

# Remote Archives and Synchronization



TIXWAY ACCELERATES RSYNC AND TSM

TIXEL's high speed data transfer solutions for Wide Area Networks cover scenarios far beyond pure file transfer. Because of its roots in streaming large uncompressed image sequences TIXEL's software transfer engine is also capable to accelerate arbitrary data streams – virtually in real-time.

TIXway Universal is the key enabler for efficient operation of a wide variety of data-intensive TCP-based applications in WANs. TIXway boosts transfer performance especially on links with typical impairments like packet loss, jitter, and high latency. Multiple Gigabits per second can be achieved on standard IP networks.

## Save Time

Push or drag data instantly to or from a central archive location.

## Save Storage

Avoid unnecessary costs and maintenance of local storage.

## Streamline Workflows

Do not waste any time for intermediate store and forward.

### RSYNC

One of the most popular and established tools for keeping files in sync at different locations is rsync. By using check sums, rsync provides efficient file transfer between two machines while avoiding any unnecessary double transmissions.

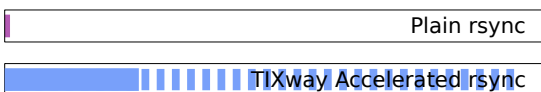
Working great in local environments, rsync transfer rates decrease on wide area links.

Syncing files with common sizes of 50 and 500 Megabytes in a local network with rsync result in a data rate of about 150 Megabytes/s.

On a WAN link with 100 ms RTT and 0.1% packet loss rsync, performance decreases down to 1 to 2 Megabytes/s.

Running the same scenario via TIXway delivers 50 to 190 Megabytes/s resulting in an **acceleration rate of 50 to 95**.

*rsync, RTT: 100ms, packet loss: 0.1%*



### TIVOLI STORAGE MANAGER

Tivoli Storage Manager (TSM) is part of IBM's comprehensive Tivoli suite. TSM acts as a centralized, web-based management for intelligent moving and storing data.

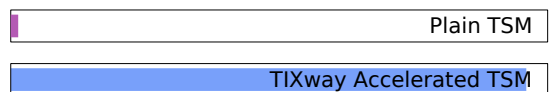
Among other techniques, TSM applies data deduplication to minimize bandwidth for storage and transfers.

The IVZ provides archive services for public German broadcasters ARD. IVZ operates a distributed infrastructure with facilities in Berlin and Leipzig.

Transferring files between Berlin and Leipzig via regular TSM runs at a data rate of 3.4 Megabytes/s.

Applying TIXway allows TSM to run at 240 Megabytes/s on this link – **70 times faster**.

*Archive Transfer via TSM Berlin – Leipzig*



► *Today's storage and archive solutions already minimize the amount of data to avoid unnecessary network traffic.*

► *Simply adding TIXway Universal enables high performance operation also in WAN environments.*

### HOW DOES IT WORK?

TIXway Universal acts as a gateway for standard TCP-based applications.

TIXway runs in the same local network or on the same machine along with the application's client or server components.



After a simple setup of the two TIXways, client's traffic is redirected to the local TIXway. Boosted by TIXEL's transfer technology, traffic is forwarded to the remote TIXway which passes it to the actual server.

### CHARACTERISTICS

- Transparent **WAN acceleration**
- Loosely coupled easy integration via **standard TCP**
- Up to multiple Gigabits/s transfer speed
- Full speed **on-the-fly encryption**
- **Content-independent** transfer speed