



WAN Governance Permanent Audit Professional Services

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WAN Governance is underpinned by Ipanema's Autonomic Networking System (ANS™) delivering four key feature sets over the enterprise's global WAN:

- Application Visibility
- QoS & Control
- WAN Optimization
- Dynamic WAN Selection

Using Ipanema, enterprises:

- Turn their VPN into a cloud-ready network
- Guarantee user experience
- Accelerate their business applications
- Unify the control of hybrid networks
- Save on IT costs

"Using Ipanema's WAN Governance Permanent Audit makes our network fully predictable. Usage and performance are transparent; we get easy-to-understand KPIs. Resources are optimized and we can clearly tune the network budget/performance tradeoff according to our business priorities. Our users benefit from an excellent quality of experience in any circumstances," **Patrick Withers**, Network Manager at Guerbet, a leading medical imaging company.



WAN GOVERNANCE PERMANENT AUDIT (WGPA)

The WAN is so critical to enterprise productivity that it must be considered from a business perspective, like other important sectors of the 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:

- How to guarantee application performance in every circumstance, including cloud applications, distributed and mobile workforces and increasing usage of social media and recreational applications?
- Getting full visibility over the global network, discovering applications and understanding the causes of application brownouts?
- Controlling and reducing the cost of application delivery over the WAN, maximizing the usage of available resources.

WAN Governance Permanent Audit (WGPA) is a professional service delivered by Ipanema and its certified service partners which offers unique value to the IT organization of large enterprises. It provides C-level and detailed recommendations that address all aspects of application performance over the WAN, including:

- Critical applications usage and performance analysis (current, trends);
- Critical sites usage and performance analysis (current, trends);
- Application SLAs (definition, enforcement, control);
- WAN rightsizing to define bandwidth to match application SLAs;
- IT/network performance breakdown analysis;
- Ipanema ANS optimal architecture and configuration fine tuning.

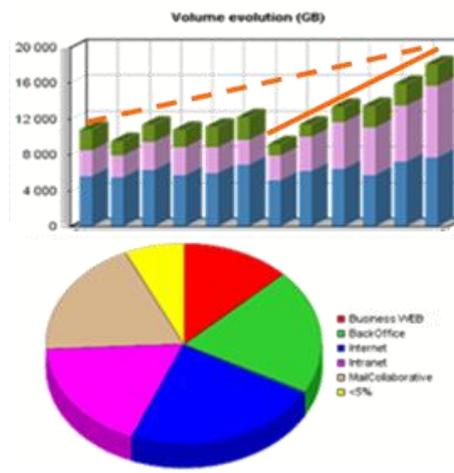


Fig. 1 – Global WAN traffic analysis example

Global traffic breakdown

- Business critical 13%
- Standard 32%
- Low criticality 65%

Traffic growth:

- + 15% /month (global – 6 months)
- + 8% /month (critical app – 6 months)

Five User Classes = 93% of total traffic:

- Internet (Low) 23%
- BackOffice (Medium) 20%
- Mail Collab. (Low) 19%
- Intranet (Medium) 18%
- Business Web (Top) 13%



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WGPA BENEFITS

WAN Governance Permanent Audit provides full visibility of application traffic over the enterprise WAN. Using the audit information and recommendations, IT managers can:

- Align their WAN with business objectives
- Communicate high-level KPIs across the enterprise
- Improve critical application performance
- Put in place application performance SLAs
- Justify, control and reduce IT costs

Ipanema's Application SLA management is based on AQS (Application Quality Score), a high-level composite indicator that represents the WAN contribution to users' quality of experience (QoE).

For each individual active session, AQS is calculated by comparing performance objectives and actual measurement.

For voice (VoIP), Ipanema provides industry standard MOS (Mean Opinion Score).



WGPA DESCRIPTION

WAN Governance Permanent Audit consists of a quarterly in-depth analysis of Ipanema application visibility data by a seasoned consultant and a dedicated report presenting the corresponding results and recommendations. The audit findings are then explained and discussed with the enterprise IT team.

Prerequisites: The audit is based on the permanent collection of application and network performance information from the customer's system. The WGPA consultant must have access to these reports, ideally from a remote access.

WAN Governance dashboards (examples):

- Top critical application analysis (current, trends)
- Top critical site analysis (current, trends)
- Service Level Management analysis against SLAs based on AQS and MOS
- Technical reporting; bandwidth, delay, jitter, loss, Round-Trip Time, Server Response Time, ...

WAN Business alignment recommendations (examples):

- Rightsizing: how to size the network for matching Application SLAs without over-provisioning
- Servers: which servers are the bottlenecks for application performance?

Ipanema ANS fine tuning recommendations:

- Optimal architecture to guarantee best application performance
- Review of application classification and application performance objectives (APOS)
- System check-up (stability, load, sizing, etc.)

% of daily time with poor QoE	< 5%	<2%	<1%	0%
Time per working day	1h40min	40 min	20 min	0 min
OVERSIZING				
Very critical applications				X
Non critical applications				X
Recreational applications				X
RIGHTSIZING				
Very critical applications				X
Non critical applications			X	
Recreational applications		X		
UNDERSIZING				
Very critical applications			X	
Non critical applications		X		
Recreational applications	X			

Fig. 2 – Capacity Planning example

- Available bandwidth: 155 Mbps - Peak throughput: 110 Mbps
- Usage-based sizing: 130 Mbps
 - Rightsized bandwidth: 80 Mbps (Ipanema is activated)

Conclusion: LONDON DC is correctly sized to match current traffic and expected evolution for the next 6 to 9 months period.

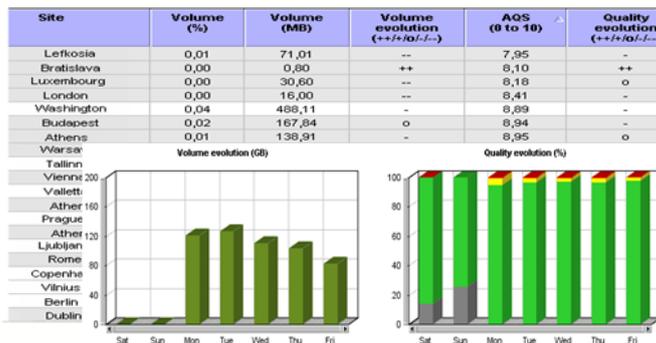


Fig. 3 – Application Analysis example

Business Web-Criticality: TOP

BWeb daily volume: 120 Gbyte (max on Tuesdays)

Bweb Application Quality Score (AQS):

- Average performance is good (AQS > 8)
- However 4 sites with poor performance (AQS < 8.5): LEFKOSIA, BRATISLAVIA, LUXEMBOURG, LONDON