



PIVO

PEERING MADE SIMPLE

LinkedIn

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Summary

1.	What is Pivo?
2.	What does Pivo do?
3.	How does Pivo work?
4.	Challenges
5.	Problems solved
6.	Future plans

What is Pivo?

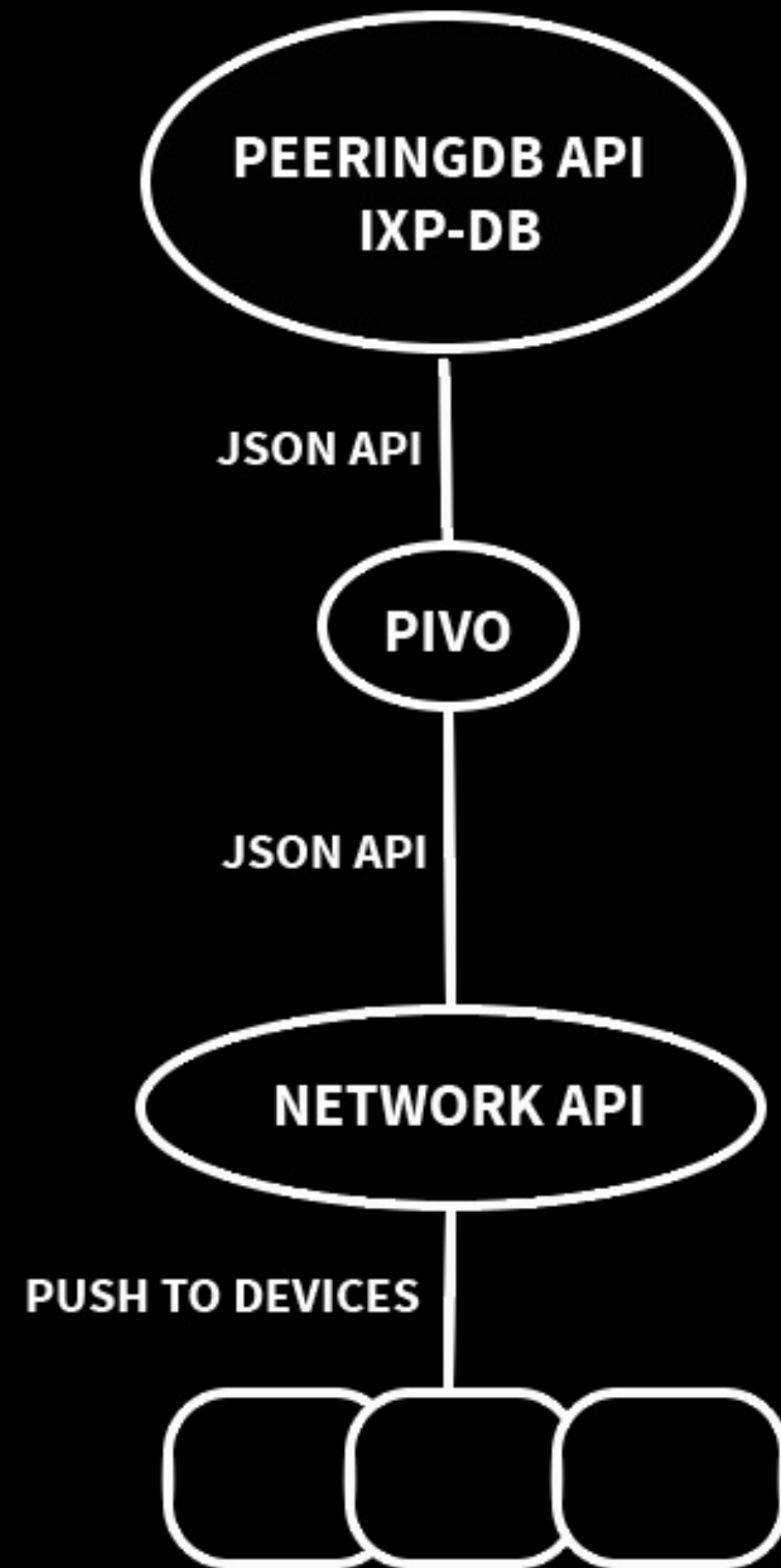


- **Pivo means beer in following languages:**
 - **Bosnian / Croatian / Slovenian / Serbian**
 - **Czech / Slovak**
 - **Polish**
 - **Russian**
 - **Ukrainian**

What does Pivo do?

- **Manage peer configuration:**
 - IPv4/IPv6 address
 - ASN
 - Internet exchange
 - IRR record
 - Max-prefix value
 - Other
- **Basic monitoring:**
 - BGP session state (UP/DOWN)
 - Max-prefix warning
 - IX monitoring

How does Pivo work?



- **It imports all entities we need from PeeringDB / IXP-DB**
- **Syncing is continuous**
- **Pivo is always SoT**
- **It provides UI and APIs to manage:**
 - **Peers**
 - **Internet exchanges**
 - **Organizations**

How does Pivo work?

- **The information from edge devices is constantly polled**
- **Configurations between edge devices and Pivo are compared**
- **If the configurations don't match, Pivo shows the difference**
- **Update Pivo or edge device configuration and lock the state**
- **Pivo is always SoT**

PIVO Denis Ivanov

Peer Configs

Create

Exchanges

Select...

- AMS-IX
- CoreSite - Any2 California
- DE-CIX Frankfurt
- DE-CIX Madrid
- DE-CIX New York
- ECIX-FRA

Please select [Exchange > Peer > Device] to generate variations

Limit Teardown

95

Limit Teardown Idle Timeout

30

Clear Create

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PIVO

Peer Configuration

Seamless bulk peering configuration generation

Peer Configs

Pivo > Peer Configs

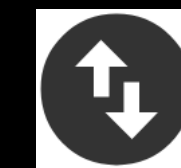
Config Id	Peer Name	Exchange Name	Device Name	
<input type="text" value="i.e. id1, id2, etc... wet"/>	<input type="text" value="Micr"/> ⓘ	<input type="text" value="Equinix etc..."/>	<input type="text" value="Equinix etc..."/>	<input type="button" value="Search"/>

No data

PIVO

Peer Status

Live update of peer status



- active



- inactive/issue

Challenges



- **Solving multi-vendors problem**
- **Multi-product environment**
- **Respecting company guidelines when open-sourcing a tool**
- **Ansible vs. Chef vs. Puppet vs. Salt**
- **Python 2.7 vs 3.5**

Problems solved

- **Create scalable tool to manage peering configurations and updates in multi-product and multi-vendor environment**
- **Reduce manual input to network devices**
- **Reduce time to:**
 - **Configure multiple peers on multiple Internet exchanges**
 - **Populate new exchanges**
- **Quick troubleshooting / monitoring:**
 - **BGP sessions status**
 - **Max-prefix**
 - **Internet exchanges**

Future plans

FEATURES	PLAN
Include PNIs	Q3 2019
ML / AI implementations (SCOUT)	Q3 2019
IXP-DB	?

Enjoy your Pivo!



Ahhh...

Gulp

Relax

Glug

Burp

PEER!

IF YOU ARE INTERESTED MORE IN PIVO AND ITS' DEVELOPMENT, PLEASE SEND E-MAIL TO: MARA@[LinkedIn](mailto:MARA@LinkedIn.com).COM