WAN Optimization (Acceleration and Compression)
Features & Benefits

The Autonomic Networking System™ (ANS™) links application performance over the network with the enterprise's business goals.

Self-learning, self-adapting and self-healing, ANS offers tightly coupled features that together bring a unique level of intelligence to the enterprise network:

- **Application Visibility** provides full understanding of application usage and performance over the global network - from the smallest detail up to SLA-based application performance management;

- **Application Control** dynamically adjusts network behavior and resources to the exact application traffic demand - guaranteeing critical application performance in the most complex and changing traffic situations;

- **WAN Optimization** accelerates application response times and offers additional virtual bandwidth to the network;

- **Dynamic WAN Selection** enables Dynamic Hybrid Networking for multi-networked branch offices, selecting in real-time the best path according to actual performance and application traffic characteristics.

OVERVIEW

Enterprise productivity requires any employee to be able to access business applications with the best quality of experience no matter where the employee is located. In addition, business applications now are generally consolidated on corporate data-center servers for Security, IT Operations and cost reasons. This increases pressure on the WAN and the need for better optimization mechanisms to mitigate the effects of high latency with WAN Acceleration and limited bandwidth resources with Compression, especially for multinational companies.

Ipanema WAN Optimization includes:

- Deduplication and Redundancy Elimination that strongly reduce the amount of data transferred on the network

- TCP Acceleration to overcome the limitations of TCP protocol

- Application Acceleration to mitigate chatty applications such as CIFS.

This optimization is applicable to all IP flows between any site of the network equipped with one of Ipanema's physical or virtual appliances (ip|engine or virtual|engine). In order to extend WAN Optimization benefits to small branch-offices and teleworkers, it is also available for Windows PCs equipped with Ipanema Mobile Agent software.

IPANEMA WAN OPTIMIZATION KEY DIFFERENTIATORS

- Handles any IP flows, even SSL-Encrypted.

- Can be used in all network topologies, including fully-meshed and asymmetric routing.

- Does not require any link with applications servers.

- Process to manage SSL certificates for encrypting and decrypting SSL traffic is SaaS-compatible and security-friendly.

- Fully integrated with other Ipanema system features to continuously ensure that the bandwidth freed by compression will not be immediately consumed by recreational traffic.

- Scalable to Very Large Networks as your enterprise uses Ipanema's single centralized platform to define which applications you want to optimize between all equipped sites.

HOW IPANEMA WAN OPTIMIZATION WORKS

- Redundancy Elimination applies to all IP flows, TCP and UDP, including SSL encrypted flows. Algorithms have been tuned to handle today's most important enterprise applications and protocols, such as HTTP, HTTPS and MAPI.

- Specific TCP Acceleration mechanisms address "TCP slow-start" to speed-up short transfers and "Bandwidth Delay Product" encountered on large-bandwidth, high-latency network links.

- Specific CIFS Acceleration mechanisms address the chattiness of SMB Microsoft File Sharing protocol to improve end-user experience from a branch when accessing an Office document stored in a Data Center. This feature does not require any link with Microsoft servers.

- Ipanema devices use bidirectional dictionaries. Once a file has been downloaded, it is optimized for the upload and for the next downloads. This is a powerful mechanism for end-users writing-back their Office documents to a shared server. These data are stored once for all IP destinations.

- SSL certificates are handled in a way that removes the requirement to propagate them throughout the network. This is a significant advantage over other mechanisms on the market. Ipanema's approach allows SaaS application optimization on the WAN, and reinforces the global security of the chain.

- Ipanema's data-center engines handle WAN optimization even for complex network architectures with asymmetric routing. Data-centers with several network links to provide high availability — allowing IP sessions to go out on one link and come back on another — are fully supported.

- Optimization is scalable to Very Large Networks. Using Ipanema's Central Platform, the enterprise defines which applications they want to use for optimization once for all sites.

- Ipanema WAN Optimization benefits are measured and visible as part of the system's real-time and historical reporting.
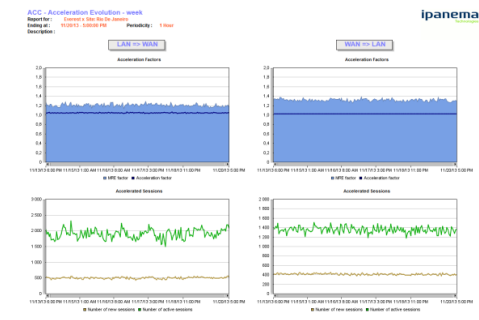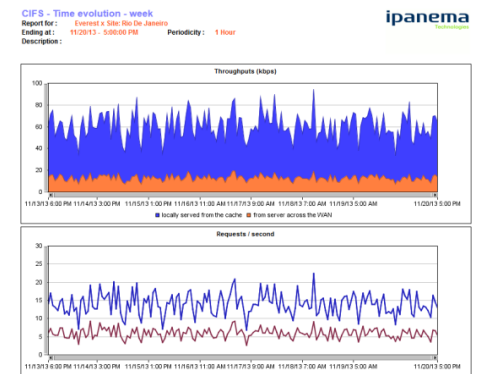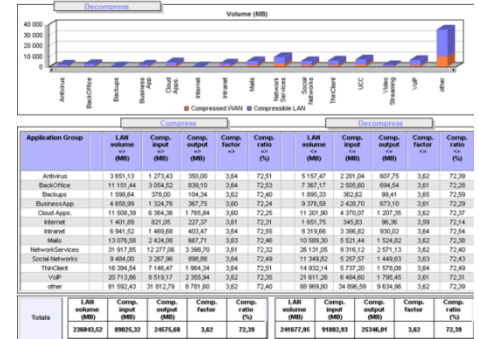
BENEFITS

For the enterprise as a whole: Increase employees' productivity and satisfaction. Contribute to IT savings by reducing network and infrastructure costs. Enable WAN Governance as part of IT Governance.

For the IT organization: Optimize network resources by minimizing the volume of data transferred over the WAN. Speed-up batch operations such as back-Up & replications. Ensure the success of server consolidation in corporate data centers. Streamline IT operations.

For the end-user: Ensure satisfying end-user experience for daily activities such as surfing, file downloads and uploads while guaranteeing the performance of business-critical applications (ERP, CRM) and real-time applications (VoIP, Video).

ipanema
Technologies