

# What's new on PeeringDB?

Livio Morina- Board Member livio@peeringdb.com

#### What is PeeringDB?

**PeeringDB** is a freely available, usermaintained, database of networks and carriers, and the go-to location for interconnection data. It facilitates the global interconnection of networks at **IXPs**, data centers, and other **interconnection facilities**. It is the first stop in making interconnection decisions.

**Global System Statistics** 1124 Exchanges 28633 Networks 5239 Facilities 35 Campuses 109 Carriers 50968 Connections to Exchanges 46451 Connections to Facilities 6404 Automated Networks 50261 Registered Users 26660 Organizations



### What is PeeringDB?

Why should my exchange, network or facility be listed in PeeringDB?

- Helps establish new peering more efficiently, with all information easy to find in one place
  - Maintain all of your contact and connection info
  - Find other network's peering contact and connection info
  - Find interconnection facility and IXP info
- A PeeringDB record is required by many networks to peer
- Can be used for automation to generate router configurations
  - Initial configuration to setup peering quickly
  - Update configuration if maximum prefixes change

### **Account Security**

- Two-factor authentication (2FA) (2.21.0)
  - Using time-based one-time password (TOTP) no SMS, no
  - Setup via User Profile
  - Highly recommended

15/11/2023

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- Provision for backup codes and recovery tokens
- Fast IDentity Online (FIDO) Universal 2nd Factor (U2F) 2FA support (2.33.0)
  - Allowing users to enable 2FA without relying on a TOTP app
- HOWTO: <u>https://docs.peeringdb.com/howto/authenticate/</u>

peerinadb.com

One-time passwords enabled You can use the one-time password coor by this app to verify your sign-ins

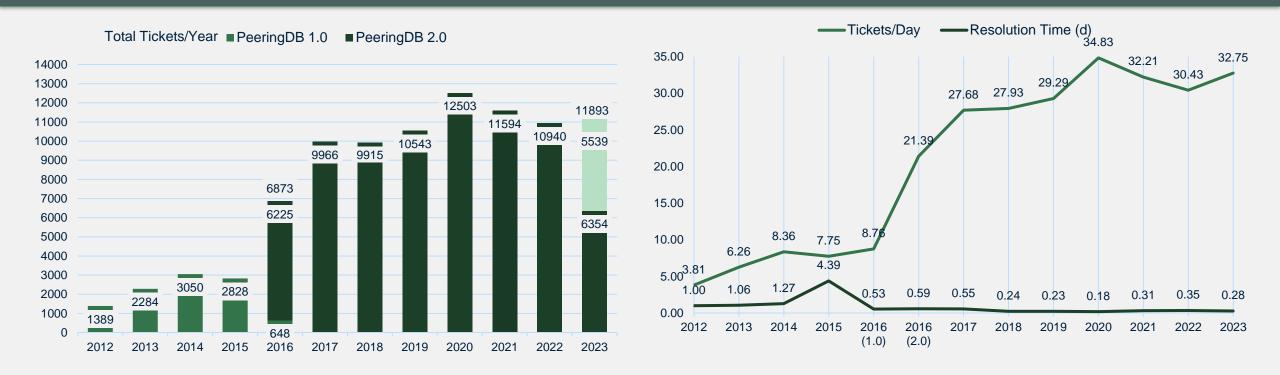
One-time password cod 762 125

#### Committees

Admin Committee	Operations Committee	Outreach Committee	Product Committee
<ul> <li>Manage administration of user accounts and PeeringDB records</li> <li>Answer support tickets</li> <li>Cleansing and completion of PeeringDB records</li> </ul>	Manage PeeringDB     infrastructure	<ul> <li>Manage marketing and social media</li> <li>Develop and maintain presentations, workshops and webinars</li> <li>Coordinate presentations and attendance at events</li> </ul>	<ul> <li>Manage roadmap and development priorities</li> <li>Ask for input from the community on desired features</li> <li>Write SoWs to solicit bids to complete requested features</li> </ul>
Contact: <u>admincom@</u> <u>lists.peeringdb.com</u>	Contact: <u>pdb-ops@</u> <u>lists.peeringdb.com</u>	Contact: <u>outreachcom@</u> <u>lists.peeringdb.com</u>	Contact: <u>productcom@</u> <u>lists.peeringdb.com</u>



## **Support Ticket Statistics**



- Admin Committee volunteers are based around the world in a variety of time zones with diverse language skills
- Goal is to resolve support tickets within 24 hours

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#### We are looking for volunteers

#### • For Operations Committee

- Small and highly trusted
- Experience with containers is a plus

#### Apply to stewards@lists.peeringdb.com



# New "campus" object

- The campus object allows to structure two or more facilities
  - Not well defined in terms of size
  - All facilities should be interconnectable with "cheap" interconnections
  - All facilities must belong to the same owner
- API: campus
- A campus is only shown with at least two members
- Add a campus object via your organization "Manage" section

## New "campus" object

- 1. Created in February
- 2. Added to API in August
- 3. Other UX improvements  $\blacksquare$
- 4. Added to search in October
- 5. Campus aggregated resources tables added this month

- Desuinar	campus in milan		
Peering[	Advanced Search	Legacy Search	English (English)
	You are using our new beta search interface	Click here to return to the old interface. Click here to pro	ovide feedback.
	Showing res	ults for campus in Milan, IT within 23km	
Exchanges (0)	Networks (0)	Facilities (0)	Organizations (0)
Campus (1) IRIDEOS Avalon Campus	Carriers (0)		

### New "carrier" object

- New pillar of data besides network, facility and ix
- A "Carrier" provides high capacity L1/L2 links between facilities.
- API: carrier and carrierfac
- A carrier presence in a facility must be approved by a facility admin



## New "carrier" object

- Add a carrier object via your organization "Manage" section
- Add a presence via the carrier object
- Introduced in 2.43.0 (Current 2.52.0)
- See also the blog about the carrier object

eeringDB

Arvig Enterprises	Inc.			Edi	
Also Known As		Facilities		Filter	7
Long Name				[	J
Website	https://www.arvig.com/	Name 🔓	Country City		
Address 1	150 2nd Street SW				-
Address 2			No filter matches. You may filter by <b>Name</b> , <b>Country</b> or	City.	
Floor			, , , <b>,</b>	-	
Suite		Networks		Filter	]
Location	Perham, MN, 56573	Name <b>↓</b> <sup>₽</sup>		ASN	
Country Code	US				
Geocode Geocode data for this entity could not obtained at this point. This is done automatically upon address field changes.	Arvig		16904	_	
	Exchanges		Filter		
Last Updated	2019-07-08T18:35:40Z	Name 🔓	Country		
Notes ?			City		
Logo 😧			No filter matches. You may filter by <b>Name, Country</b> or	City.	
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		Name <b>↓</b> ₽			
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		Campuses		Filter	J
er		Name <b>↓</b> ⁵			
<u> </u>			N. Channel I.		

No filter matches You may filter by Name

#### **Documentation Updates**

- Started series of HOWTOs
  - https://docs.peeringdb.com/howtos/
- Regular blogs on new features
  - <u>https://docs.peeringdb.com/blogs/</u>
- Announced on social media
  - \*\* FOLLOW US \*\*

#### Create entries

- Get Started with PeeringDB as a Exchange Operator
- · Get Started with PeeringDB as a Facility Operator
- Get Started with PeeringDB as a Network Operator

#### Manage entries

- Manage Organizational Policy
- Manage User Permissions

#### Search

- Get Started with Search in PeeringDB
- Work Within PeeringDB's Query Limits

#### Authentication and security

- Authenticate to PeeringDB
- Get Started with API Keys
- Report a Security Issue

#### Other

- Get Started with Developing for PeeringDB
- Setup a PeeringDB Development Environment
- What is AS112?

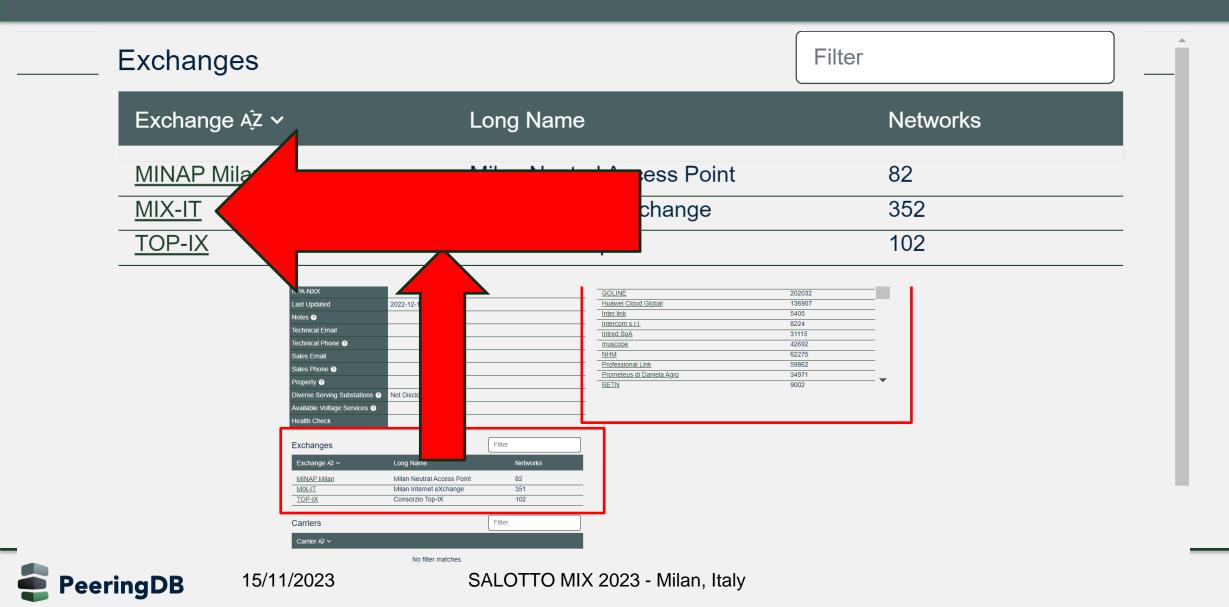
#### How can I find a facility?

	ee Peer		iearch	Legacy Search	English (English)	
	C21					
	Networks Local Exch 36 3	anges	Г			
	Organization	CDLAN SpA		Networks	Filter	-
	Also Known As				ASN	
	Long Name			Peer Name A <sup>2</sup> ~		
	Company Website	https://www.cdlan.it/		01 Telecom (01T)	201933	
	Address 1	Via Caldera 21		2Bite Airbeam	35617 50877	
	Address 2			Alibaba Cloud CDN	24429	
	Floor			<u>Amazon.com</u>	16509	
	Suite			ANIMASGR	56641	
	Location	Milan, Italy, 20153		Arelion (Twelve99) BrianTel	1299 43843	
	Country Code	IT			20836	
	Continental Region	Europe		Cogent Communications, Inc.	174	
	Geocode	45.476394, 9.103571		Ehiweb	43989	
	CLLI Code			Eis S.r.I. Fiber Telecom (FT)	56488 41327	
	NPA-NXX			GOLINE	202032	
	Last Updated	2022-12-19T11:36:12Z		Huawei Cloud Global	136907	
	Notes ?			Inter.link	5405	
	Technical Email			Intercom s.r.l.	8224	
	Technical Phone ?			Intred SpA muscope	31115 42692	
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	Sales Phone ?			Professional Link	59862	
	Property ?			Prometeus di Daniela Agro	34971	
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	Available Voltage Service					
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	MIX-IT	Milan Internet eXchange	351			
	TOP-IX	Consorzio Top-IX	102			
			[ [iller	-		
	Carriers		Filter			
	Carrier A₂Z ∽					
		No filter matches.				
PeeringDB	15/11/2023			2023 - Milan, Ital		

### How can I find a facility?

Exchanges		Filter	
Exchange Ą́z ∽	Long Name	Networks	
MINAP Milan	Milan Neutral Access Point	82	
MIX-IT	Milan Internet eXchange	352	
TOP-IX	Consorzio Top-IX	102	
NPA-NXX       2022-12-1         Last Updated       2022-12-1         Notes @       1         Technical Email       1         Technical Phone @       1         Sates Email       1         Sates Phone @       1         Property @       1         Diverse Serving Substations @       Not Discle         Available Voltage Services @       1         Health Check       1	GOLINE       Huawei Cloud Global       InterCom s.r.l.       Intred SpA       muscope       NHM       Professional Link       Prometeus di Daniela Agro       RETN	202032 136907 5405 8224 31115 42692 62275 59862 34971 9002	
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eeringDB 15/11/2023	SALOTTO MIX 2023 - Milan, Italy		

#### How can I find a facility (where there is a specific IXP)?



#### How can I find a facility (where there is a specific IXP)?

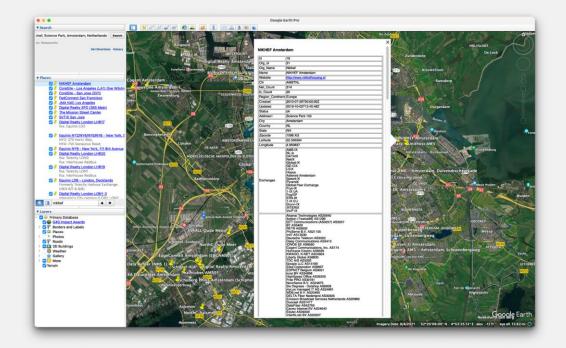
Local Facilities	Filter	
Facility Ą́z ∽	Country	City
<u>Aruba IT3 - Milan PSP</u>	Italy	Ponte San Pietro
BOIX	Italy	Bologna
<u>C21</u>	Italy	Milan
DATA4 Milan-Cornaredo - MIL1	Italy	Cornaredo (MI)
<u>Equinix ML2 - Milan, Savona</u>	Italy	Milano
<u>Equinix ML5 - Milan</u>	Italy	Settimo Milanese (MI)
IRIDEOS Avalon Campus	Italy	Milano
MIX	Italy	Milano
<u>Open Hub Med</u>	Italy	Carini
STACK EMEA - ITALY S.P.A.	Italy	Siziano



### Quick updates

- PeeringDB client complete rewrite, now v2
- PeeringDB whois will be closing at the end of January
- Link your social media accounts from PeeringDB
- Get facility location data as a .kmz file

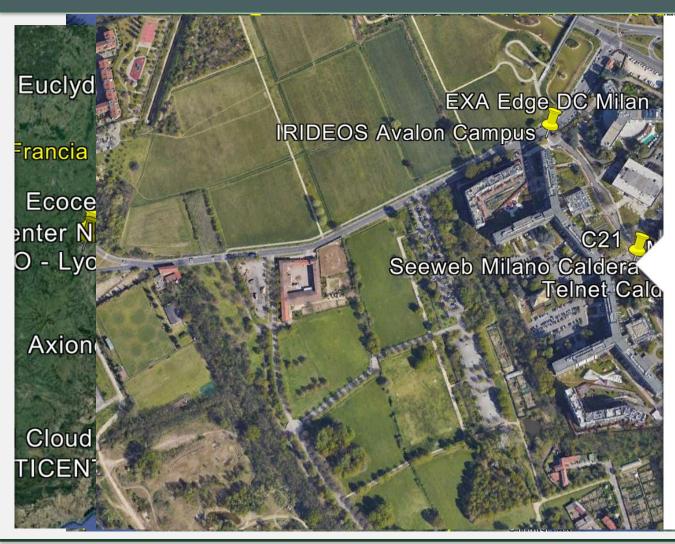
Also Known As	Example
Long Name	PeeringDB Example Organisation
Website	https://www.example.org
Facebook	peeringdb
Twitter	peeringdb
Linkedin	peeringdb





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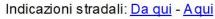
#### How can I find a facility (2)?



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PeeringDB

MIX	
ld	864
Org_Id	3207
Org_Name	MIX s.r.l.
Name	MIX
Website	http://www.mix-it.net/
Net_Count	196
lx_Count	5
Region_Continent	Europe
Created	2010-08-28T00:00:00Z
Updated	2018-08-07T10:29:04Z
Status	ok
Address1	via Caldera, 21
Address2	Palazzo D ala 3
City	Milano
Country	IT
Zipcode	20153
Latitude	45.476394
Longitude	9.103571





SALOTTO MIX 2023 - Milan, Italy

## Italy from a PeeringDB POV

15/11/2023

PeeringDB

Category - Month	November 2023	May 2023
IXP/Operators	18/14	17/13
Facilities/Operators	96/71	96/71
Networks at IXP	522	516
Italian Networks at IXP	373	366
Networks in Facilities	451	439
Italian Networks in Facilities	321	310
Total Networks (IXP and Facilities)	615	602
Total Italian Networks (IXP and Facilities)	410	397
Italian Networks in PeeringDB	521	513
Italian Networks in any RIR	1295	1281
PeeringDB/RIR	40.2%	40.0%

## Italy – Internet Exchange

Name ÁZ ~	Media Type	Country	City	Networks	
BGP.Exchange - Rome	Multiple	IT	Rome	7	
		Т	Palermo	20	
Ea	-it.net/location/pop-milano/	Т	Milan	29	
Ge		Т	Genova	1	
На		Т	Rome	3	
	Exchange - Servizi - About - Sa	alotto	Milan	352	2
MI Mi Mi Mi	ASN	т	Bologna Palermo	14	
Mil <u>Na</u> Na	<b>iii 375</b>	•T	Bari	20	
Na		ΎΤ	Napoli	6	
<u>Na</u> Nautilus Mediterranean Exchange Point		Т	Rome	158	
<u>PCIX</u> Piacenza Internet Exchange	Ethernet	IT	Piacenza	9	
<u>SIIX</u> Southern Italy Internet Exchange	Multiple	IT	Pomezia	16	
STIX	Ethernet	IT	Bozen/Bolzano	7	
<u>TIX</u> Tuscany Internet eXchange	Ethernet	IT	Florence	17	
TOP-IX Consorzio Top-IX	Ethernet	IT	Turin	102	
<u>VSIX</u> Veneto System Internet Exchange	Ethernet	IT	Padova	53	



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#### **Italy - Campus**

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Exchanges Networks Fa	cilities Organizations Campus		
Name		Organization	
Address			
City/ State/ Postal			
Country (ctrl/cmd click to select multiple)	Iran Iraq Ireland Isle of Man Israel Italy		
Continental Region (ctrl/cmd click to select multiple)	North America Asia Pacific Europe South America Africa Australia		
Additional filters are available to	authenticated users, and you are currently not logged in.		



👲 JSON 🛛 🛓 CSV

Name ĄŻ ∽	City	State
Management	Country	Postal Code
IRIDEOS Avalon Campus	Milano	Lombardia
IRIDEOS S.p.A.	IT	20153

SALOTTO MIX 2023 - Milan, Italy

#### **Product Development Workflow**

- All issues tracked using GitHub at <a href="https://github.com/peeringdb/peeringdb/issues">https://github.com/peeringdb/peeringdb/issues</a>
  - Anyone can open a feature requests or file a bug report
  - Open and transparent process for product development
  - Workflow is at <u>http://docs.peeringdb.com/workflow/</u>
- Product Committee issue process
  - Evaluate and prioritize the requests
  - Request a quote for development costs
  - Request budget from the board
  - Manage implementation and scheduling
- Your input is needed on features!

1 Decide No due date ③ Last updated 3 days ago Issues under Decide queue. Issues are kept in Decide while the Product Committee discusses the issue. Next milestone is "Consensus Reached"	12% complete 128 open 19 closed Edit Close Delete
2 Consensus Reached No due date (©) Last updated 3 days ago Issues that are in the Consensus queue. When a decision is made abo(more)	0% complete 6 open 0 closed Edit Close Delete
<b>3 Consensus Finalized</b> No due date ① Last updated 1 day ago When an issue is at milestone "Consensus reached" PC members have t(more)	100% complete 0 open 2 closed Edit Close Delete
3a Needs Implementation discussion No due date (3) Last updated 6 days ago	0% complete 5 open 0 closed Edit Close Delete
<b>4 Ready for Implementation</b> No due date (2) Last updated 1 day ago Last milestone before milestone "Next release". The predecessor is "Consensus Finalized".	0% complete 22 open 0 closed Edit Close Delete
Next Release No due date © Last updated 5 days ago	80% complete 3 open 12 closed

#### **Release Schedule**

Release number	Internal testing	Beta release	<b>Production release</b>
2.51.0	2023-09-06	2023-09-13	2023-09-20
2.52.0	2023-10-18	2023-10-25	2023-11-06
2.53.0	2023-11-22	2023-11-29	2023-12-01



### **Beta Development**

- Beta server
  - Available at <a href="https://beta.peeringdb.com/">https://beta.peeringdb.com/</a>
  - Runs the latest beta software version
  - Full access over HTTP and the API



- Database is local to the beta server only, changes are not reflected on the production servers
- Latest changes
  - Available at <u>https://beta.peeringdb.com/changes</u>
  - Redirects to the list of issues on GitHub
  - Documents all of the changes in the current beta version
- Anyone can log bugs and feature requests in GitHub at <a href="https://github.com/peeringdb/peeringdb/issues">https://github.com/peeringdb/peeringdb/issues</a>

## **Become a PeeringDB Sponsor!**



PeeringD

PLATINUM

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PeeringD

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SILVER

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- Diamond Sponsorship \$25,000 / year
  - Limited to 10 sponsors
  - Very large logo on top line of Sponsors page with URL
- Diamond Sponsor badge display on all records
- Social media promotion
- Platinum Sponsorship \$10,000 / year
  - Large logo on second line of Sponsors page with URL
  - Platinum Sponsor badge display on all records
  - Social media promotion
- Gold Sponsorship \$5,000 / year
  - Medium logo on third line of Sponsors page
  - Gold Sponsor badge display on all records
  - Social media promotion
- Silver Sponsorship \$2,500 / year
  - Small logo on fourth line of Sponsors page
  - Silver Sponsor badge display on all records

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Social media promotion

C **25** peeringdb.com/search/v2?q=palermo

Platinum Sponsor



Exchanges (3)

**DE-CIX** Palermo

**MIX-IT** Palermo

MIX-IT



Advanced Search

#### Facilities (3)

Open Hub Med

Sicily Hub - Telecom Italia Sparkle Palermo Data Center

Tiscali Palermo



Contact <a href="mailto:sponsorship@peeringdb.com">sponsorship@peeringdb.com</a> for sponsorship info!

#### Thank you to our sponsors!

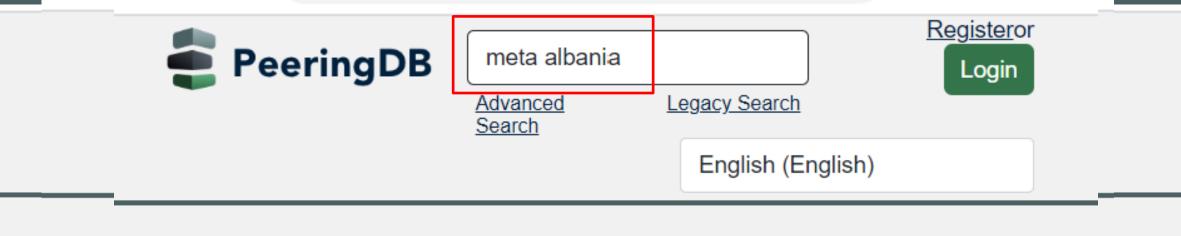




Need help? Contact <a href="mailto:support@peeringdb.com">support@peeringdb.com</a>

Got a feature idea? Contact <a href="mailto:productcom@lists.peeringdb.com">productcom@lists.peeringdb.com</a>

#### How can PeeringDB help you?



You are using our new beta search interface. <u>Click here</u> to return to the old interface. <u>Click here</u> to provide feedback.

Showing results for meta albania

# Exchanges (1)

### **IX-F JSON Import**

#### Finalize tasks from Data Ownership Task Force

- ATM, only notifications are sent out to networks and IXes
- Todo: automatically remove stale connections to an IX
  - Almost done, see <u>Github issue #1360</u>

#### • Why don't more IXP provide an IX-F JSON and enable it?

Total Number of IXP inEurope	376	100.0%
IXP with IX-F JSON URL	130	34.6%
IX-F JSON Import enabled	97	25.8%

Data retrieved from PeeringDB on 2023-03-10 06:57 UTC



#### WebUX interface

#### Changes coming early in 2024

- Responsive design fo
- Optimizations to save
- Personalization
- Lazy loading

@EXPORT         Equinix Manchester (Science Park) (2)       Carriers (2)         Also Known As       Equinix Inc.         Long name       Facilities         City       Manchester         Company Website       Mitrs://www.scuinix.com/cdsia=centers/scurper_colocation/united: hindom:colocation/manchester.edsia=centers	Equilities Facilities Facility A2 Country City V rise	Againix Manchester (Science Park) (2)       Carriers (2)       Exchanges (2)       Networks (154)         Monthester       Exuinix. Inc.       Inc.       Inc.       Inc.       Inc.         stry       Manchester       Inc.       Inc.       Inc.       Inc.       Inc.         stry       Manchester       Inc.       Inc.       Inc.       Inc.       Inc.       Inc.         stry       Manchester       Inc.       Inc. </th
Also Known As Equinix_Inc, Long name City Manchester Company Website <u>https://www.sou/ink.com/data-centers/surgee-colocation/united- hinedian-colocation/manchester-data-centers Equinix MA1 - Manchester, Williams/Kiburn United Kingdom Manchester</u>	Equinix. Inc.         Manchester         Manchester         Ibtos://www.cou/ink.com/data-centers/rurone-colocation/united:         Equinix. MA1 - Manchester. Williams/Küburn       United Kingdom         Kingdom.colocation/united:         Equinix. MA4 - Manchester. Williams/Küburn       United Kingdom         Science Park 610	Isio Known As     Eaulnix Inc.       ong name     Facilities       rity     Manchester       ompany Website     https://www.eeulnix.com/data-centers/aurope-colocation/united_ indigom.colocation/manchester-data-centers       ountry Code     Equinix IAA1 - Manchester, Williams/Kilburn       outs     Science Park 610       country Code     GB
Long name         Facilities           City         Manchester           Company Website         Facility 4 <sup>2</sup> Country         City         ▼ mere- linitedion-colocation/manchester-data-contess           Equinity MA1 - Manchester, Williams / Kiburn         United Kingdom         Manchester	Equilities         Manchester         https://www.epuink.com/data-centers/surpee-colocation/united- kingdom-colocation/manchester-data-centers         Equinix MA1 - Manchester-Williams/Kilburn       United Kingdom         Kingdom-colocation/united- kingdom-colocation/manchester-data-centers       United Kingdom         Science Park 610       United Kingdom	Facilities       ity     Manchester       company Website     https://www.esulink.com/data_scenters/aurope-colocation/united- kingdom.colocation/manchester-data-centers       ountry Code     GB       country Code     GB
City Manchester City Manchester Company Website <u>https://www.eouinix.com/data-centers/europe-colocation/united-kingdom-colocation/manchester-data-centers</u> <u>Equinix MA1-Manchester</u> , <u>Willioms/Kilbum</u> United Kingdom Manchester	Manchester     Facility A2     Country     City     V       https://www.epulnik.com/data-centers/nurspe-colocation/united- kingdom-colocation/manchester-data-centers     Facility A2     Country     City     V     Face       Equinix MA1 - Manchester-Williams/Kiburn     United Kingdom     Manchester       Equinix MA4 - Manchester, Synergy House     United Kingdom     Manchester	Manchester     Manchester       fy/     Manchester       Ministration     Facility Ų       Country     City       Facility Ų     Country       Country     City       City     Ci
Company Website https://www.eouinix.com/data-centers/europe-colocation/united- kingdom-colocation/manchester-data-centers/	https://www.cou/nik.com/data-centers/aurone-colocation/united- kingdom-colocation/manchester-data-centers     Country     Cutry     V     Pter       Equinix MA1 - Manchester-Williams/Kiburn     United Kingdom     Manchester       Equinix MA4 - Manchester, Synergy House     United Kingdom     Manchester       Science Park 610     V     V     V	And party Website     https://www.esulink.com/data-centes/europe-colocation/united: https://wwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwww
	Equinix MA4 - Manchester, Synergy House United Kingdom Manchester Science Park 610	Ountry Code     Equilinix MA4 - Manchester, Synergy House     United Kingdom     Manchester       Codes     Science Park 610       Country Code     GB
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		Country Code GB
	GB	
Country Code GB		ampus 💿 Eguinix Manchester (Science Parks)
Campus O Equinix Manchester (Science Park)	Equinix Manchester (Science: Park)	
		<sup>980</sup> <b>u∭</b> ⊎-EQUINIX



#### Updates from a source of truth

Your internal source of truth can now propose updates to PeeringDB, which can then be approved or denied by a human at the web interface

This is a good fit for networks with lots of records that cannot or do not want to send updates via the API

neeringDB	Search here for a network,	IX, or facility.		
T eening DD	Advanced Search		v2 Search (Beta)	English (English)
	peerCtl proposes the folk • 20C - Network Synchronize from peerCtl			
		20C - Net	work	
	Field	Current	Proposed Update	_
	IPv6 Prefixes	50	60	
	Traffic Levels		20-100Mbps	
			Accept selected changes	3

## Import of Data Provided by IXPs

- For Networks
  - Allow IXPs to maintain your IXP connection information
  - One setting for all IXPs where you are connected
  - Off by default
- For IXPs

PeeringDB

- IXPs provide participant data (IP addresses, speed, RS peering)
- Imported into PeeringDB nightly using IX-F JSON schema

15/11/2023

• See issue <u>#237</u> on GitHub for details

#### PeeringDB Configuration



Name		DOT1Q	MTU
DE-CIX Frankfurt Peering LAN			1500
IXF Member	Export URL		
× IPv4	1	80.81.192.0/21	
× IPv6		2001:7f8::/64	
	1		
IXPs Set Export URL in Exchange Record			