

Internet2 Network update

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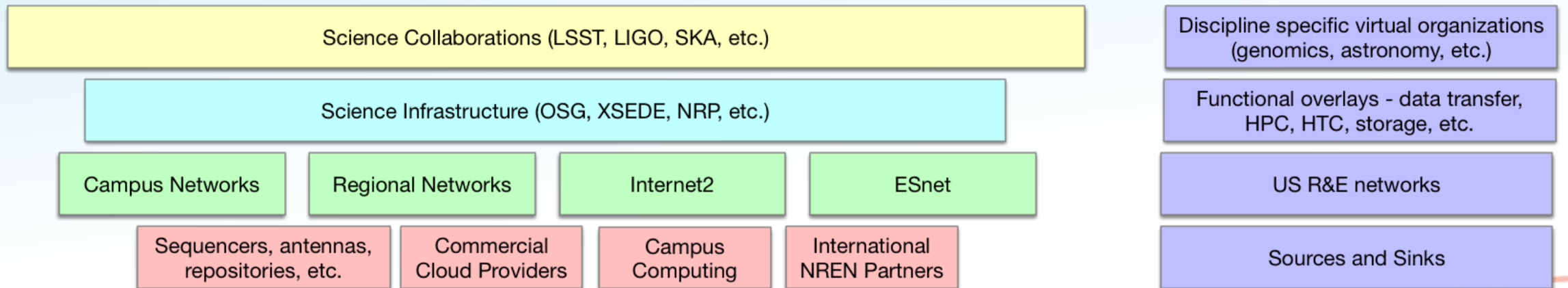
SAACC



Science infrastructure drivers

Ecosystem-wide services

- From a network infrastructure investment perspective – these are often overlays
 - We've been supporting various overlays for years – GENI, XSEDE, etc.
 - To the science users, these are the infrastructure – and they rely on the network ecosystem, to support their unique needs
- Understanding nuances of workflow in the overlays helps us plan for:
 - Aggregate packet flows, caching schemes, cloud service access needs, on-campus storage needs, etc.

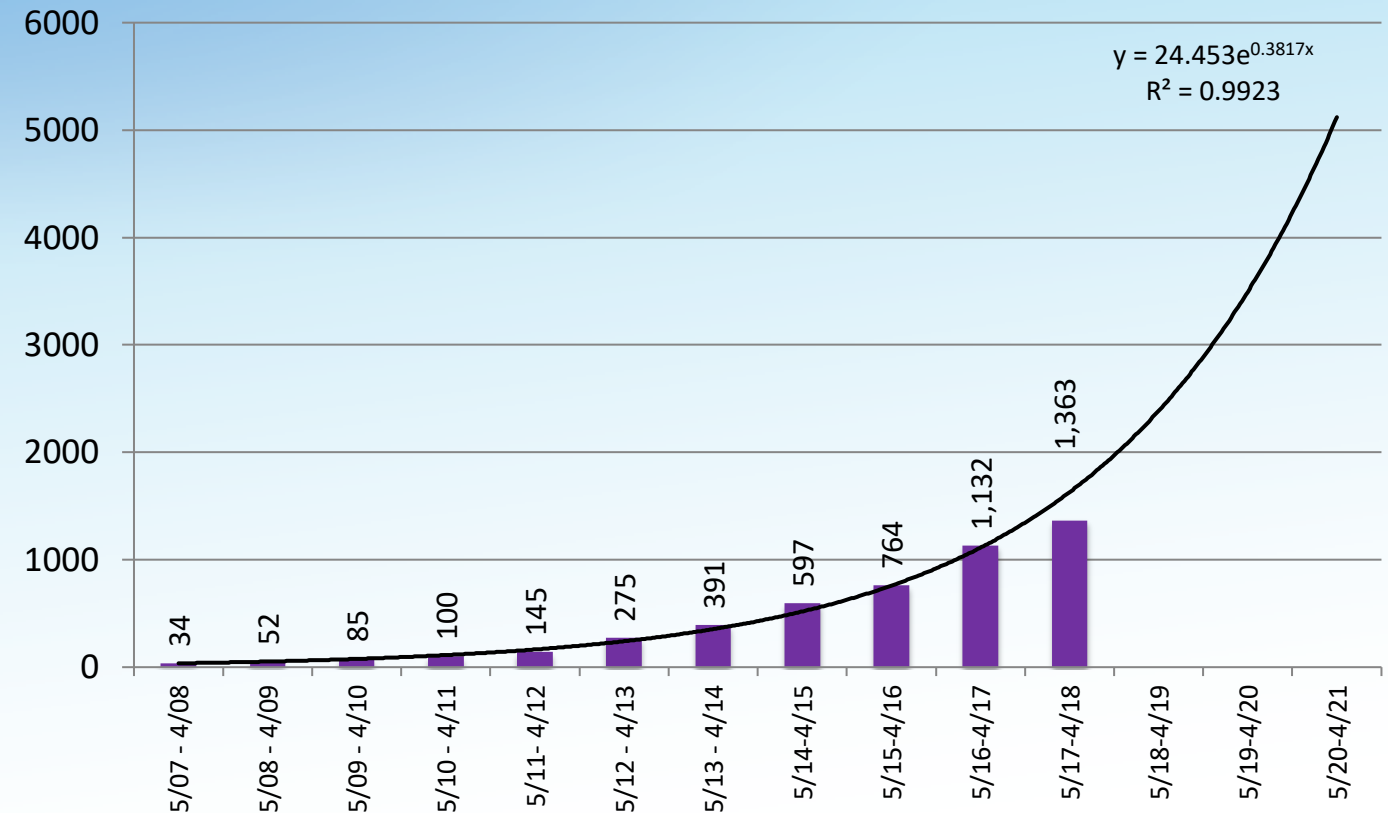


INTERNET

Internet2 Network Total PetaBytes Carried Per Year (May->April)

These trends require thought and enabling efforts by network operators:

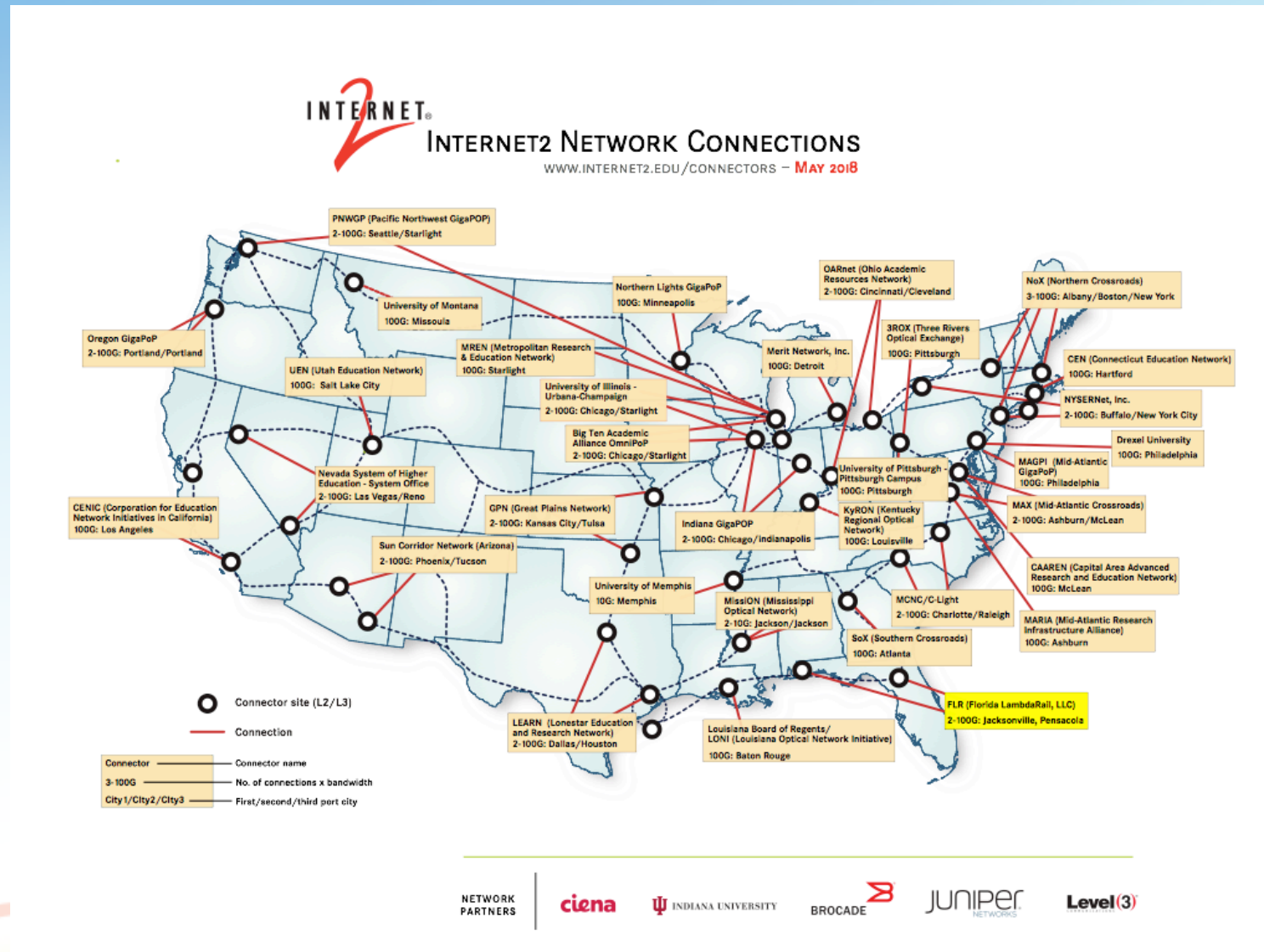
- Tighter end-to-end collaboration
- Better standardization and/or adoption of interdomain norms
- New Skills and Tools-> Software
- Significantly improved capacity
 - Reduction of (unnecessary) duplicate infrastructure
 - Improved cost/bit ratios



■ Peta Bytes per year — Expon. (Peta Bytes per year)



INTERNET2 CONNECTOR MAP



NETWORK
PARTNERS

ciena

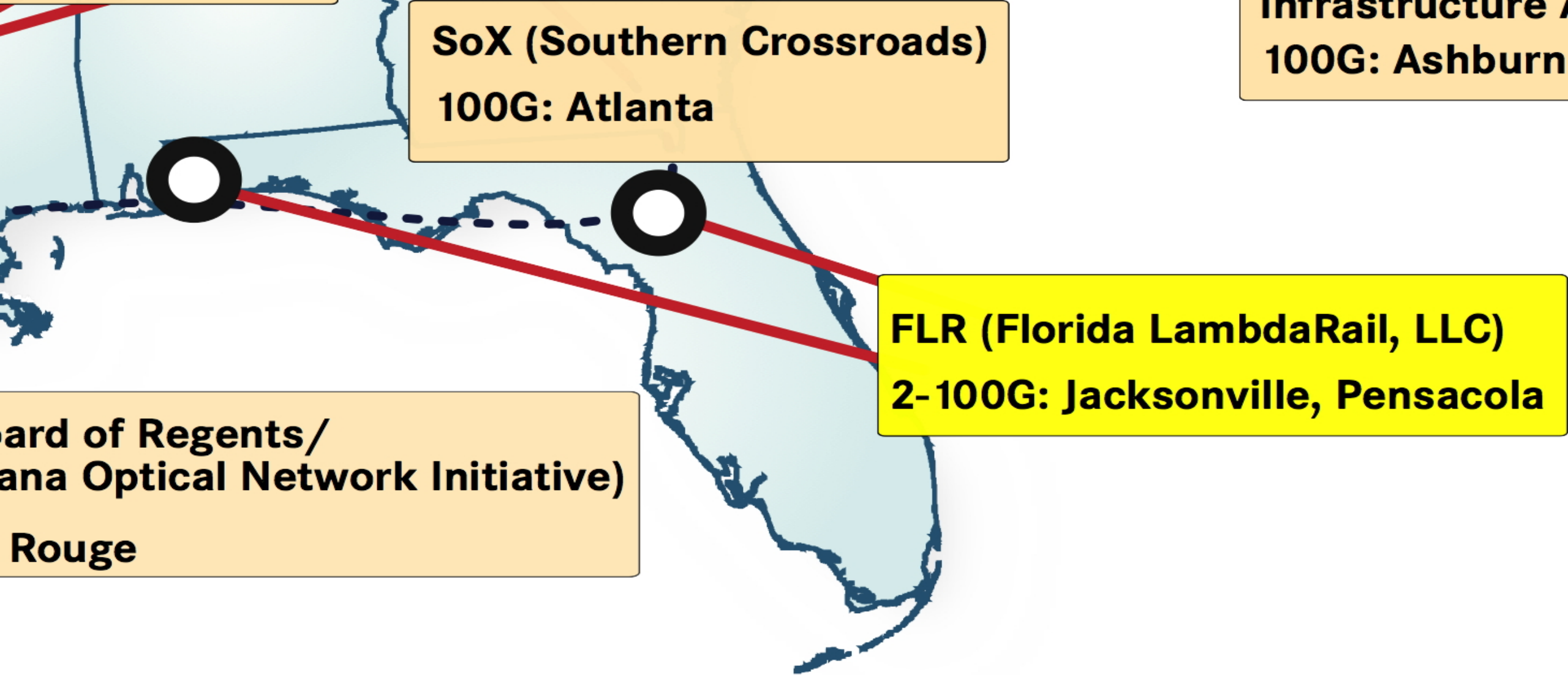
INDIANA UNIVERSITY

BROCADE

JUNIPER
NETWORKS

Level(3)

INTERNET²



SoX (Southern Crossroads)
100G: Atlanta

Infrastructure /
100G: Ashburn

Board of Regents /
Florida Optical Network Initiative)
Rouge

FLR (Florida LambdaRail, LLC)
2-100G: Jacksonville, Pensacola

QUESTIONS FOR LSST

- Dedicated wave or backbone service?
- What are your expectations from us once in full production?
- Do they anticipate that LSST would change our data projections in any significant way?