

Advantages

Leading technology

SANGFOR WAN optimization greatly benefits the performance of Web, HTTPS, FTP, Network Neighborhood, Lotus Notes, Exchange, MS SQL, ERP, CRM and other business applications. Regardless of the physical location of branches and business partners, WAN optimization accelerates their important data and applications for a LAN-like experience across even a worldwide WAN.

Low quality communications environments are accelerated the most

Poor quality environments benefit the most with SANGFOR WAN optimization. Such environments are typically poor quality physical links, with high packet loss and high latency. They include satellite links, transnational links, and inter-operator connections. Certain applications (such as MS Exchange) will also greatly benefit from WAN optimization, which compensates for the applications' original design to be used on LANs and not WANs.

High ROI

SANGFOR WAN optimization provides more scalable whole-network acceleration solutions with reasonable price. In addition to acceleration of existing lines, SANGFOR WAN optimization delivers an accelerated VPN infrastructure to connect remote users and sites with flexible and diversified accelerated connectivity by virtue of its built-in VPN service. For small branch sites, its software client can help reduce costs by providing accelerated connectivity via low-cost broadband solutions (instead of expensive leased lines).

Expand your businesses potential, wide area networking (WAN) provides your company with a competitive edge by enabling workforce globalization and IT consolidation. However, WANs face three basic bottlenecks which lead to low application performance and inefficient data transmission:

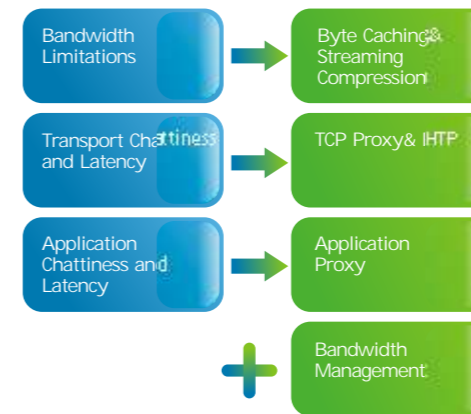
NO 1. Low bandwidth utilization caused by redundant data on WAN

NO 2. Network latency caused by low efficiency of transmission on WAN

NO 3. Interaction mechanism of application protocols seriously affects the network performance

SANGFOR offers WAN optimization (WANO) technologies specifically developed to fix the problems of wide area networking transmission.

SANGFOR WANO Optimization Solution



Data reduction: Byte-caching, streaming compression (GZIP, LZ0), WebPush;

Transmission optimization: Flash-link, HTP, TCP proxy, pre-fetching;

Application optimization: Application proxy;

Bandwidth management: Traffic shaping based on application/type of file/type of website/schedule/user/user group;

Benefits

SANGFOR WAN optimization enables fast and stable remote accesses, significantly accelerates the access speed of ERP, OA, CRM and other information systems.

- Smoothly accelerate the business systems, promote business efficiency without lengthy transformation of existing application or networks.
- Shorten the cycle of business expansion (unlike the long-term cycle of private line networking, the deployment cycle of WAN optimization solution is fairly short).
- Upgrade the work efficiency, enhancing the competitiveness and gain greater business benefits.
- Promote IT integration, reduce IT operating costs.

SANGFOR WAN optimization delivers multi-layer WAN optimization, improving the data transmission efficiency over physical links and significantly improving application responsiveness, especially in environments of high packet loss and high latency. Improvements are especially noticeable with applications that work very inefficiently over the WAN (such as Microsoft Exchange, CIFS, etc).



Core Technologies

Data reduction

Byte-caching

The technology eliminates from 30 to 90 percent of data traffic on transmission lines, avoiding the transmission of redundant data on WAN, and improve the access speed.



LZO/GZIP streaming compression

SANGFOR WANO compress all the data before transferring, significantly improving the speed of accessing Web resources and C/S applications, reducing network traffic and download time.

The higher speed the compression algorithm compresses with, the lower compression ratio it will be. LZO compression algorithm has found the best balance point between the two. GZIP is a popular compression algorithm which is good at compressing web resources, and the compression rate can reach to about 50%-100%.

Overall IP compression

Work with byte caching and LZO/GZIP, compresses all IP data including TCP as well as UDP data, offload the pressure of bandwidth.

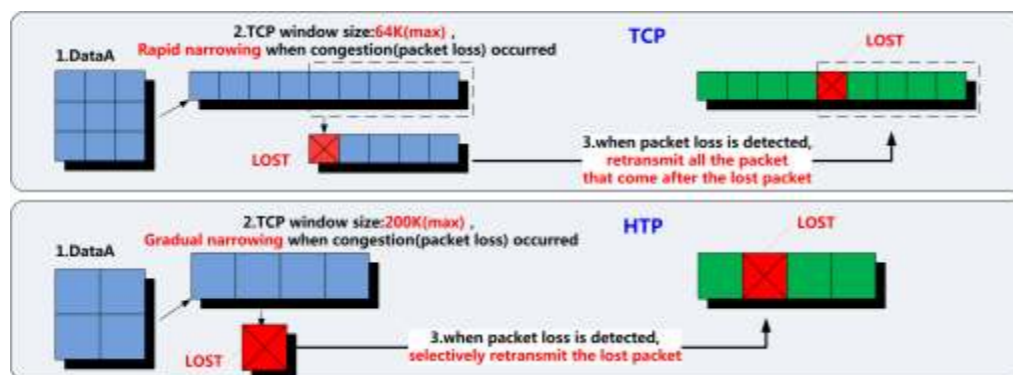
Transmission optimization

Flash-Link technology

Work especially effectively in environments of high packet loss and high latency, such as cross-border or cross-ISP network environments. The Flash-Link technology enables users to gain a good experience though in harsh network environment.

HTP

Improving the transferring efficiency by optimizing the TCP protocol: selective retransmission, fast retransmission, window processing mechanism optimization and congestion control mechanism optimization.



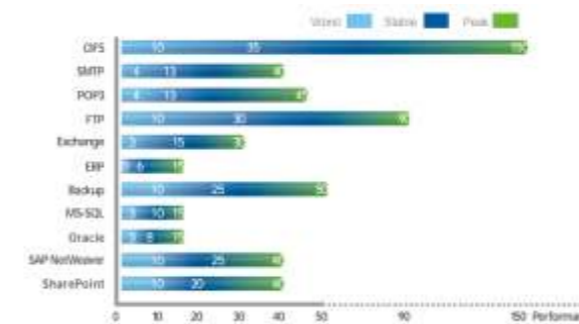
TCP proxy

Reduce duplicate requests and TCP handshakes by adopting TCP link cache technology. Effectively reduce the routing overhead, thus reduce the data transmission protocol interaction.



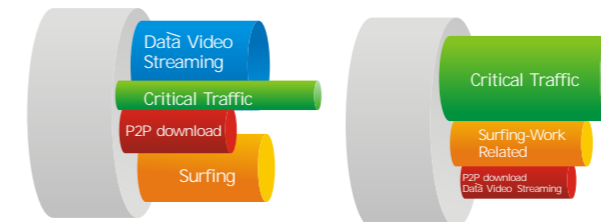
WebPush

SANGFOR WANO analyzes the HTML main page of users' requests, pre-fetch sub-objects (including images, scripts, flash and CSS, etc.) on the webpage and take the initiative to send to the client. The WebPush technology makes the full use of the "remaining bandwidth" and the acceleration effect and reach to more than 100% for Web-based applications.



Application proxy

The request/response Interactions enhanced the availability as well as generated latency for WAN, causing slow data transmission. Traditional TCP optimization and QoS technologies cannot do with the problems as the request/response is carried out on application layer. SANGFOR WANO enhances the transmission efficiency of application software through application proxy technology, and effectively improves the access speed of applications.



Bandwidth management

Integrate the professional bandwidth management module of SANGFOR IAM, providing the bandwidth management function with the identification technology based on DPI (Deep Packet Inspection) +DFI (Deep Flow Inspection) and the flow control technology based-on Per Flow Queuing+ Token Bucket. Guarantee bandwidth for critical applications, providing more value.

Comprehensive reporting

SANGFOR WANO records, and counts all the network traffic of intranet users with a trend and report. With graphic report, curve, and statistics, you can clearly know what behaviors occupy the bandwidth resource. The result will be converted to report forms automatically and sent to the appointed e-mail in regular time, through which IT administrators can easily get the accurate traffic map of the network and to know the user network behaviors and the application conditions of bandwidth resource, and thus make out accurate bandwidth management policy.



Additional functions

VPN

Built-in professional IPsec VPN module to enable the establishment of VPN tunnel between headquarters and the branches as well as the mobiles users, providing high value-added fast VPN solutions.

Firewall

Built-in enterprise-level firewall to enhance network security.