

ASPA @ YYCIX

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Calgary Internet Exchange (YYCIX) deploys world's first ASPA-filtering Route Servers

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CALGARY, CA-AB, Feb. 2, 2023 - The Calgary Internet Exchange (YYCIX) is thrilled to announce the deployment of the world's first ASPA-filtering Route Servers on a public peering fabric. The YYCIX Route Servers drop ASPA-invalid BGP routes in order to protect multilateral peers.

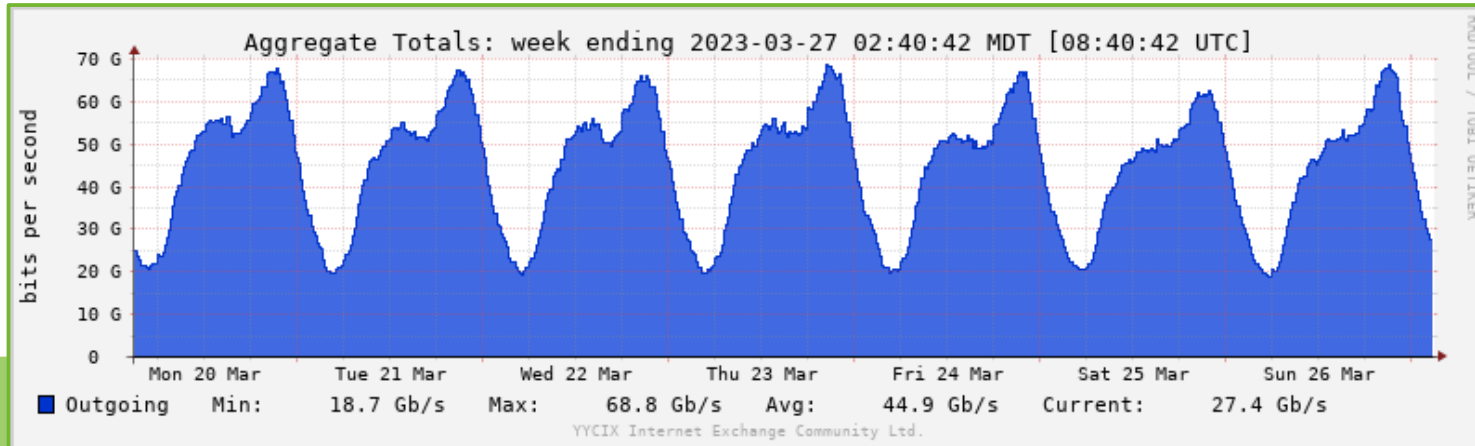
ASPA (Autonomous System Provider Authorization) is a free RPKI-based technology for detection and mitigation of BGP route leaks. ASPA enables holders of Autonomous System identifiers to securely authorize one or more other Autonomous Systems as their upstream providers. In turn

<https://mailman.nanog.org/pipermail/nanog/2023-February/221471.html>



YYCIX – Calgary Internet Exchange

- 7 facilities
- 72 ASes connected
- 1.1 terabit/sec capacity
- <https://www.peeringdb.com/ix/639> and <https://yycix.ca/>



YYCIX Route Servers

- 119 BGP neighbors (Established state)
- 168,540 BGP routes (112,861 IPv4 - 55,450 IPv6)
- ~ 30 megabytes of “RPL” configuration
- Software stack: [OpenBGPD](#) + [rpki-client](#) + [Arouteserver](#)



ASPA in the wild

```
"provider_authorizations": {  
  "ipv4": [  
    { "customer_asid": 945, "providers": [1299, 6939, 7480, 20473, 32097, 50058, 56655, 61138] },  
    { "customer_asid": 970, "providers": [54874] },  
    { "customer_asid": 15562, "providers": [2914, 8283, 51088, 206238] },  
    { "customer_asid": 21957, "providers": [970] },  
    { "customer_asid": 50058, "providers": [174, 1299, 6939, 32097] }  
  ],  
  "ipv6": [  
    { "customer_asid": 945, "providers": [1299, 6939, 7480, 20473, 32097, 50058, 56655, 61138] },  
    { "customer_asid": 970, "providers": [54874] },  
    { "customer_asid": 15562, "providers": [2914, 8283, 51088, 206238] },  
    { "customer_asid": 21957, "providers": [970] },  
    { "customer_asid": 50058, "providers": [174, 1299, 6939, 32097] }  
  ]  
}
```

5 objects, full AFI parity (March 27th, 2023)



Policy for ASPA-invalid routes

Background:

- RPKI-ROAs have been around since 2011
- YYCIX dropping RPKI-ROV invalid BGP routes since 2018
 - Multi-week project to get members' misconfigured RPKI-ROAs fixed

Therefore (with ASPA-object population in its infancy):

- **reject** ASPA-invalid routes (*right off the bat, don't wait 7 years*)
- We encourage *all* IXPs to *reject* ASPA-invalids



ASPA stats (March 27th, 2023)

- 5 ASPA objects reachable via the 5 RIR Trust Anchors
- 1,618 ASPA-valid routes (almost 1% of all routes)
 - 1,255 IPv4
 - 363 IPv6
- 4 ASPA-invalid routes
 - All invalid due to the presence of AS_SET segment in AS_PATH



Questions?

