



**Best Practices for
Application Service Management
in Law Firms:**

COMPUWARE VANTAGE SOLUTION

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Partners and IT Managers at law firms should take the information in this paper and apply it to their specific technology management situation, evaluating solutions like Compuware Vantage to gain better control over technology resources and ensure that the IT infrastructure supports business growth and success.

Executive Summary

Lawyers are known for their hard-working business ethics and their long hours put in at the office – and now, thanks to technology, outside the office. Because so much of a lawyer’s work involves technology today, it is imperative that the technology be available and working correctly when a lawyer needs it. If there’s a problem with technology—if a lawyer can’t access documents or email or get fast response from a critical application—there’s a problem with the business. That means fewer billable hours, less revenue, potentially unhappy clients and a frustrated lawyer wasting time. More so than in any other business, a legal firm’s IT infrastructure—from its applications to the network—have to work right, work fast and be available whenever the employees need them.

That, however, is easier said than done. As with most businesses, the IT staff in a law firm is typically stretched thin. Instead of being able to proactively monitor all the applications, servers, network connections and storage devices critical to daily operations, most staff are fighting technology fires or simply trying to complete important projects before deadline. For example, when an application crashes, or the network is bogged down, IT must scramble to identify the cause and then try to find the resources to fix it, all while under pressure to get the systems up and running again as quickly as possible. A downed network or server can easily cost a firm of 100 lawyers \$25,000 - \$75,000 per hour in lost revenues.

There is an alternative—automated systems that can proactively help IT (and even lawyers themselves) monitor everything from the new voice over IP (VOIP) telephone system to financial management applications to email performance and network bottlenecks. Leading companies in industries that have high service requirements or critical time pressures have been using these types of “application service management” solutions successfully and profitably for years. While application service management solutions can work equally well in legal environments and can have a dramatic effect on the productivity of both IT departments and partners, most law firms are just starting to take advantage of them.

This report offers a solution for law firms feeling the crunch of their IT systems’ vulnerabilities or simply the uncertainty of inconsistent performance. By using a set of application management tools that monitor, manage and troubleshoot everything from desktops and servers to networks and applications, law firms can gain significant benefits and competitive advantages. This report also introduces Compuware Vantage as an option for law firms that are interested in leveraging the benefits of automated application service management.

What is Application Service Management?

Application service management enables IT managers to gain critical insight into the performance and availability of their complete portfolio of application, network, and end-user services. Using an application service management solution, IT can monitor, analyze, resolve, and prevent application performance catastrophes. They can also optimize performance for networks, servers, databases, and end users.

TECHNOLOGY UNDER THE COVERS AT LAW FIRMS

The presence of technology in today's successful law firms is ubiquitous. In addition to email applications such as Microsoft Outlook and Lotus Notes, lawyers rely on document management and business process management applications to gain access to and facilitate the routing of important legal documents. Many law firms are switching their phone systems over to technologies such as VOIP (voice over IP) to provide better coverage and phone service around the clock. In addition, critical functions like file management, billing and other applications must run continuously in the background.

Don't Think You Have a Problem?

Ask Yourself These Questions

- How do you know for sure that the VOIP system you are about to install will work with all of your existing applications?
- Why is your print server acting up sporadically, making it undependable for users to rely on fast document turnout?
- What is causing the network to bog down at 10AM every morning?
- Why is network speed fine in one office and sluggish in the next?
- How can you figure out why some of the lawyers are getting spotty performance when they try to access the applications and the network off-site?
- When you invest in infrastructure to address an application performance problem, do you know if it will really solve your problem?
- When's the last time an attorney or end user called to compliment you?

Even if you don't have a problem right now, you probably will—and then what will you do? Too many firms find themselves reacting to problems and scrambling to find out why their email isn't working or a document didn't get printed, instead of using automated monitoring and analysis solutions that can identify and troubleshoot problems before they receive angry phone calls.

All of this technology needs to be managed seamlessly and without any breaks in service to the end users, lawyers and their support staff. When a problem arises, IT is immediately thrown into fire-fighting mode, trying to solve the problem as quickly as possible to reduce the amount of downtime. However, in many cases, IT cannot immediately determine the cause of the slow network performance, or the reason the financial management application crashed twice this week. They are pressed for time and therefore try to fix the immediate problem as quickly as possible and move onto the next fire without identifying any of the underlying problems that caused the issue in the first place. Because much of the technology at law firms has been purchased off-the-shelf and handed down through different members of the IT staff, it is often difficult (if not impossible) to quickly identify the source of a problem. And, traditional frameworks and silo specific tools cannot

accurately measure the performance of today's complex applications or effectively troubleshoot them when problems arise.

This reactive mode that many law firm IT departments are in is highly ineffective, because it does not enable IT to get ahead of the fires. As any IT manager can attest, hearing about a problem from an end user is the last thing they want, because it means that the level of service has been compromised. This puts IT in an unfavorable position within the company and makes it not only difficult for IT to prove its value to the business leaders but also hard for lawyers to be sure that their applications or IT assets will always be available to work exactly when they need them.

FROM THE TRENCHES

"Without diagnostic tools we feel like we're operating in a vacuum, and it is often challenging to pinpoint a problem like a computer screen freezing up or a slow log-in time."

**Tracey Baetzel, CIO,
Honigman Miller Schwartz and Cohn LLP.**

THE COSTS OF PERFORMANCE PROBLEMS AT A LAW FIRM

The impact that an unreliable network and applications infrastructure can have on a law firm is both substantial and far-reaching. Consider the following areas where a law firm suffers each time there is an application down, or the network slows up:

- **Lost Revenue** - This is perhaps the most easily measured impact from application service outages. Not being able to work on a case has a direct impact on the number of hours a lawyer can bill for work completed. An application that is brought down for an hour during working hours can cost a firm tens of thousands in lost revenue. Any time a lawyer cannot access an application or a service is delayed translates into a direct revenue loss for the firm.
- **Client Satisfaction** - The happiness of its client base keeps a law firm humming, bringing in continued business and generating new business opportunities. Clients that are not given the level of service they expect when interacting with the law firm will take their business and their references elsewhere. Therefore, any application outages that impact the level of service lawyers can provide to their clients means that client approval levels drop and ultimately may impact the business.
- **Lawyer/Management Satisfaction** - Since most law firms are ruled by a group of partners, application or network performance slowdowns that impact the lawyers will be felt at the highest levels within the firm. This high visibility of IT problems can have a serious negative impact on IT, and adversely impacts the position of IT at the firm, ultimately preventing IT from assuming a more strategic role within the firm.
- **Brand protection** - Law firms grow on their solid reputation and the ability to respond quickly to existing and new customer demands. With heavy caseloads or contract work, law firms rely on their technology to move business along. If that technology fails them, it can have a measurable impact on the firm's reputation and new business opportunities.

As you can see from the above examples, law firms stand to lose a lot from an application infrastructure that is unreliable and has frequent problems. Continuing to operate under such conditions can put the firm in jeopardy of losing business and can sink IT into a hole it will have difficulty climbing out of. However, the solution may be closer than you think. Application service management is an area of technology that has been used by large enterprises for years, but has recently become an increasingly important part of many law firms' IT infrastructures.

APPLICATION SERVICE MANAGEMENT: WHAT IT MEANS FOR LAW FIRMS

To prevent some of the costs outlined above, IT managers at law firms need to be able to move to a more proactive management mode, whereby they are alerted to potential network, server and application problems before their user base calls them to report a

problem. Once aware of a problem, organizations must have processes and tools in place to help them quickly determine the business impact, isolate the source of the problem and resolve it.

Across vertical markets and throughout the globe, organizations small and large have found that by using an application service management solution they can more effectively manage their technology resources and operate the business.

Service management solutions can help a business manage all of an organization's IT services, including: desktop applications, networked applications, databases, shared services, phone systems, and even personal devices like Blackberries. Ensuring that all of these different services are performing at the promised levels and meeting end user expectations is the goal of application service management.

Within the law firm, application service management can have a significant impact on business operations. For example, it enables IT managers to:

- **Gain insight** into the end-user experience—whether it is an

A LAW FIRM'S SUCCESS STORY

Overview

Dickinson Wright PLLC is a law firm with more than 200 lawyers. It was planning to upgrade its phone system to VOIP with the objective of taking advantage of the latest technologies.

Challenge

During the phone upgrade, the firm encountered major problems. There were frequent outages when long distance and voice mail services were unavailable, cutting critical communication lines between the firms' lawyers and their clients. During the first two months after the switchover, IT was getting 30 complaints a day.

Benefits of Application Service Management

After implementing Compuware Vantage, the IT manager was able to configure it to reset the phone services automatically after a service interruption was detected. As a result, the following benefits have been achieved:

- The company estimates it has saved more than \$200,000 by solving the VOIP uptime and enabling lawyers to do their jobs uninterrupted.
- The IT staff has seen increased productivity because it is freed from doing manual restarts on servers, and notifications of problems come from the Vantage system rather than upset and angry end users.
- The Vantage solution has freed the IT staff from a number of mundane monitoring tasks, enabling them to increase application development, including 250 new Lotus Notes applications that will increase lawyer productivity and contribute to increased revenues for the firm.

attorney, billing analyst or paralegal—determining exactly how long certain transactions take to complete and identifying areas where there are lag times or problems before the users complain.

- **Troubleshoot performance problems** before they bring down the network, to quickly determine root cause analysis
- **Improve infrastructure utilization**, identifying areas where servers can be consolidated and applications can be adjusted to save costs and improve performance – without impacting service delivery.

LAW FIRM SUCCESS

"With application service management, our diagnostic capability has been jumpstarted 500-1000 times over manual efforts."

**Tracey Baetzel, CIO,
Honigman Miller Schwartz and Cohn LLP.**

With an application service management solution, law firms can be sure they are operating all of their application services at the highest, most cost-effective level while ensuring round-the-clock availability of key resources for lawyers. Lawyers need to be confident that their computers and system access will perform at the highest levels day and night while they get their jobs done. Therefore, an application service management solution can provide the confidence and reassurance to guarantee the level of performance that lawyers need while freeing valuable IT resources from fire-fighting mode.

BEST PRACTICES FOR APPLICATION SERVICE MANAGEMENT AT LAW FIRMS

The managing partners at law firms are responsible for ensuring that their entire business runs smoothly and supports the work of the lawyers in the most efficient and effective manner possible. As law firms get more competitive, they need to respond faster to clients and be able to successfully attract and retain new business. Therefore, they need IT systems that will respond whenever called on, the first time and every time after that.

Based on interviews with successful regional and international law firms, Upside Research

has found a number of technology best practices that a solution like application service management can bring to a law firm to build a competitive edge.

Application Service Management's Direct Impact on Lawyers

The following are some direct benefits that application service management delivers:

- Confirmation of important email receipt in real-time (i.e. during a phone conference).
- Ability to quickly log into or off the system when getting to work or rushing to court.
- Confidence to work off-site any time of day or night with access to all critical applications.
- The end of frozen computer screens and unnecessary downtime.
- Maximized billable hours.

- **IT is core to the business.** Those law firms that have been successful in leveraging technology for competitive advantage have created a close alignment between IT and business. IT is involved at the highest levels of the firm to understand the business strategy and translate that into technology services and infrastructure. With a close partnership between IT and business, all technology decisions reflect the

business goals of the firm and therefore support the business throughout the technology lifecycle.

- **Providing 24x7 (or always available) applications or services.** Most law firms find themselves working around the clock, whether due to far-reaching offices that span time zones or conducting business with clients around the globe. As a result, availability is becoming a necessity. Even if your organization isn't 24x7, you probably have the same availability requirement—the applications and IT resources need to be available when and where the lawyers need them. Using automated solutions to enable this is fast becoming a best practice among savvy law firms.
- **Proactive troubleshooting.** Rather than always being on the receiving end of complaints from users, Upside Research has spoken with a number of CIOs at law firms that are trying to change the tide of troubleshooting from reactive to proactive. Adding systems and tools that enable IT to watch the trends on their monitors for potential changes in completion times or response rates, or be automatically alerted when there is a potential problem is a key to being proactive. For those times when the problem cannot be headed off before it causes a break in service, adding diagnostic tools to quickly get to the root of the problem and take actions to correct it with minimal intrusiveness to normal business operations is another best practice.
- **Adding performance tuning.** As with any system, fine tuning it is key to its smooth operation. Applications and their supporting infrastructure in a law firm are no different, and Upside Research has found that IT managers at firms are increasingly using tools to help them tune the network and applications that lawyers rely on to conduct business. With a well-tuned infrastructure, IT can continue to provide lawyers with the level of service they demand while more efficiently managing the system behind the scenes.
- **Making informed infrastructure investments.** Upside Research uncovered several instances where law firms avoided costly infrastructure upgrades. With an application service management solution in place, they were able to understand the real cause of application slowdowns and resolved the problem without adding costly bandwidth.
- **Freeing IT to focus on value-added functions.** The IT resources within a law firm are often limited to the staff on hand. If that staff is spending most of its time running around doing manual upgrades, diagnostics, and fixes, there is little time left to optimize the technology infrastructure. Upside Research has learned that law firms that use an automated management solution for their networks, servers, and applications find that they can double or triple their existing staff availability by taking them away from mundane tasks and enabling them to focus on value-added tasks instead.

These are a few of the ways that an application service management solution can bring benefits to law firms today. While they are compelling, it is always more powerful to see how an application service management solution in action has helped a company make significant operating improvements.

A CLOSER LOOK AT BEST PRACTICES WITHIN THE FIRM

Being successful has its price. For Honigman Miller Schwartz and Cohn LLP, one of Detroit's largest law firms, it was supporting more than 600 attorneys and their staff in a timely and efficient manner.

Key to support was their server infrastructure and fast, efficient access to applications, documents, and data on the various servers. The firm first selected Compuware Vantage on a trial basis for 30 days to monitor the Exchange servers. The product was up and running within a day, and almost immediately the IT staff received its first alert about a potential network problem.

"We got a notification that a large email was attempting to be sent, and it was going to bog down the entire system," explained Tracey Baetzel, CIO at Honigman. "We quickly moved the email to an after-hours schedule, notified the sender, and established a policy for handling large email attachments."

With the success of the initial trial, Honigman quickly decided to roll out the Vantage product to all 90 servers enterprise-wide, and it also called Compuware services in to help diagnose an intermittent problem the company was experiencing around slow log-in and log-offs to the network. Right away, the group identified three specific issues in the network directory that were causing the spotty performance of login function. Honigman was able to remedy the system and eliminate the user complaints that were piling up.

The benefits of implementing application service management were significant. Since the implementation, Honigman has seen a number of important benefits:

Operational Impact:

- The IT staff no longer has to spend 4 hours every morning checking consoles manually for connectivity. With the solution, the monitoring continues around the clock, and immediately notifies the network management team when and where there is a problem.
- For diagnosing problems, the Vantage solution was able to get the IT 80% closer to the problem than the traditional "needle in the haystack" approach, saving valuable time and resources.

Business Impact:

- Using the specific reports from Vantage about server performance and faults that occur, the network services team can fix any problems before end user calls start coming in.

Financial Impact:

- A critical document management system had gone down twice during the night in one week prior to implementing Vantage, causing substantial disruption to service and frustrated users calling into IT at 8:00 am in the morning. With Vantage, the problem was immediately identified and within 5 minutes the server was up and running again, without any end user awareness.

COMPUWARE VANTAGE: A CLOSER LOOK

Compuware Vantage is an application service management solution that provides IT managers with the insight and productivity tools to more effectively manage the availability and performance of all of their client, network, server and application resources. Using Compuware Vantage at a law firm, IT can more easily and effectively provide:

End-to-end visibility of service delivery

When a critical application experiences a performance problem, the first call you receive should not be from an angry attorney. To manage application service effectively, IT must have an easy way to know about these types of problems before they impact the firm. But, traditional silo-specific tools do not provide relevant metrics. Vantage measures end-user experience, rather than just infrastructure performance. Through end-user experience monitoring, it measures response times of critical business transactions on a 24x7 basis for all types of applications (web, client/server, 3270, Citrix, Java and .NET) that span the infrastructure—from a single dashboard (see figure 1 and figure 2).

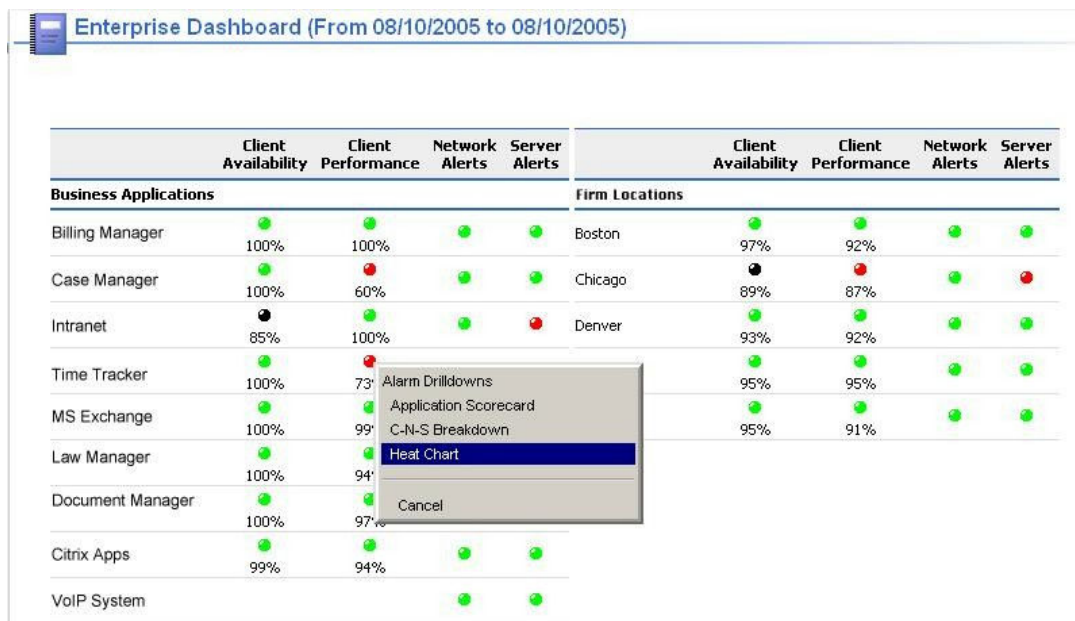


Figure 1 - Example of Enterprise Dashboard Showing Application Performance

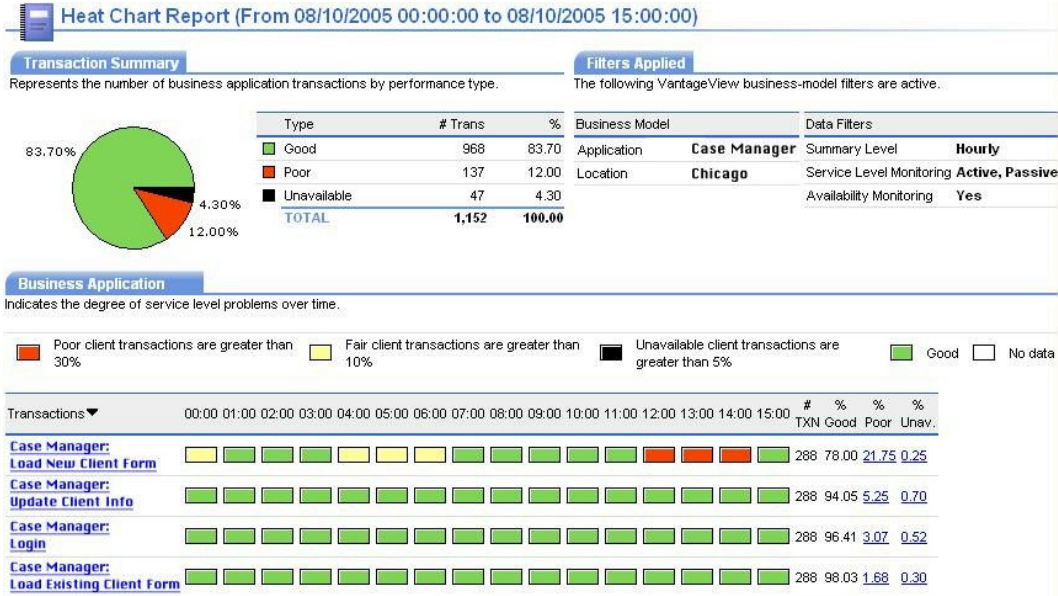


Figure 2 - Example of Application Performance Report

Faster mean time to resolution

Vantage provides broad troubleshooting solutions for addressing application performance throughout the enterprise (see figure 3). Deep diagnostic capabilities are integrated with performance monitoring to provide detailed troubleshooting insight. Vantage provides root cause analysis to help correct the causes of poor end-user response times wherever they hide, eliminating time-consuming guesswork. Comprehensive performance analysis including resolution recommendations is delivered in a polished MS Word document that eases communication within IT departments and between IT and 3rd party software vendors (see figure 3).

Executive Summary

Overview

The analysis presented is for the application **Demo - Flowchart Examples**. The task analyzed is **Processing Sensitive Transaction Example**. The task involved two nodes on two identifiable tiers. The trace took place at 3:39 pm on Friday, January 17, 2003.

The total response time is **16.61** seconds.

The Transaction Expert has determined that **Node Processing** is the most important aggregate factor limiting performance for this task across all resources. Node Processing on **LJQA-W2KADV-GHO** was the largest contributor in this category, and accounted for 10.43 seconds, or **62.80%** of overall response time.

Resource Usage

LJQA-W2KADV-GHO contributed the most delay of any single resource, **10.44** seconds, or **62.82%** of total response time.

Resource	16.61 seconds	Final	
WAN		7.78%	1.29 seconds
LAN		0.03%	0.00 seconds
LJQA-W2KADV-GHO		62.82%	10.44 seconds
Client		29.38%	4.88 seconds

The running percentage delay attributable to each resource is shown, ending with the final breakdown of response time by resource.

Application Participants

There were two nodes in the trace, Client (which was the client) and LJQA-W2KADV-GHO. Presented is a summary of their interaction.

Conversation	Offered Load	Total Bytes	Transit Time (ms)	Low	High	Bandwidth
Client		7,743		15	103	256 kbps
LJQA-W2KADV-GHO		12,030		15	315	

Offered load for each direction is shown throughout the duration of the measured interval. Transit time is shown for WAN conversations (note: transit time may include queuing time).

Figure 3 - Example of Summary Document

Effective infrastructure management

Vantage brings superior visibility into the usage and performance of the network, all from an application viewpoint (see figure 4). With this visibility, you can ensure that infrastructure changes will actually improve performance, make certain the network is used for intended purposes, receive guidance on where to focus virus clean up, measure quality of VoIP in context of all applications, and plan for server consolidation and WAN provisioning.

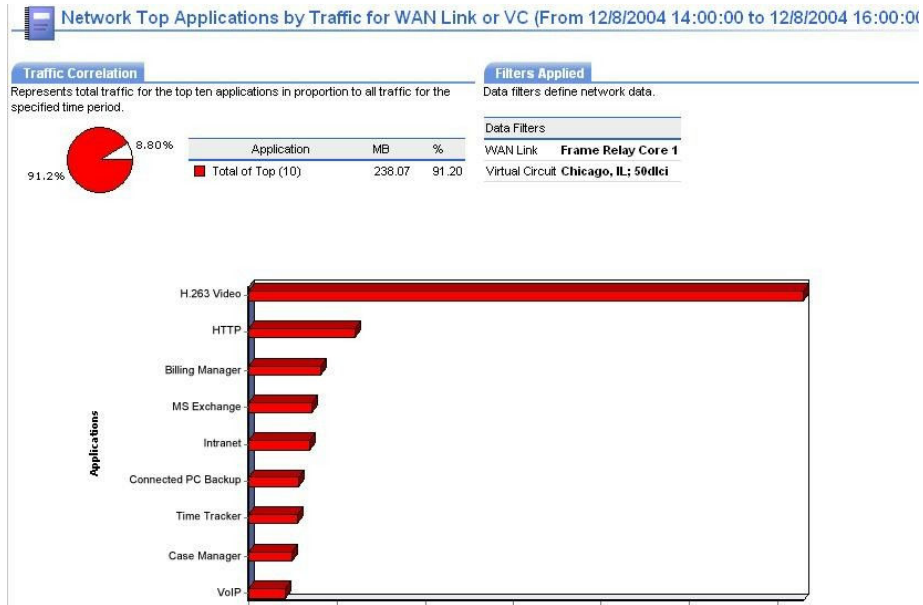


Figure 4 - Analysis of network application traffic for analyzing performance

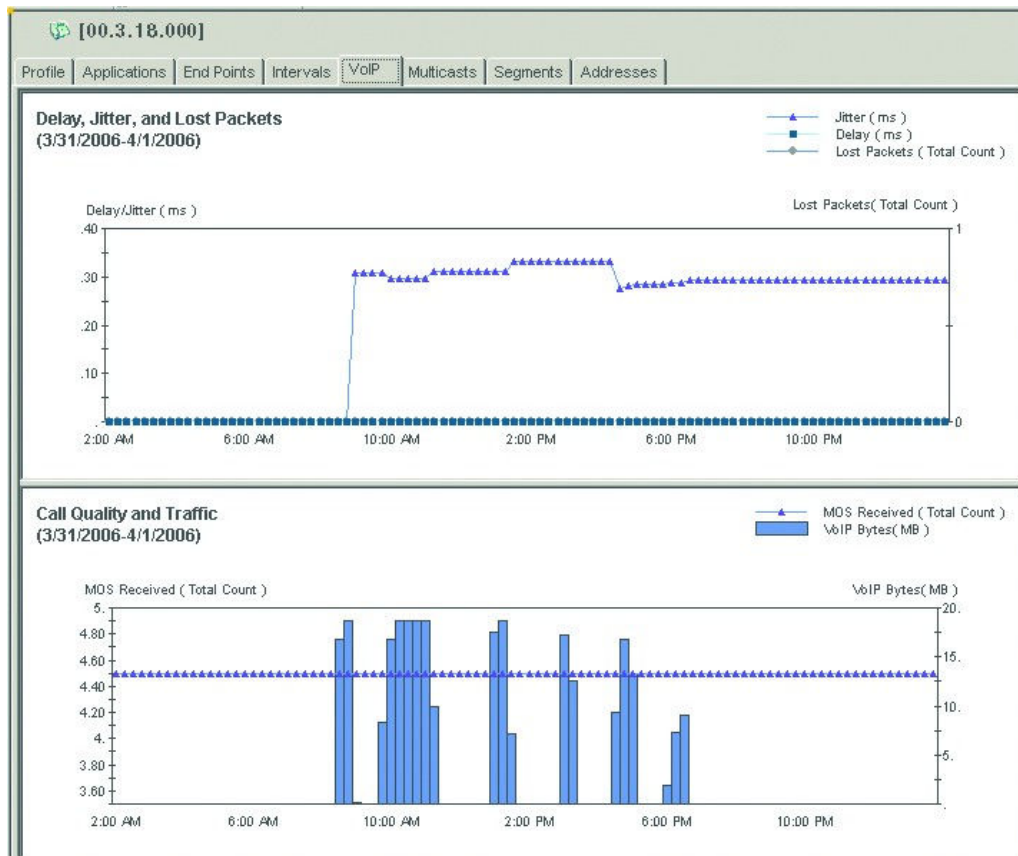


Figure 5 - Network analysis

BUILDING ON SUCCESS THROUGH APPLICATION MANAGEMENT

With its proven track record in organizations throughout a variety of industries and geographies, application service management is a solution to the challenge of guaranteeing that the most critical applications and services are available to business users when they need them most. Applying automated management tools to law firms is a natural fit. Not only can it save firms the significant cost of downtime and lost productivity, but it can also enable IT to operate proactively and to optimize the networked application resources that are available to lawyers.

A number of savvy law firms have already seen impressive results from adding automated management solutions to their technology infrastructure. With application service management, IT can become a more strategic partner to the law firm, and enable the firm's greatest asset, the lawyers, to leverage the best technology available. Implementing tools such as application management today can catapult a law firm beyond the competition, and even open up new opportunities through its increased effectiveness. Compuware Vantage's suite of application service management tools are being added to law firms regionally and internationally to help optimize the IT environment and propel the firms beyond the competition in their quest to maximize business performance.

About Upside Research, Inc.

Upside Research is a research and consulting firm focused on helping clients put application development, Web services, business process management, integration, and enterprise infrastructure challenges in perspective. Upside Research helps organizations find practical ways to achieve their IT goals and profit from the diversity of a changing technology landscape.

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