

Critical Performance for Critical Applications

Meet demanding requirements for maximum end-user quality of experience

ASSURES QUALITY OF EXPERIENCE

Eliminate network as cause of poor application performance

Awareness of most critical characteristics needed by the app

Eliminates finger pointing & guesswork

ASSESS ALL LIVE IP NETWORKS

Assesses networks not owned or controlled by organization

Provides holistic view of data & voice without interruption of service

Inspects carriers' networks & validates SLAs

The network is a critical component to every enterprise. The catalyst for user productivity, revenue generation and communications, its effectiveness is now evaluated based on performance — availability is no longer minimally sufficient.

With the tools in the NOC still focusing on availability and fault management, network engineers remain reactive to alerts and complaints. Yet network managers now have more responsibility for applications than ever before. According to the Yankee Group, nearly 70% of network managers said they are responsible for isolating the cause of application performance issues.

Therefore, managing service quality based on a network-availability perspective is no longer adequate for those responsible for converged networks. Applications such as voice and video and bandwidth-intensive services such as data storage and the trend toward software as a service are highly sensitive to IP behaviors. To successfully move forward, network managers — whether within the enterprise or as a hired service provider — must be able to understand and evaluate the relationship between network performance and the end user quality of experience.

To do so, they need technologies that can quickly respond in real-time to performance-degradation occurrences. These solutions must do more than identify if there is a problem, they must pinpoint the cause and location and offer tactics for resolutions of the problem so the network engineer can remediate it before revenues are lost and users are sidelined.



AppCritical™ is a network performance system that is actively aware of the network path quality required by today's business applications. Superior for testing quality and conditions of the end-to-end IP network path, AppCritical reduces network complexity by virtualizing the network and providing awareness of the critical network characteristics needed by the application. It eliminates the potential for undetected network-influenced application performance problems.

With its unique ability to evaluate, diagnose and troubleshoot the end-to-end path, AppCritical not only makes it possible to remediate network faults and bottlenecks, it quickly and continuously determines the quality of thousands of network paths in a real-time, ongoing manner.

AppCritical can be used in a proactive manner to assess a network before an application is put into production, a reactive manner once a problem is identified or in a real-time continuous basis to discover problems before they impact the applications and ultimately the users.

Apparent Networks

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Product Features

By taking a very different perspective of the network than traditional management solutions, AppCritical sets itself apart from its competition with the following features:

- **Network aware:**
Continuously verify the quality of hundreds or thousands of network paths in a real-time, ongoing manner.
- **Non Intrusive:**
Extremely light touch means you can use it on any live network at any time without impacting other applications.
- **Simple Deployment:**
Do not need to deploy remote agents and it provides complete visibility of the end to end path, including into ISPs and across traditional demarcation lines.
- **Ease of Use:**
Intelligence built into tests leverages the capabilities of every user. Minimal training necessary because of the common language used.
- **Powerful Diagnostics:**
Pinpoints exact cause and location of a problem so action can be taken immediately to fix it.
- **Superior Reporting:**
Automatically generated detailed reports, including summaries and graphs, clearly outline the network's strengths and shortcomings.

How it works

There are three major components to AppCritical — the UI, the NIS (or brains of the system) and the Sequencer. The Sequencer is a key component to the system — it sends very precisely timed packets through the network path using ICMP and/or UDP. As these packet groups move through the network path, the timing is distorted by delays, restrictions and limitations of the network leaving a distinct "signature" on the returning packets. These signatures are then analyzed to create a virtual image of the network path to produce the essential network characteristics that network dependent applications require.

The first set of characteristics identified are the key network measurements:

- Host name and address
- Measured and reported MTU
- Utilization
- Packet jitter
- Best / Average / Worst RTT
- Packet loss percent
- Maximum achievable bandwidth
- Propagation delay
- Packet reordering
- Mean Opinion Score (MOS)
- Predictive MOS score

As well as measurements, the technology performs automatic diagnostics. The primary network faults identified are:

- Duplex conflicts
- Congestion
- Media errors
- Firewall limiting
- Grey Hole hops
- Rate limiting queues
- Sub-optimal performance
- Collision domain violations
- Black Hole hops

This path perspective allows the determination of where, what and how to resolve network related faults.

How it's different

Yesterday's approaches rely on having access to the network infrastructure because they employ techniques that either passively monitor network devices using SNMP or simulate network traffic and observe its behaviour. AppCritical is radically different. Using our innovative approach by injecting tiny amounts of network traffic and determining the networks characteristics from the unique signatures left on the traffic allows AppCritical to be used in many situations where no other technology available today will work.

AppCritical provide network awareness:

- From a single point throughout the network.
- Across networks owned and controlled by someone else.
- On live production networks without interruption of service.
- Within a completely separate or even fully isolated environment.
- Embedded within a piece of hardware or as part of a software service.

Who can benefit the most?

Where time and manpower are rare commodities and reputation and revenue are tied to network and application performance, AppCritical delivers true business value.

Professional Services Teams

With AppCritical, professional services teams can respond confidentially in the race towards full convergence. Whether during predeployment for VoIP, baselining network paths before a solution goes live, providing remote assistance when problems arise or regular network upgrades or maintenance, AppCritical can generate revenue and eliminate risk.

Product Development Teams

Enhances product performance and drives competitive differentiation by:

- Eliminating network risk from the start with pre-deployment assessments;
- Responding to support calls by knowing immediately if it's the network or the application;
- Creating a network-aware application with measurements and actionable diagnostics;
- Making real-time network information available to customers and technical support and professional service organizations.

Enterprise IT Managers

In this hectic environment where resources are scarce, AppCritical:

- Removes ambiguity about whether the problem is within the network or not;
- Quickly identifies the cause and location of problems;
- Provides end-to-end visibility enabling better analysis of the network, making it possible to plan and justify the need for any new investment;
- Validates SLAs from service providers.

Managed Service Providers

Where service quality is the yardstick and penalties are fierce, AppCritical provides:

- Complete visibility of the end-to-end network;
- Alerts when something changes or degrades before it impacts user experience;
- Thorough diagnostics to assure that IP networks are — and remain — fault-free by identifying problems before they interrupt service quality;
- Hands-on access even when help is miles away.

Technical Support Teams

Improves customer support experience and reduces mean-time-to-repair by:

- Quickly reaching beyond a customer's firewall, without having to roll a truck;
- Responding to support calls and know immediately if it's the network or the application without having to escalate the trouble ticket;

“ With this technology, we can now identify the exact cause and location of weaknesses within our clients' networks before they become problems, resulting in higher network availability, better network performance, and improved service quality.”

Jimmy Brown,
VP of Network Services
at Affiliated Computer
Services (ACS)

Matching solution to need and budget

At Apparent Networks, we understand that one size doesn't fit all. Available in five editions, AppCritical is crafted to meet the individual needs of its diverse user group. Each product has unique benefits making it simple and cost effective to tailor the solution to the specific tasks. Yet, all five editions provide a path-centric view of the network, accurate measurements and thorough diagnostics and troubleshooting results.

Product	Purpose	Typical User
Professional Edition™	Network assessments and reactive troubleshooting installed on a mobile platform.	Hands-on technicians providing pre-deployment assessment or ongoing network health checks for VoIP and data converged networks.
SME Edition™	Small and medium enterprises for scheduled testing and reactive troubleshooting installed on fixed platform.	Engineers concerned with network quality as part of pre-deployment assessment or ongoing network health checks.
Enterprise Edition™	Continuous real-time proactive performance and fault monitoring. Fixed installation with integration into NMS on internal network.	Engineers responsible for performance and quality of user experience of their own converged networks, who are looking for a complete approach.
MSP Edition™	Continuous real-time proactive performance and fault monitoring. Monitor provisioned services, devices and networks on behalf of customers who have outsourced those functions.	Managed service providers analyzing customer networks for data and/or voice, who are looking for a complete approach.
Technical Support Edition™	Reactively troubleshoot the networks of a vendor's customer to eliminate network as cause of poor performance problems.	Front-line support engineers of network-dependent vendors that field inbound calls related to application performance issues.