

L-BONE

LOGISTICAL BACKBONE

The L-Bone is a service layer that allows clients to find IBP storage depots on the network. Clients query the L-Bone for storage depots that have various attributes, including storage capacity, time limits, hard/soft allocation, and physical and network proximity to various places. Thus, clients can perform Logistical Networking functions by querying the L-Bone for storage depots, and making use of them explicitly. The Network Weather Service is employed for live proximity determinations.

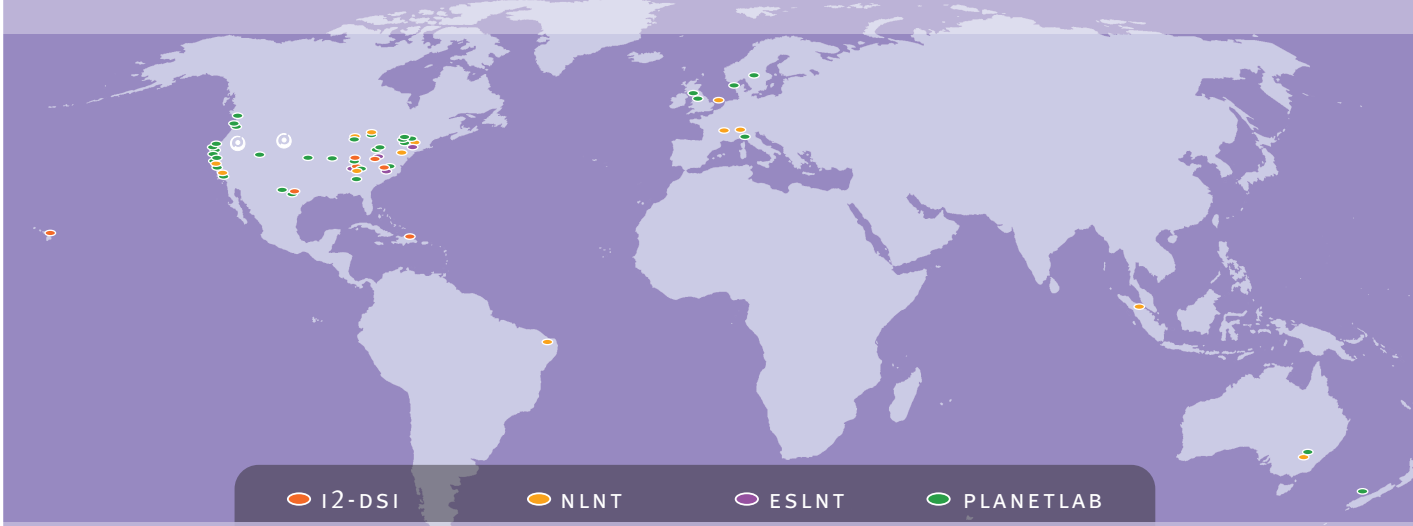
Along with thirty-one depots of its own, the current L-Bone also includes resources from various national and international research projects, including I2-DSI and PlanetLab. The Internet2 Distributed Storage Infrastructure

(I2-DSI) is a multi-institutional project in advanced content distribution headed by the University of Tennessee. I2-DSI has more than 1T of storage at six locations worldwide. PlanetLab is a global testbed for developing and accessing new network services, supported by Intel Research and involving a worldwide collaboration of Computer Scientists.

Beginning in November, 2002, the physical capacity of the L-Bone in the United States will be expanded by the addition of the depots of the National Logistical Networking Testbed (NLNT). The NLNT project is supported by the NSF with a matching contribution from Industry partner Yotta Yotta. Its first new depot will be a 4.7T

Yotta Yotta server at StarLight, the international high-speed optical fiber network connection point in Chicago. The goal of the NLNT is to have more than 50T of shareable storage on-line by the fall of 2005.

Complementing the NLNT will be an dedicated Energy Sciences Logistical Networking Testbed (ESLNT) serving the SciDAC community from a private network of depots at the national laboratories. The initial nodes of the ESLNT are planned for Oak Ridge National Laboratory, Jefferson Lab, and the Brookhaven National Laboratory.



I2-DSI

NLNT

ESLNT

PLANETLAB

- Australian National University
- Brookhaven National Laboratory
- California Institute of Technology
- Carnegie Mellon University
- Catholic University of America
- Columbia University
- Cornell University
- Duke University
- Georgia Institute of Technology
- Harvard University
- Indiana University-Purdue University Indianapolis
- Information Sciences Institute
- Intel DSL - Oregon
- Intel Research Berkeley
- Intel Research Pittsburgh
- Intel Research Seattle
- Jefferson Lab
- Lancaster University, United Kingdom
- Lawrence Berkeley National Laboratory
- Massachusetts Institute of Technology

- New York University
- North Carolina Supercomputing Center
- Oak Ridge National Laboratory
- Princeton University
- Rice University
- Stanford University
- Texas A&M University
- Universidade Federal da Paraiba, Brazil
- University of Arizona
- University of Bologna, Italy
- University of British Columbia, Canada
- University of California at Berkeley
- University of California at Los Angeles
- University of California at San Diego
- University of California at Santa Barbara
- University of Cambridge, United Kingdom
- University of Canterbury, New Zealand
- University of Copenhagen, Denmark
- University of Hawaii
- University of Illinois Chicago - Northwestern University
- University of Kansas
- University of Kentucky
- University of Massachusetts

- University of Michigan
- University of North Carolina - Chapel Hill
- University of Pennsylvania
- University of Puerto Rico
- University of Tennessee
- University of Texas, Austin
- University of Utah
- University of Washington
- University of Wisconsin Madison
- Uppsala, Sweden
- Virginia Polytechnic Institute and State University
- Washington University at St. Louis

NLNT International Partners

- cole Normale Sup rieure, France
- Nanyang Technological University, Singapore
- SARA Computing and Networking Services, Netherlands
- Universit degli Studi del Piemonte Orientale, Italy
- University of Technology, Australia

Corporate Partners

<http://loci.cs.utk.edu/lbone>



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