




Beyond the Network …




Solution Overview

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ipanema Technologies

ABOUT IPANEMA

Ipanema develops next-generation solutions for enabling large enterprises to have full control and optimization of their global network; private cloud, public cloud or both.

The Ipanema System unifies performance across hybrid networks. It dynamically adapts to whatever is happening in the traffic and guarantees constant control of critical applications. It is the only system with a central management and reporting platform that scales to the levels required by Service Providers and large enterprises. With solutions used extensively by many of the world's largest telecom providers and enterprises across business and public sectors, Ipanema controls and optimizes over 100,000 sites among 1,000+ customers. **Ipanema goes Beyond MPLS**.

Ipanema enables any large enterprise to institute WAN Governance for aligning and automatically managing WAN performance according to business objectives. Ipanema solutions guarantee business application performance and continuity in a cloud computing world—anytime, anywhere. Using Ipanema, enterprises:

- Evolve to Cloud-Ready Network;
- Guarantee user experience;
- Accelerate business applications;
- Unify hybrid networks;
- Save on IT costs.

Ipanema enables Telcos and Managed Service Providers to market, sell and deliver Business-Aware, Application-Centric VPN services to enterprise customers. With Ipanema's technology and simplified, finely-tuned, engagement model to quickly deploy value-added VPN services, Service Providers:

- Serve enterprise customers' real-time business needs;
- Capture more of enterprise customers' IT budgets;
- Increase VPN profitability;
- Refocus sales strategies away from MPLS commoditization and margin erosion to higher value network services;
- Change customer perceptions from costly vendor to true business partner for improving financial performance;
- Reduce churn and win new customers.

INDUSTRY VIEW

"As the complexity of managing WAN traffic is increasing, organizations need more capabilities for optimizing application performance than just WAN acceleration. They are looking to couple application technologies with capabilities that would allow them to have full visibility and control over their WAN traffic. WAN Governance is an innovative concept that allows organizations to use a combination of traditional WAN optimization techniques and robust application performance management capabilities to ensure optimal speed and availability of business - critical applications.

More importantly, WAN Governance allows organizations to use an integrated approach for managing application performance from a global perspective. This management concept goes beyond just a mix of technology capabilities and it allows organizations to align their IT and business goals."

Bojan Simic, Founder & Principal Analyst, TRAC Research

"Whilst deploying redundant networks has become widespread, being able to manage the multiple infrastructures efficiently remains challenging. What customers really want to achieve is business communication continuity through multiple redundant networks while at the same time optimizing their network costs and applying application performance guarantees. This is exactly what Ipanema Hybrid Network Unification brings to our customers."

Steve Howarth, Product Manager Applications & Security, Cable & Wireless

TABLE OF CONTENTS

1. Get full control and optimization of all applications over your global network, private cloud and public cloud

Powered by the Autonomic Networking System™ (ANS™), WAN Governance from Ipanema enables any large organization to gain full control and optimization of all applications over its global network, including evolutions to private and public cloud computing. With WAN Governance, application delivery and performance automatically adapt to ongoing infrastructure transformations so enterprises can perform today while taking control of tomorrow.

- **Enable Cloud-Ready Network**

Using **WAN Governance**, you fully control and optimize all applications over your global network, turning your VPN into a cloud-ready network. You can successfully migrate to Google Apps, Microsoft Office 365 and any other private and public cloud applications, while postponing bandwidth upgrades by two to four years and reducing your network budget.

- **Guarantee user experience**

Ipanema ANS is self-learning, self-adapting and self-healing. Its real-time adaptation to any application traffic change provides an unprecedented ability to guarantee end-user **Quality of Experience** (QoE) with critical business applications, regardless of traffic or application mix.

- **Accelerate business applications**

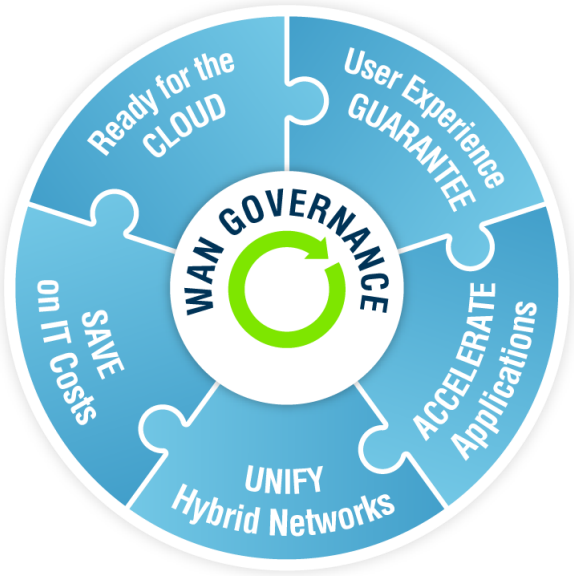
Through state-of-the-art WAN Optimization, Ipanema dramatically reduces application response times for end users while automatically controlling traffic in real-time.

- **Unify hybrid networks**

With Dynamic WAN Selection technology, hybrid [MPLS + Internet] networks become flexible assets that any enterprise can rely on for cost effective business communications.

- **Save on IT costs**

Enterprise WANs are pivotal to executing successful business strategies. Ipanema ANS improves application performance and continuity, increases users' productivity and customer satisfaction while substantially reducing IT and network costs, enabling enterprises to leverage their WAN for greater competitive advantage.



Get full control of your global network

2. Align your WAN performance with business objectives

2.1. WAN Governance

Guaranteeing Business Application Performance

The WAN is so critical to enterprise's productivity that it must be considered from a business perspective, like other critical sectors of the enterprise organization.

Throwing more bandwidth and money at problems is not an appropriate approach in today's world of business governance. Looking at the global enterprise network as a business enabler rather than as a collection of technical objects is one of the new challenges faced by IT managers.

WAN Governance addresses three fundamental issues IT managers have to solve:

- How to guarantee application performance in every circumstance, including cloud applications, distributed and mobile workforce and increasing usage of social media and recreational applications?
- How to get full visibility over the global network, discover applications and understand the causes of application brownouts?
- How to control and reduce the cost of application delivery over the WAN, maximizing the usage of the available resource and potentially using the Internet as a business network?

WAN Governance gives you full control and optimization of all applications over your global network, private cloud and public cloud.

The goal of IT is to support business processes, make workforces more efficient and to maximize their business value. WAN Governance provides full control and optimization of all enterprise applications over the global network to ensure that the WAN contributes to this ultimate goal. By implementing WAN Governance, enterprises:

- Discover, understand and communicate clear KPIs about application performance;
- Control and dynamically optimize public and private applications over global networks;
- Guarantee performance and enforce application SLAs for all critical applications;
- Optimize cost and performance across hybrid networks (MPLS + Internet);
- Encompass all users, wherever they are located;
- Provide the agility and flexibility the enterprise requires to achieve business objectives.

WAN Governance starts with the definition of global application performance objectives. These objectives feed the Ipanema Autonomic Networking System™ (ANS™), which implements four key, tightly coupled features: Application Visibility, QoS and Control, WAN Optimization and Dynamic WAN Selection to match application performance with user demand and available network resources.

2.2. Guarantee user experience

Get full control of increasing application delivery complexity and guarantee end-user Quality of Experience (QoE) with critical business applications.

Applications support new and standard business processes of the enterprise. Highly variable users' activity cannot be predicted with precision. Business and recreational Internet traffic increasing fast. Mobility, virtualization, in-house applications moving to the cloud place more demand on the WAN than ever before and increase the overall complexity of the network traffic.

Ipanema's Autonomic Networking System (ANS) empowers enterprises to:

- Guarantee business critical applications' user experience;
- Align their network with the enterprise's business goals;
- Adapt dynamically to IT changes like cloud computing;
- Automatically enforce and control Application SLAs.

First, ANS's Application Visibility gives full visibility of application traffic over the global enterprise network, using powerful deep packet inspection (DPI) to differentiate between business and recreational applications. It also provides complete information about application performance over the network.

Finally, ANS's QoS and Control globally manages all aspects of the competition among applications and dynamically adapts to real-time changes in the traffic or the global network even in the most complex meshed situation. Business criticality, the types of flows and users' activity are automatically taken into account to enforce application SLAs.

ANS's Application Visibility and QoS & Control work in concert with other system features like

WAN Optimization and Dynamic WAN Selection and are automatically tuned by Ipanema's unique Autonomic Networking architecture.

WAN Governance powered by ANS provides full control and optimization of application performance over your global network, private cloud and public cloud.

2.3. Accelerate applications

Improve response times, create virtual additional bandwidth and enable IT transformations.

Data center consolidation implies higher bandwidth demand on the WAN. Long distance networking creates large delays impacting the performance of centralized applications. In these times of deep IT transformations, enterprises need to reduce IT costs, maximize end-user productivity and ensure business continuity.

Ipanema's Autonomic Networking System (ANS) empowers enterprises to:

- Expand the available network bandwidth;
- Accelerate business applications over the WAN;
- Enable IT transformations such as data center consolidation;
- Improve performance of bandwidth-hungry, chatty applications like CIFS.

ANS's WAN Optimization distributed delta caching and data reduction techniques massively reduce the amount of data sent across the WAN, creating large virtual additional bandwidth.

ANS's WAN Optimization alleviates the impact of network delay and bandwidth constraints for all applications, including chatty ones like Microsoft CIFS (Common Internet File System protocol).

ANS's WAN Optimization works in conjunction with other system features like Application Visibility, QoS & Control and Dynamic WAN Selection. It is automatically tuned by Ipanema's unique Autonomic Networking architecture.

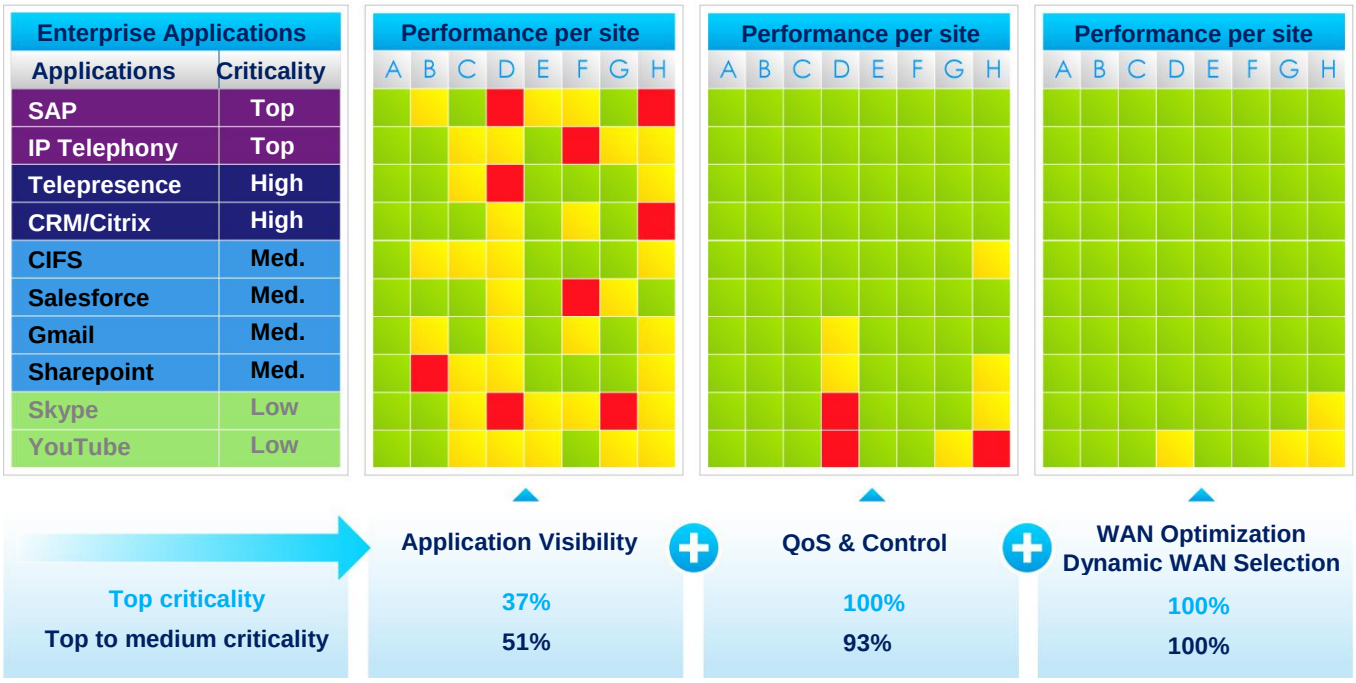
WAN Governance powered by ANS provides full control and optimization of application performance over your global network, private cloud and public cloud.

2.4. Unify hybrid networks

Maximize performance, continuity and IT savings.

IT departments need to guarantee perfect business continuity for critical applications and to face the explosion of their Internet traffic for cloud computing and less critical applications. At the same time, there is a strong pressure to reduce expenses.

Ipanema's Autonomic Networking System (ANS)



Percentage of satisfied users across the network

empowers enterprises to:

- Guarantee unified application performance across [MPLS + Internet] networks;
- Improve business communication continuity;
- Exploit large Internet capacity at low cost;
- Turn back-up lines into business lines.

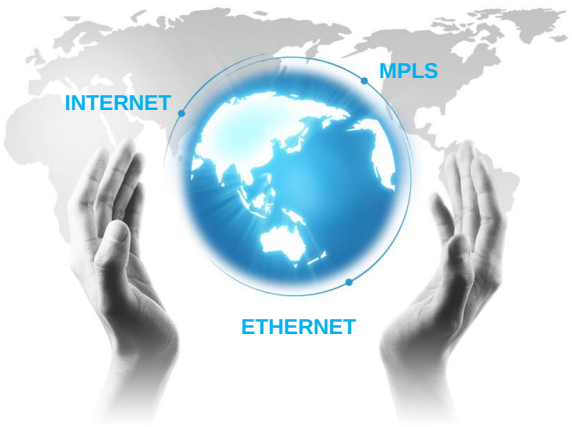
The Internet, however, offers large and affordable bandwidth, without guarantee of performance or availability.

Until now, enterprises had to make painful choices: fast or large networks? Business-grade or standard-grade performance? Value-priced or less-reliable, inexpensive bandwidth? Ipanema's Hybrid Network Unification™ (HNU) enables enterprises to get the best of both worlds: fast and large networks with 99.99% reliability, cost effectively.

Hybrid Network Unification extends the concepts of WAN Governance and Autonomic Networking to automatically monitor, control, optimize and accelerate business applications across two or more networks in a unified controlled environment.

ANS's Dynamic WAN Selection is the key feature enabling HNU. It works in concert with other system features like Application Visibility, QoS & Control and WAN Optimization and is automatically tuned by Ipanema's unique Autonomic Networking architecture.

WAN Governance powered by ANS provides full control and optimization of application performance over your global network, private cloud and public cloud.



2.5. Save on IT costs

Increase business continuity, improve user productivity, upgrade customer satisfaction and accelerate IT transformations while decreasing IT spending.

Enterprise WANs support all existing and new business processes. Poor application performance has massive impacts on the enterprise's business, user productivity and customer satisfaction. At the same time, IT departments face a strong pressure to transform application delivery and reduce expenses.

Ipanema's Autonomic Networking System (ANS) empowers enterprises to:

- Postpone bandwidth upgrades by 2 to 4 years;
- Reduce amount of data transferred over the WAN by 30% to 90%;
- Exploit low-cost, large Internet capacity;
- Justify bandwidth requirements through application SLA-based rightsizing;
- Improve end-user productivity and customer satisfaction;
- Decrease network MTTR (Mean time to recovery);
- Save on major IT transformations like cloud computing.

Ipanema's ANS substantially reduces IT costs in many aspects, enabling enterprises to leverage their WAN for greater competitive advantage:

- QoS & Control increases WAN efficiency and allows a very high workload without any impact to users' experience. Business critical application users are unaffected by network congestions;
- WAN Optimization decreases the amount of data over the WAN, to provision much lower bandwidth;
- Dynamic WAN Selection maximizes the usage of cost effective hybrid networks;
- Application SLA-based capacity planning (rightsizing) keeps sizing the bandwidth to a minimum, ensuring business-critical applications performance at the potential expense of less critical applications such as YouTube or Internet browsing;

- QoS & Control automatically eliminates most application performance brownouts, increasing users' productivity and improving customer satisfaction;
- WAN Optimization decreases application response times and the corresponding nonproductive users' waiting time;
- Application Visibility provides all the necessary information to dramatically reduce the time to understand network incidents and to allocate them to the right level of the organization.

ANS controls the impacts of major IT transformations like server consolidation, desktop virtualization and cloud computing, decreasing project duration, risks and associated costs.

Ipanema's highly automated Autonomic Networking reduces OPEX for application performance management to a minimum, while tele-appliances enable global WAN management without devices at remote branch offices, minimizing CAPEX and deployment costs:

- *"With Ipanema, we divided by 3 the transfer cost of each Gbyte over our network, while decreasing our global cost by 30% at the same time"* IT Infrastructure Director of a leading automotive industry company;
- *"By using Ipanema for data center consolidation down to two data centers while guaranteeing performance across our 1,000 sites worldwide, we removed huge IT costs including servers, software licenses and maintenance… without increasing our network costs!"* Network Manager of a world-leading construction company;
- *"With Ipanema, we have reduced our global network costs by a factor of 2.5 in three years, all while satisfying our end-users… even non-equipped sites generated network cost savings!"* Network Manager of an international technology company;
- *"We rolled-out Oracle Financials across our 80 country network with just one-click… instead of facing six months of painful WAN reconfigurations!"* CIO of a worldwide organization;
- *"With Ipanema, all our 1,500+ branches are getting excellent application performance and only 15 of the sites are equipped with Ipanema devices!"* Infrastructure Director of a major car rental company;
- WAN Governance powered by ANS provides full control and optimization of application performance over your global network, private cloud and public cloud.

3. How it works

Ipanema's Autonomic Networking System (ANS™) is a unique self-learning, self-configuring and self-optimizing architecture that offers tightly coupled features that together bring a unique level of intelligence to the enterprise network:

- **Application Visibility**, providing full understanding of application usage and performance over the global network - from the smallest detail up to high-level KPIs allowing SLA-based application performance management and capacity planning;
- **QoS & Control**, dynamically adjusting network behavior and resources to the exact application traffic demand and network conditions - guaranteeing critical application performance in the most complex and changing traffic situations;
- **WAN Optimization**, accelerating application response times and offering additional virtual bandwidth to the network;
- **Dynamic WAN Selection** for multi-networked branch offices, automatically selecting the best network according to actual performance and application traffic characteristics.

Autonomic Networking

ANS consists of the following components that work together in complete harmony as one fully integrated solution:

- Specialized physical appliances called ip|engines® that are installed at main enterprise sites (data centers, headquarters, etc.) and sometimes in branch offices;
- Virtualized versions of ip|engines called virtual|engines for use in virtualized environments, including private cloud and Infrastructure as a Service (IaaS);
- Emulated appliances called tele|engines or tele-appliances that are automatically delivered remotely by physical ip|engines to provide most of Ipanema's features in unequipped branches;
- The Ipanema Mobile Agent (IMA™), a software client for Windows laptops and desktops, which provides WAN Optimization features to individual roaming users or users within a branch.
- Central management software – Ipanema's Scalable Application-Level Service Architecture (SALSA®) - that provides centralized configuration and reporting for the entire system.

4. Customers

Ipanema is deployed by domestic and international enterprises in over 75 countries.

Ipanema enables any large enterprise to introduce WAN Governance to align and automatically manage WAN performance according to business objectives. Ipanema's solutions guarantee business application performance and continuity in a cloud computing world — anytime, anywhere.

Guarantee user experience

"With Ipanema's Hybrid Network Unification, we divided by 3 the transfer cost of each Gbyte over our global network."

Accelerate business applications

"To ensure productivity and efficiency, it was necessary and imperative to manage and control network usage and application performance in real-time, to provide optimal service to users. The overall visibility and real-time reports on application usage and performance and the ability to 'prioritize' the performance of critical business applications in all circumstances were decisive factors in choosing the Ipanema System."

Unify hybrid networks

"One of our top 2011 priorities is the implantation of Orange Business Services' Network Boost product to improve bandwidth and price performance. As a result, we can greatly enhance data delivery to our UMG sites offices and third-party locations throughout the world. We also expect better performance in the cloud between large data centers supplying services and our local sites."

Save on IT costs

"We needed to adapt our network to manage the increasing number of external Web applications as well as our new international sites. Our goal was to move from a traditional, static network management, based on the definition of Classes of Services to a dynamic, centralized management based on application performance. This is why we chose Ipanema."

Enable global WAN Governance

"Our WAN boasts the most modern WAN techniques, including hybrid networks, and yet is amazingly simple to manage. Ipanema's objective based approach to managing application performance alleviates a lot of the complexity found in typical WANs like Henkel's,"

"Hybrid Network Unification by Ipanema provides a fully integrated Visibility, Control and WAN Optimization feature-set that ideally combines Internet VPN and MPLS in parallel to maximize performance and continuity over our global network, while minimizing our IT cost – all of this from an All-in-One system."

"We wanted to assess the end-to-end Quality of Service offered to our users, and go beyond simply measuring the performance of routers, servers and workstations as a collection of separate objects. The goal was to aggregate all information and to be able to govern our entire information system."

5. Partnering for Success through Innovation

Ipanema is the worldwide leading technology provider for application aware network services today.

This success has been possible through continuous innovation following the principles of Autonomic Networking. In addition to telcos and Managed Service Providers, Ipanema has developed a strong network of Value Added Resellers that address enterprises that want to run the system by themselves.

Our partners include:

- Service providers;
- Managed Service Providers (MSP);
- Value Added Resellers (VAR);
- Value Added Distributors (VAD).

Some of our partners include:

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