HPC & BD Survey: Results for Sections on Internet Bandwidth and Science DMZ

Section on Internet Bandwidth

22 of the 58 survey participants took the Internet Bandwidth section. Status representation (10 faculty, 8 students, 2 post docs, 2 staff) differed somewhat from that of the survey as a whole, in which students outnumbered faculty (23 faculty, 27 students, 6 post-docs, 2 staff). As with the survey as a whole, members of the Departments of Computer Science (5 participants) and Mathematical Science (7 participants) had the largest representation.

Participants were provided with the following introductory information:

> Internet bandwidth is the capacity of NJIT's connection to and from the Internet.

Participants then rated the suitability of Internet bandwidth, including Internet 2 if applicable, to their work. As indicated in the chart below, half the participants rated suitability as Excellent.

Suitability of Internet bandwidth
Note: No participants chose Don't know

- ■ Excellent
- ■ Good
- ■ Fair
- ■ Poor
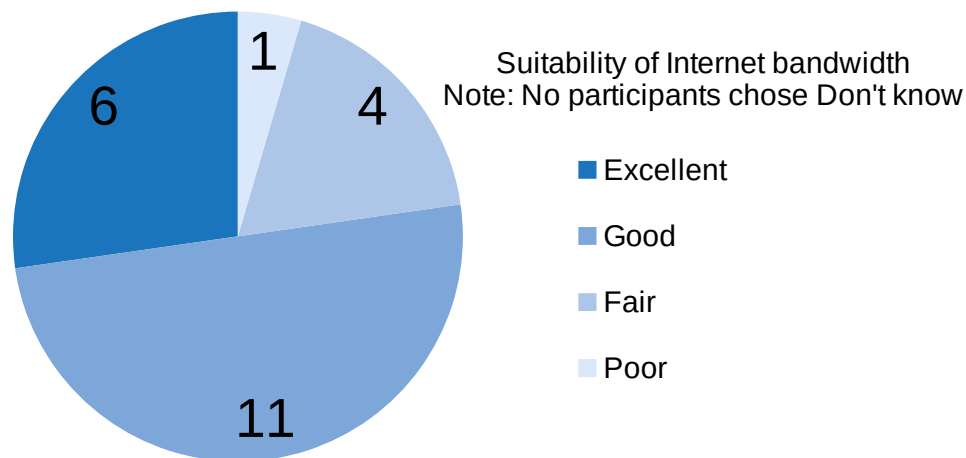
Participants indicated whether their research has been hampered by difficulties in transferring data from or to the Internet.
6 out of 22 (27%) reported such difficulties, and were asked to describe the difficulties. Their descriptions are listed below, along with their suitability ratings. (Note: None of the participants who rated suitability as Excellent reported data transfer difficulties.)

- FAIR using external resources that are faster

- POOR We attempt to run our remote site in real time remotely, which works fine at home, but at NJIT it is often too slow and laggy to be reliable. We would like to transfer our stored data to NJIT, but would not even attempt it given NJIT's slow network.

- GOOD slow connection to nearby universities, Rutgers in particular. Not sure about the source of the problem.

- GOOD While working on the remote connection to NJIT servers from outside the US, the speed slows down greatly. The speed of the internet service at is fast however.

- FAIR Just one host downloading data from Europe managed to bring down the Internet 2 connection.

- GOOD Downloading multiple large files from the NIH Cancer databases.

Participants were asked to provide further comments if they wished. One comment was provided:

- Pretty good, though it varies depending on my location on campus

Section on Science DMZ

8 of the 58 survey participants took the Internet Bandwidth section, comprised of 5 faculty (3 from the Department of Computer Science), 2 students, and 1 post-doc.

Participants were provided with the following introductory information:

> "Science DMZ" refers to a computer subnetwork that is structured to be secure, but without the performance limits that would otherwise result from passing data through a stateful firewall.
>
> The Science DMZ is designed to handle high volume data transfers, typical with scientific and high-performance computing, by creating a special DMZ to accommodate those transfers.
>
> Science DMZ is typically deployed at or near the local network perimeter, and is optimized for a moderate number of high-speed flows, rather than for general-purpose business systems or enterprise computing.

Participants then rated the desirability of implementing a Science DMZ at NJIT as it related to their work. As indicated in the chart below, half the participants rated desirability as High.

(Note: No participants rated desirability of implementation as Low).
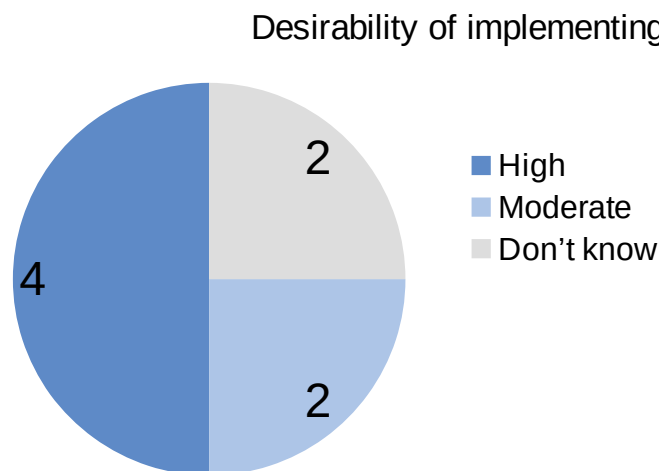
Desirability of implementing Science DMZ

Participants were asked to provide further comments if they wished. One comment was provided:

- It would be helpful to researchers in big data who download big datasets.