ULG

Universal Looking Glass

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14. 05. 2013

What is Looking Glass?

Software (web app) for:

- Analysis of BGP announcement visibility from remote perspective
- Insight into BGP table in remote network
- Troubleshooting utilities (ping, traceroute)

Looking Glass concept

Known problems:

- Security threats. Suspicion towards clients
- Support for multiple vendors / BGP implementations
- Visual variability, templates
- Screen scraping reliability
- Configuration complexity

ULG approach

- Security: Parameter checking, verbose logging, rate-limiting
- Support for multiple vendors: BIRD, Cisco IOS, JunOS so far. (IOS XR WIP.)
- Templates: Python Genshi engine
- Screen scraping: Pexpect library + testing
- Configuration: Auto-sensing when possible

ULG features

- OSS (GNU GPLv3)
- Simple CGI, “low-profile”, few dependencies
- BGP table visualization (using Graphviz)
- Output decoration using HTML tables
- Whois client and bindings for RIPE DB

BGP table visualization

Select router to perform operation on, then select a command to perform and add (optional) argument if needed.

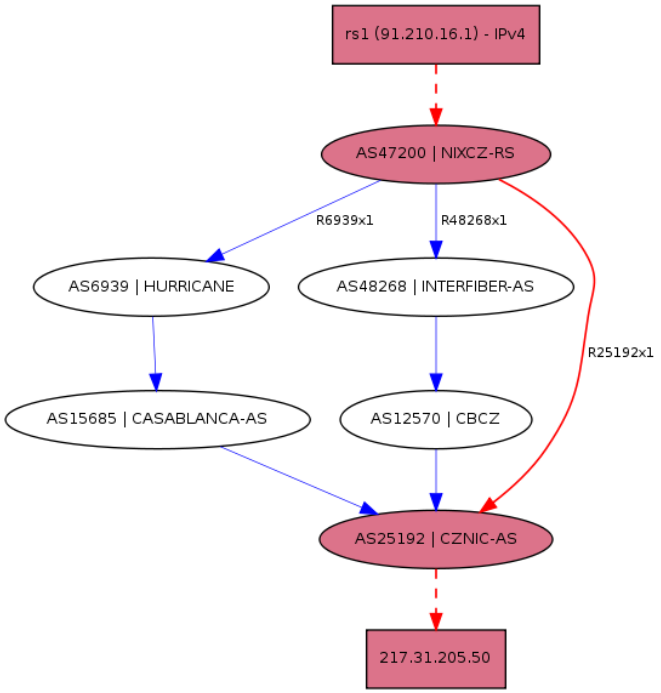
1. Router selection: rs1 (91.210.16.1) - IPv4 ▾

2. Command selection: Graph show route table <RT> for <IP subnet> ▾

3. Routing Table: T8928 ▾

4. IP subnet: 217.31.205.50

Submit



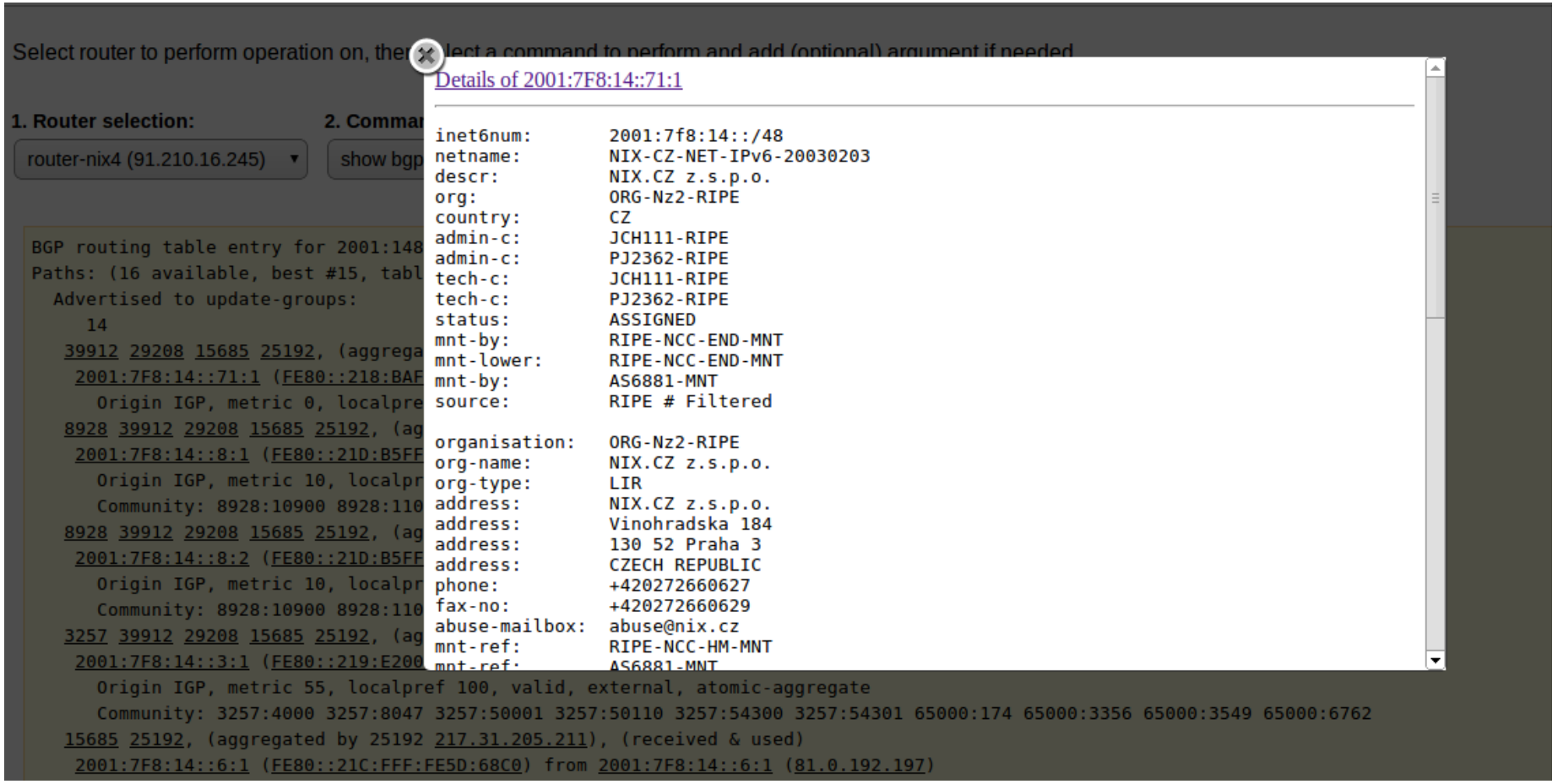
Decorated BGP table

Select router to perform operation on, then select a command to perform and add (optional) argument if needed.

1. Router selection: rs2 (2001:7F8:14::12) - IPv6 ▾ **2. Command selection:** show route table <Routing Table> protocol <Peer ID> ▾ **3. Routing Table:** master ▾ **4. Peer ID:** R25192x1 ▾ Submit

Prefix	Next-hop	Interface	Since	Status	Metric	Info
2001::/32	2001:7f8:14::e:2	eth1	[R25192x1 Dec19]		(100)	[AS25192i]
2002::/16	2001:7f8:14::e:2	eth1	[R25192x1 Dec19]		(100)	[AS25192i]
2001:678:1::/48	2001:7f8:14::e:2	eth1	[R25192x1 Sep06]	*	(100)	[AS25192i]
2001:678:f::/48	2001:7f8:14::e:2	eth1	[R25192x1 Sep06]	*	(100)	[AS25192i]
2001:1488::/32	2001:7f8:14::e:2	eth1	[R25192x1 Sep06]	*	(100)	[AS25192i]
2001:1398:274::/48	2001:7f8:14::e:2	eth1	[R25192x1 Dec28]	*	(100)	[AS52234i]

Whois client



Download and deployments

Deployments

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Downloads

- Github: https://github.com/tmshlvck/ulg
- Releases: https://labs.nic.cz/page/1304/ulg---universal-looking-glass/

Thank You

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