

# Internet2 National Networking and IXPs

NGI, MANLAN and WIX Updates

AmRP 2021

Christian Todorov

# NOTICE: MANLAN Relocation in October



- MANLAN Peering switches will be relocated within the 24<sup>th</sup> Floor facility at 32 Avenue of the Americas
- Anticipated maintenance is a single service window which includes complete relocation of both MANLAN switches
- Notices to service owners will be forthcoming shortly.
- Enables new efficiencies (reduction of space and power)
- Enables turn up of new backbone capacity

# NOTICE: Classic Multicast Deprecation on I2 Backbone

- Interdomain IP Multicast is being deprecated on the Internet2 NGI network as service migrations continue.
- Internet2 is moving its R&E routing instance from the global routing table to a VRF as part of its NGI network upgrade. Interdomain IP multicast is not supported at this time on the Cisco 8200 platform.
- Only identified production use is being moved to GRE tunnels.
- Multicast working group is considering options for a multicast overlay and seeking new approaches and new applications that would leverage such a service.

# New Internet2 Performance Assurance Service /Nodes Soon

47 Node 2x100G dedicated perfSONAR nodes

- 41 nodes installed and reachable
- 6 nodes pending installation

Intention of having 100G interface for internal PAS mesh and other 100G interface for ad hoc and external testing.

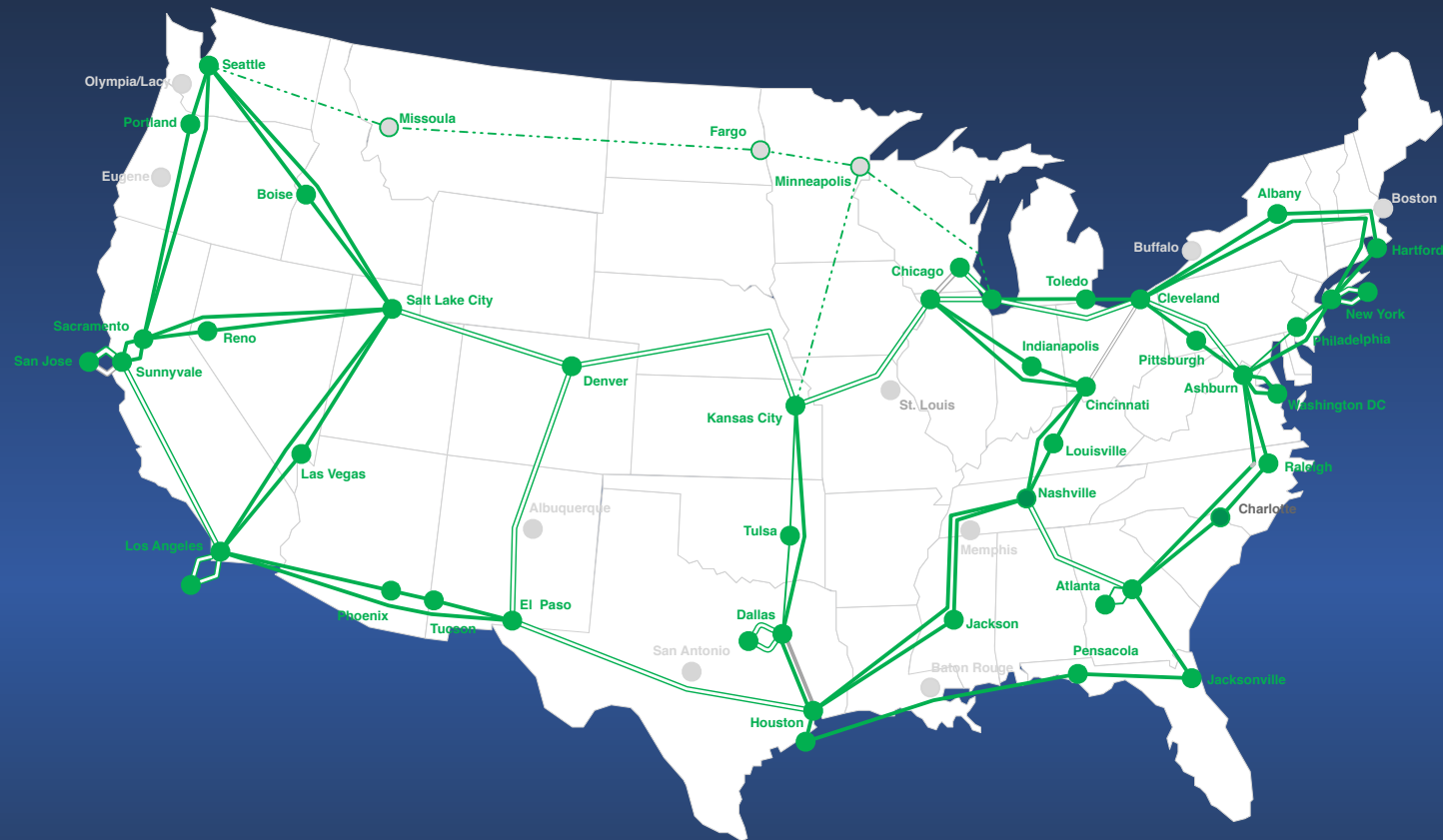
Online later this fall as issues are resolved.

- DAC cables being replaced with discreet optics
- Performance tuning:
  - “Good enough” configuration in place
  - Possibility of issues w/firmware and/or drivers limiting high-end performance (pursuing with Dell and Mellanox)



# Overall Internet2 NGI Status Update

- Flexgrid optical Upgrade is complete
- 95 400G Optical Links are in service (99 total)
- 92 Node 400G IP Network is operational
- NSO is being used for 100% of config pushes
- Migration of IP and L2 services underway and primarily complete in September
- Migration of 10G and 100G optical services underway also with end of October Target
- Decommissioning of legacy network underway shortly thereafter
- On track for 70% reduction in power/space costs
- Over 10PB/day moved since start of school



# Questions?

[Rvietzke@internet2.edu](mailto:Rvietzke@internet2.edu) (Rob Vietzke)

[cwilkinson@internet2.edu](mailto:cwilkinson@internet2.edu) (Chris Wilkinson)

[ctodorov@internet2.edu](mailto:ctodorov@internet2.edu) (Christian Todorov)

[gkloftus@internet2.edu](mailto:gkloftus@internet2.edu) (George Loftus)

[msimpson@internet2.edu](mailto:msimpson@internet2.edu) (Mike Simpson)