



NLNOG:  
What is a NOG and how can it help you?

# Introduction

- Teun Vink
- Networking Lead @ BIT (AS12859)
- NLNOG board member
  
- what is a NOG?
- How do NOG's help the internet (and you)?
- NLNOG: Tools & Projects

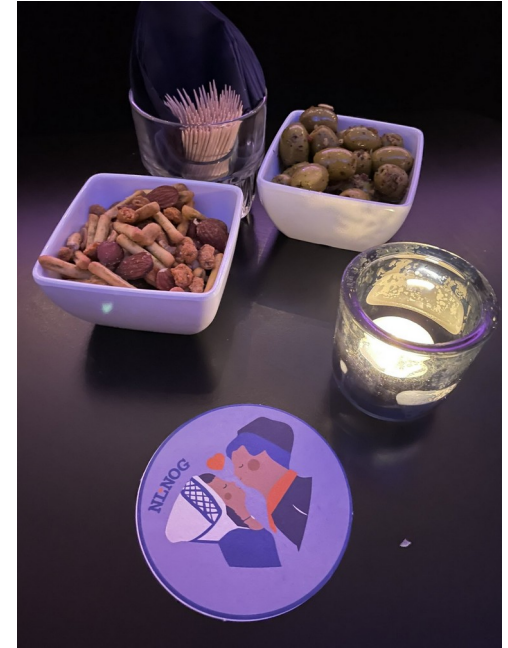
# What is a NOG?

## Network Operators Group

- Collaboration between network engineers
- Aimed at a specific country or region
- Informal setting
- There are many NOG's around the world

# NLNOG

- Started more than 20 years ago
- 6 board members, many volunteers
- Active on many platforms
- New Years Drink, Summer Event, NLNOG Day
- Many sponsors make all events free of charge
- Many Tools & Projects



# Why participate?

- Get to know new people
- Build your professional network
- Learn new things
- Participate in cool projects
- Present your own projects
- Find your next job!



# NLNOG Tools & Projects

NLNOG runs many projects for the good of the internet:

- NLNOG RING - <https://ring.nlnog.net>
- IRR Explorer - <https://irrexplorer.nlnog.net>
- BGP Filter Guide - <https://bgpfilterguide.nlnog.net>
- NLNOG Looking Glass - <https://lg.ring.nlnog.net>

# NLNOG RING

Concept:

provide a shell server in your network, get access to shell servers all over the world.

And some cool tooling to use them as well!

Nodes: 633  
ASNs: 512  
countries: 57

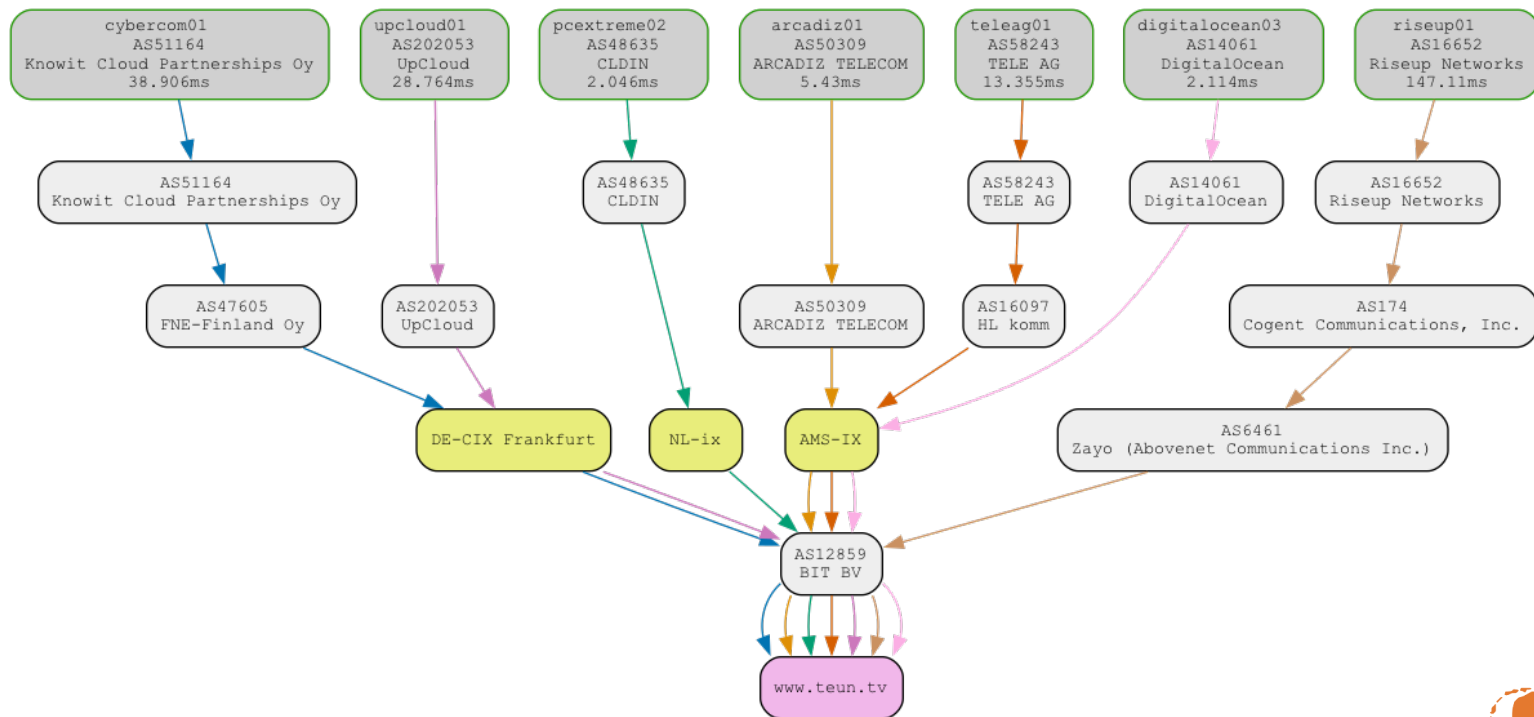


# NLNOG RING: ring-ping

Ping a destination from a random selection of RING nodes.

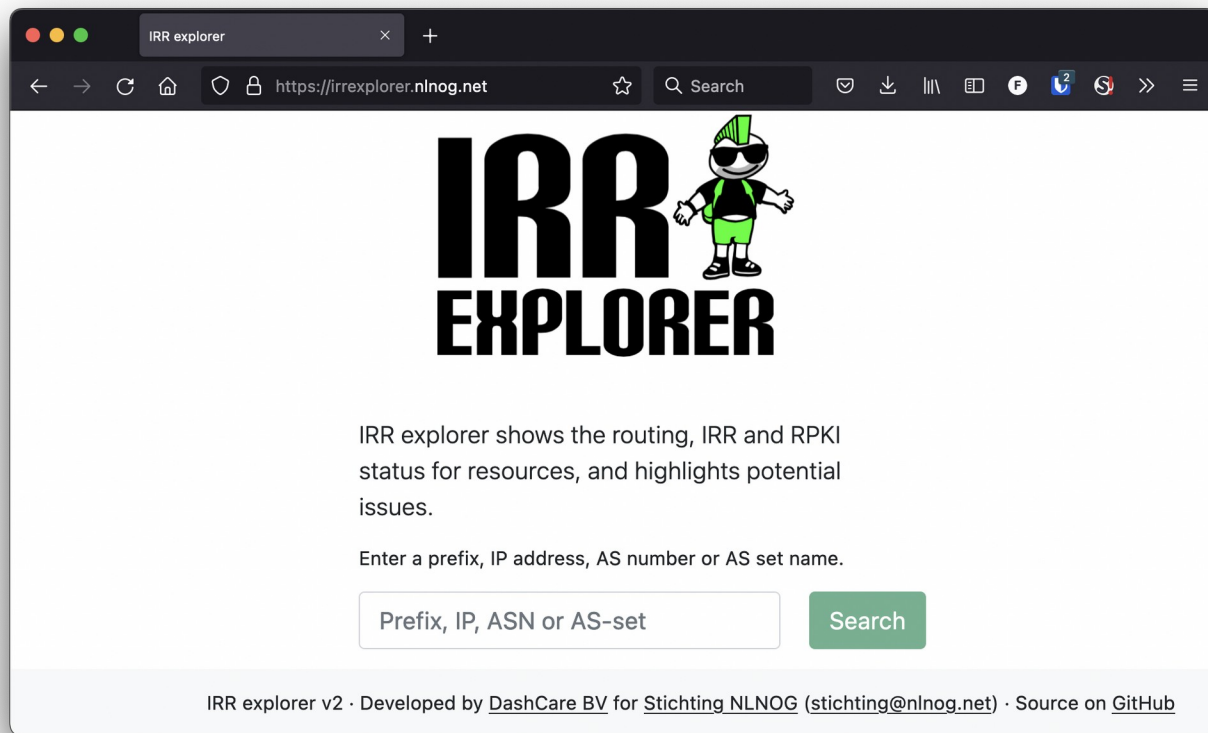
```
teun@bit01: ~  
teun@bit01: ~ — teun@ishamael.local  
teun@bit01:~$ ring-ping -vi -n 5 www.nlnog.net  
strato01:          15.745      [ Germany - AS6724 (ripenc, STRATO STRATO AG, DE) ]  
a2binternet02:     0.692      [ Netherlands - AS51088 (ripenc, A2B, NL) ]  
hostwayde01:       13.905     [ Germany - AS24679 (ripenc, SSERV-AS, DE) ]  
digitalocean08:    144.858    [ California, United States - AS14061 (arin, DIGITALOCEAN-ASN, US) ]  
nicchile01:        210.283    [ Chile - AS27678 (lacnic, NIC Chile, CL) ]  
5 servers: 77.10ms average 15.74ms median  
teun@bit01:~$
```

# NLNOG Ring: ring-trace



ring-trace to [www.teun.tv](http://www.teun.tv) @ 2023-05-06 21:25:14

# IRR explorer



<https://irrexplorer.nlnog.net>

# IRR explorer: Goal

For a prefix (or list of prefixes) present an overview of all IRR database registrations, RPKI ROAs and routing table entries, and suggest improvements and point out conflicts.

Results:

- 1) better reachability of prefixes
- 2) cleaner IRR databases

# IRR Explorer: example output

IRR explorer: 1.1.1.1

https://irrexplorer.nlnog.net/prefix/1.1.1.1

## Directly overlapping prefixes of 1.1.1.1

Prefix ▾	RIR ▾	BGP ▾	RPKI ▾	APNIC ▾	Advice ▾
<a href="#">1.1.1.0/24</a>	APNIC	<a href="#">13335</a>	13335 ▶/24	<a href="#">13335</a> ✓	✓ Everything looks good

[Source data as JSON](#)

## All overlaps of least specific match 1.1.1.0/24

Prefix ▾	RIR ▾	BGP ▾	RPKI ▾	APNIC ▾	RADB ▾	Advice ▾
<a href="#">1.1.1.0/24</a>	APNIC	<a href="#">13335</a>	13335 ▶/24	<a href="#">13335</a> ✓		✓ Everything looks good
<a href="#">1.1.1.3/32</a>	APNIC				<a href="#">2764</a> ✗	✗ RPKI-invalid route objects found ⓘ Expected route object in APNIC, but only found in other IRRs ❓ Route objects exist, but prefix not seen in DFZ
<a href="#">1.1.1.15/32</a>	APNIC				<a href="#">9942</a> ✗	✗ RPKI-invalid route objects found ⓘ Expected route object in APNIC, but only found in other IRRs ❓ Route objects exist, but prefix not seen in DFZ

[Source data as JSON](#)

# IRR Explorer: Use cases

- Improving routability of prefixes
- Doing housekeeping on IRR database entries
- Analysing routing problems
- Preparing prefix transfers between networks
- Monitoring your prefixes

# BGP Filter Guide


- Provides guidance on how to build your BGP import filters for routers
- Written and improved by many people in the industry!
- Configuration examples for many router OS'es
- Don't reinvent the wheel!
- <https://bgpfilterguide.nlnog.net>

# NLNOG Looking Glass

NLNOG Looking Glass

lg.ring.nlnog.net

NLNOG Looking Glass



## NLNOG Looking Glass

Please enter an IP address, prefix or hostname to look up in our routing tables.

Search  Exact match on All peers (258) Show routes

IPv4: 130 peers up, 10 down, 133,829,310 prefixes received  
IPv6: 133 peers up, 12 down, 29,899,817 prefixes received

The NLNOG Looking Glass is provided by [NLNOG](#). Hosting is sponsored by [BIT](#). Questions? Please contact us at [ring-admins@nlnog.net](mailto:ring-admins@nlnog.net).



# NLNOG Looking Glass

Prefix: 213.136.0.0/19 1



IRR Explorer

WHOIS

AS-Path 57866 12859 via next-hop 37.139.139.0

Validation state valid

Origin IGP

MED 0

Last update 2022-09-26 18:38:47 UTC (1d02h09m ago)

Communities

12859:3000 (originated by BIT)

12859:3666 (originated by BIT)

57866:200 (Public peer route)

65102:56393 (Route learned from Frys-I...)

65103:1 (Route learned in Nikhef)

65104:31 (Route learned in The Neth...)

Extended communities

ovs valid

Large communities

57866:101:200 (Public peer route)

57866:102:56393 (Route learned from Frys-I...)

57866:103:1 (Route learned in Nikhef)

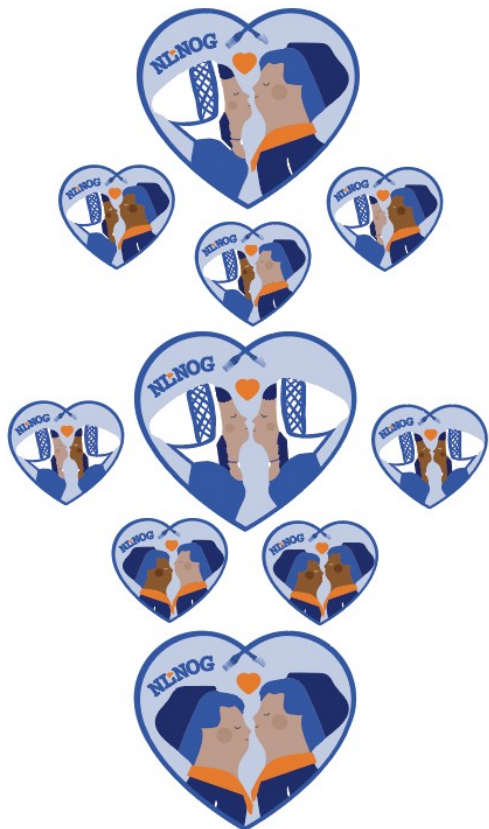
57866:104:31 (Route learned in The Neth...)

# NLNOG Community

Questions:

[stichting@nlnog.net](mailto:stichting@nlnog.net)

<https://www.nlnog.net>



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