

# Intercontinental Disk-to-Disk Data Transfer Experiment with a Lightweight DTN Software Stack

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**Abstract**—This paper presents a lightweight software stack for data transfer node to carry out massive data transfer, monitor real-time data traffic activity, and provide network infrastructure measurements. It consists of Fast Data Transfer~(FDT) as the key application to control all of the data transfers, pairing with OpenTSDB for statistical monitoring in real time and perfSONAR for network statistics. We have demonstrated the proposed DTN software stack by conducting an intercontinental disk-to-disk transfer experiment between Japan and USA. The result shows that the average throughput reaches 6.4 Gbps with a socket buffer tuning.

**Keyword**— Big Data Transfer, Data Transfer Node, Disk-to-Disk Data Transfer, High Bandwidth Communication



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