



SOLUTION

APPCRITICAL — THE NETWORK APPLICATION PERFORMANCE SOLUTION

Business applications and the networks they run on are more intertwined than ever before. Trends contributing to this complexity include adoption of Web-based services, convergence of data, voice and video, software as a service and virtualization. Previously separate technologies can now share network resources and interact with one another to deliver services to customers and end users more efficiently.

This blending of technology and business services is blurring traditional boundary lines between hardware and software, between the network and applications. When networked applications work properly, IT can deliver high quality of experience for users and compelling operational efficiencies. But when they don't, it becomes increasingly difficult for network

operations staff to identify and remediate problems.

Traditional network diagnostic tools, with device-centric approaches, are incapable of assessing the interdependencies between applications and network devices, and the performance implications of those relationships.

As a result, the goal of maintaining a high quality of experience for end users and customers too often goes unmet. As performance issues impact their competitive position and bottom line, executives, business unit managers, and the IT staff all struggle to find answers. AppCritical delivers answers to the toughest network and application performance questions.

BENEFITS

Proactive Prevention – AppCritical provides users with the real-time visibility into network capacity, availability and performance that they need to spot and fix issues impacting customers or other end users.

Faster Remediation – When a network application problem does occur, AppCritical's ability to pinpoint and analyze the cause promotes much faster resolution with greater accountability.

Higher Service Quality – With its unique insight into the network paths used by business applications, AppCritical enables network teams to tune their infrastructures for maximum performance and service quality.

Increased IT Effectiveness – The granularity and specificity of the information provided by AppCritical enables network teams to dramatically reduce the time it takes to find and fully understand a performance problem. That reduces IT costs and frees up staff to focus on strategic initiatives.

Enhanced Collaboration – By generating meaningful, actionable information for all constituents, AppCritical ends finger pointing and fosters new and productive collaboration between business and IT teams.

TOP FEATURES

AppCritical distinguishes itself with the following major features.

Real-time, End-to-end Monitoring – Continuously monitor the capacity and quality of thousands of network paths in real time. Unlike any other product available today, AppCritical extends this monitoring and visibility through service providers' networks to your business constituents.

Active Path Assessment – AppCritical's core, patented technologies provide precision packet-handling capabilities. It automatically transmits small, precisely timed packets through network paths using ICMP or UDP. As these small, 'synthetic' packets traverse the network, their timing is distorted by delays, restrictions and limitations, all of which yield distinctive markers carried back by the packets.

AppCritical analyzes these markers, creating a virtual image of the present state of network paths, and whether or not they meet requirements of network-dependent applications.

NEW INSIGHT INTO NETWORK APPLICATIONS

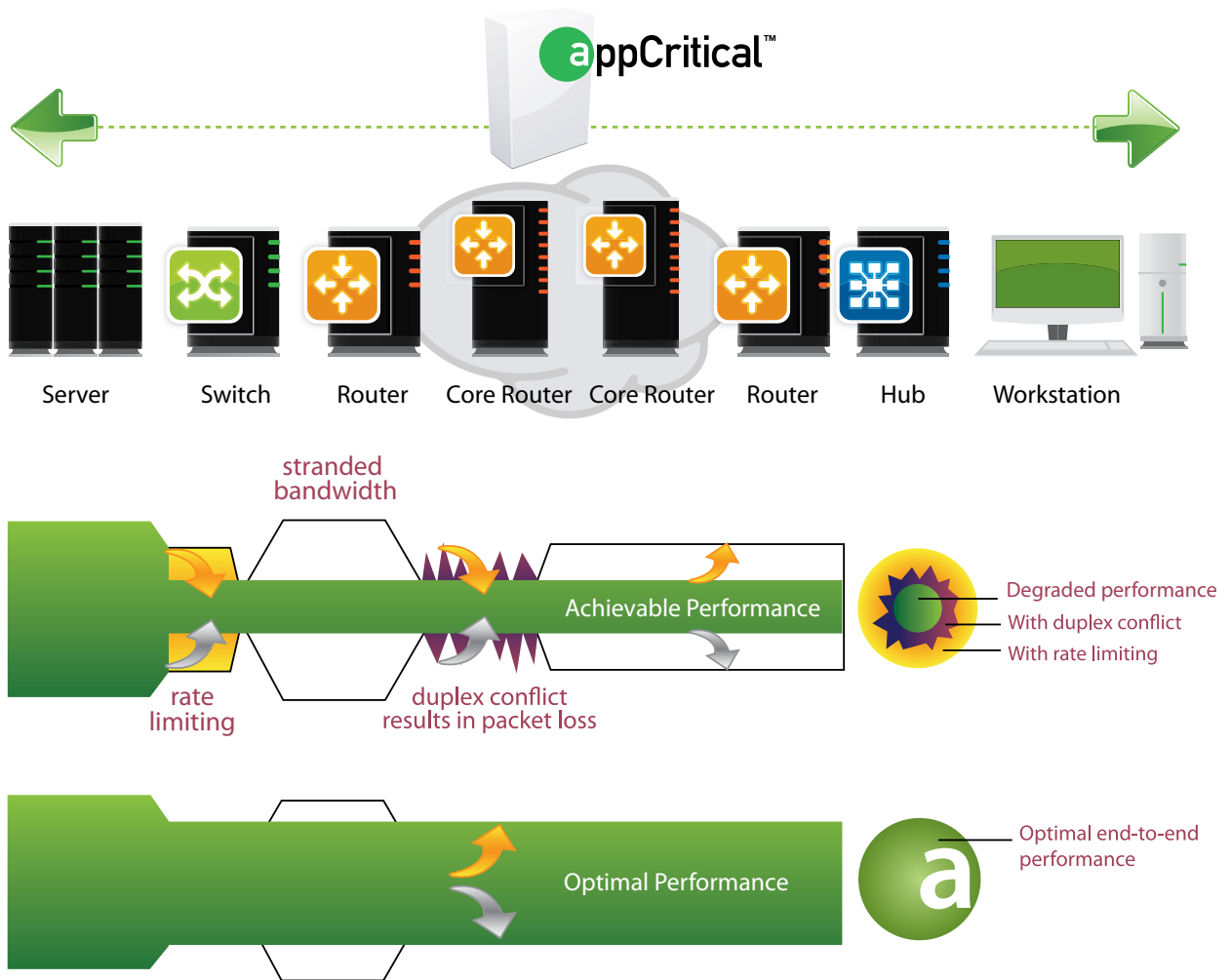
AppCritical is a solution that provides real-time performance monitoring of the network your applications depend on and the quality of the services, not just the availability. It provides unique visibility and clarity that spans your entire infrastructure, including outsourced segments such as a service provider's cloud. No other product available today offers this capability.

Network operations professionals use AppCritical to get an instant read on the level of service being provided to their network-dependent applications. With its end-to-end path orientation, AppCritical tells them

immediately whether a performance issue is stemming from the network or from an application.

AppCritical processes application and network data into actionable information. It enables network teams to react more efficiently to network-dependent constituents, such as customers, partners and employees. In doing so, AppCritical transforms the fundamental relationship between network teams and their business clients from conflict to collaboration.

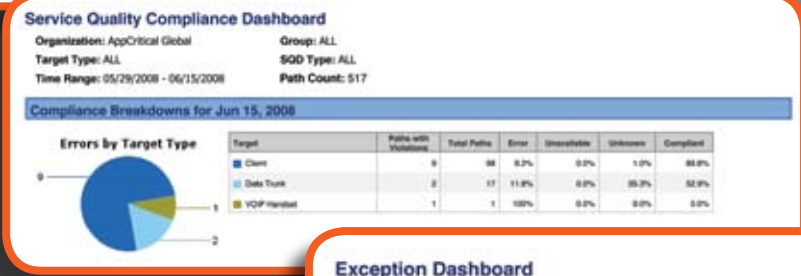
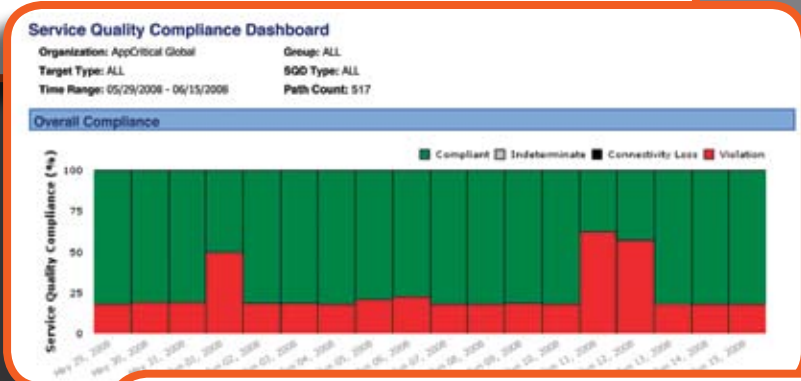
That change can create major productivity and efficiency gains that drive straight to a company's bottom line.



AppCritical focuses on the network paths used by application traffic. With its unique, lengthwise view, AppCritical provides visibility into performance problems anywhere in your network infrastructure, even in parts of the network you do not own — such as your service provider's cloud. It gives you a more effective way to assess, measure and diagnose converged networks.

INTERACTIVE DASHBOARDS AND FLEXIBLE REPORTING

AppCritical's interactive, Web-based dashboards use clear graphics to provide customizable trend reporting on business-critical metrics. Dashboards enable on-the-fly drill down to detailed analysis of a specific network path or groups of paths. AppCritical also can automatically generate detailed reports, including charts, graphs and summary views.



Exception Dashboard

Organization: AppCritical Global Group: ALL
 Target Type: ALL SQD Type: ALL
 Time Range: 05/29/2008 - 06/15/2008 Path Count: 517

Events

Violations per Day

Legend: Total, Connectivity Loss, Bandwidth, Jitter, Packet Loss, QoS Change, Network Route Change, Propagation Delay, Unknown Condition

Event Breakdown

Violation Type	Violation (Count)	Duration (hours)
Connectivity Loss	~350	~4500
Bandwidth	~150	~2500
Jitter	~100	~2000
Packet Loss	~50	~1500
QoS Change	~20	~1000
Network Route Change	~10	~500
Propagation Delay	~5	~200
Unknown Condition	~5	~200

Total Violations	299	Violations / path	2.3	Total Duration	4903 hrs	Duration / path	37.8 hrs
Violations / day	16.6	Violations / path / day	0.1	Duration / day	267 hrs	Duration / path / day	2.1 hrs

Top Offenders

Top Offenders by Events

Group	Type	Events	Contribution to Total	
172.16.128.26	subnet	Client	29	9.7%
172.16.128.31	subnet	Client	17	5.7%
172.16.128.138	subnet	Client	16	5.4%
172.16.128.40	subnet	Client	15	5.0%
172.16.128.160	subnet	Client	14	4.7%

Top Offenders by Duration

Group	Type	Duration (hrs)	Contribution to Total	
172.16.128.31	subnet	Client	395	8.2%
172.16.128.05	subnet	Data Trunk	390	8.2%
172.16.128.54	subnet	Mixed Handset	386	8.2%
172.16.128.37	subnet	Data Trunk	396	8.2%
172.16.128.79	subnet	Client	396	8.2%

POWERFUL DIAGNOSTICS

AppCritical uses patented algorithms and expert system analytics to pinpoint the exact cause and location of a problem. Providing a unique, path-centric perspective, AppCritical enables IT staff to quickly determine whether the problem is network- or application-related. If it is a network problem, AppCritical identifies exactly what is causing it, where it is occurring, and what needs to be done to resolve it.

AppCritical captures and analyzes the following measurements in real time:

- Availability
- Bandwidth
- Jitter
- Packet loss
- Propagation delay
- Route changes
- QoS changes

The primary network faults detected by AppCritical include the following:

- Duplex conflicts
- Congestion
- Media errors
- QoS issues
- Rate-limiting queues
- Sub-optimal performance
- Collision domain violations
- Black hole & grey hole hops
- MTU conflicts

AppCritical alerts instantly when the network is not delivering quality and performance:

- Voice networks
- Video networks
- Local area networks
- Wide area networks
- Custom network applications
- Performance SLAs

SCALABLE ARCHITECTURE

AppCritical was designed for deployment in very large, complex and highly distributed enterprise network environments. It also meets the demanding requirements of managed service providers.

The AppCritical architecture consists of three main software components:

- **Sequencers** – These are small pieces of code placed at strategic locations like data centers where they create test packets, conduct network path tests, and collect real-time network performance data.
- **Network Intelligence System** – This manages the Sequencers and controls all path testing. It analyzes data collected from Sequencers with identification, correlation and remediation analysis engines, presents results to the Operations Console and stores all data and analyses in an RDBMS.
- **Operations Console** – This console presents consolidated information about path and network application performance in simple, intuitive and actionable formats using plain language.



LATEST FEATURES IN THE APPCRITICAL SOLUTION

The AppCritical solution includes new features that help enterprise customers improve network management and application delivery in their large and converged environments. It also includes a new suite of enterprise-ready reporting and dashboard capabilities that present AppCritical's data in ways that are meaningful, relevant and actionable for the network team and for business line managers and executive staff. Following are brief descriptions of these key features.

Synthetic Traffic Analysis

This new feature enables network managers to create synthetic traffic flows that mirror the unique properties of specific applications. This traffic uses the same application and signaling protocols as the actual applications, ensuring accurate modeling of how applications will be affected by network performance. It enables customers to project exactly how a new application, or an expanded deployment of an existing application, will impact their network's performance. This lets customers easily identify and diagnose issues before they disrupt actual deployments.

Improved Scalability

The monitoring capacity of AppCritical's analysis engine, the Network Intelligence System (NIS) has been increased by 50 percent. This higher capacity enables large enterprises and managed service providers to deploy AppCritical more broadly and efficiently.

Interactive Dashboards and Flexible Reporting

New, Web-based dashboards make AppCritical's information immediately available to more users in relevant and useful formats. The dashboards provide customizable trend reporting on business-critical metrics, such as infrastructure performance, events and exceptions and service quality compliance. They also enable users to drill down on-the-fly to detailed analysis of the performance of a specific network path or a group of paths.

AppCritical's expanded reporting capability includes new reports such as a VoIP Assessment, which enables customers to gauge their network's readiness for planned VoIP deployments.

Other New Features

- Active Directory Authentication – Integrated support for Lightweight Directory Access Protocol (LDAP) and Microsoft Active Directory for centralized user management and authentication reduces overhead and risk exposure
- Web Services API – Facilitates a standards-based (SOAP 1.1) method for integrating AppCritical into existing enterprise infrastructures and workflows
- Embedded auditing – For assessing compliance with corporate governance standards such as ITIL

CONCLUSION

The AppCritical solution provides real-time insight into the quality of the user's experience within the context of end-to-end network performance.

Unlike any other product available today, AppCritical gives you new clarity and valuable insight into the strengths and weaknesses of your vitally important IT assets – your network and the business applications that depend on it. With that insight, you can gain competitive advantage by ensuring that all constituents – your customers, suppliers, partners and employees – can leverage your network and application resources for maximum productivity.

“The AppCritical software has improved our operations considerably. Prior to using AppCritical, identifying network problems would take weeks to months, and at times issues would remain unresolved. With AppCritical, problem resolution takes less than an hour. The ROI on AppCritical has been significant. After troubleshooting two customer cases, the time and resources saved were equivalent to the cost of purchasing the product.”

— Susan Evilsizer, Manager, Paragon Support
McKesson

“In today's competitive business environment we recognize that network uptime is essential for our clients. We count on AppCritical to provide us with actionable information about our clients' network performance, making network assessment and troubleshooting more efficient and cost effective, which enables us to make sure that our clients experience high quality of service and increased productivity.”

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

“With AppCritical, we can quickly and more proactively answer the most pressing question of whether an issue lies within the network or the application. Unlike traditional reactive tools, the AppCritical solution enables us to monitor our services, end-to-end, across not only our own network, but also externally provisioned network segments in real time.”

— Bin Guan, Chief Technology Officer
York Telecom Corp.



Apparent Networks develops and markets software that provides a unique approach to managing the performance of network-dependent applications. The Company's AppCritical solution measures and diagnoses live, converged networks with continuous real-time monitoring. It provides unbroken, end-to-end visibility into the critical performance characteristics of network resources needed for voice, video and data applications.

AppCritical has been successfully deployed by large enterprises, managed service providers and tier-one technology vendors to assure end-user quality of experience. Customers include: 3Com, Affiliated Computer Services, Boeing, Electronic Arts, Fujitsu, Hewlett-Packard, IBM, Network Appliance, Nortel, Siemens, Symantec, TELUS, and Toshiba.

AppCritical System Requirements and Supported Platforms

NETWORK INTELLIGENCE SYSTEM	SEQUENCER	OPERATIONS CONSOLE
Windows 2003 Server	Windows	Windows XP
SQL Server 2005	Linux	512 MB Memory
3 GB+ memory	Solaris	1.4 GHz+ CPU
1 GB+ disk space	HP UX with 512 MB memory	
2 GHz+ CPU	1 GHz+ CPU	

The database requires 2.5 MB of storage per path with default real-time data retention configuration.

Contact Us

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