



# SPEED UP APPLICATIONS AND OPTIMIZE BANDWIDTHS WITH WAN ACCELERATION

## What is WAN Acceleration?

WAN Acceleration speeds up all important company applications in the Wide Area Network (WAN), reaching LAN-like performance (Local Area Network). It reduces the data transfer volume by analyzing and modifying, and finally restoring, the original data. In this way, data transfers in the WAN can be optimized and latency times reduced.

## The Challenge

The demands for customer proximity, flexibility, and fast reaction times in a global market are leading more and more to highly networked company structures. Employees who have direct contact with customers increasingly require access to centrally located or geographically distributed data and applications at their workstations. Companies with widely ramified and decentralized structures often complain about their IT applications performing inadequately, especially when it comes to consolidating business processes or performing company-wide data backups. These problems are the result of insufficient IT network bandwidth on the one hand and of the demands modern applications place on data traffic on the other. A key challenge is to guarantee fast and secure connections for all employees at all locations. In so doing, priority should be given to the cost-effective provision of high-bandwidth WANs, as well as to avoiding the transfer of superfluous information by using intelligent techniques.

## The Solution

The principle of WAN Acceleration is based on a hardware and software solution that speeds up WAN data traffic by a combination of transfer optimization and transfer avoidance mechanisms. The data volume to be transferred is thus reduced to its information content, while at the same time WAN bandwidth application performance is improved. Frequently, WAN optimization techniques only take a network-based approach to the problem of performance optimization. Yet the network is just one of the factors that affect performance. WAN Acceleration from Freudenberg IT uses an integrative approach: it takes both the network and the effects of key applications into account, while also avoiding multiple transfers by saving and indexing data. This considerably speeds up data transfer.

Avoiding unnecessary data transfers without losing information is one of WAN Acceleration's most elegant aspects. Data traffic is segmented into fragments, then indexed and saved. After indexing, fragments are compared with those already transferred, saved, and indexed. In the event of a match, only the indexes between the endpoints of the WAN connection are transferred. In this way, only

truly new information is exchanged over the network. The indexes, which are only a few bytes long, can refer to several megabytes of data. As the fragments are saved in components at both the sender and the receiver, the recipient can reproduce the original data from the index and forward this to the application. This, along with compression algorithms and application integration, significantly reduces not only the data volume to be transferred but also the latency times. In this way, the bandwidth of a WAN connection is optimally used and expensive bandwidth upgrades may possibly be avoided.

### Main Benefits

The considerable performance gains help companies optimize their business processes. Cooperation between sites becomes more efficient, network-based backups are possible, and data protection is easier thanks to centralization. With the help of WAN Acceleration, IT managers can provide LAN-like access to data and applications throughout the company network, allowing real-time collaboration. This opens up new options for effective server consolidation. The solution plays a significant role in the consolidation, as even high bandwidths would be unable to guarantee LAN-like functioning without a reduction of latency times. Web-based applications benefit the most from the solution, as the client's universal browser interface obviates the need for application-specific optimization of data traffic. Without a comprehensive solution for the acceleration of applications, extensive server consoli-

dations and distributed applications would lead to overloaded networks, poor performance, and dissatisfied employees.

According to manufacturers' data, WAN Acceleration speeds up applications by up to 50-fold while cutting back bandwidth utilization by 60% to 95%. The extent of acceleration depends on whether a company has focused on consolidating file servers, e-mail servers, or remote libraries for band storage systems. For companies that attach great importance to certified expertise and operational experience, even in complex system infrastructures, Freudenberg IT offers the solution as a managed service. The managed service model allows companies outsourcing their services to Freudenberg IT to optimize resources, avoid making their own investments, plan as well as permanently reduce operating costs by leaving the optimized procurement, implementation, and operation management to Freudenberg IT.

### Target Group

The WAN Acceleration solution from Freudenberg IT is targeted to all multi-site companies that require centralized management and consolidation. As a managed service, the solution is exceptional for its low investment and total operating costs and is therefore especially attractive to small and medium-sized enterprises.

### Solution Highlights

- Acceleration of business processes in the WAN
- Low data volume through indexing and compression
- Risk minimization through server consolidation
- Secure and fast backup scenarios
- Operation of the solution using a managed service model

### References



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