

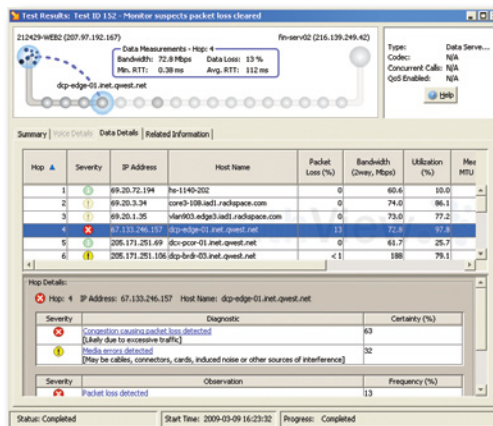
PathView™

Network Performance Management System

See Through The Cloud Like You Own It.

Your business runs on networked applications. Cloud computing, VoIP, IP-video conferencing and other performance-critical applications require you to keep your network running all day, every day, at high levels of performance. Any drop in bandwidth or increase in latency can make these applications unusable and your customers unhappy. While you're responsible for delivering end-to-end performance, you lack visibility into the end-to-end network paths through the WAN, the cloud and your virtualized infrastructure. So how do you effectively manage network performance when today you're operating blindly?

Apparent Networks' PathView™ solutions solve this visibility problem by providing insight into the end-to-end network path from source-to-destination through your own and third-party networks. By experiencing network performance without affecting it, PathView's patented technology troubleshoots network performance problems, monitors service levels, assesses network readiness for new applications, and reports on service delivery. PathView solutions give you a comprehensive view into physical and virtual infrastructures and their associated service levels so that you have a complete picture of the health of the end-to-end network at any point in time. If a service issue should



- PathView provides complete hop-by-hop analysis from source to destination, through your own and third-party networks.

arise, PathView automatically performs a hop-by-hop analysis to precisely pinpoint where the problem lies—whether it's in your network, someone else's or even the application itself.

With its intuitive dashboards and reports, PathView reduces operational costs, increasing customer satisfaction by allowing you to proactively monitor your network for issues before they impact services and to quickly find and fix problems when they do arise. Additionally, PathView reduces the risks associated with network and application changes by allowing you to easily assess their business impact before they occur and validate them afterwards.

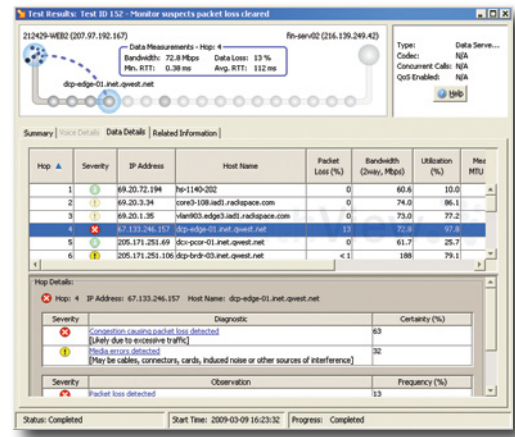
PathView Capabilities

- Troubleshoots network and application performance issues with hop-by-hop analyses from source to destination, even through the cloud and virtual infrastructures
- Easily resolves network issues with actionable diagnostic information
- Proactively monitors network performance, Quality of Experience and Service Level Agreements for better customer experience
- Tracks your carrier's performance with measurements such as bandwidth, jitter, latency and packet loss
- Facilitates capacity planning with historical network usage statistics to avoid costly network upgrades
- Assesses network readiness pre- and post-deployment of new applications or infrastructure to reduce the risk of change
- Validates and reports upon service levels, service violations and network performance for both voice and data
- Deploys in minutes with single-ended software requiring no agents, configuration changes or end-points
- Integrates easily with third-party network management systems via SNMP and SMTP notification

1 Troubleshooting Features

Find and fix network problems quickly

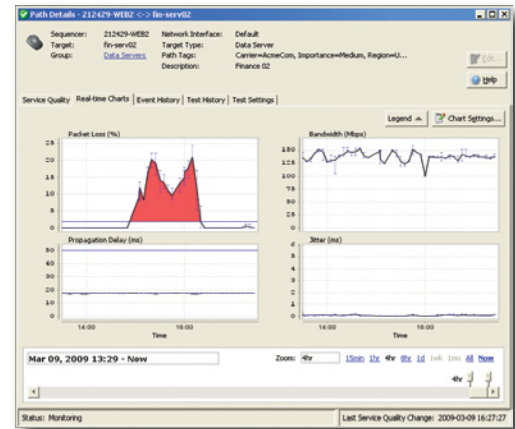
- Embedded expert system that provides detailed hop-by-hop diagnostics along an end-to-end network path, including segments outside of your network
- Summary of the duration and number of violations per service, path, group, region, or other user-defined variables including jitter; packet loss; packet reordering; utilization; propagation delay; best and maximum achievable bandwidth; host names and addresses; average and worst RTT, measured and reported MTU; and mean and predictive MOS scores, QoS changes, collision domain violations, MTU conflicts and more
- Actionable diagnostics for more than 50 different network problems including duplex conflicts, rate-limiting queues, network congestion and media errors
- Manual or automatic start when performance thresholds are violated
- Assignable end-point types—client, data server, handsets and voice trunks
- Safe for production environments at approximately 10 kbps per test



2 Monitoring Features

Proactively monitor network performance for fewer service issues

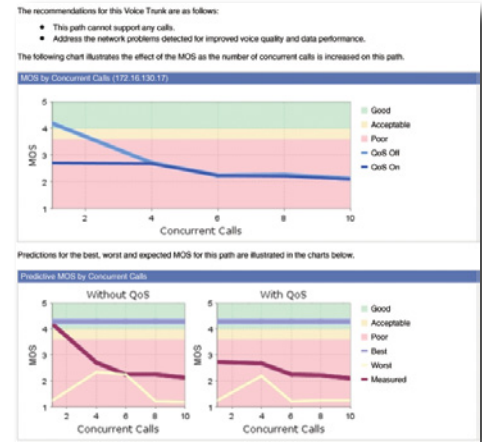
- Single ended, real time, end-to-end monitoring of network paths and services
- Measure end-user application response time for data, video and voice applications
- Drill down from high-level summaries to detailed path reports
- Captures and analyzes many network characteristics and behaviors, including jitter, packet loss, packet reordering, utilization, propagation delay, maximum achievable bandwidth, host names and addresses, average and worst RTT, measured and reported MTU and mean and predictive MOS scores
- Automatic alerts, traps and escalation to troubleshooting mode based on user customizable service quality definitions
- Sampling granularity as low as 5 seconds versus 10-15 minutes for other systems
- Less than 3 kbps per sampling on average



3 Assessment Features

Assess network readiness for change to reduce operational risk

- Summary report of full network readiness for data, video and voice applications pre- and post-changes
- Dashboard summary of the duration and number of violations per service, path, group, region, or other user-defined variables including jitter; packet loss; packet reordering; utilization; propagation delay; best and maximum achievable bandwidth; host names and addresses; average and worst RTT, measured and reported MTU; and mean and predictive MOS scores
- Actionable diagnostics for more than 50 different network problems including duplex conflicts, rate-limiting queues, network congestion, media errors, QoS changes, collision domain violations, MTU conflicts and more
- Assignable end-point types—client, data server, handsets and voice trunks
- Safe for production environments at ~10 kbps per test

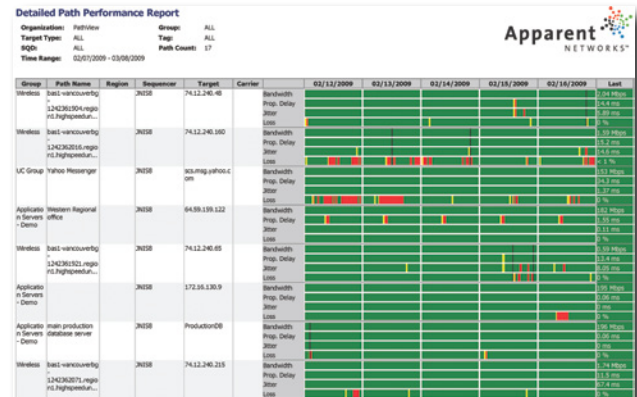


4 Reporting Features

Validate and report upon your own and your carrier's service levels

- Real-time reports on network performance and application delivery
- Individual path and rolled up reports including:
 - » Test Report
 - » Path Report
 - » Assessment Report
 - » Performance Dashboard
 - » Service Quality Dashboard
 - » Violation Dashboard
 - » Management Overview Dashboard
 - » Voice MOS Report
 - » Path Performance Report
 - » Detailed Path Performance Report

- Export reports to pdf, rich text, .csv and .xml formats
- Additional reporting via optional PathView Report Server



5 Other Features

- Intuitive web-based user interface
- Setup and configuration wizards
- Auto-discovery of layer 3 network devices
- 1200 LAN paths and 120 WAN paths
- Up to 40 PathView Sequencers generating test samples installed near point of service delivery
- PathView Application Server with database installed on any networked host
- 1 administrator and up to 5 report users
- Integrates with existing NMS's via SNMP traps and SMTP email notification
- Utilizes ICMP and UDP for testing and monitoring

Configurations

Model:	LAN Paths:	WAN Paths:	Sequencers:	Users:
PathView 110	100	10	3	1
PathView 220	200	20	5	1
PathView 330	300	30	10	1
PathView Team 550	500	50	15	2
PathView Team 880	800	80	25	3
PathView Team 1320	1320	120	40	5

System Requirements

Hardware:	Min. Hardware Requirements:	Supported Software:
PathView Server	<ul style="list-style-type: none">• 1 GB Memory (2 Preferred)• 2 GHz CPU• 1 GB Available disk space	<ul style="list-style-type: none">• Windows Vista• Windows XP Professional (SP3)• Windows 2003 (SP2)• VMware ESXi v3.5
PathView Sequencer (installed on any networked host)	<ul style="list-style-type: none">• 512 MB Memory• 1.4 GHz CPU• 20 MB Available disk space	<ul style="list-style-type: none">• Windows Vista• Windows XP Professional (SP3)• Windows 2003 (SP2)• Windows 2000• Red Hat Enterprise Linux 4.0 and 5.0 (x86)• VMware ESXi v3.5
Performance Dashboards Console		<ul style="list-style-type: none">• Internet Explorer 7 (Win)• Firefox 3.0 (Win & Linux)• Mozilla 1.7 (Solaris)

About Apparent Networks

Apparent Networks is the only IT performance management provider that delivers the end-to-end service insight required for today's cloud applications. By experiencing network performance without affecting it, the company's patented path solutions assess network readiness, monitor service levels and diagnose problems otherwise hidden from sight. Leading companies rely on Apparent Networks to assure application delivery and expand their service portfolios with confidence.

Corporate Headquarters:

110 Cedar Street
Wellesley Hills, MA 02481
1.800.508.5233

Vancouver Office:

400 - 321 Water Street
Vancouver, BC V6B 1B8
1.604.433.2333

Sales: 1.800.508.5233

Email: support@ApparentTools.com

ApparentTools.com

Apparent
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