Direct Access File System (DAFS) is a network file system, similar to Network File System (NFS) and Common Internet File System (CIFS), that allows applications to transfer data while bypassing operating system control, buffering, and network protocol operations that can bottleneck throughput. DAFS uses the Virtual Interface (VI) architecture as its underlying transport mechanism. Using VI hardware, an application transfers data to and from application buffers without using the operating system, which frees up the processor and operating system for other processes and allows files to be accessed by servers using several different operating systems. DAFS is designed and optimized for clustered, shared-file network environments that are commonly used for Internet, e-commerce, and database applications. DAFS is optimized for high-bandwidth InfiniBand networks, and it works with any interconnection that supports VI including Fibre Channel and Ethernet.