DATA SHEET

Application Performance Troubleshooting

From Flows to Conversations

Overview

In order to guarantee the performance of business applications, enterprise IT organizations need an in-depth understanding of their application ecosystem, starting with full visibility into application usage and network performance. Additionally, they must communicate outcomes to internal stakeholders during all steps of implementation of new applications and their running modes, including:

Rollout: Assess network readiness and the impact of new application deployments, confirm assumptions and adapt the project accordingly, if required.

Run Mode: Monitor the actual application usage and performance, from high-level, SLA-dashboard views, to detailed information levels. Communicate to business lines the network performance as it compares to expected, internal SLAs.

Incident Management: Detect and mitigate problems down to individual users/servers within the LAN infrastructure.

Budget and Capacity Planning: Justify network upgrades with documented facts and propose an adapted network design, aligned with business objectives.

With Ipanema SD-WAN's Application Performance Troubleshooting feature, both IT network and DevOps teams can now work together under a single interface to solve application performance issues.

Application Visibility: Is the cornerstone function of Ipanema SD-WAN – the first step for enterprises to regain control over their networks. Application Visibility enables IT departments to establish application performance baselines and assess the benefits of other Ipanema features.

Why Ipanema SD-WAN is recognized as the leading solution[1]?

Comprehensive set of reports include CxO dashboards to deliver a high-level overview of network and application conditions. It also includes very detailed views of real-time and non-real-time traffic flows;

High granularity allows the analysis of traffic and performance application across all organizational levels, including business units, geographies, sites and application groups;

Application Quality Score (AQS) can be used as a common KPI, relevant to all applications. It provides correlated end-user experience and a referential of internal business objectives;

All IP packets are measured by using actual traffic on the whole network, not just on few samples of packets or simulated flows;

Cost-effective because Ipanema SD-WAN, by using tele-engines, does not require appliances on all sites to produce a comprehensive view of application usage and performance over the network;

NPM integration, the Ipanema SD-WAN central management platform called SALSA® integrates NetFlow capabilities within a single unified GUI;

Scalable to all network sizes, SALSA® allows the IT departments managing thousands of distributed appliances through a single console.

Ipanema SD-WAN, application intelligence for the WAN edge from Infovista, links application performance over the network with the enterprise's business goals.

- **Self-learning, self-adapting and self-healing, Ipanema SD-WAN offers tightly coupled features that 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 WAN for multi-networked branch offices, selecting in real-time the best path according to actual performance and application traffic characteristics;**
- **WAN Security protects branch Internet connections from threats. It encrypts traffic over IPsec VPNs to public and private DCs. It forwards Web traffic to Secure Web Gateway providers and allows/denies traffic to go directly to the Internet.**
- **Application Performance Troubleshooting simplifies the management of the digital user experience by accelerating troubleshooting and streamlining the trends analysis of network and applications performance by collecting NetFlow rich set of flow metrics from network devices of the LAN and WAN, enabling the detection and location of the source of network performance issue and expanding Ipanema SD-WAN Application Visibility to the LAN.**

1. Gartner Magic Quadrant 2016: "Infovista (formerly Ipanema SD-WAN) supports a unique application-policy-driven solution, dynamic per-flow or per-packet control, WAN path selection, direct access to Internet and WAN optimization in a single, centrally managed system"

How Ipanema SD-WAN Application Performance troubleshooting works?

Ipanema SD-WAN identifies applications and computes metrics for all IP packets going through physical or virtual appliances, deployed in data centers and branch offices.

The data are collected and stored centrally, to be delivered through real-time dashboards and historical reports. Ipanema SD-WAN's Application Visibility is built with several components:

Deep Packet Inspection recognizes and classifies all business and recreational applications, (via Layer 7 attributes).

Network Metrics represent traffic volume (throughput, sessions); performance metrics (one-way delay, jitter, loss, RTT, Server Response Time, TCP Retransmit, etc.) for each application flow, from WAN-to-WAN and LAN-to-LAN.

Mean Opinion Score (MOS) standardized composite metric to evaluate VoIP / Audio Codecs Quality-of-Experience (QoE).

Application Quality Score (AQS) Ipanema SD-WAN composite metric to assess the QoE of any application and alignement with business objectives defined in the Application Performance Objectives.

Real-Time Dashboard provides an instantaneous view of network conditions and application statuses.

Tags provide consolidated dashboard views grouping hybrid links, appliances, sites and applications, particularly useful for complex and large network environments.

Application Flows Detail provides an exhaustive tabular view of the Flow matrix to understand peer-to-peer Application Flows, such as UCC and SaaS between pairs of sites with all application performance metric details.

Ipanema SD-WAN Application Performance Troubleshooting feature provides complete autonomy and independence from CSPs/ISPs, thereby ensuring faster remediation and cost effectiveness.

Application Flows Map provides a revolutionary bird's-eye view connectogram – in real-time – that enables a top-down approach to understand flow topologies; very useful to understand peer-to-peer Application Flows.

Diagnostics Tools visualizes the real-time connectivity status of any paths between sites in the networks, broken down in availability and stability of such paths, essential in Hybrid WAN deployments.

Troubleshooting Tools expedite incident resolution via drill-down from Ipanema SD-WAN Application Flows to NetFlow Application Conversations detailing all Application performance metric between pairs of end-point for a given application across the WAN thus extending the reach of Application end-to-end visibility to the LAN infrastructure.

Real-time performance data from Ipanema SD-WAN, NetFlow and Applications appliances

Scalable and optimized database and data processing engine

Single pane of glass for network and application performance

Configurable dashboards summarize key information with logical data groupings

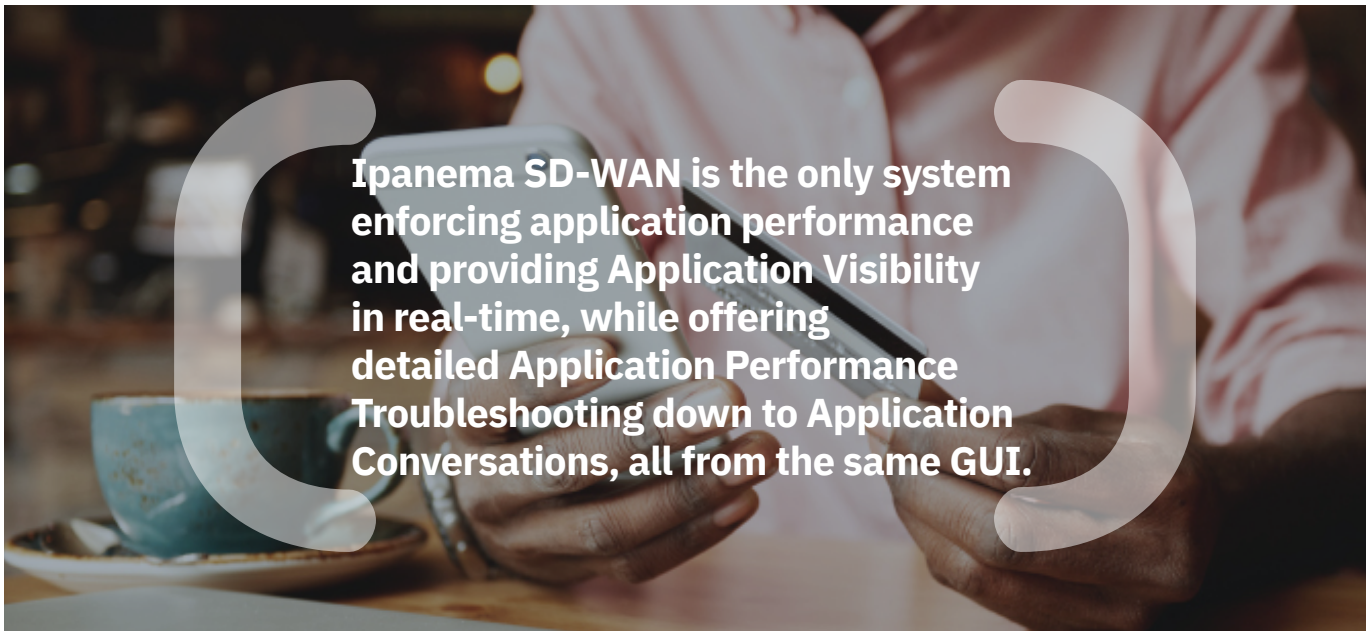
Comprehensive reporting facilities include adhoc report creation with multiple formatting options including; matrix, chart and grid

Contextual drill-down and drill-up support within maps, reports and charts

Extensive out-of-the-box filtering options for network, user or application transactional data

Application Usage Manager (AUM) module extends SDM functionality to improve the coverage of application specific traffic using flow analysis

Application Response Manager (ARM) module extends SDM functionality to display transaction specific metrics using deep packet inspection (DPI) data



Benefits

For the enterprise, as a whole: as a whole: Increase IT organization efficiency and contribute with faster troubleshooting. Enable decision making on documented facts and measured outcomes during Application Performance incidents.

For the IT organization: Streamline roll-out and helpdesk operations with quicker root-cause analysis. Fasten help desk calls resolution and reduce staffing requirements. Reduce the network team's meantime-to-innocence (MTTI) and improve the reputation of IT as a whole within the enterprise.

UNIQUE VALUE PROPOSITION

The only SD-WAN system enforcing application performance, providing application visibility in real time, while offering detailed troubleshooting down to NetFlow Conversations, all from the same GUI.

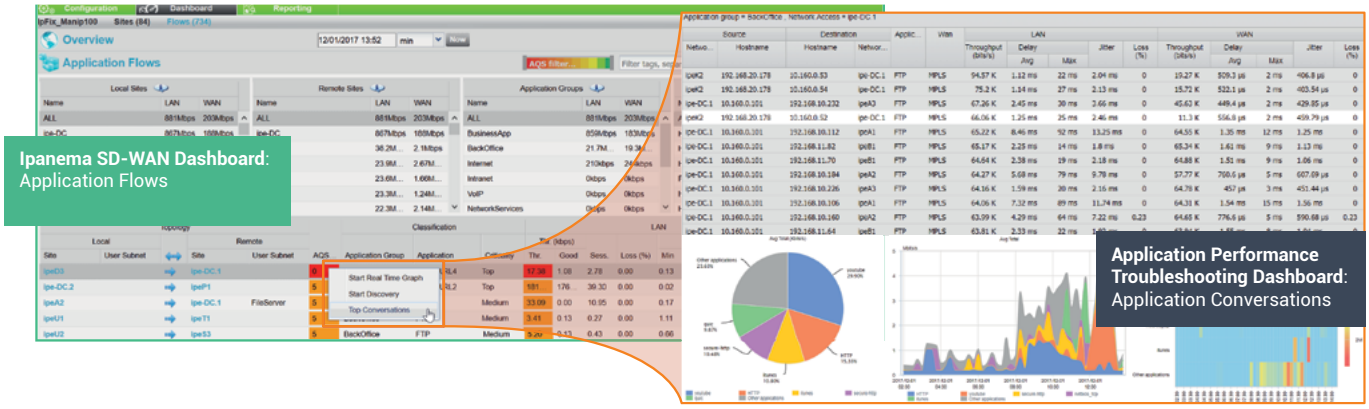
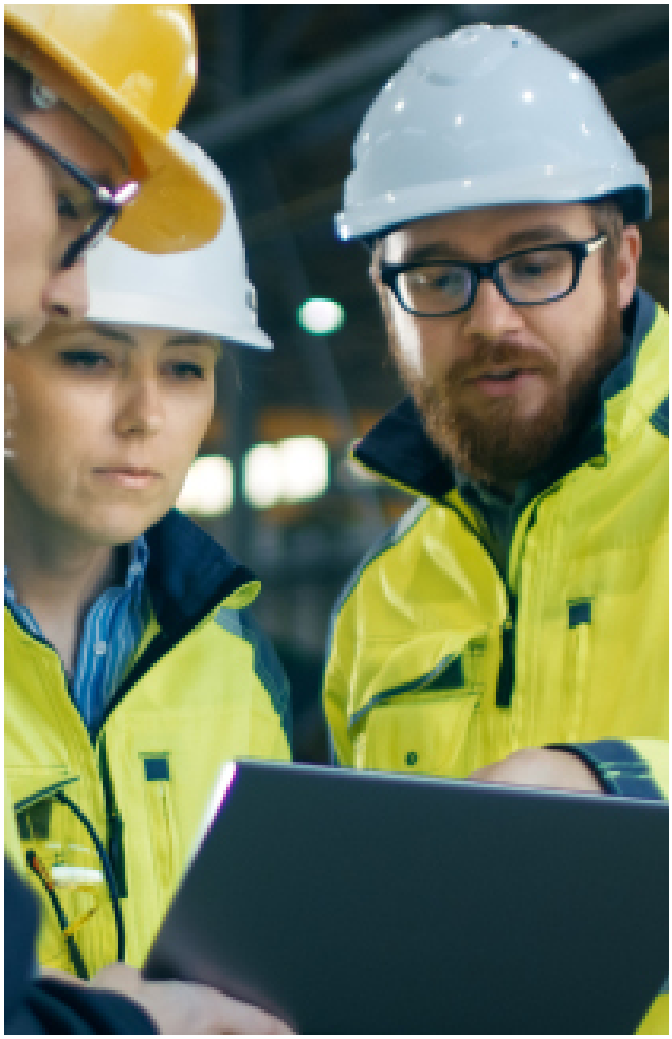


Figure 1. Application Performance Troubleshooting breaks down Ipanema SD-WAN Dashboard's Application Flows into NetFlow Conversations

For the applications' users: Improve user experience by accurately detecting application performance issues (scope and root-cause) and shortening business critical application performance incidents, before users call the help desk. Troubleshoot help desk calls in real time by expediting root-cause resolutions down to the user/server.



About Infovista

Infovista, the leader in modern network performance, provides complete visibility and unprecedented control to deliver brilliant experiences and maximum value with your network and applications. At the core of our approach are data and analytics, to give you real-time insights and make critical business decisions. Infovista offers a comprehensive line of solutions from radio network to enterprise to device throughout the lifecycle of your network. No other provider has this completeness of vision. Network operators worldwide depend on Infovista to deliver on the potential of their networks and applications to exceed user expectations every day. Know your network with Infovista.