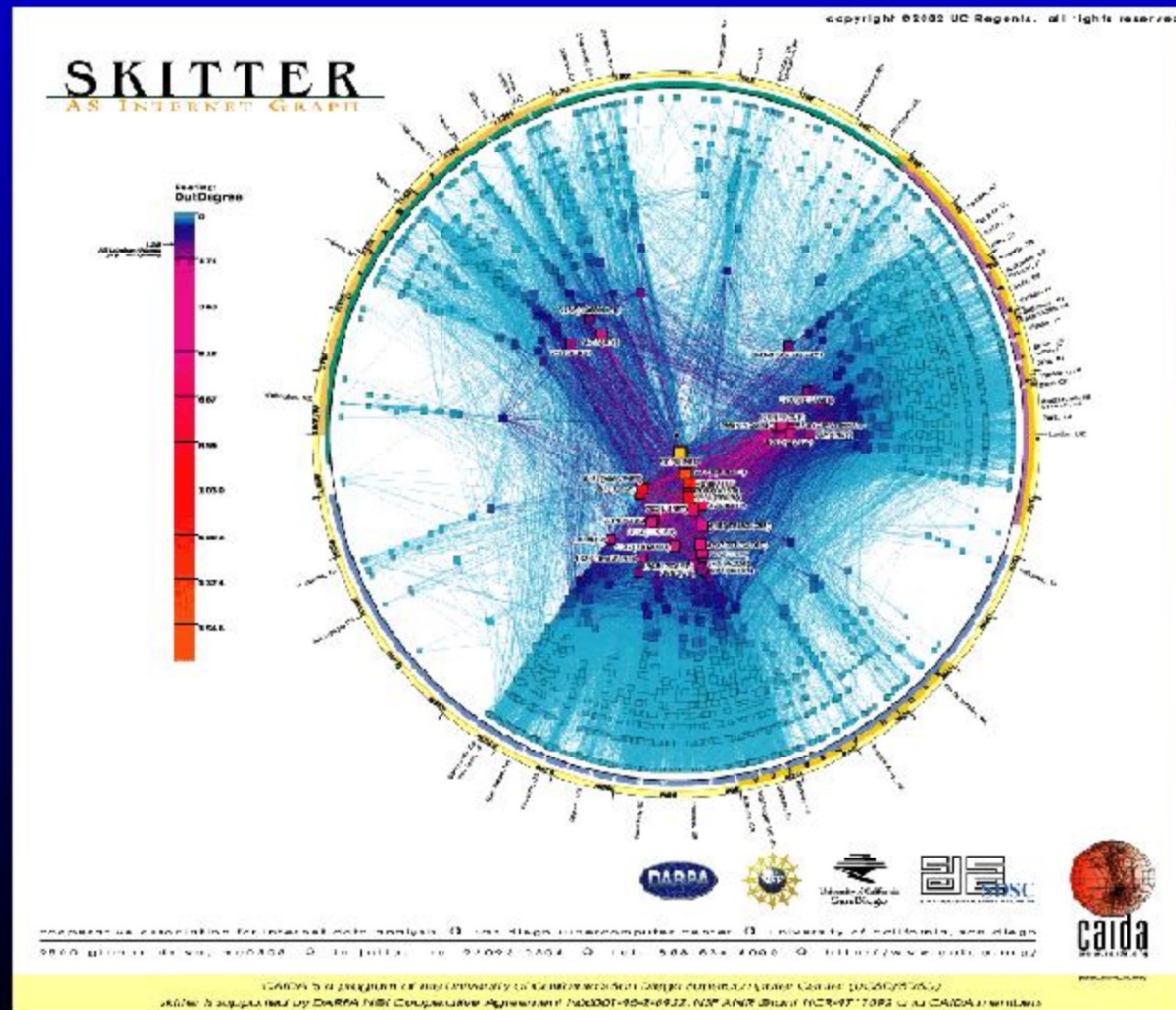
Agenda

- Project Overview and Purpose
- Current Status and What's New
- Issues/Problems
- Questions and/or Comments
- <http://www.routeviews.org/talks/NANOG29>

Project Overview (Circa 1995)

- route-views started life as a ...
 - purely operational tool
 - We needed a way to look how providers saw our routes
- Looking glasses were still in the future
- Randy Bush was kind enough to give us a view from MAE-WEST
- People started using route-views and contributing views
- But this caused things to really take off...

Skitter Core -- <http://www.caida.org>



Current Status

■ Realtime (CLI) access

- Useful in diagnosing operational problems
- Takes O(5K) connections/day

■ Data Collection

- Collect RIBs in 'show ip bgp' format
- Collect MRT format RIBs and updates
- Archival Internet Routing Data Repository
- Working on database front-end(s)

■ BGP Beacon (192.135.183/24)

■ Provide data to various research groups

■ <http://www.routeviews.org/papers>

Current Status -- Services

Host	MFG	BGP Proto	CLI	Location
route-views.routeviews.org (route-views.oregon-ix.net)	Cisco	IPv4 uni/multi-cast	telnet	U of Oregon, Eugene Oregon, USA
route-views2.routeviews.org (route-views2.oregon-ix.net)	Zebra	IPv4 uni/multi-cast	telnet	U of Oregon, Eugene Oregon, USA
route-views3.routeviews.org	Juniper	IPv4/v6 uni/multi-cast	telnet ssh	U of Oregon, Eugene Oregon, USA
route-views6.routeviews.org	Zebra	IPv6	telnet	U of Oregon, Eugene Oregon, USA
route-views.wide.routeviews.org	Zebra	IPv4 uni/multi-cast	telnet	NSPIX, Tokyo, Japan
archive.routeviews.org		BGP Beacon prefix 192.135.183.0	http ftp	U of Oregon, Eugene Oregon, USA
zebra.routeviews.org				U of Oregon, Eugene Oregon, USA

See <http://www.routeviews.org>

Current Status -- Mailing Lists

list	description
help	Questions and requests regarding Route-Views services. Closed to subscription.
outage	Notifications of outages affecting Route-Views equipment or services. Open subscription, closed posting.
rviews-announce	Announcements pertaining to Route-Views services. Open subscription, closed posting.

Again, see <http://www.routeviewws.org>

What's new...

■ New Collector Sites

- WIDE/NSPIXP (hosted by KDDI)
- PAIX (ISC)
- Again, thanks to WIDE and PAIX for hosting these
- We need US East Coast and European locations (Hosts welcome!)

■ Prefix to ASN and AS_PATH zones

- asn.routeviews.org and aspath.routeviews.org

■ Database front ends

- This is in primordial state
- Input on what would be useful would be greatly appreciated

Prefix to AS/AS_PATH zones

```
[dmm@wayback:~] 6% dig TXT 223.128.asn.routeviews.org
```

```
; <<>> DiG 9.2.1 <<>> TXT 223.128.asn.routeviews.org
```

```
:: global options: printcmd
```

```
:: Got answer:
```

```
:: ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 26027
```

```
:: flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 1, ADDITIONAL: 1
```

```
:: QUESTION SECTION:
```

```
;223.128.asn.routeviews.org. IN TXT
```

```
:: ANSWER SECTION:
```

```
223.128.asn.routeviews.org. 86400 IN TXT "3582" "128.223.0.0" "16"
```

```
:: AUTHORITY SECTION:
```

```
asn.routeviews.org. 86400 IN NS routeviews.org.
```

```
:: ADDITIONAL SECTION:
```

```
routeviews.org. 86400 IN A 128.223.162.49
```

```
...
```

Issues/Problems

■ Zebra and MRT data integrity

- Code-base split into Zebra/Quagga
- Is MRT's 1 second granularity sufficient?

■ eBGP Multi-hop & external events

- Some routers don't do ebgp-multihop well
- multi-hop also makes it difficult to study events in the multi-hop path
- So we're trying to reduce ebgp-multihop scenarios

■ And of course, the perennial

- Archival data storage
- Data base front end(s)

Aside: Coordination of Routing Data Sources

■ RIPE RIS (www.ripe.net/ris)

- MRT format RIB and UPDATES
- some quagga these days (RRC05 at least)

■ route-views (www.routeviews.org)

- 'sh ip bgp' format at 2 hour intervals
- (older hwb archive on moat.nlanr.net)
- MTR RIB archiving (every 2 hours)
- MTR UPDATES archiving (every 15 minutes)

■ PCH (www.pch.net)

■ Numerous Looking Glasses

- good list at <http://neptune.dti.ad.jp>

Coordination of Routing Data Sources, cont

- Private Listeners/Archives
- So there is a lot of BGP data around these days
- But...
 - What is the quality of this data?
 - Note recent Agilent work on this topic
- And who is coordinating archival storage
 - Would "one-stop shopping" be useful?

Questions and/or Comments?

Thanks

[The Route-views crew]

And again, many thanks to Cisco Systems, Juniper Networks, Sprint Advanced Technology Labs, and the National Science Foundation for their support. We also thank the ISC and WIDE projects for the co-location and transit they graciously provide to us.