

So LONI...

- Cyberinfrastructure
 - Regional Research & Education Network
 - ScienceDMZ resource
 - Computation resource
 - perfSONAR resource
 - Research Collaborator

The LONI logo is displayed in a large, light green, sans-serif font. The letters are bold and have a slight shadow effect. The background of the slide features a map of Louisiana with a network of yellow nodes and lines connecting them, representing the LONI network. The nodes are located at various locations: Ruston, Natchitoches, Lake Charles, Lafayette, Baton Rouge, Hammond, and New Orleans. The map is light blue and white, with the LONI logo overlaid on it.

LONI Factoids

1,674

Total miles of fiber in the LONI network

1.5+

Number of Petaflops in LONI's main compute node, QB2

20

Universities on the LONI architecture

65

Total miles of fiber owned by LONI network

4

No High Education Subscribers on LONI

5

State Gov't Subscriber on LONI

64

Technical and community college campuses on LONI

5

Health Science, Medical & Nursing Schools, and Biomedical Research Centers on LONI

2

Adjoining state optical architectures: MissiON (Mississippi Optical Network) and ARE-ON (Arkansas Research and Education Optical Network)

A map of Louisiana is shown in the background, overlaid with a network diagram. The map is light blue, and the network consists of yellow circular nodes connected by yellow lines. The nodes are positioned at various locations across the state, including Ruston, Natchitoches, Alexandria, Lake Charles, Lafayette, Baton Rouge, and New Orleans. The text 'LOONI' is faintly visible in the background.

LONI Cyberinfrastructure Examples with LSU

- [2012] co-Principal Investigator, “CC-NIE Network Infrastructure: CADIS -- Cyberinfrastructure Advancing Data-Interactive Sciences”. Funding is from NSF Award #1246443 for the amount of \$499,758.
- [2013] co-Principal Investigator, “CC-NIE Network Infrastructure: Bridging, Transferring and Analyzing Big Data of 10Gbps Campus-Wide Software Defined Networks.” Funding is from NSF Award #1341008 for the amount of \$947,860.

LONI Cyberinfrastructure Examples with Tulane University

- [2013] “CC-NIE Network Infrastructure: Dedicated High-Speed Science Network”. Funding is from NSF Award #1340454 for the amount of \$498,655.
- [2014] “CC-NIE Networking Infrastructure: Riverfront Campus Research Network”. Funding is from NSF Award #1440565 for the amount of \$489,700.

LONI Cybernrastructure Examples with University of Louisiana at Lafayette

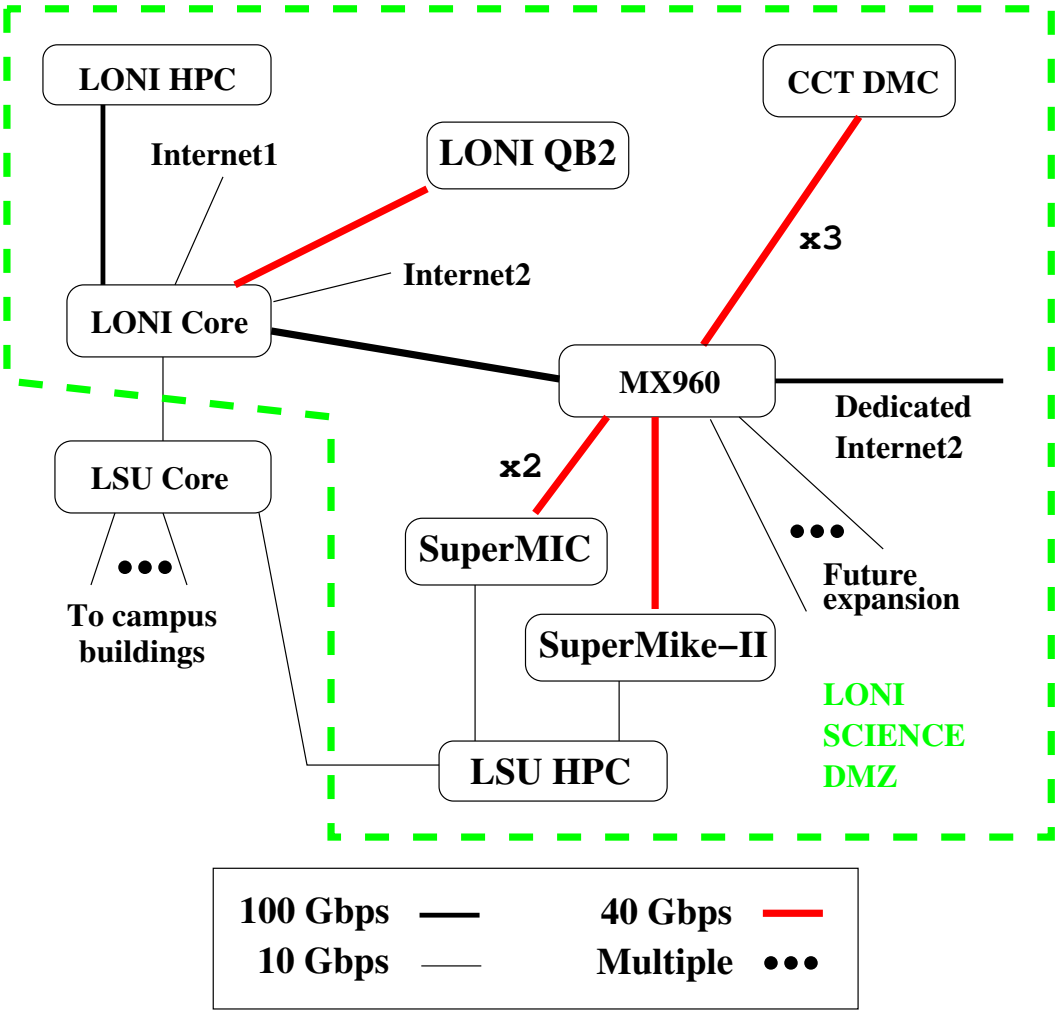
- [2014] “CC*IIE Networking Infrastructure: Cyberinfrastructure - Creation of Science DMZ at UL Lafayette”. Funding is from NSF Award #1440772 for the amount of \$491,513.

LIGO in Livingston, LA

Quote local cyberinfrastructure staff:

“Our scientific data is constantly transmitted over LONI for this science, allowing not only real-time analysis of potential gravitational wave events by our collaborators across the globe, but also follow-up observations by other methods (telescope, radio, x-ray).”

As you might can tell from your statistics, the highest traffic used by LIGO Livingston within the past year was in the immediate month after our first observation. We utilized the bandwidth to completely transfer our data at the observation point (“freeze” if you will) so that we could be certain that, after careful analysis, we had made our first detection.”



LONI HPC

CCT DMC

Internet1

LONI QB2

x3

LONI Core

Internet2

MX960

Dedicated Internet2

LSU Core

x2

SuperMIC

Future expansion

To campus buildings

SuperMike-II

LONI SCIENCE DMZ

LSU HPC

100 Gbps —

40 Gbps —

10 Gbps —

Multiple ●●●