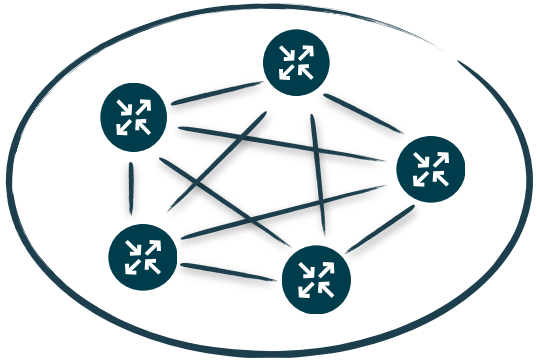
DE-CIX Looking Glas Update

26.10.2018 - ESNOG Gore22 - Valéncia

Daniel Spierling

IXPs, interconnecting peering routers

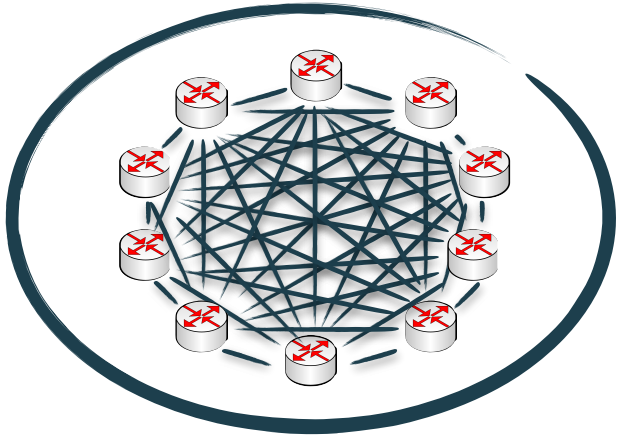
- BGP requires point to point / direct sessions in order to exchange information between two routers..
  - therefore setting up peering (BGP) sessions is a very manual process
    - won't be an issue at small IXPs with e.g 5 peers



https://goo.gl/images/dDYd3K

IXPs, interconnecting peering routers

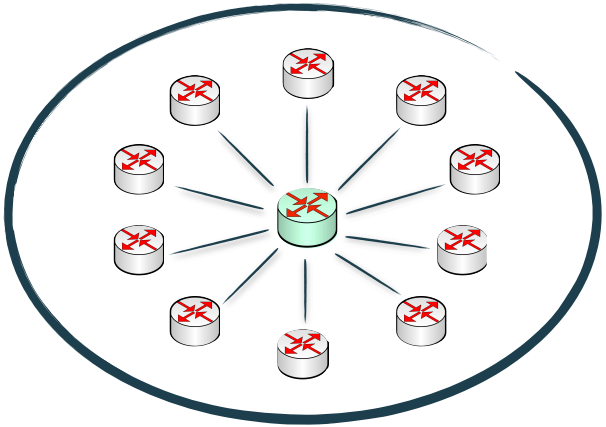
- the bigger an IXP gets, the more possible peers are available to exchange BGP information with..
  - Full mesh of BGP sessions, does not scale!



https://goo.gl/images/dDYd3K

IXPs, interconnecting peering routers

➔Introducing Routeservers into an IXP infrastructure, simplifies the exchange of BGP information between connected peers

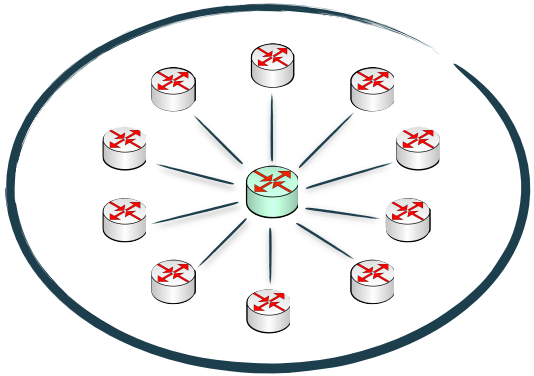


https://goo.gl/images/dDYd3K

Why using the route servers?

- ➔ to simplify the setup of peering / BGP sessions for as many peers as possible at a certain IXP
- ➔ with the large amount of connected networks at an IXP, managing all corresponding BGP sessions can be a full time job..
  - ➔ Changes will be required for every peer joining or leaving the IXP
- ➔ with only 2x BGP route server sessions new peers will get (inter-)connected with almost all other peers at the IXP

https://goo.gl/images/dDYd3K

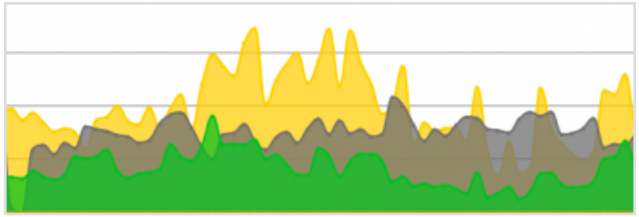


DE CIX

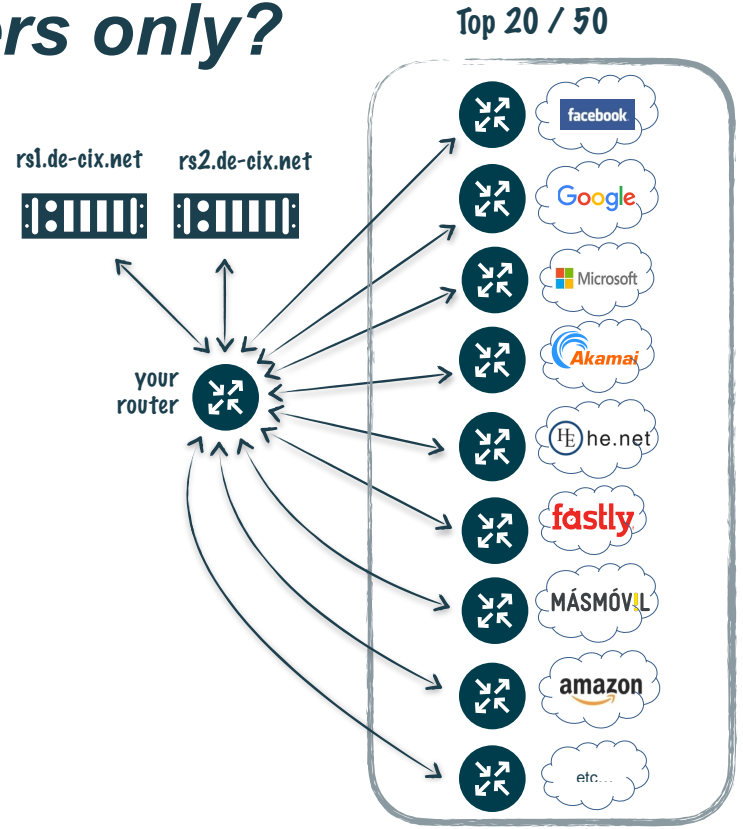
Why to not use the route servers only?

- ➔ mange the most important peers manually!
  - ➔ create redundancy
  - ➔ finer control / traffic engineering
  - ➔ in some cases you will receive more prefixes over a direct session vs. the routeservers

- ➔ let the routeservers handle the rest



use the your NetFlow statistics or DE-CIX Service Insight System to further analyze your peering / traffic relations and discover any new important peers

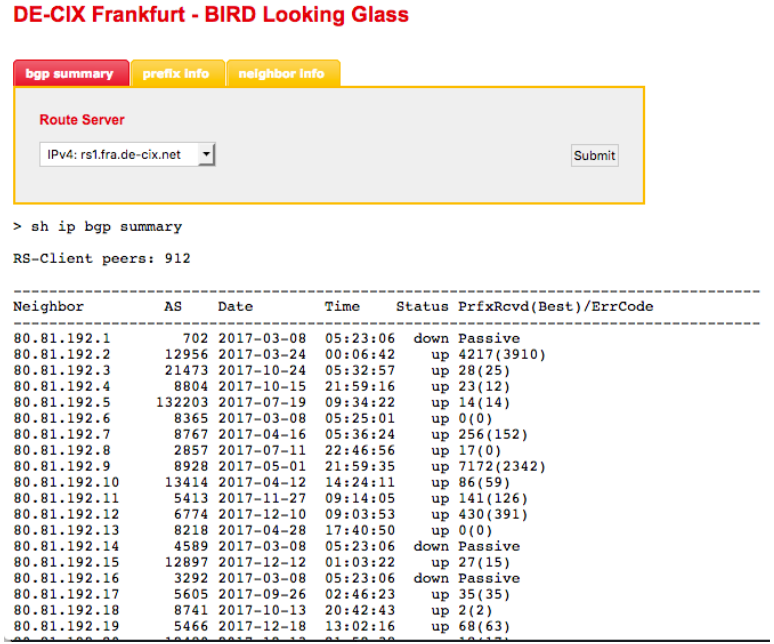


DE-CIX Routeserver Looking Glas

DE CIX

DE-CIX Routeserver old LG Features

- ➔ **BGP Summary**
- ➔ CISCO shell emulation
- ➔ Select multiple rs*.fra.de-cix.net
  - Neighbor IP
  - ASN
  - Date/Time of last status change
  - Status
  - #PfxReceived (Best)



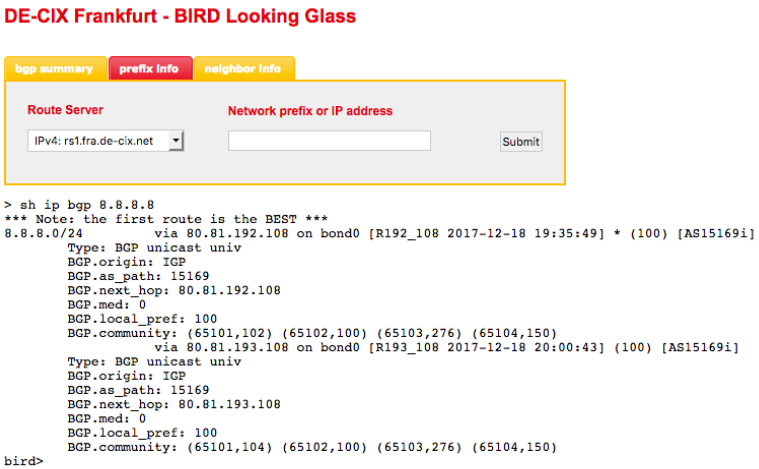
https://lg.de-cix.net/

DE-CIX Routeserver old LG Features

➔ **Prefix Info** (IP Address/Network)

➔ List of routes for prefix:

- Next_hop (GW)
- ASN
- AS_PATH
- MED
- Local Pref
- Community



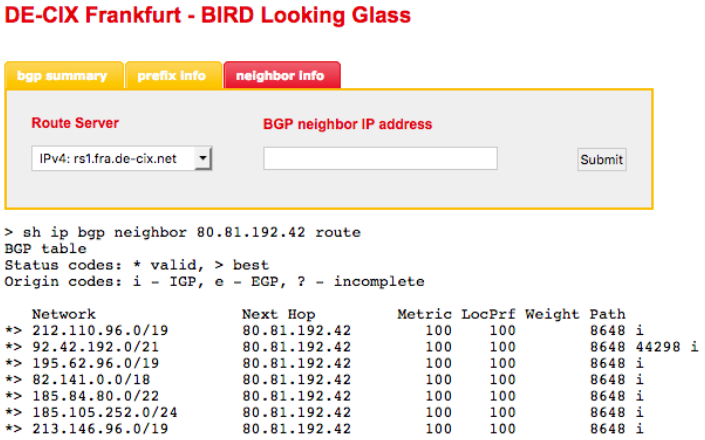
https://lg.de-cix.net/

DE-CIX Routeserver old LG Features

➔ **Neighbor Info** (IP Address)

➔ List of networks from peer:

- Network
- Next Hop
- Metric
- Local Pref
- Weight
- AS_PATH



https://lg.de-cix.net/

DE-CIX Routeserver old LG

Pro

- → Simple, intuitive interface
- → Output is easy to parse
- → Output looks „familiar“
- → Input validation across the software chain
- → Clean, minimal implementation

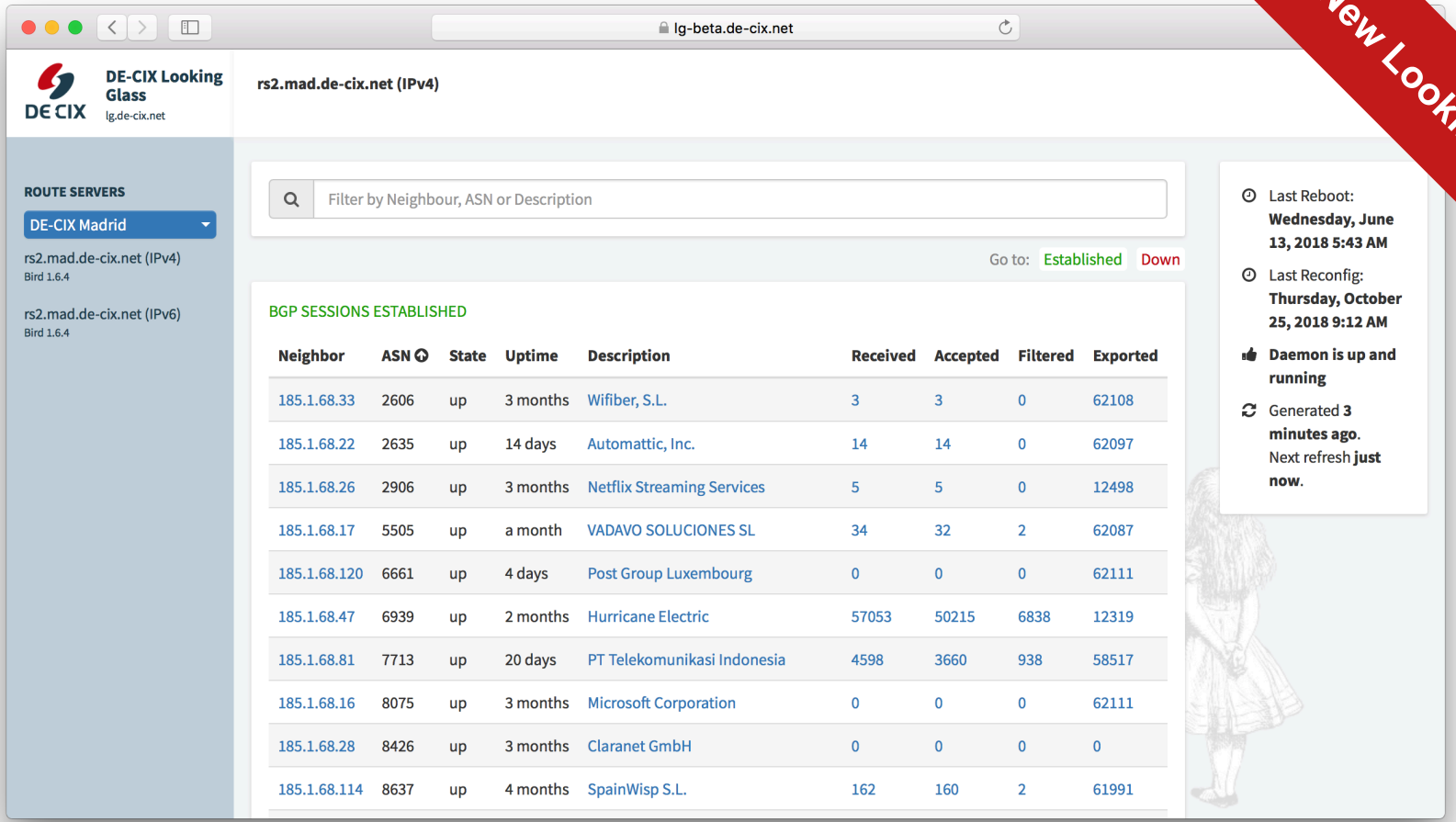
Con

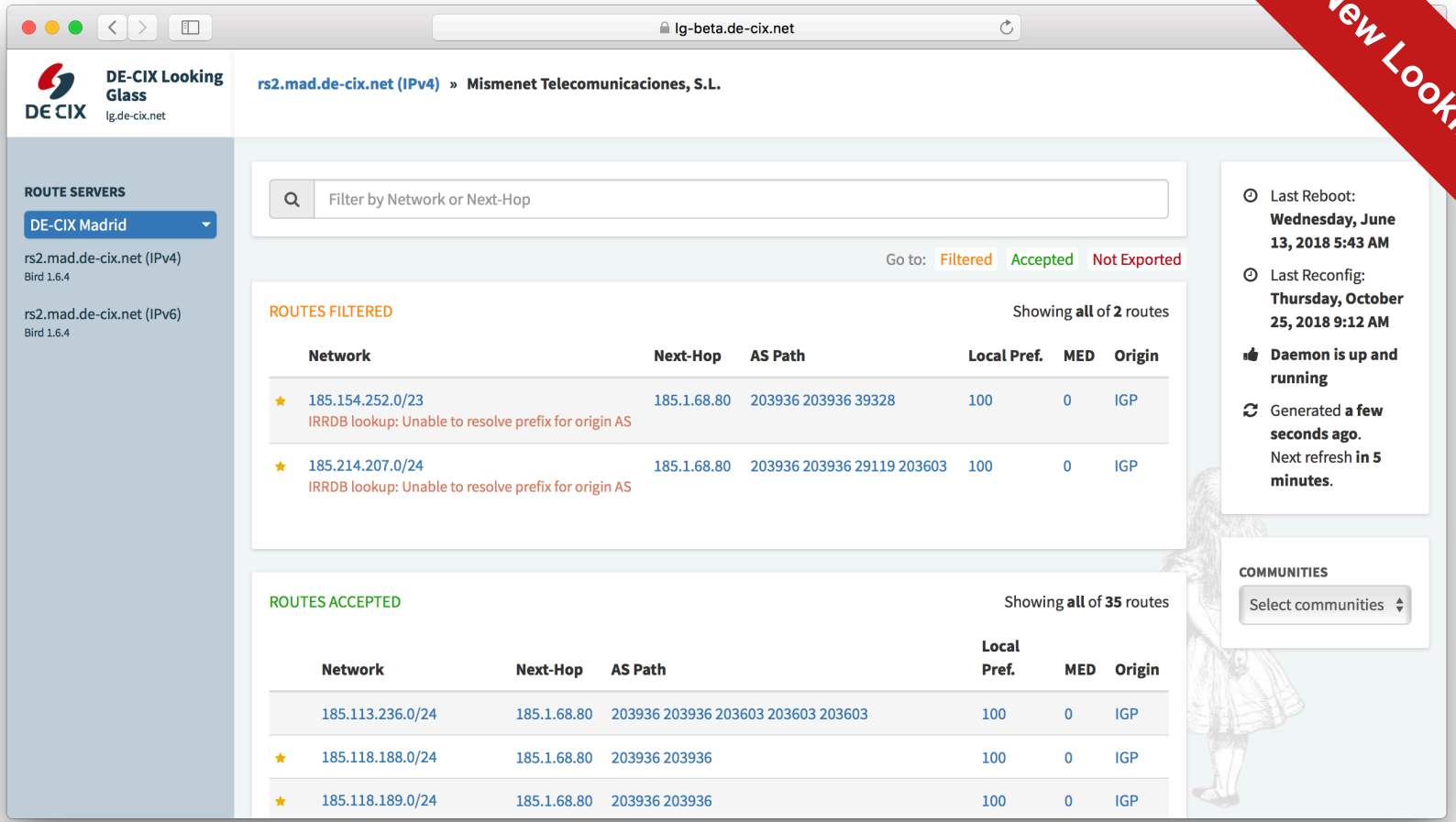
- → **No builtin rate limiting**
- → **No builtin caching of requests**
- → **No visibility of filtered prefixes**
- → **No public API**
- → **When was the last filter reload?**
- → **...**

NEW DE-CIX Looking Glas

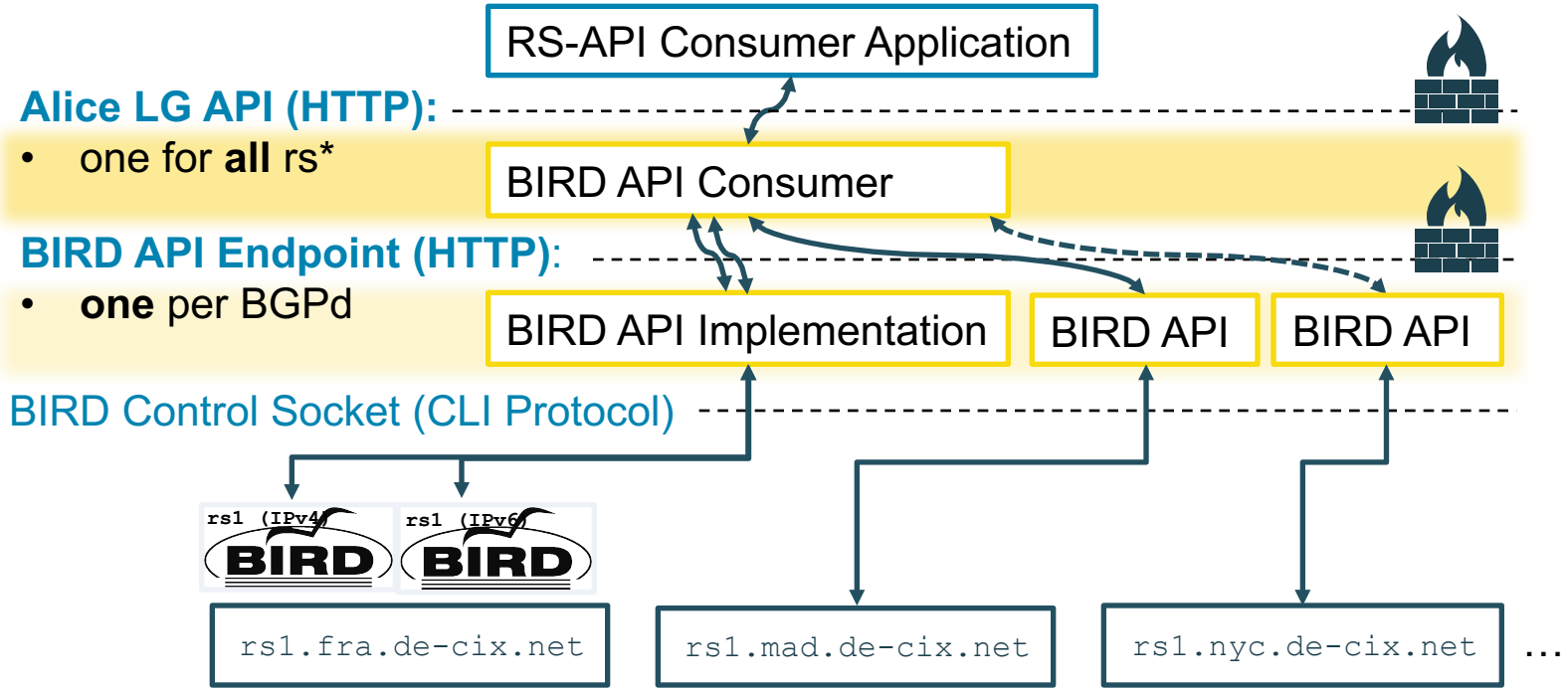
- **LIVE DEMO**:
  - https://lg-beta.de-cix.net/
    - still in beta status (ongoing bug fixes, stability improvements, etc..)

- Open Source available via: https://github.com/alice-lg/alice-lg
  - you have questions on how to implement it for your operation? Let us know and perhaps we can help! :)


lg-beta.de-cix.net
DE-CIX Looking Glass
lg.de-cix.net
rs2.mad.de-cix.net (IPv4)
ROUTE SERVERS
DE-CIX Madrid
rs2.mad.de-cix.net (IPv4)
Bird 1.6.4
rs2.mad.de-cix.net (IPv6)
Bird 1.6.4
Filter by Neighbour, ASN or Description
Go to: Established Down
BGP SESSIONS ESTABLISHED
Neighbor ASN State Uptime Description Received Accepted Filtered Exported
185.1.68.33 2606 up 3 months Wifiber, S.L. 3 3 0 62108
185.1.68.22 2635 up 14 days Automattic, Inc. 14 14 0 62097
185.1.68.26 2906 up 3 months Netflix Streaming Services 5 5 0 12498
185.1.68.17 5505 up a month VADAVO SOLUCIONES SL 34 32 2 62087
185.1.68.120 6661 up 4 days Post Group Luxembourg 0 0 0 62111
185.1.68.47 6939 up 2 months Hurricane Electric 57053 50215 6838 12319
185.1.68.81 7713 up 20 days PT Telekomunikasi Indonesia 4598 3660 938 58517
185.1.68.16 8075 up 3 months Microsoft Corporation 0 0 0 62111
185.1.68.28 8426 up 3 months Claranet GmbH 0 0 0 0
185.1.68.114 8637 up 4 months SpainWisp S.L. 162 160 2 61991
Last Reboot: Wednesday, June 13, 2018 5:43 AM
Last Reconfig: Thursday, October 25, 2018 9:12 AM
Daemon is up and running
Generated 3 minutes ago. Next refresh just now.
New Looking Glas


New Looking Glas
lg-beta.de-cix.net
DE-CIX Looking Glass
lg.de-cix.net
rs2.mad.de-cix.net (IPv4) » Mismenet Telecomunicaciones, S.L.
ROUTE SERVERS
DE-CIX Madrid
rs2.mad.de-cix.net (IPv4)
Bird 1.6.4
rs2.mad.de-cix.net (IPv6)
Bird 1.6.4
Filter by Network or Next-Hop
Go to: Filtered Accepted Not Exported
ROUTES FILTERED
Showing all of 2 routes
Network Next-Hop AS Path Local Pref. MED Origin
185.154.252.0/23 185.1.68.80 203936 203936 39328 100 0 IGP
IRRDB lookup: Unable to resolve prefix for origin AS
185.214.207.0/24 185.1.68.80 203936 203936 29119 203603 100 0 IGP
IRRDB lookup: Unable to resolve prefix for origin AS
ROUTES ACCEPTED
Showing all of 35 routes
Network Next-Hop AS Path Local Pref. MED Origin
185.113.236.0/24 185.1.68.80 203936 203936 203603 203603 203603 100 0 IGP
185.118.188.0/24 185.1.68.80 203936 203936 100 0 IGP
185.118.189.0/24 185.1.68.80 203936 203936 100 0 IGP
Last Reboot: Wednesday, June 13, 2018 5:43 AM
Last Reconfig: Thursday, October 25, 2018 9:12 AM
Daemon is up and running
Generated a few seconds ago.
Next refresh in 5 minutes.
COMMUNITIES
Select communities

Alice-LG: Top-Level Architecture



Questions?

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Where networks meet

www.de-cix.net