NLR Member Case Studies

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NLR Birthright services

- Each member gets the following as part of their membership
  - GE PacketNet connection to the National Exchange Fabric
  - 10 GE FrameNet Connection to the Routed IP Service
    - Primary connection to the “nearest” NLR node
  - GE FrameNet Connection to the Routed IP Service
    - Secondary “backhaul” to a different NLR node

- More details on NLR services here:
  - [http://www.nlr.net/services/index.html](http://www.nlr.net/services/index.html)
  - And we have brochures....
Standard Birthright PacketNet Service
These services were defined as a set of base services - the vanilla version

Some members have asked to have those services provisioned in a different flavor

We’ve worked with them to engineer solutions that meet their needs
Case 1: North Carolina

- Short-term requirements
  - Need to minimize the number of lambdas used between the Raleigh NLR node and MCNC
  - No need for 10G of bandwidth to the NLR
  - Routed IP Service
Solution:

- Single 10 GE connection from NLR node to MCNC
- Two GE VLANs for diverse connections to NLR PacketNet service
- One GE VLAN for NLR NEF
Case 2: FLR/LONI/LEARN

Requirements
- Direct RON-RON connectivity
- Abilene connection backup

Issues
- FLR currently has Abilene connection from Jacksonville to Atlanta
  - Looking for some route diversity

Note * This is still under discussion
Notes:
- RONs use VLANs to directly reach each other at Layer 2 as well as each reaching the NLR Layer 3 CRS-1.
- The RON Switch would either be co-managed by the RONs or might be a muxing service of the NLR Layer 2 service if an NLR Layer 2 node is nearby.

Options for Layer 2 “Ish” Connectivity:
- MPLS LSF between RON Nodes across NLR Layer 3 Interfaces
- VLAN switching between NLR Layer 3 Interfaces (A.K.A. cross connect local switching)
- GRE Tunnel between RON Nodes

Note: Some options require software support on the CRS-1 that may not yet be available.
Summary

- Current NLR service descriptions are "vanilla" baselines.
- We can customize based on your needs - just ask!