



**Simplifying Peering  
with Open Source**

# Why Peering Manager?

- Setting up BGP sessions is simple
- Keeping track of BGP sessions, communities and policies is less simple
- Configuring hundreds or thousands of sessions is boring
- Finding new peers should be easier
- Engineers are lazy (that's a good thing)
- Therefore, the project was born



# Under The Hood

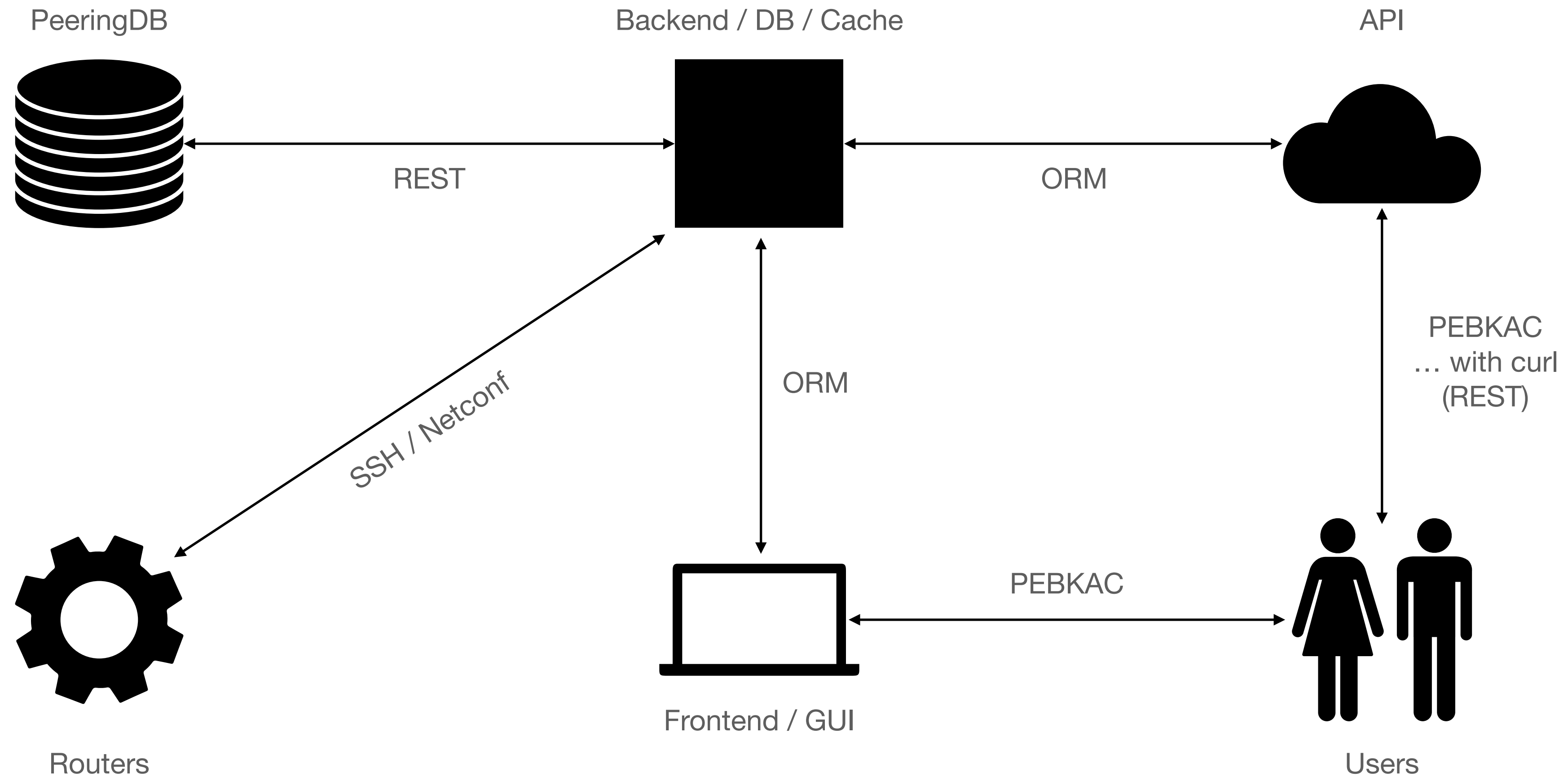
- Python  $\geq 3.6$  required, needs WSGI process (gunicorn, uwsgi, nginx unit ...)
- PostgreSQL as database and Redis for caching/task scheduling
- Docker images and stacks
- REST API as first class citizen
- NAPALM to interact with routers
- Integration with third-party tools (PeeringDB, IX-API)
- Apache-2.0 Licensed
- Available on GitHub <https://github.com/peering-manager/peering-manager>



# BGP Source Of Truth, Why?

- Tracking BGP configuration changes (adding/updating/deleting sessions)
- Knowing the desired state
- Gathering as many details as possible
- Allowing automation without YAML and/or JSON hell
- User “friendly” interface for day-to-day management
- Highly specialised tool; does one thing but does it well (at least try to)

# How Hard Can It Be?



# Features To Come

- IX-API improvements with write capability
- Peering sessions workflow (requested, configured, to be removed, ...)
- API endpoints to connect self service public peering portals
- Export data to remote data store: RIPE-db, git repository, ...
- Import of templates from git repository for management convenience
- Improved mailing features (send requests, inform about maintenances)
- Tighter integration with other sources of truth
- Porting UI to Bootstrap 5 and add dark theme



**Let's have a look**







[API](#) · [Docs](#) · [GitHub](#)

- ☒ IPv4 max prefixes

●●●

Private

<>

localhost

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Peering Manager

Autonomous Systems

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Internet Exchanges

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Other▶

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2023-02-23 21:18:48 UTC

☁️ API · 📄 Docs · 🔄 GitHub

Internet Exchanges / Import IXPs and Connections

🔍 Last Search 📄 AS35280 👤

France-IX Paris

Connection #1 - 100 Gbps

37.49.237.108/22

2001:7f8:54::1:108/64

Equinix Paris

Connection #1 - 100 Gbps

195.42.145.114/23

2001:7f8:43::3:5280:1/64

Netnod Stockholm GREEN -- MTU1500

Connection #1 - 100 Gbps

194.68.123.96/24

2001:7f8:d:ff::96/64

Netnod Stockholm BLUE -- MTU1500

Connection #1 - 100 Gbps

194.68.128.96/24

2001:7f8:d:fe::96/64

DE-CIX New York

Connection #1 - 100 Gbps

206.82.104.167/22

2001:504:36::89d0:0:1/64

IX Australia (Sydney NSW)

Connection #1 - 100 Gbps

218.100.52.127/23

2001:7fa:11:4:0:89d0:0:1/64

Hopus

Connection #1 - 100 Gbps

37.77.34.82/20

2a02:e5c:1:35::1/32

Connection #2 - 100 Gbps

37.77.38.29/20

2a02:e5c:4:a::2/32

Equinix New York

Connection #1 - 100 Gbps

198.32.118.1/24

2001:504:f::3:5280:1/64

AMS-IX

Connection #1 - 100 Gbps

80.249.209.14/21

2001:7f8:1::a503:5280:1/64

DE-CIX Frankfurt

Connection #1 - 100 Gbps

80.81.193.10/21

2001:7f8::89d0:0:1/64

DE-CIX Dusseldorf

Connection #1 - 100 Gbps

185.1.170.91/23

2001:7f8:9e::89d0:0:1/64

DE-CIX Hamburg

Connection #1 - 100 Gbps

185.1.210.102/23

2001:7f8:3d::89d0:0:1/64

DE-CIX Munich

Connection #1 - 100 Gbps

185.1.208.97/23

2001:7f8:44::89d0:0:1/64

LINX LON1

## IX Details ✓

|      |           |
|------|-----------|
| Name | LINX LON1 |
|------|-----------|

Status Enabled

Local AS [AS35280 - F5 Inc. \(formerly Acorus Networks / Volterra\)](#)

## IXP Prefixes

2001:7f8:4::/64

195.66.224.0/21

These are the prefixes used to connect to the IX network.

## Contacts

None

+ Add a contact

## Comments

## Tags

No tags assigned

## BGP Communities

## Routing Policies



Peering Manager

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Other

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InfoConnectionsPeering SessionsAvailable PeersConfig ContextChangelog

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| ASN  | AS Name                                                 | IX Name   | IPv6               | IPv4           | On RS | Speed    |
|------|---------------------------------------------------------|-----------|--------------------|----------------|-------|----------|
| 42   | PCH AS42                                                | LINX LON1 | 2001:7f8:4::2a:1   | 195.66.225.238 | ✓     | 100 Gbps |
| 109  | Cisco Systems, Inc.                                     | LINX LON1 | 2001:7f8:4::6d:1   | 195.66.227.143 | ✗     | 10 Gbps  |
| 702  | Verizon - EMEA                                          | LINX LON1 | 2001:7f8:4::2be:2  | 195.66.225.4   | ✗     | 40 Gbps  |
| 714  | Apple Inc.                                              | LINX LON1 | 2001:7f8:4::2ca:1  | 195.66.226.146 | ✗     | 200 Gbps |
| 714  | Apple Inc.                                              | LINX LON1 | 2001:7f8:4::2ca:2  | 195.66.226.145 | ✗     | 200 Gbps |
| 714  | Apple Inc.                                              | LINX LON1 | 2001:7f8:4::2ca:3  | 195.66.226.147 | ✗     | 200 Gbps |
| 714  | Apple Inc.                                              | LINX LON1 | 2001:7f8:4::2ca:4  | 195.66.226.148 | ✗     | 200 Gbps |
| 786  | Janet                                                   | LINX LON1 | 2001:7f8:4::312:1  | 195.66.224.15  | ✗     | 100 Gbps |
| 917  | Misaka.io                                               | LINX LON1 | 2001:7f8:4::e15f:1 | 195.66.227.120 | ✗     | 1 Gbps   |
| 1103 | SURF                                                    | LINX LON1 | 2001:7f8:4::44f:1  | 195.66.225.122 | ✓     | 20 Gbps  |
| 1239 | Sprint                                                  | LINX LON1 | 2001:7f8:4::4d7:1  | 195.66.225.35  | ✓     | 100 Gbps |
| 1248 | HERE Global B.V.                                        | LINX LON1 | 2001:7f8:4::4e0:1  | 195.66.225.94  | ✓     | 10 Gbps  |
| 1257 | TELE2                                                   | LINX LON1 | 2001:7f8:4::4e9:1  | 195.66.224.87  | ✗     | 20 Gbps  |
| 1267 | WINDTRE                                                 | LINX LON1 | 2001:7f8:4::4f3:1  | 195.66.225.65  | ✗     | 100 Gbps |
| 1273 | Vodafone Global Network                                 | LINX LON1 | 2001:7f8:4::4f9:1  | 195.66.224.182 | ✗     | 10 Gbps  |
| 1547 | JSC InterDnestrCom (IDC)                                | LINX LON1 | 2001:7f8:4::60b:1  | 195.66.224.200 | ✗     | 10 Gbps  |
| 1680 | Cellcom LTD                                             | LINX LON1 | 2001:7f8:4::690:1  | 195.66.225.87  | ✓     | 100 Gbps |
| 1820 | Wnet Telecom USA                                        | LINX LON1 | 2001:7f8:4::71c:2  | 195.66.226.32  | ✓     | 10 Gbps  |
| 1828 | Unitas Global                                           | LINX LON1 | 2001:7f8:4::724:1  | 195.66.224.81  | ✓     | 100 Gbps |
| 1921 | RcodeZero Anycast DNS                                   | LINX LON1 | 2001:7f8:4::781:1  | 195.66.227.115 | ✓     | 1 Gbps   |
| 2018 | Tertiary Education and Research Network of South Africa | LINX LON1 | 2001:7f8:4::7e2:1  | 195.66.227.126 | ✓     | 10 Gbps  |
| 2116 | GlobalConnect AS2116                                    | LINX LON1 | 2001:7f8:4::844:1  | 195.66.225.220 | ✗     | 1 Gbps   |
| 2119 | Telenor (Norway/Sweden)                                 | LINX LON1 | 2001:7f8:4::847:1  | 195.66.225.107 | ✗     | 100 Gbps |
| 2134 | Produban Servicios Informaticos Generales               | LINX LON1 | —                  | 195.66.226.12  | ✗     | 1 Gbps   |
| 2484 | FR-NIC-DNS-ANYCAST (AFNIC > NIC-FR > Anycast DNS)       | LINX LON1 | 2001:7f8:4::9b4:1  | 195.66.227.3   | ✓     | 1 Gbps   |
| 2497 | Internet Initiative Japan                               | LINX LON1 | 2001:7f8:4::9c1:1  | 195.66.225.237 | ✗     | 10 Gbps  |
| 2516 | KDDI                                                    | LINX LON1 | 2001:7f8:4::9d4:1  | 195.66.227.85  | ✗     | 10 Gbps  |
| 2519 | ARTERIA Networks Corporation (Vectant)                  | LINX LON1 | 2001:7f8:4::9d7:1  | 195.66.231.18  | ✓     | 20 Gbps  |

Search

ASN

On Route Server

Traffic

Scope

Type

Peering Policy

Multiple Locations

Ratio Requirement

Contract Requirement

ApplyClear



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| AS                                          | Connection               | IP Address        | Status  | Route Server |                                              |
|---------------------------------------------|--------------------------|-------------------|---------|--------------|----------------------------------------------|
| <input type="checkbox"/> AS714 - Apple Inc. | LINX LON1 on London ASBR | 195.66.226.145    | Enabled | ×            | <div><div></div><div></div><div></div></div> |
| <input type="checkbox"/> AS714 - Apple Inc. | LINX LON1 on London ASBR | 195.66.226.146    | Enabled | ×            | <div><div></div><div></div><div></div></div> |
| <input type="checkbox"/> AS714 - Apple Inc. | LINX LON1 on London ASBR | 195.66.226.147    | Enabled | ×            | <div><div></div><div></div><div></div></div> |
| <input type="checkbox"/> AS714 - Apple Inc. | LINX LON1 on London ASBR | 195.66.226.148    | Enabled | ×            | <div><div></div><div></div><div></div></div> |
| <input type="checkbox"/> AS714 - Apple Inc. | LINX LON1 on London ASBR | 2001:7f8:4::2ca:1 | Enabled | ×            | <div><div></div><div></div><div></div></div> |
| <input type="checkbox"/> AS714 - Apple Inc. | LINX LON1 on London ASBR | 2001:7f8:4::2ca:2 | Enabled | ×            | <div><div></div><div></div><div></div></div> |
| <input type="checkbox"/> AS714 - Apple Inc. | LINX LON1 on London ASBR | 2001:7f8:4::2ca:3 | Enabled | ×            | <div><div></div><div></div><div></div></div> |
| <input type="checkbox"/> AS714 - Apple Inc. | LINX LON1 on London ASBR | 2001:7f8:4::2ca:4 | Enabled | ×            | <div><div></div><div></div><div></div></div> |
| <input type="checkbox"/> AS2818 - BBC       | LINX LON1 on London ASBR | 195.66.224.88     | Enabled | ×            | <div><div></div><div></div><div></div></div> |
| <input type="checkbox"/> AS2818 - BBC       | LINX LON1 on London ASBR | 195.66.224.103    | Enabled | ×            | <div><div></div><div></div><div></div></div> |
| <input type="checkbox"/> AS2818 - BBC       | LINX LON1 on London ASBR | 195.66.225.13     | Enabled | ×            | <div><div></div><div></div><div></div></div> |
| <input type="checkbox"/> AS2818 - BBC       | LINX LON1 on London ASBR | 195.66.226.229    | Enabled | ×            | <div><div></div><div></div><div></div></div> |
| <input type="checkbox"/> AS2818 - BBC       | LINX LON1 on London ASBR | 2001:7f8:4::b02:1 | Enabled | ×            | <div><div></div><div></div><div></div></div> |
| <input type="checkbox"/> AS2818 - BBC       | LINX LON1 on London ASBR | 2001:7f8:4::b02:2 | Enabled | ×            | <div><div></div><div></div><div></div></div> |
| <input type="checkbox"/> AS2818 - BBC       | LINX LON1 on London ASBR | 2001:7f8:4::b02:4 | Enabled | ×            | <div><div></div><div></div><div></div></div> |
| <input type="checkbox"/> AS2818 - BBC       | LINX LON1 on London ASBR | 2001:7f8:4::b02:5 | Enabled | ×            | <div><div></div><div></div><div></div></div> |
| <input type="checkbox"/> AS2906 - Netflix   | LINX LON1 on London ASBR | 195.66.224.251    | Enabled | ×            | <div><div></div><div></div><div></div></div> |
| <input type="checkbox"/> AS2906 - Netflix   | LINX LON1 on London ASBR | 195.66.225.16     | Enabled | ×            | <div><div></div><div></div><div></div></div> |
| <input type="checkbox"/> AS2906 - Netflix   | LINX LON1 on London ASBR | 195.66.227.7      | Enabled | ×            | <div><div></div><div></div><div></div></div> |
| <input type="checkbox"/> AS2906 - Netflix   | LINX LON1 on London ASBR | 195.66.227.146    | Enabled | ×            | <div><div></div><div></div><div></div></div> |
| <input type="checkbox"/> AS2906 - Netflix   | LINX LON1 on London ASBR | 2001:7f8:4::b5a:1 | Enabled | ×            | <div><div></div><div></div><div></div></div> |
| <input type="checkbox"/> AS2906 - Netflix   | LINX LON1 on London ASBR | 2001:7f8:4::b5a:2 | Enabled | ×            | <div><div></div><div></div><div></div></div> |
| <input type="checkbox"/> AS2906 - Netflix   | LINX LON1 on London ASBR | 2001:7f8:4::b5a:3 | Enabled | ×            | <div><div></div><div></div><div></div></div> |
| <input type="checkbox"/> AS2906 - Netflix   | LINX LON1 on London ASBR | 2001:7f8:4::b5a:4 | Enabled | ×            | <div><div></div><div></div><div></div></div> |

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Autonomous system

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●●●

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localhost

🗨️🔄

📄+📄

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Router Details

PingPoll Sessions

|                   |                                                         |
|-------------------|---------------------------------------------------------|
| Name              | London ASBR                                             |
| Hostname          | asbr01-lon.example.net                                  |
| Platform          | Juniper Junos                                           |
| Status            | Enabled                                                 |
| Local AS          | AS35280 - F5 Inc. (formerly Acorus Networks / Volterra) |
| Configuration     | JUNOS based ASBR                                        |
| Encrypt Passwords | ✓                                                       |
| Poll BGP Sessions | ✓                                                       |
| Utilization       | Has 0 connections                                       |

Comments

None

Tags

No tags assigned

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InfoConfigurationConnectionsDirect Peering SessionsConfig ContextChangelog

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Compare before commit

Deploy

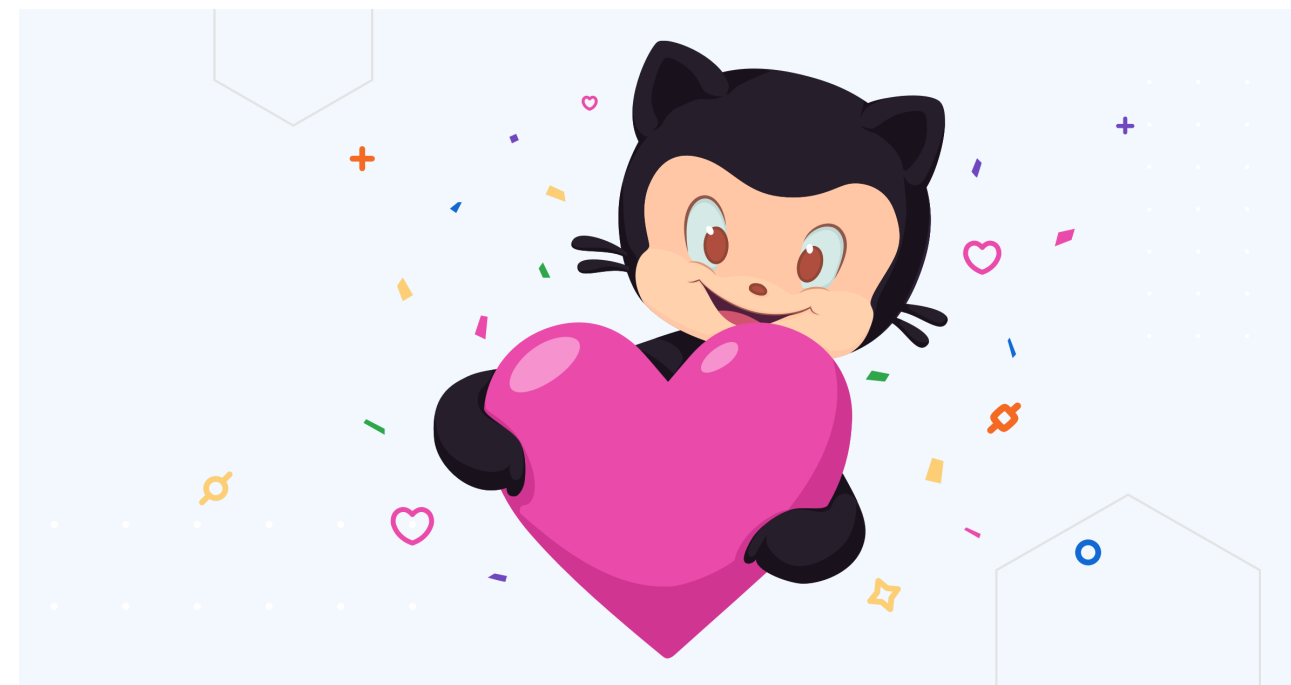
Copy

Raw Output

```
protocols {
  bgp {
    replace: group ipv6-linx-lon1-18 {
      type external;
      multipath;
      advertise-inactive;
      family inet6 {
        unicast;
      }
      neighbor 2001:7f8:4::2ca:1 {
        description "Peering: AS714 - Apple Inc.";
        family inet6 {
          unicast {
            prefix-limit {
              maximum 1000;
            }
          }
        }
        peer-as 714;
      }
    }
    neighbor 2001:7f8:4::2ca:2 {
      description "Peering: AS714 - Apple Inc.";
      family inet6 {
        unicast {
          prefix-limit {
            maximum 1000;
          }
        }
      }
      peer-as 714;
    }
    neighbor 2001:7f8:4::2ca:3 {
      description "Peering: AS714 - Apple Inc.";
    }
  }
}
```

# Participate

- Try it - demo available at <https://demo.peering-manager.net>
- Talk about it
- Open issues, propose pull requests, help documenting
- Sponsor feature requests ( 💵 ; 💻 ; 🍕 ; 🧐 )



# Sponsors





# Questions?

Demo - <https://demo.peering-manager.net>

[GitHub Discussions](#)

[NetDev Community](#) #peering-manager