IRREXPLORER V2.0

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- Over a decade of professional software engineering
- A lot of contracted Python & Django
- Mostly open source
- Not quite a network operator, but I have an ASN in the DFZ
- Write the Docs core team
- she/her

WHAT IS THE INTERNET ROUTING REGISTRY?

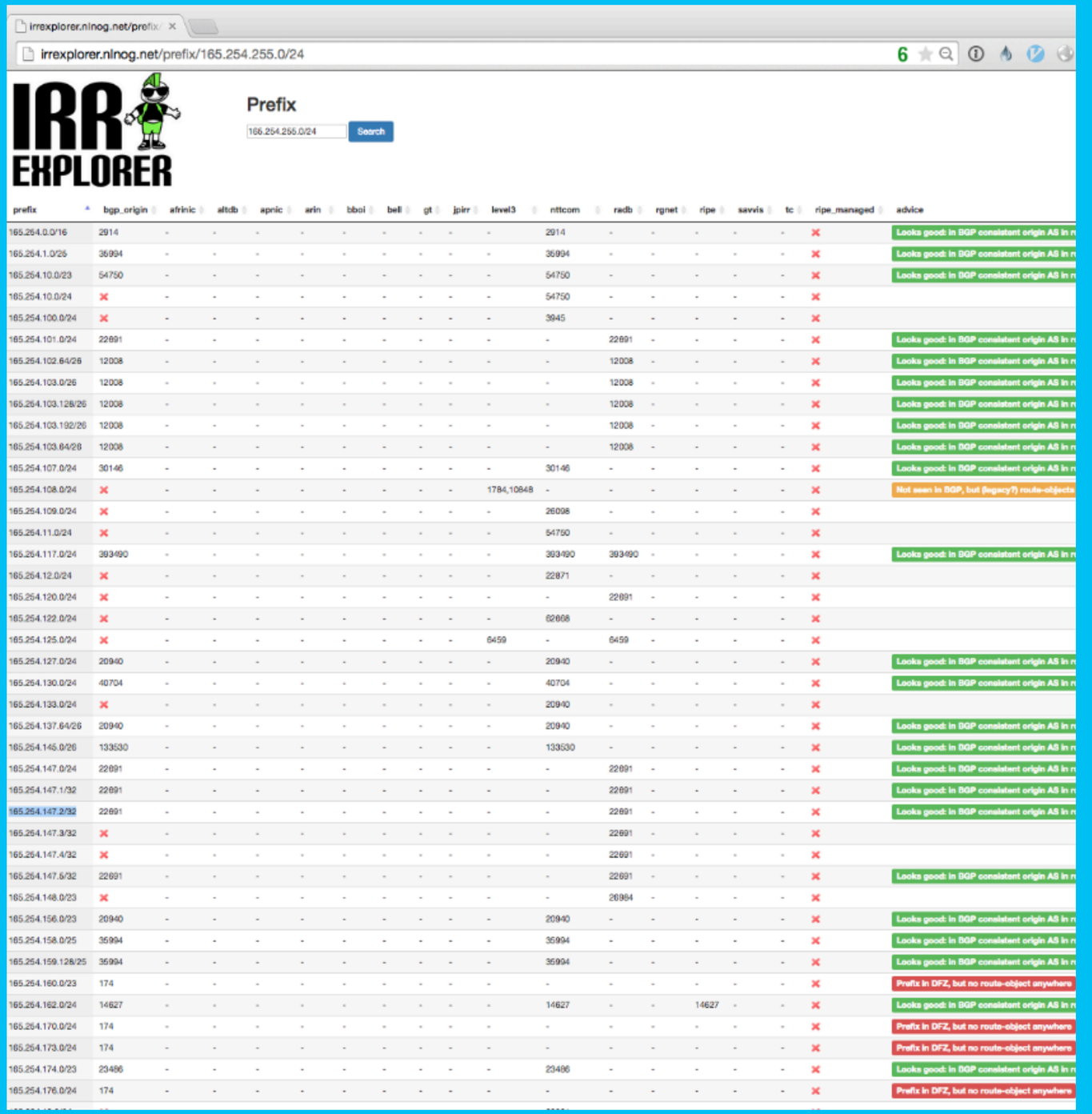
- Routes that you or others intend to announce
- Overlapping with registration data
- Various other things
- Widely used for filtering (e.g. bgpq4)
- A dozen or so registries:
  all RIRs, RADB, NTTCOM, LEVEL3, ...
- Lots of legacy in data and code
  (working on that)

```
route6:          2001:678:d44::/48
origin:          AS213279
mnt-by:          SR42-MNT
created:         2020-05-06T13:11:01Z
last-modified:   2020-05-06T13:11:01Z
source:          RIPE
```

```
as-set:          AS2914:AS-GLOBAL
descr:           NTT Global IP Network transit v4 customers
members:         AS2914, AS3949,
                 AS2914:AS-US, AS2914:AS-ASIA,
                 AS2914:AS-EUROPE, AS2914:AS-SA
admin-c:         NCGE-VRIO
tech-c:          NCGE-VRIO
remarks:         contacts per RFC2142:
remarks:         Abuse / UCE reports abuse@ntt.net
remarks:         Security issues security@ntt.net
mnt-by:          MAINT-NTTCOM-BB
changed:         tboudreau@us.ntt.net 20190630
source:          NTTCOM
```

ORIGINAL IRREXPLORER (2015)

- Insight into all IRR records + BGP for prefix/ASN/as-set
- For yourself or to help out customers
- Room for improvement in UX, reporting, maintainability, correctness



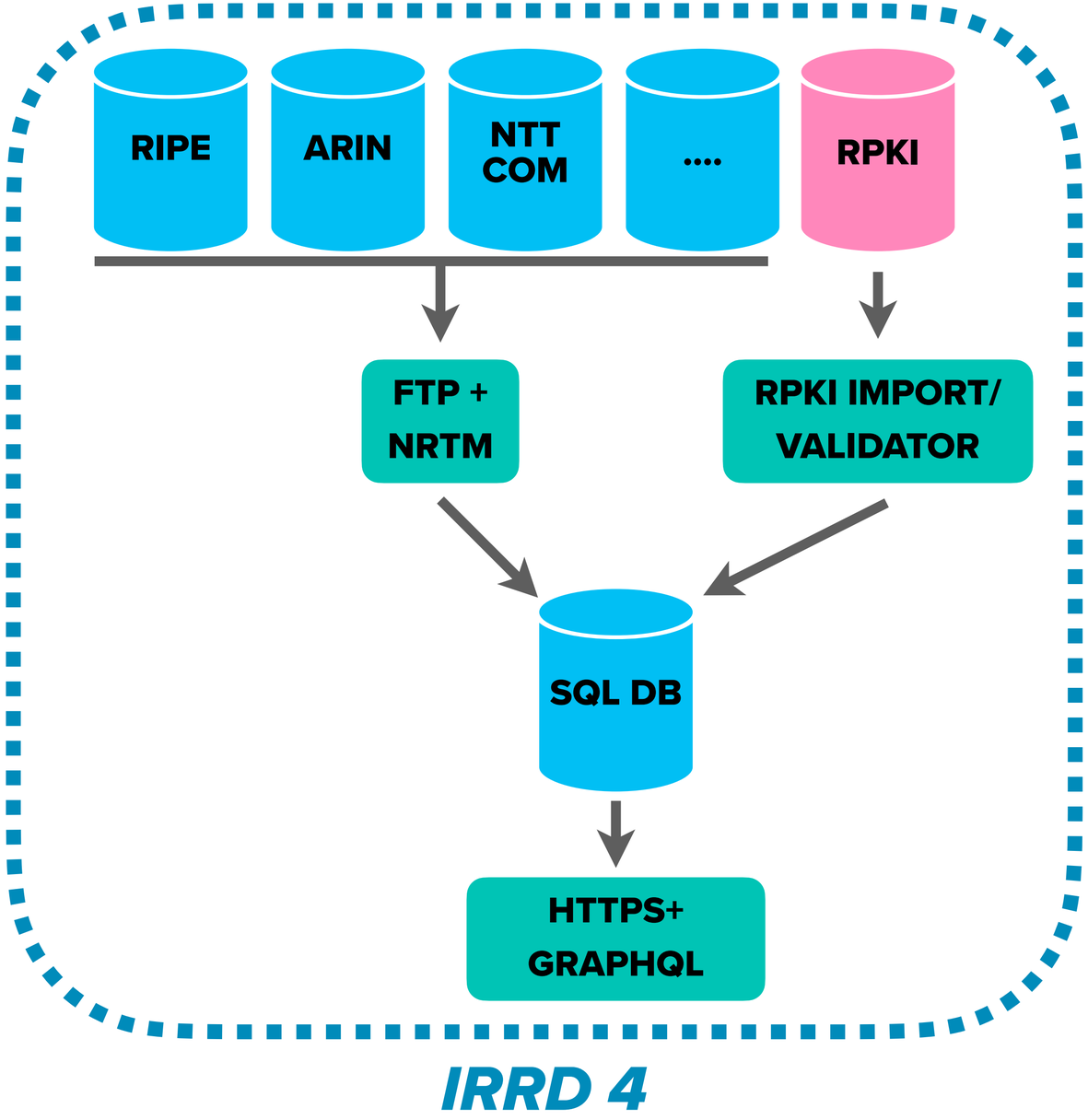
prefix	bgp_origin	afrinic	altdb	apnic	arin	bboi	bell	gt	jpirr	level3	nttcom	radb	rgnet	ripe	savvis	tc	ripe_managed	advice
165.254.0.0/16	2914	-	-	-	-	-	-	-	-	-	2914	-	-	-	-	-	✗	Looks good: in BGP consistent origin AS in n
165.254.1.0/26	36994	-	-	-	-	-	-	-	-	-	36994	-	-	-	-	-	✗	Looks good: in BGP consistent origin AS in n
165.254.10.0/23	54750	-	-	-	-	-	-	-	-	-	54750	-	-	-	-	-	✗	Looks good: in BGP consistent origin AS in n
165.254.10.0/24	✗	-	-	-	-	-	-	-	-	-	54750	-	-	-	-	-	✗	
165.254.100.0/24	✗	-	-	-	-	-	-	-	-	-	3945	-	-	-	-	-	✗	
165.254.101.0/24	22691	-	-	-	-	-	-	-	-	-	-	22691	-	-	-	-	✗	Looks good: in BGP consistent origin AS in n
165.254.102.64/26	12008	-	-	-	-	-	-	-	-	-	-	12008	-	-	-	-	✗	Looks good: in BGP consistent origin AS in n
165.254.103.0/26	12008	-	-	-	-	-	-	-	-	-	-	12008	-	-	-	-	✗	Looks good: in BGP consistent origin AS in n
165.254.103.128/26	12008	-	-	-	-	-	-	-	-	-	-	12008	-	-	-	-	✗	Looks good: in BGP consistent origin AS in n
165.254.103.192/26	12008	-	-	-	-	-	-	-	-	-	-	12008	-	-	-	-	✗	Looks good: in BGP consistent origin AS in n
165.254.103.64/26	12008	-	-	-	-	-	-	-	-	-	-	12008	-	-	-	-	✗	Looks good: in BGP consistent origin AS in n
165.254.107.0/24	30146	-	-	-	-	-	-	-	-	-	30146	-	-	-	-	-	✗	Looks good: in BGP consistent origin AS in n
165.254.108.0/24	✗	-	-	-	-	-	-	-	-	1784,10848	-	-	-	-	-	-	✗	Not seen in BGP, but (legacy?) route-objects
165.254.109.0/24	✗	-	-	-	-	-	-	-	-	-	26098	-	-	-	-	-	✗	
165.254.11.0/24	✗	-	-	-	-	-	-	-	-	-	54750	-	-	-	-	-	✗	
165.254.117.0/24	393490	-	-	-	-	-	-	-	-	-	393490	393490	-	-	-	-	✗	Looks good: in BGP consistent origin AS in n
165.254.12.0/24	✗	-	-	-	-	-	-	-	-	-	22871	-	-	-	-	-	✗	
165.254.120.0/24	✗	-	-	-	-	-	-	-	-	-	-	22691	-	-	-	-	✗	
165.254.122.0/24	✗	-	-	-	-	-	-	-	-	-	62668	-	-	-	-	-	✗	
165.254.125.0/24	✗	-	-	-	-	-	-	-	-	6459	-	6459	-	-	-	-	✗	
165.254.127.0/24	20940	-	-	-	-	-	-	-	-	-	20940	-	-	-	-	-	✗	Looks good: in BGP consistent origin AS in n
165.254.130.0/24	40704	-	-	-	-	-	-	-	-	-	40704	-	-	-	-	-	✗	Looks good: in BGP consistent origin AS in n
165.254.133.0/24	✗	-	-	-	-	-	-	-	-	-	20940	-	-	-	-	-	✗	
165.254.137.64/26	20940	-	-	-	-	-	-	-	-	-	20940	-	-	-	-	-	✗	Looks good: in BGP consistent origin AS in n
165.254.145.0/26	133530	-	-	-	-	-	-	-	-	-	133530	-	-	-	-	-	✗	Looks good: in BGP consistent origin AS in n
165.254.147.0/24	22691	-	-	-	-	-	-	-	-	-	-	22691	-	-	-	-	✗	Looks good: in BGP consistent origin AS in n
165.254.147.1/32	22691	-	-	-	-	-	-	-	-	-	-	22691	-	-	-	-	✗	Looks good: in BGP consistent origin AS in n
165.254.147.2/32	22691	-	-	-	-	-	-	-	-	-	-	22691	-	-	-	-	✗	Looks good: in BGP consistent origin AS in n
165.254.147.3/32	✗	-	-	-	-	-	-	-	-	-	-	22691	-	-	-	-	✗	
165.254.147.4/32	✗	-	-	-	-	-	-	-	-	-	-	22691	-	-	-	-	✗	
165.254.147.5/32	22691	-	-	-	-	-	-	-	-	-	-	22691	-	-	-	-	✗	Looks good: in BGP consistent origin AS in n
165.254.148.0/23	✗	-	-	-	-	-	-	-	-	-	-	26964	-	-	-	-	✗	
165.254.156.0/23	20940	-	-	-	-	-	-	-	-	-	20940	-	-	-	-	-	✗	Looks good: in BGP consistent origin AS in n
165.254.158.0/25	35994	-	-	-	-	-	-	-	-	-	35994	-	-	-	-	-	✗	Looks good: in BGP consistent origin AS in n
165.254.159.128/25	35994	-	-	-	-	-	-	-	-	-	35994	-	-	-	-	-	✗	Looks good: in BGP consistent origin AS in n
165.254.160.0/23	174	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✗	Prefix in DFZ, but no route-object anywhere
165.254.162.0/24	14627	-	-	-	-	-	-	-	-	-	14627	-	-	14627	-	-	✗	Looks good: in BGP consistent origin AS in n
165.254.170.0/24	174	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✗	Prefix in DFZ, but no route-object anywhere
165.254.173.0/24	174	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✗	Prefix in DFZ, but no route-object anywhere
165.254.174.0/23	23486	-	-	-	-	-	-	-	-	-	23486	-	-	-	-	-	✗	Looks good: in BGP consistent origin AS in n
165.254.176.0/24	174	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✗	Prefix in DFZ, but no route-object anywhere

INTERNET ROUTING REGISTRY DAEMON V4

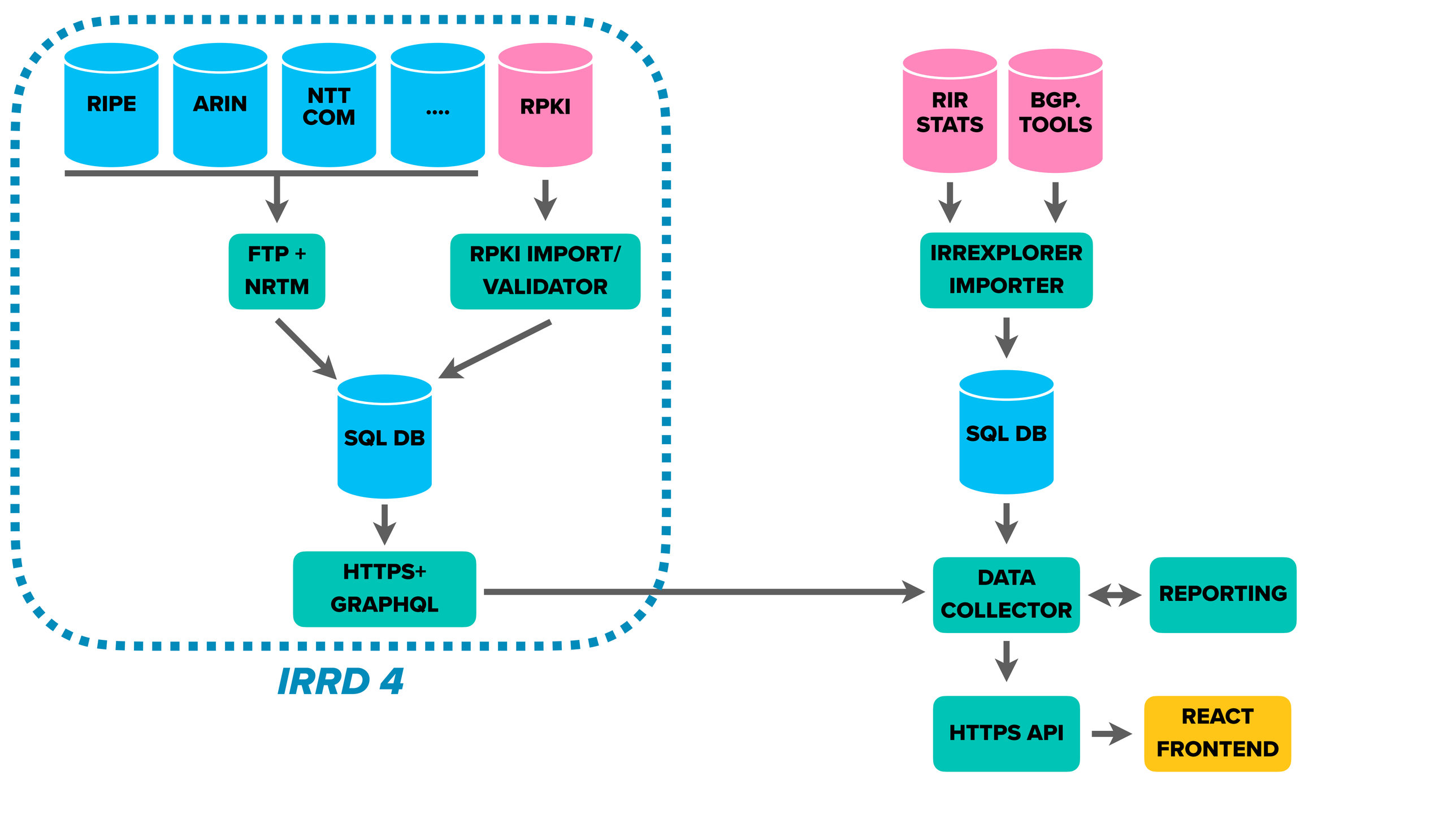
- Rewrite of legacy IRRD, released May 2019
- In production for NTTCOM, ARIN, LACNIC, TC
- Large overlap with original IRRexplorer, but more complete

IRREXPLORER V2

- Complete rewrite in Python + ReactJS
- Builds upon IRRd 4.2's advanced new GraphQL API
- Improved reporting, UX, maintainability, completeness
- Funded by RIPE NCC Community Projects Fund grant to Stichting NLNOG


RIPE
ARIN
NTT COM
....
RPKI
FTP + NRTM
RPKI IMPORT/ VALIDATOR
SQL DB
HTTPS+ GRAPHQL

IRRD 4


RIPE
ARIN
NTT COM
....
RPKI
FTP + NRTM
RPKI IMPORT/ VALIDATOR
SQL DB
HTTPS+ GRAPHQL
IRRD 4
RIR STATS
BGP. TOOLS
IRREXPLORER IMPORTER
SQL DB
DATA COLLECTOR
REPORTING
HTTPS API
REACT FRONTEND

IRR explorer shows the routing, IRR and RPKI status for resources, and highlights potential issues.

Enter a prefix, IP address, AS number or AS set name.

Prefix, IP, ASN or AS-set

Search

Report for ASN AS8283

What does the prefix table show?

Explanation of different messages

Prefixes originated by AS8283

Prefix	RIR	BGP	RPKI	APNIC	RIPE	Advice
91.208.34.0/24	RIPE NCC	8283	8283 /24		8283	Everything looks good
94.142.240.0/21	RIPE NCC	8283	8283 /21		8283	Everything looks good
94.142.240.0/24	RIPE NCC		8283 /24			RPKI ROA exists, but prefix not seen in DFZ
94.142.241.0/24	RIPE NCC		8283 /24			RPKI ROA exists, but prefix not seen in DFZ
94.142.242.0/24	RIPE NCC		8283 /24			RPKI ROA exists, but prefix not seen in DFZ
94.142.244.0/24	RIPE NCC		8283 /24			RPKI ROA exists, but prefix not seen in DFZ
94.142.245.0/24	RIPE NCC		8283 /24			RPKI ROA exists, but prefix not seen in DFZ
94.142.246.0/24	RIPE NCC		8283 /24			RPKI ROA exists, but prefix not seen in DFZ
94.142.247.0/24	RIPE NCC		8283 /24			RPKI ROA exists, but prefix not seen in DFZ
185.52.224.0/22	RIPE NCC	8283	8283 /22		8283	Everything looks good
185.52.224.0/24	RIPE NCC		8283 /24			RPKI ROA exists, but prefix not seen in DFZ
185.52.225.0/24	RIPE NCC	8283	8283 /24			No route objects match DFZ origin
185.52.226.0/24	RIPE NCC		8283 /24			RPKI ROA exists, but prefix not seen in DFZ
185.52.227.0/24	RIPE NCC		8283 /24			RPKI ROA exists, but prefix not seen in DFZ
203.56.44.0/24	APNIC	8283	8283 /24	8283		Everything looks good
2001:678:688::/48	RIPE NCC	8283	8283 /48		8283	Everything looks good

94.142.242.0/24	RIPE NCC		8283 /24			RPKI ROA exists, but prefix not seen in DFZ
94.142.244.0/24	RIPE NCC		8283 /24			RPKI ROA exists, but prefix not seen in DFZ
94.142.245.0/24	RIPE NCC		8283 /24			RPKI ROA exists, but prefix not seen in DFZ
94.142.246.0/24	RIPE NCC		8283 /24			RPKI ROA exists, but prefix not seen in DFZ
94.142.247.0/24	RIPE NCC		8283 /24			RPKI ROA exists, but prefix not seen in DFZ
185.52.224.0/22	RIPE NCC	8283	8283 /22		8283	Everything looks good
185.52.224.0/24	RIPE NCC		8283 /24			RPKI ROA exists, but prefix not seen in DFZ
185.52.225.0/24	RIPE NCC	8283	8283 /24			No route objects match DFZ origin
185.52.226.0/24	RIPE NCC		8283 /24			RPKI ROA exists, but prefix not seen in DFZ
185.52.227.0/24	RIPE NCC		8283 /24			RPKI ROA exists, but prefix not seen in DFZ
203.56.44.0/24	APNIC	8283	8283 /24	8283		Everything looks good
2001:678:688::/48	RIPE NCC	8283	8283 /48		8283	Everything looks good

Other prefixes overlapping with prefixes originated by AS8283

Prefix	RIR	BGP	RPKI	RADB	Advice
203.56.0.0/15	APNIC			7545, 9942	Expected route object in APNIC, but only found in other IRRs Multiple route objects exist with different origins Route objects exist, but prefix not seen in DFZ No (covering) RPKI ROA found for route objects
203.56.0.0/16	APNIC			24436	Expected route object in APNIC, but only found in other IRRs Route objects exist, but prefix not seen in DFZ No (covering) RPKI ROA found for route objects

Source data as JSON

Report for prefix 192.5.5.241

What does the prefix table show?

Explanation of different messages

Directly overlapping prefixes of 192.5.5.241

Prefix	RIR	BGP	RPKI	NTTCOM	RADB	Advice
192.5.4.0/23	ARIN	3557			3557	Expected route object in ARIN, but only found in other IRRs No (covering) RPKI ROA found for route objects
192.5.5.0/24	ARIN	3557		55440	3557, 14259, 23708	Expected route object in ARIN, but only found in other IRRs Multiple route objects exist with different origins No (covering) RPKI ROA found for route objects

Source data as JSON

All overlaps of least specific match 192.5.4.0/23

Prefix	RIR	BGP	RPKI	NTTCOM	RADB	Advice
192.5.4.0/23	ARIN	3557			3557	Expected route object in ARIN, but only found in other IRRs No (covering) RPKI ROA found for route objects
192.5.4.0/24	ARIN				3557	Expected route object in ARIN, but only found in other IRRs Route objects exist, but prefix not seen in DFZ No (covering) RPKI ROA found for route objects
192.5.5.0/24	ARIN	3557		55440	3557, 14259, 23708	Expected route object in ARIN, but only found in other IRRs Multiple route objects exist with different origins

Report for prefix 192.5.5.241

What does the prefix table show?

Explanation of different messages

Directly overlapping pre

Prefix	RIR	BGP
192.5.4.0/23	ARIN	3557
192.5.5.0/24	ARIN	3557

Source data as JSON

All overlaps of least spe

Prefix	RIR	BGP			
192.5.4.0/23	ARIN	3557			
192.5.4.0/24	ARIN			3557	Expected route object in ARIN, but only found in other IRRs Route objects exist, but prefix not seen in DFZ No (covering) RPKI ROA found for route objects
192.5.5.0/24	ARIN	3557	55440	3557, 14259, 23708	Expected route object in ARIN, but only found in other IRRs

AS23708 / 192.5.5.0/24

whois -h whois.radb.net 192.5.5.0/24

```
route:          192.5.5.0/24
descr:          VOCUSGROUPNZ
origin:         AS23708
remarks:        This route object was created on behalf of a Vocus customer
remarks:        because the route is being exported under this origin AS.
remarks:        This route object has been created to ensure reachability
remarks:        as some of Vocus's upstream networks filter based on IRR objects.
remarks:
remarks:        Please contact irr@vocus.com.au if you have any
remarks:        questions regarding this route object.
mnt-by:         MAINT-AS4826
changed:        support@vocus.com.au 20210614
source:         RADB
```

Close

Report for prefix 192.5.5.241

What does the prefix table show?

Explanation of different messages

Directly overlapping prefixes of 192.5.5.241

Prefix	RIR	BGP	RPKI	NTTCOM	RADB	Advice
192.5.4.0/23	ARIN	3557			3557	Expected route object in ARIN, but only found in other IRRs No (covering) RPKI ROA found for route objects
192.5.5.0/24	ARIN	3557		55440	3557, 14259, 23708	Expected route object in ARIN, but only found in other IRRs Multiple route objects exist with different origins No (covering) RPKI ROA found for route objects

Source data as JSON

All overlaps of least specific match 192.5.4.0/23

Prefix	RIR	BGP	RPKI	NTTCOM	RADB	Advice
192.5.4.0/23	ARIN	3557			3557	Expected route object in ARIN, but only found in other IRRs No (covering) RPKI ROA found for route objects
192.5.4.0/24	ARIN				3557	Expected route object in ARIN, but only found in other IRRs Route objects exist, but prefix not seen in DFZ No (covering) RPKI ROA found for route objects
192.5.5.0/24	ARIN	3557		55440	3557, 14259, 23708	Expected route object in ARIN, but only found in other IRRs Multiple route objects exist with different origins

```
0:
  irrRoutes:
    RADB:
      0:
        rpkiStatus:      "NOT_FOUND"
        rpslPk:          "192.5.5.0/24AS3557"
        rpslText:        "route:          192.5.5.…\nsource:         RADB\n"
        rpkiMaxLength:   null
        asn:             3557
      1:                 {…}
      2:
        rpkiStatus:      "NOT_FOUND"
        rpslPk:          "192.5.5.0/24AS23708"
        rpslText:        "route:          192.5.5.…nsource:         RADB\n"
        rpkiMaxLength:   null
        asn:             23708
    NTTCOM:
      0:                 {…}
  prefix:                "192.5.5.0/24"
  goodnessOverall:       1
  bgpOrigins:
    0:                   3557
  messages:
    0:
      category:          "warning"
      text:              "Expected route object in…nly found in other IRRs"
    1:
      category:          "warning"
      text:              "Multiple route objects e… with different origins"
    2:
      category:          "info"
      text:              "No (covering) RPKI ROA found for route objects"
  categoryOverall:       "warning"
  rir:                   "ARIN"
  rpkiRoutes:            []
  prefixSortKey:         "3221554432/24"
1:                       {…}
```

Prefixes originated by AS12654

Prefix	RIR	BGP	RPKI	APNIC	ARIN-NONAUTH	NTTCOM	RADB	RIPE	RIPE-NONAUTH	Advice
27.50.0.0/22	APNIC	55303		12654		55303	9293, 55303			Expected route object in APNIC, but BGP origin does not match. Objects from other IRRs do match BGP origin No (covering) RPKI ROA found for route objects
2001:7fb:fd03::/48	RIPE NCC	12654	196615 /48					12654		RPKI origin does not match BGP origin RPKI invalid route objects found
84.205.95.0/24	RIPE NCC	12654	12654 /24				12654, 52720, 52873	12654		RPKI invalid route objects found Multiple route objects exist with different origins
23.128.124.0/24	ARIN	12654								No route objects match DFZ origin
93.175.147.0/24	RIPE NCC	12654	196615 /24					12654		RPKI origin does not match BGP origin RPKI invalid route objects found
2001:7fb:fd04::/48	RIPE NCC	15562	196615 /48					12654		No route objects match DFZ origin RPKI origin does not match BGP origin RPKI invalid route objects found
84.205.79.0/24	RIPE NCC	12654	12654 /24				12654, 52720, 52873	12654		RPKI invalid route objects found Multiple route objects exist with different origins
23.128.25.240/28	ARIN				12654				12654	Expected route object in ARIN, but only found in other IRRs Route objects exist, but prefix not seen in DFZ No (covering) RPKI ROA found for route objects
23.128.25.0/25	ARIN				12654				12654	Expected route object in ARIN, but only found in other IRRs Route objects exist, but prefix not seen in DFZ No (covering) RPKI ROA found for route objects

Directly overlapping prefixes of 192.30.45.0/24

Prefix	RIR	BGP	RPKI	ARIN	RADB	Advice
192.30.45.0/24	ARIN	396576, 396547, 396549, 40647, 396557, 36623, 396566, 396570		10515, 20172, 20362, 20431, 22547, 27544, 29966, 32409, 32651, 36616, 36617, 36618, 36619, 36620, 36621, 36622, 36623, 36624, 36625, 36626, 36627, 36628, 36629, 36630, 36632, 40647, 40717, 396540, 396541, 396542, 396543, 396544, 396545, 396546, 396547, 396548, 396549, 396550, 396551, 396552, 396553, 396554, 396555, 396556, 396557, 396558, 396559, 396560, 396561, 396562, 396563, 396564, 396565, 396566, 396567, 396568, 396569, 396570, 396571, 396572, 396573, 396574, 396575, 396576, 396577, 396578, 396580, 396581, 396582, 396583, 396584, 396585, 396586, 396587, 396588, 396589, 396590, 396591, 396592, 396593, 396594, 396595, 396596, 396597, 396826, 396827, 397193, 397194, 397195, 397196, 397197, 397198, 397199, 397200, 397201, 397202, 397203, 397204, 397205, 397206, 397207, 397208, 397209, 397210, 397211, 397212	10515, 20172, 20362, 20431, 22547, 27544, 29966, 32409, 32651, 36616, 36617, 36618, 36619, 36620, 36621, 36622, 36623, 36624, 36625, 36626, 36627, 36628, 36629, 36630, 36632, 40647, 40717, 396540, 396541, 396542, 396543, 396544, 396545, 396546, 396547, 396548, 396549, 396550, 396551, 396552, 396553, 396554, 396555, 396556, 396557, 396558, 396559, 396560, 396561, 396562, 396563, 396564, 396565, 396566, 396567, 396568, 396569, 396570, 396571, 396572, 396573, 396574, 396575, 396576, 396577, 396578, 396580, 396581, 396582, 396583, 396584, 396585, 396586, 396587, 396588, 396589, 396590, 396591, 396592, 396593, 396594, 396595, 396596, 396597, 396826, 396827, 397193, 397194, 397195, 397196, 397197, 397198, 397199, 397200, 397201, 397202, 397203, 397204, 397205, 397206, 397207, 397208, 397209, 397210, 397211, 397212	Multiple route objects exist with different origins No (covering) RPKI ROA found for route objects
192.30.45.30/32	ARIN			10515, 20172, 20362, 20431, 22547, 27544, 29966, 32409, 32651, 36616, 36617, 36618, 36619, 36620, 36621, 36622, 36623, 36624, 36625, 36626, 36627, 36628, 36629, 36630, 36632, 40647, 40717, 396540, 396541, 396542, 396543, 396544, 396545, 396546, 396547, 396548, 396549, 396550, 396551, 396552, 396553, 396554, 396555, 396556, 396557, 396558, 396559, 396560, 396561, 396562, 396563, 396564, 396565, 396566, 396567, 396568, 396569, 396570, 396571, 396572, 396573, 396574, 396575, 396576, 396577, 396578, 396580, 396581, 396582, 396583, 396584, 396585, 396586, 396587, 396588, 396589, 396590, 396591, 396592, 396593,	10515, 20172, 20362, 20431, 22547, 27544, 29966, 32409, 32651, 36616, 36617, 36618, 36619, 36620, 36621, 36622, 36623, 36624, 36625, 36626, 36627, 36628, 36629, 36630, 36632, 40647, 40717, 396540, 396541, 396542, 396543, 396544, 396545, 396546, 396547, 396548, 396549, 396550, 396551, 396552, 396553, 396554, 396555, 396556, 396557, 396558, 396559, 396560, 396561, 396562, 396563, 396564, 396565, 396566, 396567, 396568, 396569, 396570, 396571, 396572, 396573, 396574, 396575, 396576, 396577, 396578, 396580, 396581, 396582, 396583, 396584, 396585, 396586, 396587, 396588, 396589, 396590, 396591, 396592, 396593,	Multiple route objects exist with different origins Route objects exist, but prefix not seen in DFZ No (covering) RPKI ROA found for route objects

Included in the following sets:

Name	LEVEL3	RADB	RIPE
AS-AB-ITN		✓	
AS-AMS-IX-PEERS			✓
AS-AMS-IX-RS			✓
AS-AMS-IX-RS-V6			✓
AS-AS260-PEERS			✓
AS-BBNED-AMSIX1			✓
AS-CWCUSTEU			✓
AS-DDITS:AS-PEERS			✓
AS-DOCLER:AS-PEERS			✓
AS-FINECOM-PEERS-AMSIX			✓
AS-GBLXEU			✓
AS-GREEN-IPV6-PEERS			✓
AS-GREEN-PEERS			✓
AS-INFO-PEERS-AMSIX			✓
AS-INTROWEB-PEERS			✓
AS-KPN			✓

Report for AS-set AS-OPENPEERINGPEERS

Expands to:

Name	Source	Depth	Path	Members
AS-OPENPEERINGPEERS	RIPE	1	AS-OPENPEERINGPEERS	AS-ADELINOVIUS AS-AIRSPEED AS-AMS-IX-RS AS-ANDERS AS-AORTANL AS-APPLE AS-ARCORGLOBAL AS-AS29550 AS-AS29550-V6 AS-ASDASD AS-ASNET AS-ATE AS-ATE-CUST AS-ATINET AS-AVENSYS AS-AWELL AS-BANDWIDTH AS-BLATZ AS-BLATZ-V6 AS-BOOKING AS-BOUNDLESSCOMMS AS-BSOCOM AS-C4L AS-CARRIER66 AS-CASEMAISP AS-CELESTE AS-CERBERUSNETWORKS AS-CITYTELECOM AS-CLARANET AS-COLOCLUE AS-COMX AS-CONNETU AS-CYBERLINK AS-DATAPIPE AS-DATATECHUK AS-DIALTELECOM AS-DOKOM21 AS-DSTORAGE AS-EMIX AS-EQUINIX-EU AS-EQUINIX-FR AS-ETOP AS-EUNETIP AS-EWETEL AS-EXA AS-FACEBOOK AS-FASTNET AS-FIBER AS-FIBER-TRANZIT-2 AS-FIORD AS-FLAGP AS-FORTEX AS-FORTEX6 AS-FREENETDE AS-FRONTIER AS-GBXS AS-GCONNECT AS-GIPNL AS-GLOBAL AS-GNET-KW AS-GTLD AS-GTS-CE AS-GYRON AS-HA-VEL-AMSIX AS-HANSENET AS-HEXANET AS-HIGHWINDS AS-HIVANE AS-HLKOMM AS-HURRICANE AS-HURRICANEV6 AS-IACD AS-IDEAR4BUSINESS AS-IKOULA AS-INETBONE AS-INFOSTRADA AS-INTERNET4YOU AS-INTERNET4YOU-V6 AS-INTERNLNET AS-IP-MAN AS-IP-MAX AS-IPERCAST AS-IPHH AS-IPO AS-IPTP AS-IPX AS-ISPPRO AS-ISPRIME AS-ITPS AS-IUNXI AS-IXREACH AS-KCOMSPN AS-KDG AS-KOMPLEX AS-KPN AS-KWAOO AS-LAN AS-LIECOMTEL AS-LNCAMSIX AS-LUXNETWORK AS-MAILRU AS-MANDA AS-MANX AS-MCKAY AS-MICROSOFT AS-MISTRAL AS-MNS AS-MTNNS AS-MULTIPLAY AS-MUNTINTERNET AS-MYTHIC AS-NAUKANET AS-NCORE AS-NETCOLOGNE AS-NETCONNEX AS-NETGUARD AS-NEURONNEXION AS-NEWNET AS-NEXTLAYER AS-NORDUNET AS-OBIT AS-OPAL AS-OPENCARRIER AS-OPENCARRIER6 AS-OPENDNS AS-OPENPEERINGMEMBERS AS-OPTEAMAX AS-ORNIS AS-OTEGLOBE AS-OVH AS-PACNET AS-PICTURA AS-PLUS AS-PLUSNETUK AS-PROSERVE AS-PROXAD AS-PTA AS-PTLU AS-QTEL-SET AS-RASCOM AS-RDSNET AS-RETN AS-RUNNET AS-SARENET AS-SDTAMSIX AS-SERVEREL AS-SIGNET AS-SOCO AS-SOFTLAYER AS-SOLCON AS-SOVAM AS-SPEEDXS AS-SPXS AS-STRATORZ AS-SUEC-DACOR AS-SURFNET AS-SYNERGYWORKS AS-TACHYON-EU AS-TANGO AS-TDDE AS-TELECITYLON AS-TELEDATAUK AS-TELENOR AS-TERTIARY AS-TICCH AS-TIERA AS-TMR AS-TNF AS-TNG AS-TRANSIP AS-TRANSQUALITY AS-TSN AS-TWIG AS-UNILINK AS-UNIXSOLUTIONS AS-VECTRANET AS-VERSATEL AS-VIATEL AS-VIRGIN AS-VKONTAKTE AS-VODAFONE AS-WAVESPEED AS-

Name	Source	Depth	Path	Members
AS-APPLE	RADB	3	AS-OPENPEERINGPEERS ➜ AS-RETN ➜ AS-APPLE	AS6185 AS714
AS-BLATZ	RIPE	3	AS-OPENPEERINGPEERS ➜ AS-TNG ➜ AS-BLATZ	AS15894 AS20886
AS-CYBERLINK	RIPE	3	AS-OPENPEERINGPEERS ➜ AS-GLOBAL ➜ AS-CYBERLINK	AS-DATAWIRE AS-VELDER AS15623 AS16111 AS198165 AS198635 AS202451 AS205737 AS206214 AS206779 AS208065 AS30935 AS31051 AS34960 AS35034 AS35712 AS39037 AS39865 AS39895 AS41590 AS42085 AS42978 AS43107 AS43183 AS43291 AS43393 AS44273 AS48795 AS49867 AS50805 AS5529 AS60221 AS61232 AS6732 AS8302
AS-CYBERLINK	RIPE	3	AS-OPENPEERINGPEERS ➜ AS-IXREACH ➜ AS-CYBERLINK	AS-DATAWIRE AS-VELDER AS15623 AS16111 AS198165 AS198635 AS202451 AS205737 AS206214 AS206779 AS208065 AS30935 AS31051 AS34960 AS35034 AS35712 AS39037 AS39865 AS39895 AS41590 AS42085 AS42978 AS43107 AS43183 AS43291 AS43393 AS44273 AS48795 AS49867 AS50805 AS5529 AS60221 AS61232 AS6732 AS8302
AS-DATAPIPE	RADB	3	AS-OPENPEERINGPEERS ➜ AS-RASCOM ➜ AS-DATAPIPE	AS-ADAPT AS-GOGRID AS-LAYERED AS11927 AS12200 AS14492 AS16645 AS16977 AS21613 AS22205 AS24043 AS24778 AS30627 AS33634 AS3762 AS40874 AS53498 AS54535 AS58982
AS-DATATECHUK	RIPE	3	AS-OPENPEERINGPEERS ➜ AS-IXREACH ➜ AS-DATATECHUK	AS47622
AS-EQUINIX-EU	RIPE	3	AS-OPENPEERINGPEERS ➜ AS-KPN ➜ AS-EQUINIX-EU	AS-EQUINIX-AM AS-EQUINIX-BA AS-EQUINIX-CH AS-EQUINIX-DB AS-EQUINIX-DE AS-EQUINIX-DU AS-EQUINIX-EN AS-EQUINIX-FR AS-EQUINIX-GV AS-EQUINIX-HE AS-EQUINIX-HH AS-EQUINIX-IL AS-EQUINIX-LD AS-EQUINIX-LS AS-EQUINIX-MA AS-EQUINIX-MD AS-EQUINIX-ML AS-EQUINIX-MU AS-EQUINIX-NL AS-EQUINIX-PA AS-EQUINIX-SA AS-EQUINIX-SK AS-EQUINIX-SO AS-EQUINIX-UK AS-EQUINIX-WA AS-EQUINIX-ZH AS-EQUINIX-ZW
AS-EQUINIX-FR	RIPE	3	AS-OPENPEERINGPEERS ➜ AS-EQUINIX-EU ➜	AS-PACKET AS-TELECITYGROUP-DE AS10599 AS11870 AS12888 AS13806 AS15580 AS15830 AS17073 AS18214 AS1828 AS18679 AS18882 AS198913 AS202108 AS204253 AS205508 AS205527 AS206219

Name	Source	Depth	Path	Members
AS-ARCORGLOBAL	RIPE	2	AS-OPENPEERINGPEERS ➜ AS-ARCORGLOBAL	AS-ARCOR AS-KDG
AS-AS29550	RIPE	2	AS-OPENPEERINGPEERS ➜ AS-AS29550	AS-CAIRNEY AS-DWEBS AS-ISIONUK AS203461 AS29550 AS34920
AS-AS29550-V6	RIPE	2	AS-OPENPEERINGPEERS ➜ AS-AS29550-V6	AS-DWEBS AS-NAMESCO-V6 AS203461 AS29550 AS34920
AS-ASDASD	RIPE	2	AS-OPENPEERINGPEERS ➜ AS-ASDASD	AS28929
AS-ASNET	NTTCOM	2	AS-OPENPEERINGPEERS ➜ AS-ASNET	AS1659 AS17502 AS17711 AS17712 AS17713 AS17716 AS17717 AS18047 AS18181 AS18183 AS7539 AS7649 AS9264 AS9283 AS9916
AS-ASNET	RIPE	2	AS-OPENPEERINGPEERS ➜ AS-ASNET	AS202659 AS202765
AS-ASNET	APNIC	2	AS-OPENPEERINGPEERS ➜ AS-ASNET	AS1659 AS17711 AS17712 AS17713 AS17716 AS17717 AS18047 AS18177 AS18181 AS18183 AS18414 AS18420 AS18422 AS7539 AS9264 AS9916
AS-ATE	RIPE	2	AS-OPENPEERINGPEERS ➜ AS-ATE	AS-ADVCOM AS-CERIZ AS-DIPM AS-FULLSAVE AS-NEXYLAN AS-UNET AS-VDG AS199917 AS202448 AS202449 AS203386 AS205149 AS205181 AS205225 AS205761 AS207719 AS24935 AS31235 AS3299 AS34993 AS35189 AS35625 AS3573 AS48402 AS49960 AS57348 AS59859 AS60555 AS60592
AS-ATE-CUST	RIPE	2	AS-OPENPEERINGPEERS ➜ AS-ATE-CUST	AS-CERIZ AS35625 AS48402 AS49960 AS57348 AS59859 AS60555 AS60592
AS-ATINET	RIPE	2	AS-OPENPEERINGPEERS ➜ AS-ATINET	AS34215
AS-AVENSYS	RIPE	2	AS-OPENPEERINGPEERS ➜ AS-AVENSYS	AS-HNS AS-QIX-LINX AS205072 AS47549 AS8553

Report for prefix ::/3

What does the prefix table show?

Explanation of different messages

Directly overlapping prefixes of ::/3

Prefix	RIR	BGP	RPKI	BBOI	Advice
1804:f8c::/32				263591	Route objects exist, but prefix not seen in DFZ No (covering) RPKI ROA found for route objects
600:6001:110b::/48		11351			No route objects match DFZ origin

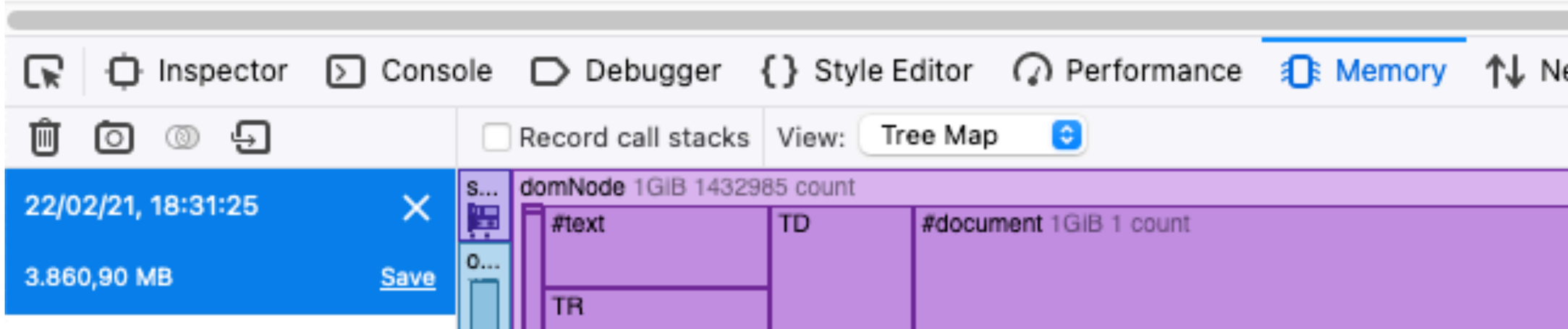
Source data as JSON

IRR EXPLORER

Prefix, IP, ASN or

Query: 2001::/16

Prefix	RIR	BGP
2001:500:7967··2:33/128	AFRINIC	



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