

# SC'18 Network Research Exhibition

## Building User Friendly Data Transfer Nodes

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### Abstract

Data Transfer Nodes (DTNs) are a hardware and software system that allows for fast and efficient transport of data over long distances. They support data intensive science such as found in the high energy physics (HEP) community. This demonstration will show how multiple data streams can be transferred across the globe, using DTNs and high-performance networks.

We will show multiple DTNs running in several production R&E networks that will perform high-performance file transfers – large files as well as many small files – through different transfer protocols, such as GridFTP, FDT, mdmFTP and others. A new addition is a user-friendly front-end, in the form of modified versions of Filesender and OwnCloud.

DTN capabilities have been deployed at CERN, NetherLight, SURF, University of Amsterdam, KLM, StarLight, PacificWave, NORDUnet and KISTI.

The demonstration showcases the support of large data transfers over R&E networks among multiple sites with DTNs. By managing large data stream volumes through DTNs, traffic among DTNs and at end sites can be handled more efficiently and faster compared to standard methods. This work is linked to the abstract 'Global Petascale to Exascale Science Workflows Accelerated by Next Generation SDN Architectures and Applications' by Harvey Newman.

### Goals

1. Showing the interworking and compatibility of multiple heterogeneous DTNs across the globe
2. Comparing performance of file duplication protocols
3. Showing a user-friendly front-end

### Resources

At SC'18, this demonstration requires dedicated capacity between Dallas and Chicago.

### Involved Parties

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