



Network Systems Lab

[Web Site](#)

We are interested in the broad area of computer networking and distributed systems. We develop algorithms and protocols to enhance the performance of networks, especially the Internet, and to efficiently distribute multimedia content (e.g., video and audio objects) to large-scale user communities.

Our current research interests include:

- Peer-to-Peer Systems- Exploring the applicability of the P2P paradigm to build cost-effective content distribution systems.
- Multimedia Networking - Focusing on distributed streaming in dynamic environments and for heterogeneous clients.
- Wireless Sensor Networks - Developing coverage and connectivity maintenance protocols that consider more realistic sensing and communication models.
- Network Security - exploring network monitoring techniques to detect and thwart intrusion and denial-of-service attacks in their early stages by observing unusual traffic patterns injected by such attacks.

Our Lab houses the following equipment: nsl: Lab web and file server, nsl-cpu: 8-core server to run simulations and large-scale experiments, nsl-win: Windows Terminal Server for remote access, nsl-cl: 11 machines interconnected through a fast Ethernet switch, PlanetLab WAN Testbed: Access to several hundred machines distributed all over the Internet, Wireless Sensor Testbed: For implementing and testing protocols in the wireless sensor networks research area.