



manitoba internet exchange

Operations Report

May 19, 2021

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& Theodore Baschak

Changes in Past 2 Years

- 4 New Members / Peers, 1 member left
 - Flex
 - MERLIN
 - Westman
 - High Speed Crow
 - Pegboard closed their business
- 1 New Location
 - 355 Portage Avenue
 - Air Canada Building
 - Colocation from LES.NET and Flex/Fastnet
- Upgraded inter-datacentre link from 40G to 100G
 - 167L to 294P now on 100G LR-4 optics

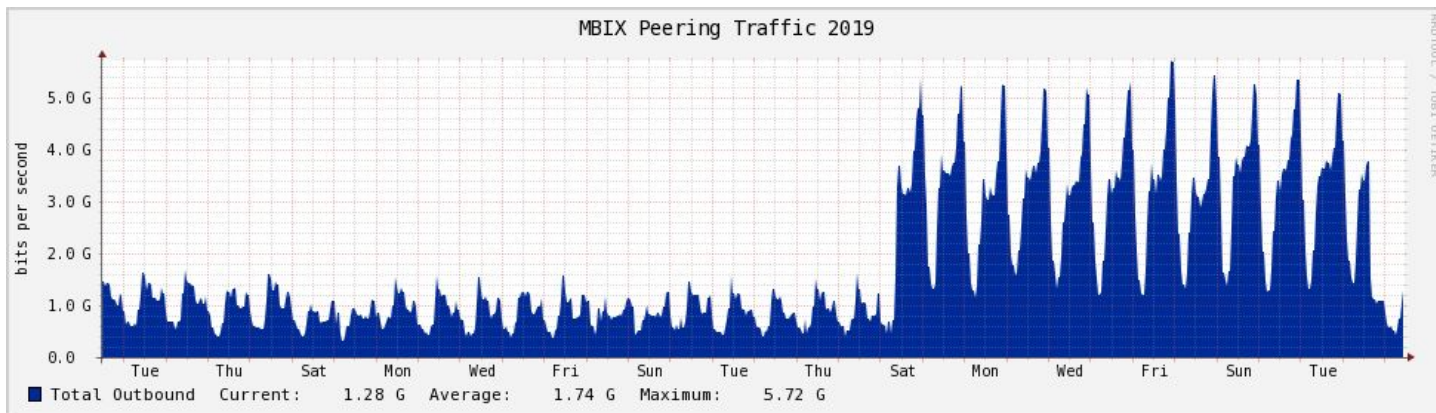
Outages and Maintenance

- New switching hardware migration
 - Upgrade to Nexus 9K @294 Portage (LES.NET)
 - Donation from OGIX in Ottawa
 - Upgrade 40G to 100G between switches
- Power failure incidents
 - Spring 2020 outage at 167 Lombard (XGSC)
 - 167L members affected

MBIX By The Numbers

- Connected members: 31 (+3)
- 1 Gb ports: 10
- 10 Gb ports: 28
- Port capacity: 290 Gbps (+66)
- Daily Peak: ~ 1.5 Gbps (+0.5)

High traffic due to a member receiving transit over MBIX - Interesting use case



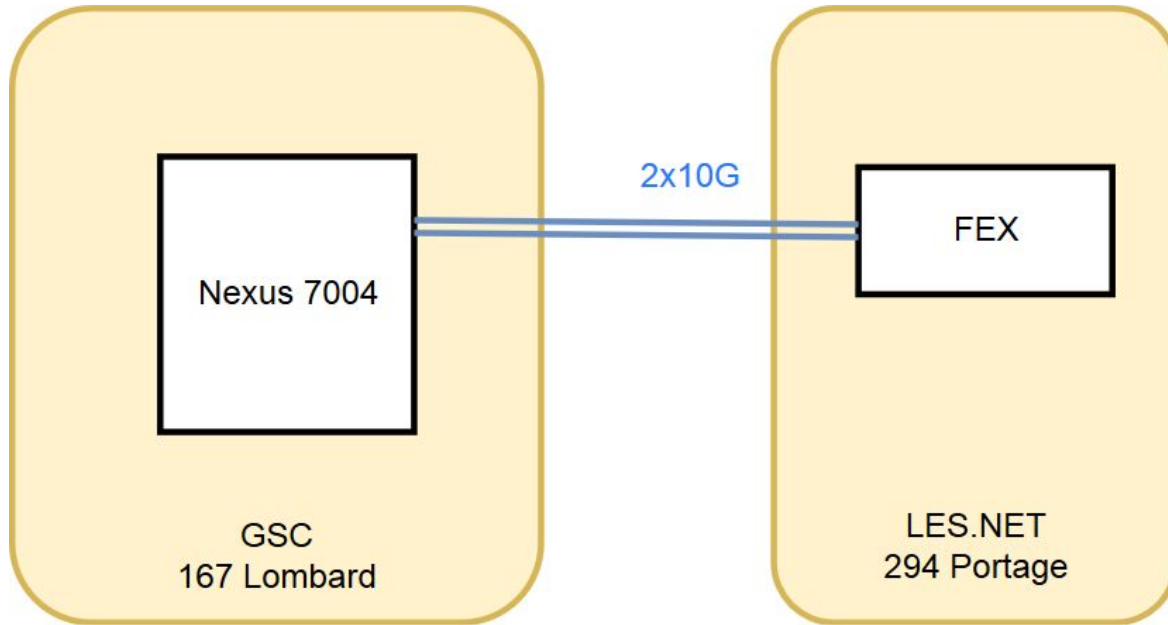
New Switching Hardware

- New Cisco Nexus 93180YC-FX
 - Donated by OGIX in Ottawa
 - Installed at LES.NET at 294 Portage
 - Replaced Cisco Nexus 3064, which moved to 355 Portage
 - 48 x 1/10G (SFP+) ports
 - 6 x 100G (QSFP28) ports

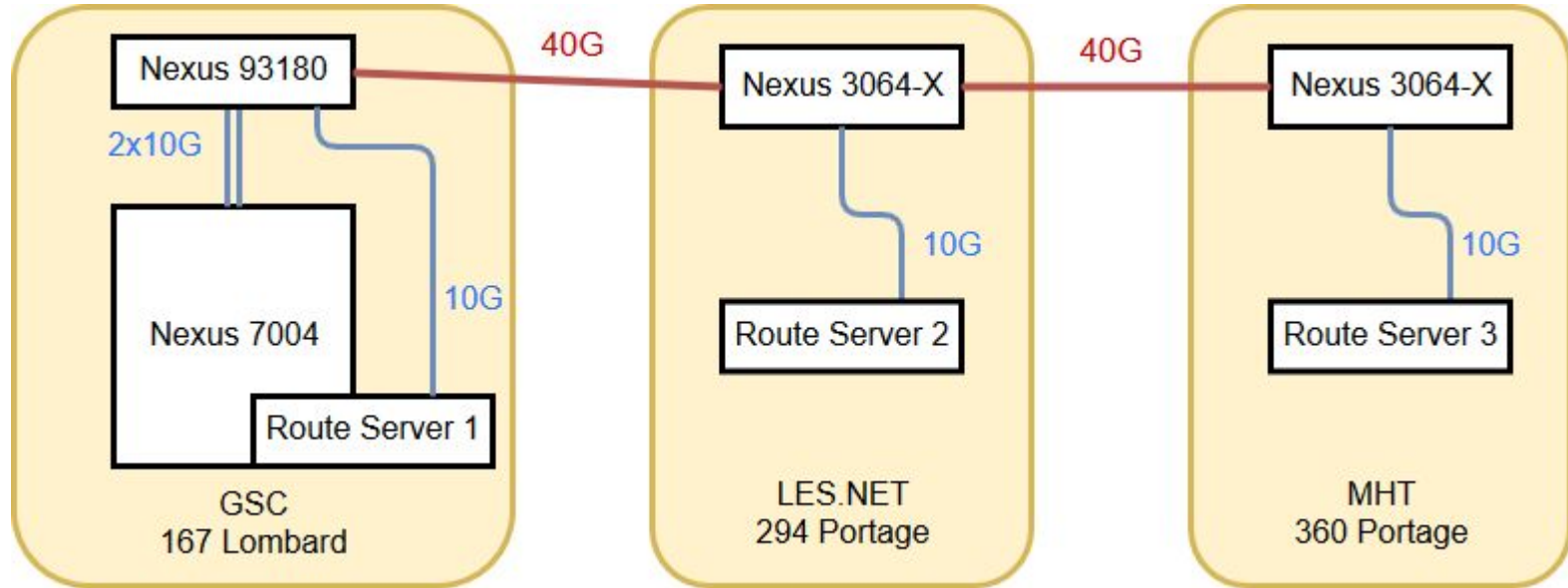
Upgrade to 100G

- 167L to 294P
 - Upgraded from 40G to 100G
 - Using dark fibre pair
 - Errors discovered due to bad optic
 - Additional 100G link installed to troubleshoot first link
 - Today 2x100G operational (!)

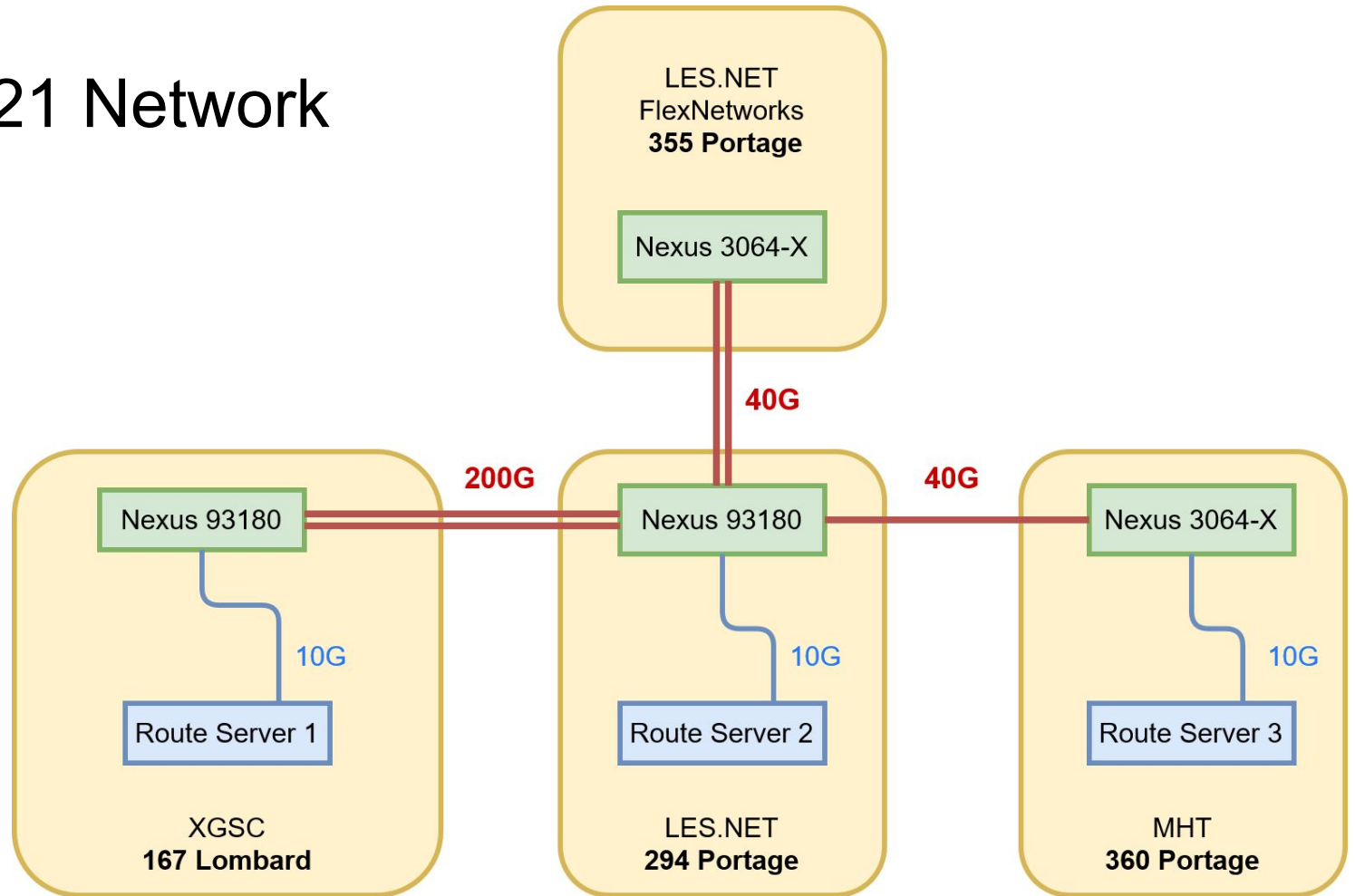
MBIX 1.0 Network (pre-2018)



MBIX 2.0 Network (2018)



MBIX 2021 Network



Use PeeringDB

- Free
- Find peer contacts
- Discover locations
- Discover networks



MBIX

Organization	Manitoba Internet Exchange Inc.
Long Name	Manitoba Internet Exchange
City	Winnipeg, Manitoba
Country	CA
Continental Region	North America
Media Type	Ethernet
Protocols Supported	<input checked="" type="radio"/> Unicast IPv4 <input type="radio"/> Multicast <input checked="" type="radio"/> IPv6
Notes	Not-for-profit internet exchange. Member-oriented and flexible. Secure route filtering using IRR data and RPKI ROA. For prefixes to pass validation peers must maintain IRR route objects, or RPKI ROAs, or ARIN WHOIS OriginAS entries. Peers with downstreams must also maintain IRR as-set objects, and place the as-set name in the peeringdb.com "IRR Record" field. The downstreams must also maintain objects.

Contact Information

Company Website	http://www.mbix.ca/
Traffic Stats Website	http://www.mbix.ca/statistics/
Technical Email	noc@mbix.ca
Technical Phone	+1 204-666-6349
Policy Email	info@mbix.ca
Policy Phone	+1 204-291-3391

LAN

MTU	9000
DOT1Q	<input type="radio"/>
IPv4	206.72.208.0/24
IPv6	2001:504:26::/64

Local Facilities

Facility	Country	City
Global Server Center	Canada	Winnipeg
LES.NET YWG2	Canada	Winnipeg
Manitoba Hydro Telecom Data Centre	Canada	Winnipeg

Peers at this Exchange Point

Peer Name	IPv4	Speed
ASN	IPv6	Policy
Broadband Communications North Public Peering	206.72.208.35 2001:504:26:4:6280:1	10G Open
Canadian Internet Registration Authority - DNS Public Peering	206.72.208.6 2001:504:26:5:5195:1	1G Open
Cloudflare Public Peering	206.72.208.31 2001:504:26:1:3335:1	10G Open
DNS-OARC-112 Public Peering	206.72.208.10 None	1G Open
FASTNET-COMMUNICATIONS Public Peering	206.72.208.30 None	10G Open
Fiber.CA Public Peering	206.72.208.21 2001:504:26:1:8534:1	1G Open
HBN! Public Peering	206.72.208.24 2001:504:26:3:1914:1	1G Open
Hexlet Systems Public Peering	206.72.208.34 2001:504:26:39:5089:1	10G Open
Hurricane Electric Public Peering	206.72.208.13 2001:504:26:6939:1	10G Open
LES.NET Public Peering	206.72.208.2 2001:504:26:1:8451:1	10G Open
LES.NET Public Peering	206.72.208.102 2001:504:26:1:8451:2	10G Open
MBIX Route Servers Public Peering	206.72.208.11 2001:504:26:1:6395:11	10G Open

Use IRR - Internet Route Registries

MBIX route servers use IRR data to verify routes being received from members.

IRR is today's best method of publishing authoritative route information.

Maximize the utility of MBIX to your network by maintaining your own IRR objects via ARIN Online.

- MBIX filters peers *automatically* using IRR data (No LOAs)
- Use ARIN IRR -- it's free!
- Many tools exist to make IRR useful to you

Questions?

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**KEEP
CALM
AND
PEER
ON**