

The dynamic nature of today's networks plus the lack of effective analytics make voice network management a complex challenge. From network design to service provider contract negotiation to operational management, constant challenges exist. For instance, do any of the following sound familiar?

- How many simultaneous calls and how much bandwidth do we need now, and how will that change as sites are added, closed, reduced or merged?
- Is there any way to model what our configuration should be? Or, do we just guess at how to build our routes?
- Why are so many VoIP calls terminating abnormally? What's the problem?
- Wouldn't it be great to have our own data when we have to negotiate our service provider contract renewal? Are we paying too much for network capacity that we don't even need?
- Do we have enough DID numbers? What numbers are available for the new building?

TRAFFIC ANALYST IS LIKE HAVING AN EXPERT ENGINEER ANALYZING YOUR NETWORK ON A FULL TIME BASIS.



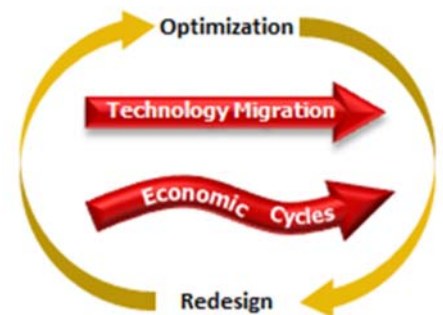
Traffic Analyst cuts through traditional telecom jargon providing definitive analytics answering questions you cannot answer today, eliminating blind spots and quickly putting you on a path to achieve your network goals. From full life cycle capacity assurance for designing networks and negotiating service provider contracts to analytics for every day operational management tasks, Traffic Analyst offers actionable intelligence that will have a dramatic impact on business operations.

Traffic Analyst's full life cycle capacity assurance and deep call forensics tools eliminate surprises by providing complete voice network visibility, be it a TDM, SIP or hybrid network. Other solutions provide only a slice of what you need. Traffic Analyst offers complete voice network visibility!

FULL LIFE CYCLE CAPACITY ASSURANCE





Networks are dynamic. Calibrating network capacity with demand is an on-going challenge. Whether you are managing a TDM network, preparing for or in process of a transition to SIP, or managing a SIP or hybrid network, you need the right metrics and methodology to optimize your network. And, how do you determine the impacts of day-to-day business operational changes, such as consolidating office locations or transitioning to work-at-home call center agents? Traffic Analyst calibrates network capacity throughout the full life cycle of technology migrations and on-going economic cycles with these unique capabilities:

- 📞 **Call Route Intelligence** illustrates true caller grade of service based on how calls flow and overflow through the network.
- 📞 **Usage Profiles** take the guess work out of capacity decisions by showing detailed histograms of network utilization compared to configured capacity.
- 📞 **Look Ahead Alarms** proactively trap and alert you of service problems, such as network saturation conditions, before they impact your business.
- 📞 **Real-Time Monitoring** keeps you continually updated on network utilization and saturation.
- 📞 **What-If Modeling** forecasts the impacts of changing call volumes, redesigning call routes, converting TDM load into IP Bandwidth and calibrating service levels to business requirements.



DEEP CALL FORENSICS








Today's call accounting packages focus on expense management and fraud detection. Important, yes, but you need deep call forensics. You require QoS from the caller perspective, not just the network perspective. Beyond QoS, you need to see when and why calls drop abnormally. And, wouldn't it be great to have the same application manage your number inventory? Go beyond a list of predefined reports and start leveraging a system that offers a complete view:

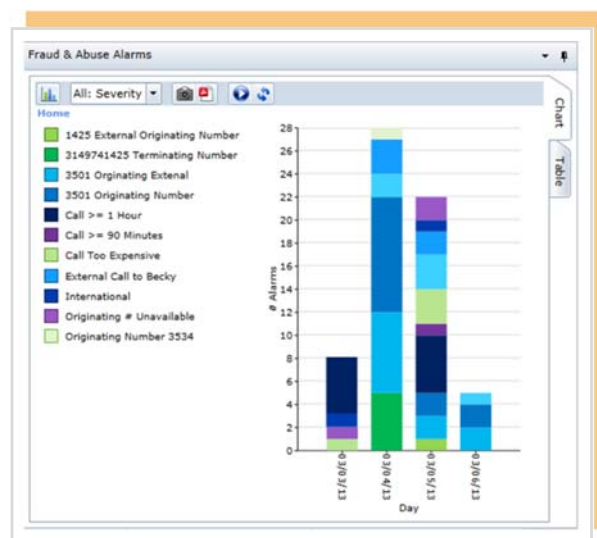
-  **Beyond Call Accounting** - Traffic Analyst Cost Management features include flexible outgoing call classification and call costing for all call types, comprehensive reporting, number management and fraud control.
-  **Call Quality Diagnostics & Troubleshooting** - Pinpoint specific devices in your network experiencing problems. Traffic Analyst proactively highlights deteriorating call quality based on standard QoS metrics and thresholds you define (MOS, R-Factor, packet loss, latency, jitter), but with integration to Traffic Analyst also includes reports and alarms for dropped calls with integrated SIP response code analytics. All this with no specialized hardware to deploy.
-  **Number Management** - Track and report the status of your DID and non-DID numbers, including In Use, On Hold, Reserved, Available and Aging.
-  **Call Tracing & Investigation** - Extensively search and drill down to trace calls as they transfer inside a switch and traverse through multiple switches to research threats and diagnosis call routing.



YOUR NETWORK, YOUR WAY

By overcoming the limitations and complications of the industry's traditional engineering methodologies, Traffic Analyst provides a simple, more reliable alternative to improve the service and cost performance of your voice network.

-  **Customizable Dashboard** honed to each user and environment, streamlining the task of network management
-  **Unlimited Reports & Charts** put all your key metrics and views at your fingertips with no time wasted waiting for a vendor to build a new report
-  **Virtual Groups** give you the flexibility to choose any combination of switches, trunk groups, routes, stations, departments, cost centers and more for your reports.
-  **Alarm Management** through user-defined alerts of deteriorating service levels, fraudulent use of the network and emergency calls
-  **Switch Platform Agnostic** for integrated analysis of networks with a mix of telephony switches from multiple manufacturers, including both wireline and WiFi
-  **Network Discovery** to automatically detect changes in the network, eliminating time-consuming and tedious configuration tasks
-  **Flexible Deployment Models** to fit any business requirements and budget



Traffic Analyst is not just another network management system or call accounting package. Traffic Analyst delivers the market's most comprehensive view of voice network utilization and performance, showing current levels in real-time for operational management and historical patterns for planning. Traffic Analyst also offers a dramatically different approach to call analytics by delivering deep call forensics. Traffic Analyst sets you on a direct path to achieving your network goals.

CAPACITY ASSURANCE

By overcoming the limitations and complications of the industry's traditional engineering methodologies, Traffic Analyst provides a simple, more reliable alternative to improve the service and cost performance of your voice network. As you cycle between optimization and redesign projects for your dynamic network, Traffic Analyst's capacity calibration lets you see network utilization and saturation in real-time, quickly pinpoint abnormalities, analyze the impact of coming changes and trap network conditions before they adversely impact performance.

CALL ROUTE INTELLIGENCE

To optimize a network, the first key step is having an accurate account of the level of service the network is providing. It is critical to realize that caller experience is not simply based on the capacity of one particular trunk group but instead how calls can be serviced collectively by all available trunks as defined by your call routing schemes. Where route plans join trunk circuits and callers together, true grade of service can only be determined by an examination of their pooled results.



One of Traffic Analyst's unique features is its ability to model call routing plans. Traffic Analyst accounts for route pools, usage peaks that may not be cumulative and large resource efficiencies. The system keeps you from falling into the trap of maintaining or purchasing excess capacity that will not improve your service levels. Traffic Analyst captures and reports on existing routes via automated network discovery, but will also allow you to create new routing plans to model network reconfigurations.

USAGE PROFILES FOR TREND ANALYSIS

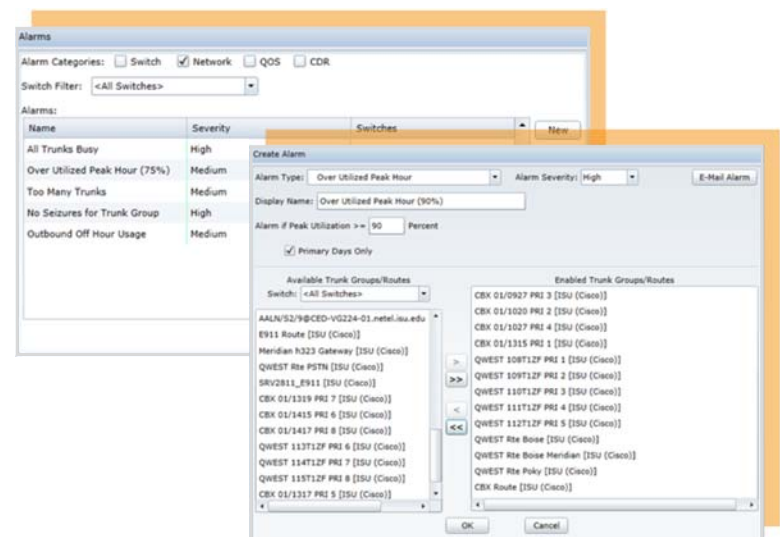
Traffic Analyst's usage profile charts highlight usage trends and capacity. They take the guess work out of capacity decisions by showing detailed histograms of network utilization and simultaneous calls trending. Usage and abnormalities are clearly seen and compared to configured capacity. Quickly find channels or trunks that can be disconnected because of overtuning. Or, uncover where configured capacity is at risk for blocking calls.

PROACTIVE MONITORING WITH ALARMS

When collecting data, Traffic Analyst first scans it for abnormalities and reports those via alarms. A large library of alarms keeps you abreast and ahead of issues, knowing about problems and abnormalities almost as they occur, sometimes even before. Alerts, with user-defined thresholds for low, medium and high priority, are presented on the dashboard and/or emailed. Available alarms include:

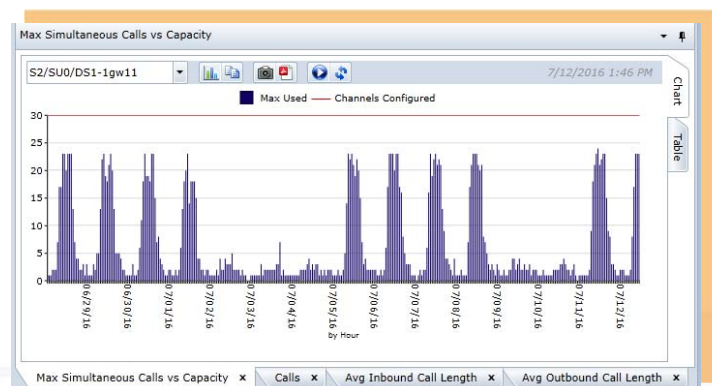
- All Trunks Busy
- Peak Utilization
- High Trunk Group Utilization
- No Seizures for a Trunk Group

Traffic Analyst provides a snapshot of alarm conditions in your network and allows you to quickly drill into problems. You decide how you want to view alarms – by priority, by switch, by type.



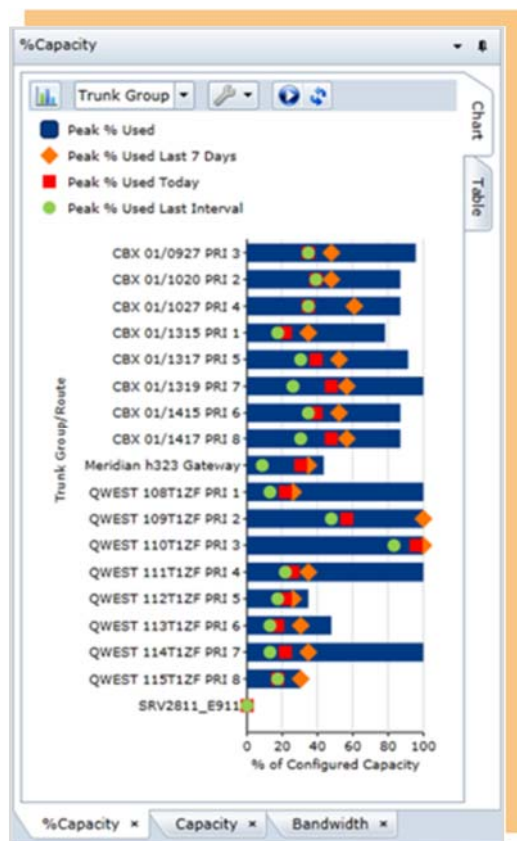
REAL-TIME MONITORING

Are you tired of waiting to get the metrics and analytics you need? Traffic Analyst gives you the latest information available. When data is collected from the switch, your data tables and displays automatically refresh. For



example, the %Capacity chart below highlights the percent of configured capacity for all trunk groups and routes. With a single glance, you can quickly see:

- Peak percent used over the entire report interval (blue bar)
- Peak percent used the last seven days (orange diamond)
- Peak percent used today (red square)
- Peak percent used during the last data collection interval (green circle)



By seeing the latest trends and new alarms, you won't get surprised by network blockage and you can proactively manage your network and elevate service levels.

Unprecedented 24x365 Visibility into Your Network's Voice Traffic

WHAT-IF MODELING

Given the dynamic nature of networks, the flexibility to determine the impacts of changes is a critical component of a network planning application. Traffic Analyst provides a variety of ways to adjust for transitions in your network. Traffic Analyst's "What if" modeling allows you to analyze the impact that changes – such as site expansion

or technology migrations – will have on your network performance. Don't guess! Use Traffic Analyst to model your scenarios:

- Convert TDM load into VoIP bandwidth and channel requirements
- Define factors for increased or decreased call volume or changes in call length
- Adjust for calls that receive busy signals
- Evaluate varying service levels
- Determine the impact of pooling trunk groups



CALL FORENSICS

Stop being frustrated by today's call accounting packages that provide a list of reports focused only on expense management and fraud detection. Go beyond who called who and how much it costs. Traffic Analyst offers visibility into call quality, abnormal call terminations, call tracing, extension activity, number management and monetizing savings from transporting calls over the internal network.

BEYOND CALL ACCOUNTING

Take advantage of Traffic Analyst's advanced call accounting and cost management features.

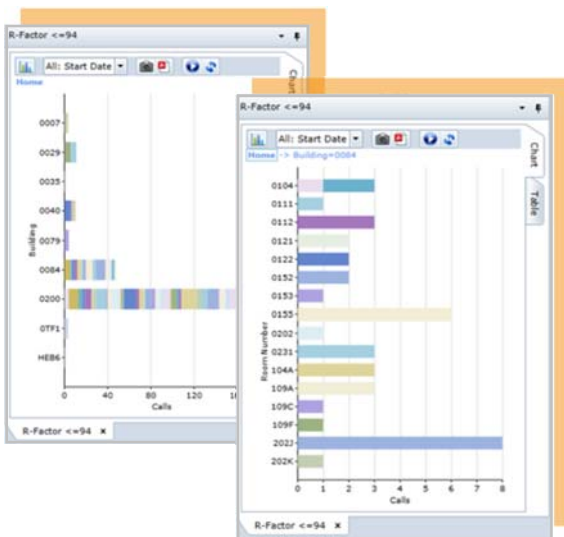
- **Expanded Call Types** - Traffic Analyst includes all internal, inbound, network and outgoing calls. And, you can define custom call classifications such as IntraLATA, IntraState or mobile.
- **Advanced Call Cost Rating** – In addition to standard per call or per time interval rating by call type or destination, Traffic Analyst supports rates by trunk group or gateway.
- **Comprehensive Reporting** – Traffic Analyst supports tracking and analyzing costs by organizational hierarchy, physical locations (building, floor, room) and wiring information (such as MDF, jack or phone type).
- **Cost Control & Risk Mitigation** – Stay abreast of issues and know about problems within minutes. Define alarms for calls based on duration, cost, originating number or terminating number to trap suspicious call activity. Alerts are posted on the dashboard and/or sent to your e-mail.

CALL QUALITY DIAGNOSTICS

Managing call quality in a VoIP network is a challenge. You have tools telling you the quality from your network equipment's perspective, but are you blind to the caller experience? Reliable, insightful, timely analytics are required to maintain high levels of call quality. Traffic Analyst is the answer as you deploy and manage your VoIP network! Without requiring any specialized hardware, Traffic Analyst can pinpoint via reports, graphs and alarms specific devices experiencing not only QoS problems but dropped calls as well.

QoS Visibility

With Traffic Analyst you choose the visibility you want – by IP address, extension, SIP gateway, PSTN gateway or facility – by MOS, R-Factor, % Packet Loss, Latency or Jitter. For instance, the chart illustrates the number of calls with R-Factor less than or equal to 94.0 by building. Click a building bar and drill into the detail by room number.



Dropped Calls Analytics

Traffic Analyst goes beyond QoS, providing insight into why calls are dropping. With VoIP there are over 100 reasons why a call may drop the connection. Only two are good. If it wasn't you or I hanging up, there is a problem that needs to be tracked down and resolved. Abnormal call termination trending analytics quickly spot any abnormalities that you might want to investigate, starting with the integrated SIP response code correlation.

VOIP ECONOMICS

Savings from leveraging your WAN to avoid PSTN toll charges is a key component of any VoIP network investment strategy. Assuring those savings are realized and being able to quantify those savings are not passing requests from senior management. They are demands. Are

you ready? Let Traffic Analyst be your VoIP scorecard with a dashboard that clearly shows you the actual and potential savings in your network.

Quantify Realized Savings

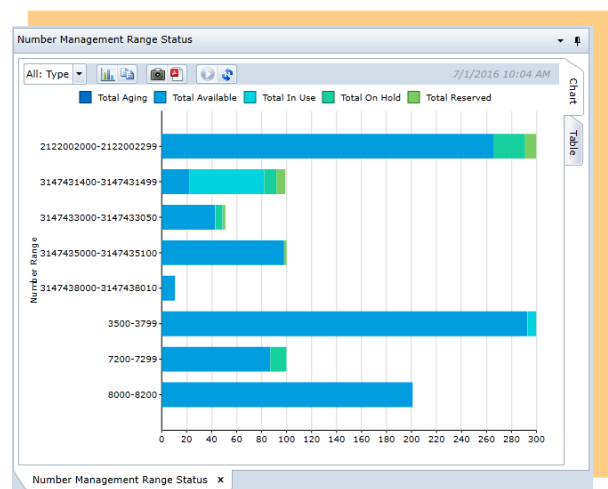
Traffic Analyst lets you see your realized savings. How? First, charts and reports clearly show the number of calls and associated savings for calls that are now traversing your WAN for site-to-site traffic instead of incurring long distance and international charges (metered or flat fee). Second, view "tail end hop off" (TEHO) calls and savings.

Find Unrealized Savings

Traffic Analyst doesn't stop there. See reports on existing PSTN traffic that could be routed over your WAN and drill into the specific call records to determine what call routing schemes may be modified or which employees are using incorrect dialing methods.

NUMBER MANAGEMENT

Traffic Analyst includes a user-friendly, centralized solution for managing your DID and non-DID number ranges across your enterprise. Quickly define your ranges, including your customized aging metrics plus designated reserved numbers. Once the ranges are defined, reports provide insight into the state of the numbers and supports operations such as holding numbers and indicating the next available number in a range.



CALL TRACING

Traffic Analyst gives you pinpoint accuracy in tracing calls throughout your network. You no longer need to run multiple reports for each switch in your network in an attempt to see how the calls flow through your network. Traffic Analyst lets you select one or many switches for any report and trace calls as they traverse through multiple switches and are transferred inside a switch.

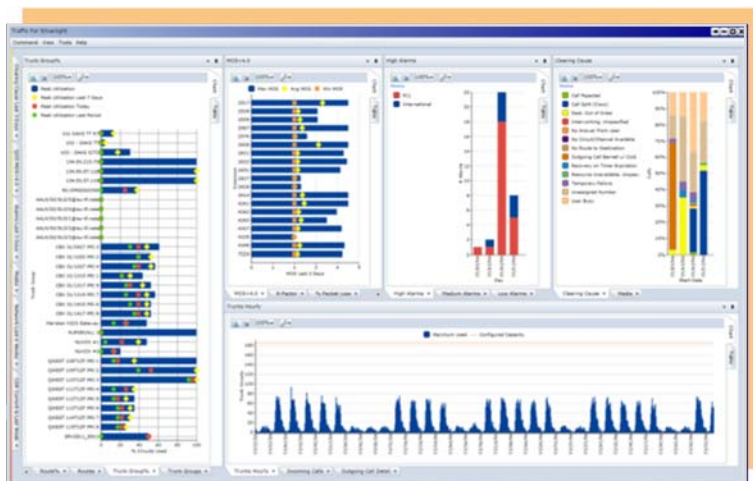
The flexibility of the interface, in addition to the comprehensive list of reporting fields not available in other solutions, provide extensive search capabilities to drill down into the data to find the information you need – whether it is fraud, threatening calls, call routing problems or a number of other situations.

YOUR NETWORK, YOUR WAY

Traffic Analyst comes with a dashboard based on Microsoft® Silverlight® rich internet application (RIA) technology. Users can customize the dashboard to their preferences by adding, deleting, modifying, resizing and relocating the dashboard's charts and data tables. A broad portfolio of chart types are available and the user has significant control over the chart appearance. Columns in data tables can be added, deleted, grouped, sorted or filtered with a click of the mouse. After creating a new dashboard, the user may simply save their desktop and each time they login, their custom desktop appears.

UNLIMITED REPORTS & AD HOC QUERIES

Traffic Analyst's easy-to-use web interface allows the user to leverage preset reports but also create unlimited reports and ad hoc queries. A library of preset reports include



predefined tabular report definitions and associated charts. Preset reports include:

- Network Utilization Last 8 Weeks
- Network QoS Last 4 Days
- Call Log with QoS Last 2 Days
- Long Duration Calls
- Most Frequently Called Numbers
- Top International Destinations by Calls
- DID Numbers by Switch
- Alarms Last 3 Days

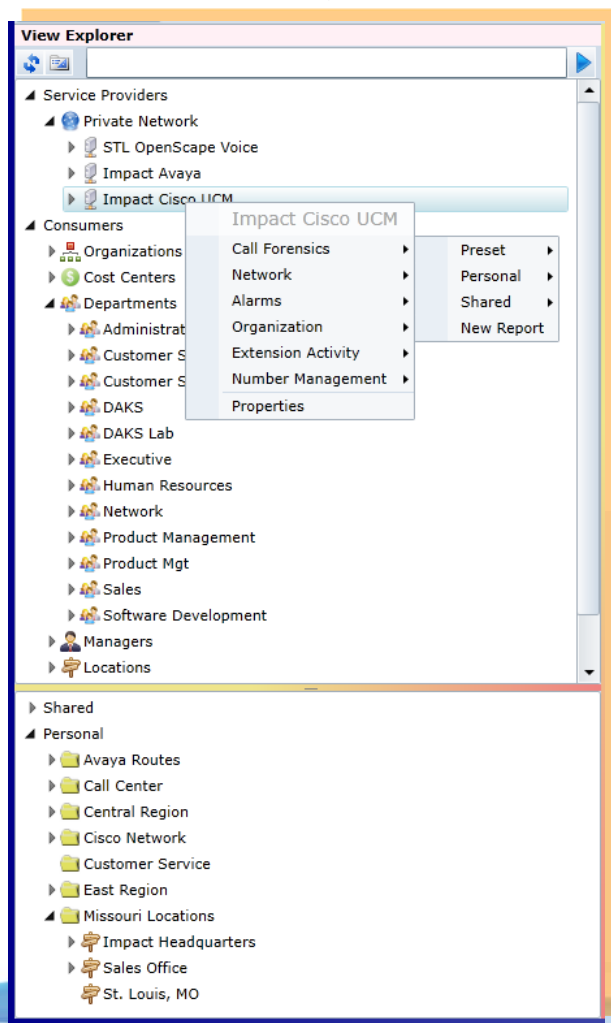
Via the explorer tree, you can choose what you want to report on:

- Entire network, switch, trunk group, gateway or route
- Corporate hierarchy element such as an organization, cost center, location, department, manager or subscriber
- "Virtual" user-defined reporting group

Then you select a preset report, a shared or personal template or create a new report. That's right. You can create any report you need. You don't have to call the vendor or find a programmer. You simply point and click to pick the content, detail and format of your report. Name your report and then you can export to Excel or PDF, print or schedule the report to periodically be emailed directly to your inbox.

SIMPLE, YET INSIGHTFUL ANALYTICS

The concepts of Busy Hour, Average Busy Hour, CCITT Busy Hour and the like can be less than straightforward and difficult to understand. Are you uncomfortable relying on them for determining network capacity requirements? Can you explain to senior management how engineering to a p.01 GOS using the Busy Hour optimizes your corporate voice network?



While supporting these traditional analytics and metrics, Traffic Analyst introduces performance metrics and graphs that are easy to understand. Simple graphs clearly show the performance levels, measured in number of blocked calls, peak percent utilization and/or quality of service metrics.

SLICE & DICE

After you have the key metrics at your fingertips, the next step is quickly digging into the details, particularly if you see an anomaly. And, you can select your drill down logic. Start with monthly data and drill down to daily, hourly and quarterly hour slices with a simple click of the mouse. Or, maybe you prefer to drill down by switch, trunk group and extension. How about by corporate hierarchy of organization, department and manager? Or by building, room, subscriber and extension? For each chart or table, you decide.

CUSTOMIZED REPORTING GROUPS

With Traffic Analyst, your reporting options are not bound by the design of your network. You can create “virtual” Shared or Personal groups at any time. You simply create a

new group on the explorer tree and drag any item into the group. Choose any combination of switches, trunk groups, routes, subscribers, cost centers and more.



SWITCH PLATFORM AGNOSTIC

Traffic Analyst is a single portal across mixed networks comprised of multiple switch manufacturers, including both wireline and WiFi platforms. Traffic Analyst automatically performs continuous network self-discovery across platforms, eliminating time-consuming, tedious, error-prone manual configuration tasks. Based on user-defined intervals, Traffic Analyst collects and processes data for report presentation and alarm processing 24 hours a day, 365 days per year. Therefore, a single query generates a single report and associated charts encompassing data for multiple switches and manufacturers. Traffic Analyst provides continuity across migrations and a common presentation for multiple vendor platforms, including Avaya, Cisco, Ascom, Nortel and Unify.

DEPLOYED YOUR WAY

Traffic Analyst allows you to choose the deployment model that fits your business requirements and budget.

24x365 VISIBILITY

You get all the data and use all the data to create an accurate analysis of the state of your voice network. You have all the data you need and can decide what time intervals you want to analyze. Traffic Analyst provides two options to eliminate the risks of limited data samples from limited time ranges.

- **Hosted** – Is the option to minimize your upfront investment and on-going maintenance but leverage the long-term benefits of Traffic Analyst attractive? In the hosted model, Impact maintains all the hardware at our location and assures that you are always benefiting from the latest software enhancements. We will communicate with your switch(es) on a daily basis to collect the raw data. Your employees simply use their web browsers to access the reports they want and define their alarms.
- **Premise-Based** – Do you prefer to own and operate the solution on your site? Purchase a license and Impact's Technical Support team will ensure a smooth, effective onsite or remote installation process so your employees can enjoy the same great reports and alarms from behind your firewall. Or, leverage a subscription model with single or multi-year contract.

SNAPSHOT VISIBILITY

Curious to see the insight that Traffic Analyst's analytics can provide for your network but don't want to make a long-term commitment?

- **Traffic Study** – Have data collected from 5 days to 13 weeks and leverage Traffic Analyst Performance, Usage and Capacity Analysis reports for that period plus 30 days to conduct a detailed investigation into your network performance and model changes in your network usage.
- **Network Analysis** – Enjoy the benefits of the Traffic Study, plus receive an inventory of routing plans and trunk groups, what-if modeling options with alternative routing plans, and optimization recommendations to improve performance and/or reduce costs.



314.743.1400
www.impacttech.com