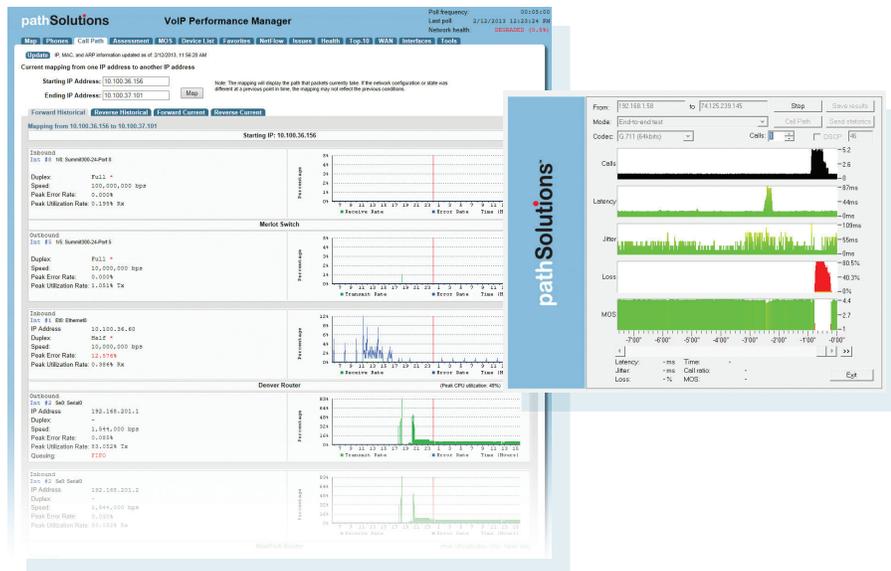


# Root-Cause Troubleshooting for Your Entire VoIP Network

All VoIP networks have quality issues. And when your users complain about echo, garbled conversations, or dropped calls, it's up to you to fix it. Fast. But there are hundreds of reasons for poor voice quality and worse yet, potentially hundreds or even thousands of links, routers, and switches to check across any number of locations. And within that network, you need to find out where and why those calls failed.



- Call quality resolution and troubleshooting
- Root-cause identification of problems in plain-English
- Unique single-ended Call Simulator performs test calls to any intermediary IP address
- VoIP phone locator identifies location, health, and status of all VoIP phones
- PoE power tracking for all PoE switches and interfaces



PathSolutions TotalView is uniquely designed to identify and resolve the root-cause of call quality problems—telling you when, where, and why VoIP problems occur and recommending how to fix them. With TotalView, call troubleshooting has never been easier as all corners of your network and beyond are covered, enabling you to isolate problems even when they occur on your carrier's network or other third party networks. PathSolutions TotalView solves all your VoIP performance problems, delivering reliable phone service at the lowest possible cost.

## Watch How the Network Affects VoIP Quality in Real-Time and Historically

With complete call path mapping, see the status of an entire call path in one view—in real-time as well as historical—so that you can analyze the quality of in-progress calls and resolve intermittent call quality issues. This includes:

- All links, switches, and routers involved in the call path (not just routers).
- The health and performance of each link over the past 32 hours.
- The QoS configuration of WAN links (Cisco devices only).

Contact PathSolutions for more information

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## Locate All the Phones On Your Network

All phones connected to every monitored device in your network are inventoried. Phone information includes:

- The phone IP address and manufacturer.
- The switch, port, and VLAN where the phone is connected.
- The health and performance of the phone's connection to the network.
- MAC addresses on the interface – this helps to determine if a PC is plugged into the phone.

VoIP Device IP Address	Device MFG	VLAN	Device Name	Interface Number	Description	MAC Addresses	Peak Daily Error Rate	Peak Daily Utilization
10.100.24.151	Shure	14	Merlot	Int #21 101	Sunset00024-Port 21		0.000%	0.004%
10.100.24.110	MME	14	Merlot	Int #19 119	Sunset00024-Port 19		0.000%	0.008%
10.100.24.43	Polycom	14	Shiraz	Int #2 48	102 First Ethernet (ICM/MS/HT)		0.000%	0.221%
10.100.27.100	Cisco	14	Shiraz	Int #24 24	Ethernet Interface (First Floor Class 1)		0.000%	0.002%
10.100.27.203	MGE	14	Barbara	Int #11 11	1100BASE-TX RJ45 Fast Ethernet Frongate Port 11 (Polycom Phone in Conference Rm)		0.000%	0.002%
10.100.27.120	Shure	14	Barbara	Int #7 7	1100BASE-TX RJ45 Fast Ethernet Frongate Port 7 (Shure Loud/Phone)		0.000%	0.002%
10.100.117.24	Cisco	1	Isabella	Int #3 3			0.000%	0.002%
192.168.202.2	Avaya	15	Coleridge	Int #2 2	Ethernet Interface		0.001%	0.237%
10.100.27.145	Avaya	14	DC_Vase_282	Int #40 40	(802) (Stryke)		0.000%	0.499%

## Easily Discover When, Where, and Why Problems Occur

Detailed performance information for every monitored device is provided in time-series format so that you can easily see where problems occurred and drill-down to discover why they occurred. This includes:

- Jitter
- Latency
- Packet Loss
- MOS

## Simulate Calls In and Out of Your Network

Simulate any number of VoIP calls anywhere in your network, mapping through carrier-managed MPLS clouds as well as VPN tunnels:

- Track latency, jitter, packet loss, and MOS for any number of calls to any location on the network, then locate the specific link and exact cause of the VoIP issue.
- Use the IP address of the VoIP phone or gateway or the IP address of an intermediate switch or router to test individual segments of the network.
- Dynamically change number of calls to determine how your network responds to increases in load.

## Advanced Reporting: Network Errors, Performance, and Administration

Based on utilization rates you set, continually monitor the interfaces that are experiencing a higher utilization rate, including error rates and peak daily utilization. Top ten reports include the top ten interfaces with the most errors, top ten interfaces with the highest daily percentage transmission, and the top ten interfaces with the highest daily received percentage.

## PoE Monitoring to Manage Power Usage of PoE Switches

Monitor the power usage of your PoE switches to make sure you are not getting close to limitations of the switch. This includes monitoring the power draw for each port on the switch so you can determine where high-power drawing devices are connected and quickly determine any power faults.

## Easily Look Up MAC Manufacturers and DNS Devices

Easily identify all the devices connected to a switch. Identify MAC manufacturers by hovering over the MAC address and DNS names by clicking on the IP address (a reverse-DNS lookup will be performed, showing you what the DNS name is for that device).

## Includes All Network Performance Manager Features

PathSolutions TotalView is the only solution that provides automated expertise, analysis, and coverage of every interface on every device on a network of any size across any number of locations. TotalView solves all your network performance problems, delivering a high performing network at the lowest possible cost. For more information, see PathSolutions TotalView Network Features data sheet.

## Optional CDR (Call Detail Records) Monitoring

With optional CDR, PathSolutions monitors the CDR (Call Detail Records) for phone systems and sends alerts when poor quality calls occur. Each alert includes a link that will run a call path map report, identifying the root-cause fault location and plain-English reason for the poor quality call.

Check with PathSolutions for a list of supported VoIP systems.