

Open Source for the IX-API



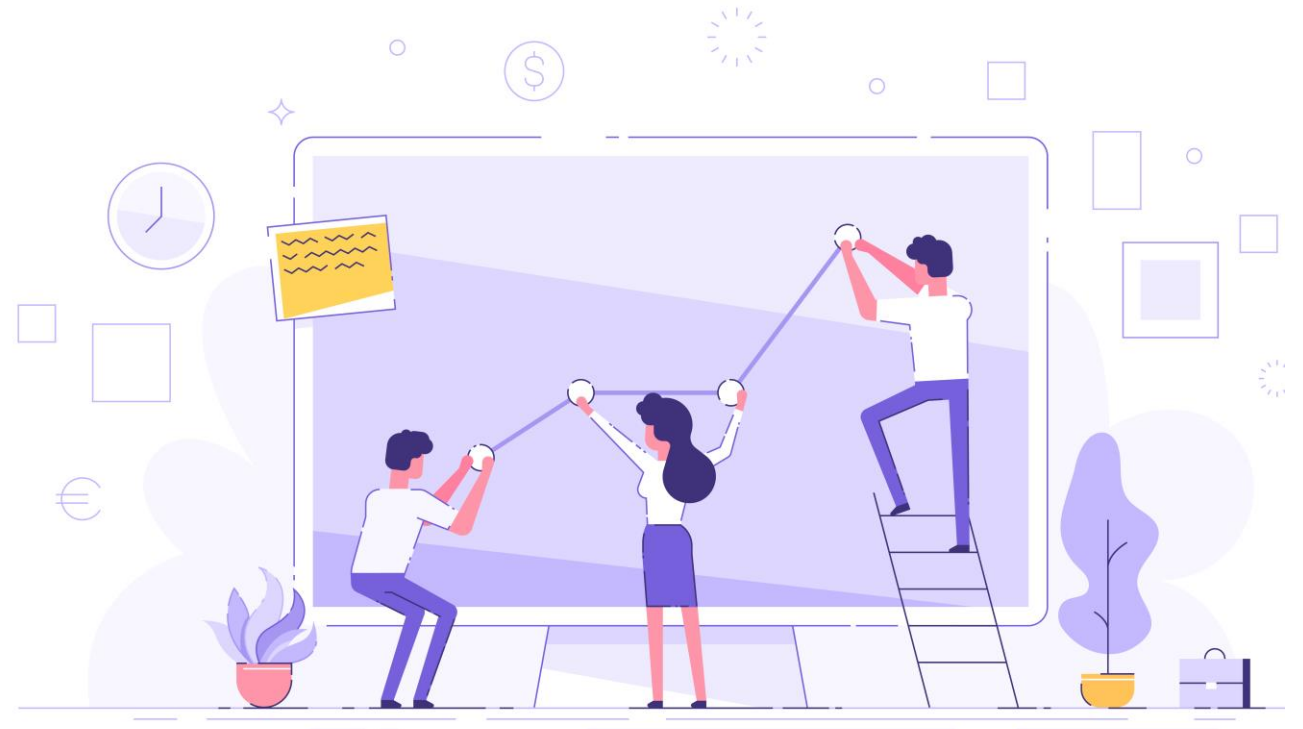
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RIPE 82, Open Source wg, 18th May 2021

IX-API in a nutshell



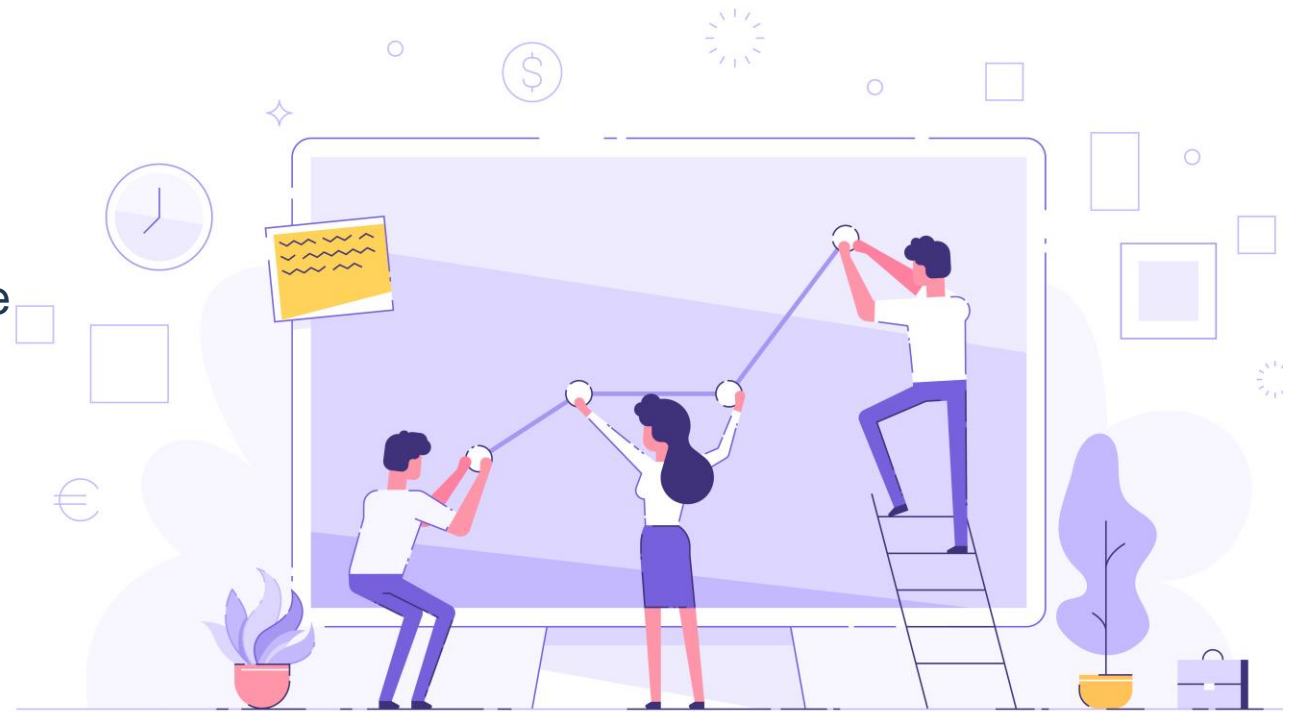
- Joint effort of AMS-IX, DE-CIX and LINX
- Create an industry standard to provision and configure interconnection services
- Started 2019, presented at RIPE 79, Rotterdam
- <https://ix-api.net>



What happened since RIPE 79



- APIv2 introduced at EPF15 (Sept 2020):
 - Features: Peering + Cloud Connectivity, private VLANs and Closed User Groups
 - Not backwards compatible to v1
 - New abstraction/modularity to allow for future features without breaking changes
 - ...and truly cloud provider independent
- Adoption/deployment status:
 - AMS-IX, DE-CIX, Epsilon, DRT/InterXion, LINX, Netnod and others...



DE-CIX portal on top



The screenshot shows the DE-CIX portal interface. At the top, there is a dark green navigation bar with the DE-CIX logo and 'BETA' tag, and a menu with items: Access, Services, Colocation, Tools, Stats, Docs, DE-CIX Academy, Marketing, and Admin. On the right side of the bar, it shows the time '9:22', a 'Contact' button, and an 'Account' dropdown menu. Below the navigation bar, the page title is 'Access & Services' with an 'Add Service' button to the right. A 'Filter' section allows users to search for services by Location, State, ASN, Bandwidth, and LAG. There are also icons for various services, with 'DirectCLOUD' highlighted. The main content area displays two columns of service cards. The left column is for 'DXDB:NAS:51505 (No Ext. Reference)' and the right column is for 'DXDB:NAS:48565 (No Ext. Reference)'. Each card shows bandwidth, point of presence, sub-customer information, and metro area details.

Bandwidth	Point of Presence
1 Gbit/s	FRA2
10 Gbit/s	DX6

Sub Customer	Bandwidth	Metro Area (Of Peering)
DE-CIX SW Demo Customer	9.9 Gbit/s	FRA
DE-CIX SW Demo Customer	10 Gbit/s	FRA

Sub Customer	Bandwidth	Service Provider	Metro Area (On Ramp)	Redundancy
DE-CIX SW Demo Customer	0.1 Gbit/s	AWS	FRA	No redundancy

IX-API OSS



- <https://gitlab.com/ix-api>
- 8 Projects, 0 private repositories:
 - Schema
 - Test suite
 - Reference Client
 - Sandbox (IXP emulator)
 - Website/Hosting configuration/Doc...
- Apache 2.0, Python+Django/Django REST
- RESTful, OpenAPI, JSON&YAML specs
- Ca 3000 commits, 42k LoC



IX-API Client



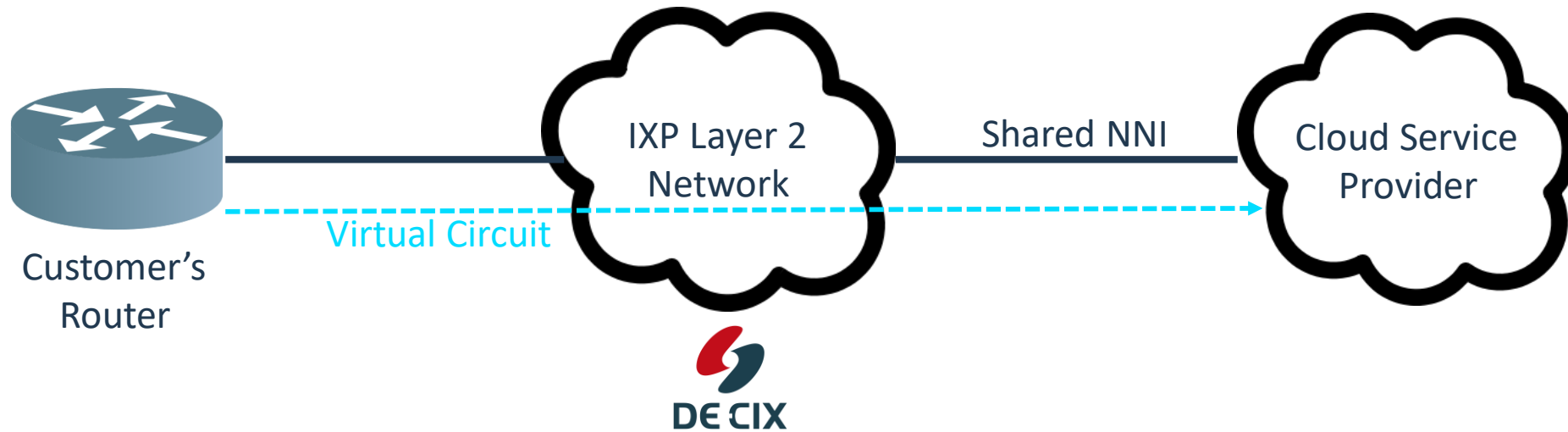
- A python client for the IX-API used by the test suite.
- An (ipython) shell with an interactive API session.
- Currently v2 only
- *Live demo against DE-CIX productive server to live provision an AWS cloud circuit:*

**IXP
INDEPENDENT**

**CLOUD PROVIDER
INDEPENDENT**



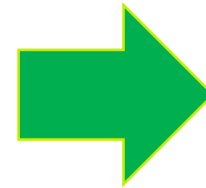
IX-API order AWS Direct Connect



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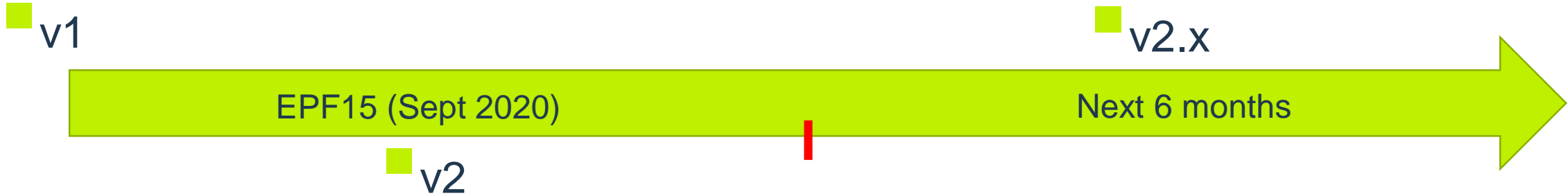
1. Query product catalog (bandwidth, region...)
2. Create Cloud virtual circuit
3. Create individual VLANs on circuit



```
GET /product-offerings  
POST /network-services  
POST /network-service-configs
```

Demo

IX-API Roadmap



More to come:

- Connection management (Order Ports)
- Setup (automated) Cross-Connects based on different workflows
- Manage LAGs
- Statistics, monitoring...

...and more open source code for that!

<https://ix-api.net>

