



# PerfSONAR JET/LSN Demo

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# Goals



The goal of the JET perfSONAR demonstration project was to expand our understanding of the issues involved with deploying multi-domain network measurement services in US federal and research networks. In particular, we were looking at the issues with:

- Deploying open source network measurement software in different types of organizations.
- Identifying security issues related to allowing tests across domain boundaries.
- Identifying policy issues related to sharing/publishing network measurement results.
- Identifying network measurements that are useful when collected and shared across domain boundaries.

# Plan



- Each domain will deploy a small number of perfSONAR tools at locations of interest to the other parties.
- Each domain will collect measurements between itself and the other participants.
- Each domain will publish the measurement results it collects.
- Collect lessons learned and publish a report

# Infrastructure Deployed



- ESnet & Internet2
  - Configured existing perfSONAR infrastructure to measure to new destinations
- NASA
  - Added perfSONAR destinations to ENSIGHT infrastructure
  - Added bwctl support to existing ENSIGHT measurement systems.
- NLR, NOAA, UEN
  - Deployed perfSONAR-PS toolkit nodes

# Summary of Lessons Learned



- We need better documentation & improved processes
  - For deploying & managing the tools
  - For debugging measurement infrastructure problems
  - For debugging network performance problems
- Coordination of the project was a challenge
- Not all JET networks exchange traffic with each other

# Conclusions & Future Directions



- Different JET networks operate under different constraints.
- We didn't learn as much about dealing with policy issues about sharing network measurement data as we hoped, because most participants were able to leverage existing policies and practices.
- The tendency is to only deploy measurement tools where there is a problem. Participating in the demonstration provided a baseline to show where there wasn't a problem, which provides a useful holistic view.
- We should perform an expanded pilot project that includes more networks and IPV6.

# Next Steps



Please read the report and send comments to [metzger@es.net](mailto:metzger@es.net)

[https://docs1.google.com/a/lbl.gov/document/edit?id=152uiUdETeFEleDt\\_TPow8Mc0ekXYa7LTmZNBOnIBqQ&hl=en&authkey=CLaV2uoE#](https://docs1.google.com/a/lbl.gov/document/edit?id=152uiUdETeFEleDt_TPow8Mc0ekXYa7LTmZNBOnIBqQ&hl=en&authkey=CLaV2uoE#)

Develop a plan for a pilot project