



LINX Product Update

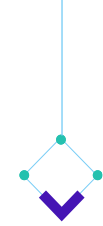


Mike Hellers









Product Development Manager

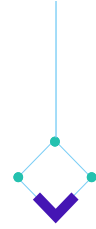
November 2024





Product Update

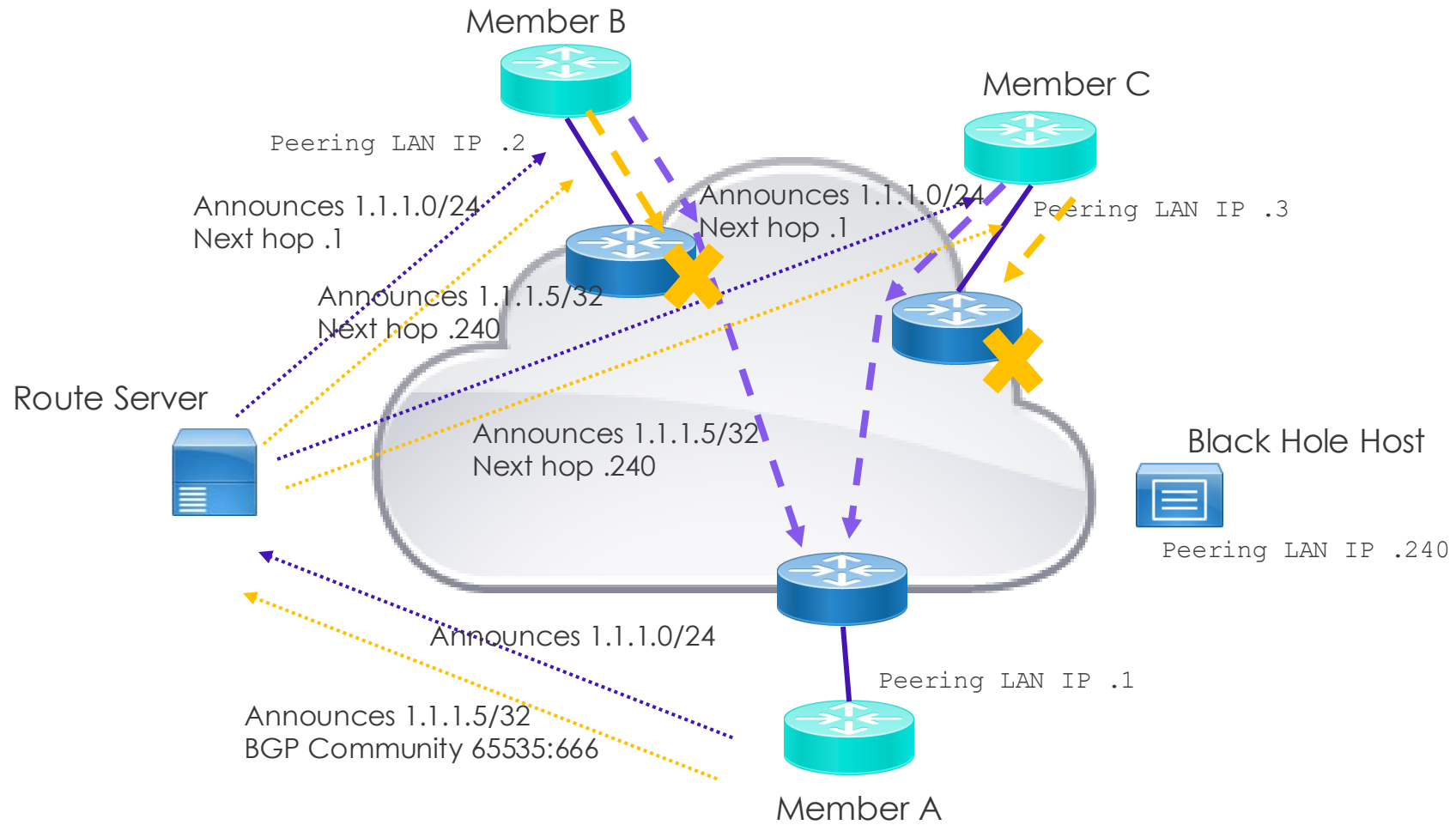
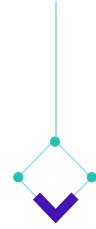
-  **LINX Protect and ProtectPlus DDoS Mitigation** 
-  **MAPS (Microsoft Peering Service) at LINX** 
-  **Digital Realty ServiceFabric** 
-  **Portal User Management Changes** 

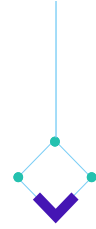


LINX Protect - Basic DDoS mitigation - RTBH

- We launched the RTBH-based DDoS mitigation capability at LINX122
- It is a very common service, and while having limited use cases, it can still be a valuable tool especially during large volumetric DDoS attacks.
- Improvements are currently being finalised around prefix validation to allow for simpler acceptance of the more-specific route announcements while maintaining the security features of the prefix validation process.
- It is available on all LINX peering LANs, and the improvements should be rolled out before the end of the year.
- The service is free of charge and can be used at any time by any member. It does not require any service activation or service order.





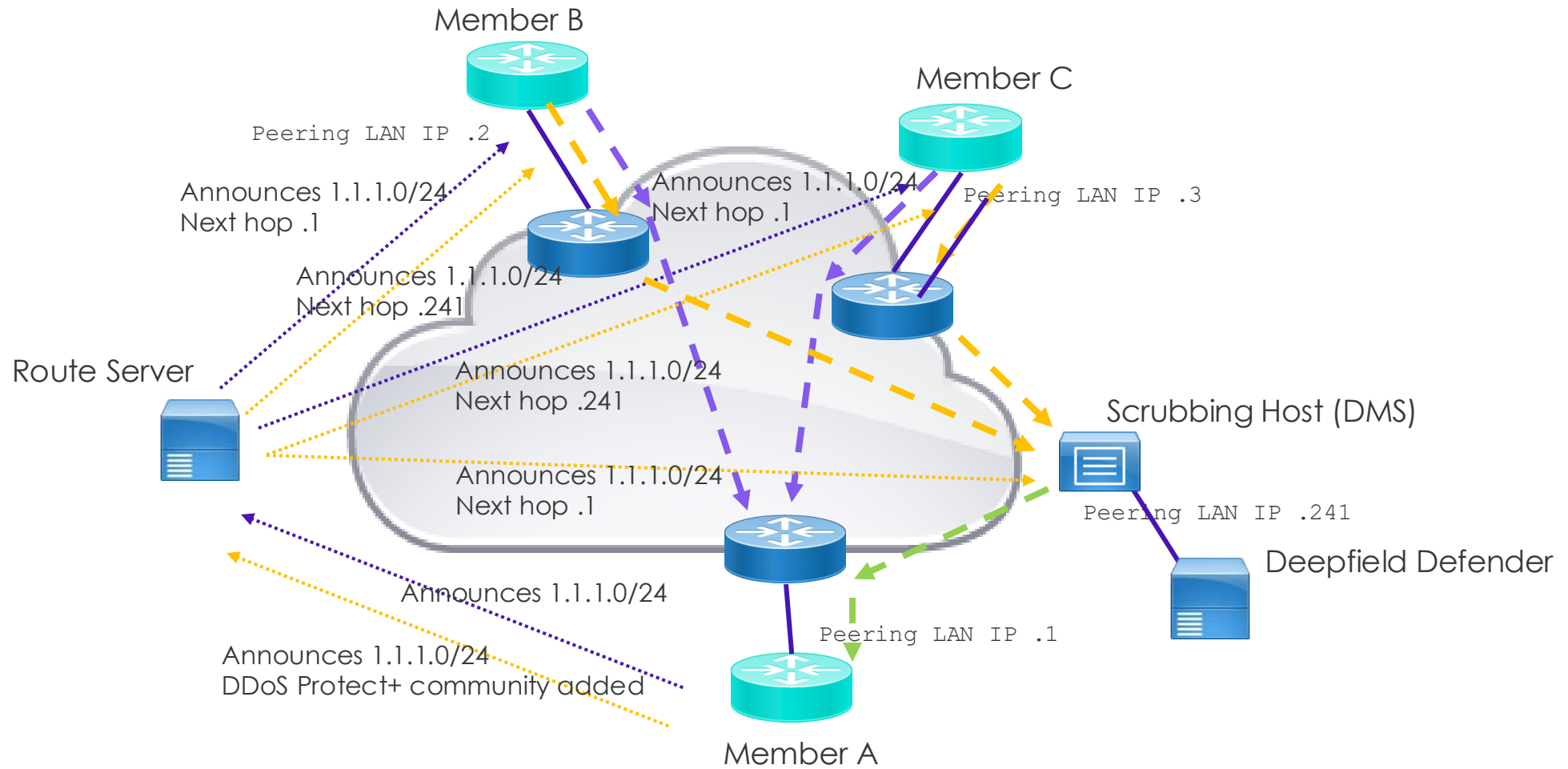
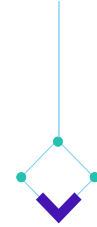


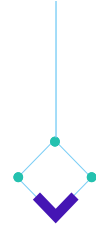
LINX ProtectPlus - Advanced DDoS mitigation

- Solution designed in collaboration with Nokia
- Based on Nokia's Deepfield Product
- Main features:
 - Scrubbing based DDoS mitigation
 - Fast Protection (<1m from service activation)
 - Detailed real-time attack reports *
 - Detailed forensic reports (with long retention) *
- Activated/deactivated by the member
- Auto-mitigated by the Nokia Platform

* Not available at soft-launch

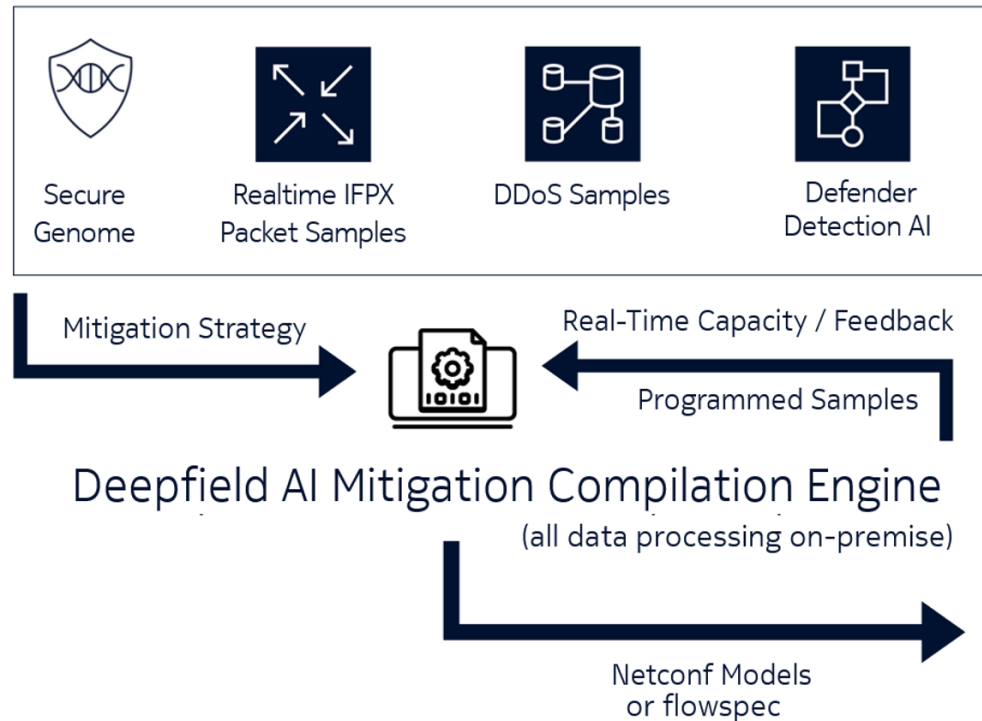






Advanced DDoS mitigation - scrubbing

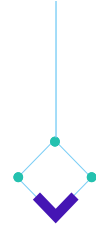
- The Nokia Deepfield Defender Controller is automatically classifying the DDoS traffic. It employs advanced algorithms and data reconciliation to differentiate legitimate traffic from malicious traffic. It assesses various factors such as packet anomalies, patterns, rouge sources and other attributes to make this classification
- The Controller generates a set of policies which dictate how the DMS should filter out the harmful traffic and forward only the clean traffic to the destination



```

entry 8 create
description "#DFA:acl_90"
match protocol 17
dst-ip ip-prefix-list "VLAB_7_1"
packet-length lt 40
fragment false
exit
action
drop
exit
exit
entry 9 create
description "#DFA:acl_571"
match protocol 6
dst-ip ip-prefix-list "VLAB_7_1"
tcp-fin true
tcp-syn true
exit
action
drop
exit
exit
entry 10 create
description "#DFA:acl_579"
match protocol 6
src-ip ip-prefix-list "VLAB_9_518"
exit
action
drop
exit
exit
entry 4 create
description "#DFA:acl_13498"
match
dst-ip ip-prefix-list "VLAB_9_495"
ttl range 1 37
exit
action
drop
exit

```



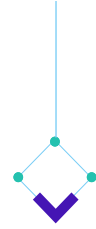
Advanced DDoS mitigation – Current Status

- Proof of concept testing has been completed, and the platform is ready to go into production on LON1 initially.
- Our own network (AS5459) will be the first customer of the service. (currently in progress)
- We will be working with a small number of members who want to use the service during the initial phase.
- If you are interested in this service, especially if you are happy to work with us ahead of the full launch, please get in touch.



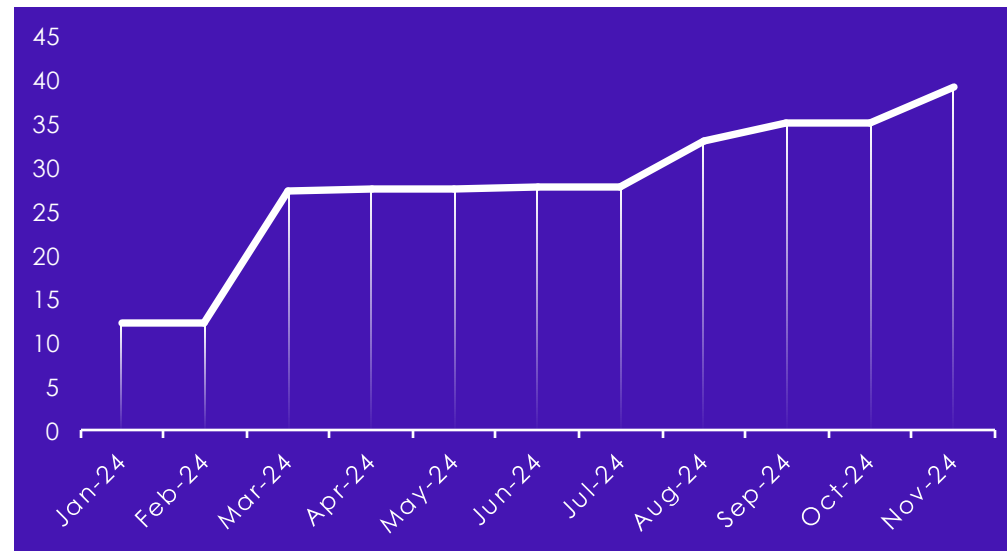


MAPS (Microsoft Peering Service) - Update



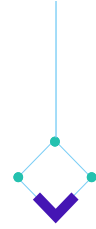
MAPS – Microsoft (Azure) Peering Service

- MAPS provides you with direct peering with Microsoft's ASN 8075
- But without any constraints in regards to Peering Policy, i.e minimum traffic etc.



Total MAPS Bandwidth in Gbps





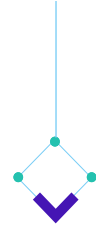
LINX MAPS Service details

- LINX LON1, Microsoft Interconnects at Equinix Sough and Telehouse North2
 - LINX Manchester, Microsoft Interconnects at Equinix MA1 (Williams House)
 - LINX NoVA, Microsoft Interconnects at Equinix Ashburn
 - LINX Nairobi, Microsoft Interconnects at ADC Nairobi
-
- Always fully resilient: dual interconnects, dual route servers
 - Available Speeds: 50Mbps to 10Gbps
 - Ordering through self-service, no minimum contract duration, upgrade or downgrade possible at any time



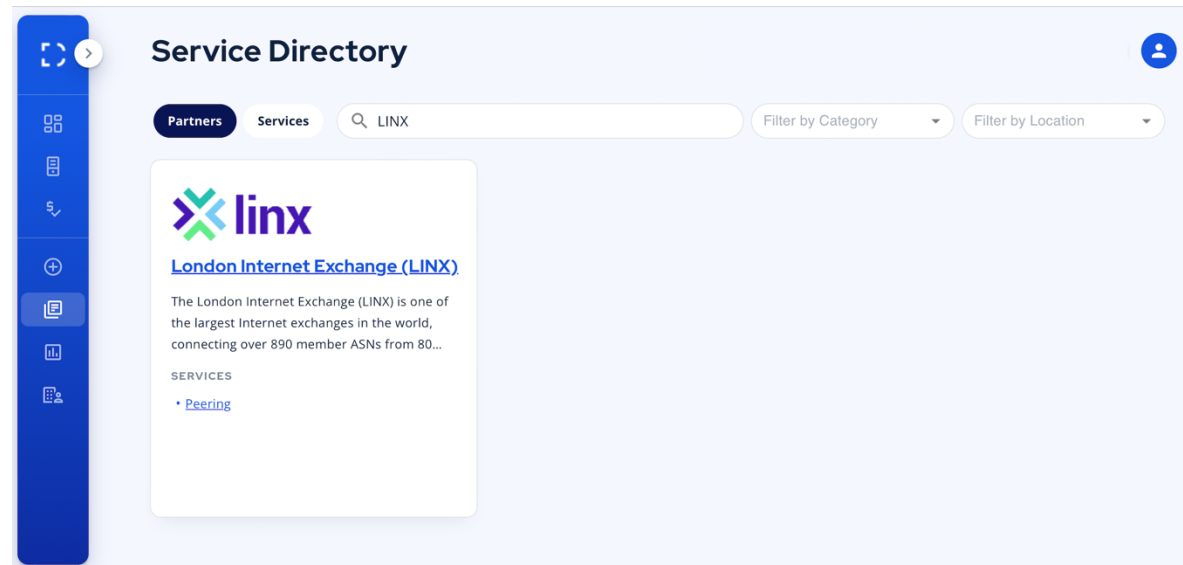
The background features a large teal triangle at the top left and a smaller teal triangle at the bottom right. Both triangles contain a network diagram of interconnected nodes and lines, transitioning from light teal to dark blue. The text "Digital Realty ServiceFabric" is positioned in the white space between these shapes.

Digital Realty ServiceFabric



Digital Realty ServiceFabric

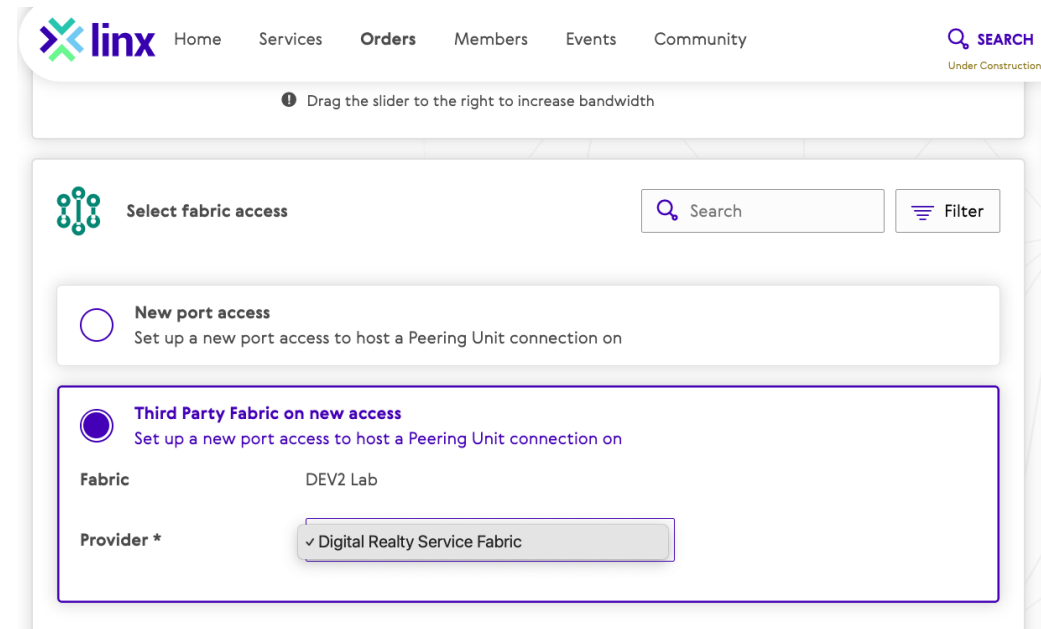
- Starting later this month, LINX LON1 Peering will be available for any Digital Realty customer through the Digital Realty Service Fabric
- Other Services and Peering LANs will become available early 2025





LINX through Digital Realty ServiceFabric

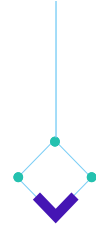
- Ordering will happen in two steps:
 - You order a connection to LINX through your account on the DR ServiceFabric
 - Once completed, you can order the corresponding LINX Service through the LINX Portal and select the ServiceFabric as delivery
- LINX charges you for the Membership and Service. Port Access is not required.
- Digital Realty charges you for ServiceFabric port/bandwidth costs



The screenshot shows the LINX portal interface. At the top, there is a navigation bar with the LINX logo and links for Home, Services, Orders, Members, Events, and Community. A search bar is located on the right. Below the navigation bar, there is a slider control for bandwidth. The main content area is titled 'Select fabric access' and contains two radio button options: 'New port access' and 'Third Party Fabric on new access'. The 'Third Party Fabric on new access' option is selected. Below this, there is a form with a 'Fabric' field set to 'DEV2 Lab' and a 'Provider *' dropdown menu set to 'Digital Realty Service Fabric'.



Portal User Management Changes



Portal User Management Changes – Primary for Roles

- Functionality added to mark a user as “primary” contact for a role
 - For Peering and NOC roles, the primary contact will be the ones used in the NOC Contact List on the Portal

Manage user
View user details and make changes to the user below

User details

Type * Person Group

Group name *

Email *

Job title

Membership role NOC, Peering

Voting rights -

Work number 1234567891

Mobile contact

Group Selection Modal:

Legal

Billing

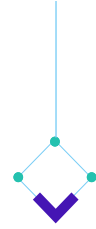
Implementation

Marketing

Sales

NOC Make Primary

Peering Make Primary



Portal User Management Changes – Person or Group

- We have also implemented restrictions to contact types
 - Person: Mandatory for Guardian, Authoriser and Voter
 - Other Roles can be a Person or a Group (i.e. noc@company.com or peering@company.com)

Please go and check your portal users, and especially check if the correct NOC and Peering Contacts are currently set as “Primary”





Questions?



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