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CASE STUDY

# Lathrop GPM

## Law firm relies on a range of Riverbed solutions to make sure lawyers never stop working because their network is down.

When network is down, attorneys lose applications, telephones and video conferencing.

Lathrop GPM has 320 attorneys nationwide serving clients in the areas of litigation, intellectual property and business. Chambers USA ranks Lathrop GPM's corporate, environmental, media and entertainment, labor and employment, litigation and real estate practices among the best in their regions. For more information, visit www.lathropgage.com.

### Challenge: Improve network reliability to ensure availability of critical applications.

Headquartered in Kansas City, Lathrop GPM has regional offices throughout the United States, from Los Angeles to Boston. The headquarters and 9 regional offices are linked to each other and to the firm's two data centers by two separate 100-megabit MPLS networks (from different providers). Each data center has its own Internet connection as well. MPLS redundancy is critical because all of the firm's critical applications–Office, Exchange, Outlook, legal document management system (Autonomy iManage), VoIP and video conferencing (Cisco Unified Communications Manager) – are centralized in the data centers and delivered over the MPLS network.

Until recently, one MPLS network was active while the other was passive, used only when a failover from the active network occurred. This configuration was less than ideal for a number of reasons. First, it was not cost-effective. "If one network sits passive 95% of the time, that's not a real good use of that investment, especially when we have offices that are at the upper threshold of their current circuits," says David Alberico, Lathrop GPM's network manager.

But the bigger problem was the fact that when the active network went down and traffic switched over to the passive network, the failover process could take up to 90 seconds. "Ninety seconds doesn't sound like a lot, but it isn't *really* 90 seconds in reality," explains Lathrop GPM's IT infrastructure manager, Tim Soto. "Your phone has to reset so you drop the call you're on. If someone tries to call you back they're not going to be able to reach you. If you're using Outlook, your session disconnects. Ninety seconds can cause a fatal application error. Ninety seconds is a very disruptive disconnect."

In addition to keeping the network up and running, the IT team, led by CIO, Gillian Power, must quickly troubleshoot issues related to application performance. The complexity of having two MPLS networks, two separate Internet connections, and so many critical centralized applications has made it increasingly important to have thorough visibility into the networks.

**300%** increase in network capacity

## In Brief

### Challenges

- Improve network performance to ensure availability of attorneys' voice, video conferencing and legal software
- Eliminate disruptive 90-second failovers causing dropped calls and work stoppage
- Use redundant MPLS networks more efficiently to save costs

### Solution

- Riverbed® SteelHead™ appliances for WAN optimization, path selection, and QoS functionality
- Alliuvio™ Flow Gateway, NetProfiler, and AppResponse for network performance management

### Benefits

- Path selection works with existing infrastructure and required no capital expense
- Failovers reduced to non-disruptive 5 seconds or less; attorneys never notice a problem
- 200% to 300% increase in network capacity at no capital expense
- Ability to implement bandwidth-intensive applications such as HD interactive video
- Attorneys experience LAN-like performance over the WAN
- Improved SLA for network performance
- Alluvio™ NPM reduces troubleshooting time to minutes; helps company make better technology investments

## Solution: Riverbed performance platform; SteelHead and Alluvio NPM

To ensure the network's reliability and the availability of the attorneys' phones, conferencing system and software applications, Lathrop GPM relies on solutions from Riverbed Technology, specifically Riverbed® SteelHead™ WAN optimization appliances, and Alluvio™ Network Performance Management (NPM) tools.

Lathrop GPM uses the SteelHead appliances for WAN optimization to ensure LAN-like performance of applications over the network. But Soto and Alberico also take advantage of other, powerful built-in functionality such as quality of service (QoS), which they use to prioritize voice traffic over recreational traffic. They also use SteelHead path selection capability, which was introduced with RiOS® 8.5 as a free upgrade for current support users of SteelHead models xx50 and higher.

SteelHead path selection allows companies to prioritize mission-critical applications over the fastest networks —business-critical traffic over an MPLS network and recreational traffic over the Internet, for example. The way Lathrop GPM uses SteelHead path selection is for times when the primary MPLS network goes down. When that happens, path selection kicks in and routes traffic over the secondary MPLS circuit until the primary circuit is back up.

"It is really hard for a person doing normal network usage to tell they're on the WAN."

The IT team evaluated Riverbed path selection against other vendors' solutions and found that others would require extensive changes to network architecture, while going with Riverbed did not require architecture changes, holistic routing changes, or even a capital expenditure. Also, SteelHead path selection could be added incrementally. "With SteelHead appliances already in place it was easy to drop path selection into the existing setup," says Alberico. "It works perfectly and it's real easy to build out." They also found that a number of other solutions used the First Hop Redundancy Protocol (FHRP) that doesn't protect both ends of the BGP cloud and can lead to a black hole routing situation. SteelHead path selection protects against that, verifying the full path from one side to the other.

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Lathrop GPM's NPM practice uses Alluvio Flow Gateway to collect, aggregate, and compress flow data, along with Alluvio™ AppResponse for high-performance packet capture. Flow data and packet-based performance metrics are combined with SteelHead performance data in the firm's Alluvio™ NetProfiler appliance, which enables the IT team to do proactive monitoring, analysis, and reporting.

## Benefits: Resilient network eliminates downtime; faster troubleshooting; better use of IT budget

SteelHead path selection has allowed Lathrop GPM to change from an active-passive network configuration to an active-active one. This is a better use of funds, since the firm now fully utilizes both networks, instead of having one sit idle most of the time.

Path selection also significantly decreases failover speeds, which are down to a non-disruptive five seconds or less, which attorneys don't even notice. "Users continue going on about their day. They might see that things run a little slower than they did a couple of minutes ago but, otherwise, they're none the wiser that there's a problem," says Soto. "What's really beautiful is the difference between something being disruptive, and everybody stops working for a period while you failover, versus now we see that there's a failure, but they don't really know that there's a problem and we fix it in the background. And we can even let them know that there's a problem, and we're working on it, but it wasn't highly disruptive."

"From a client point of view, we can lose the primary host router or circuit, and with path selection you won't know it. Failover between the two circuits is basically as seamless as you could possibly get," adds Alberico. "I would say the most important thing to the end users, and to especially our partners here, is the SLA (service level agreement) has improved."

With both MPLS circuits now active, usable bandwidth increased by 200% to 300% before WAN optimization and without any additional capital expense. With ample bandwidth and a more resilient network Lathrop GPM can now implement more bandwidth-intensive applications such as high-definition interactive video. Meanwhile, end users have seen a significant performance increase. "I have gone to quite a few of our regional offices and it feels just like we are right in our headquarters," Alberico says. "It is really hard for average person to tell they're on the WAN."

SteelHead QoS functionality ensures that even if an office reaches its bandwidth limits, it won't be a problem because usage is prioritized according to application. Lathrop GPM reserves the majority of the primary network for business-critical uses while less critical applications get shuttled to the secondary network. More designations may be implemented in the future, but the change to an active-active network configuration provides such a huge improvement that bandwidth is rarely an issue at any office.

The increased visibility provided by the Alluvio NPM solutions has streamlined troubleshooting to the point where it can now happen in minutes. "We can see the entire network and anything that is going on with any office," says Alberico. "We can zoom in, zoom out. We can get very granular. We can find out exactly who's consuming what bandwidth and what traffic is going on where in a matter of a couple of minutes." He also finds the NPM tools helpful for planning technology investments. "We had Alluvio NPM in place when we did our MPLS upgrade and it was valuable for sizing our MPLS circuits correctly to each office."

## Summary

The IT team at Lathrop GPM needed better visibility into network performance to ensure the availability of the firm's centralized voice, video conferencing and legal applications. They also wanted to find a way to use the firm's redundant MPLS networks more efficiently to save costs. And they needed to do something about 90-second failovers, which were causing dropped calls and work stoppage.

Riverbed solutions addressed all of the issues. Alluvio NPM lets the IT team do proactive network monitoring and reduces troubleshooting time to minutes. It also helps company make better technology investments. SteelHead WAN optimization ensures LAN-like performance of applications over the network. SteelHead QoS lets IT prioritize voice traffic over recreational traffic, while SteelHead path selection capability kicks in when the primary MPLS network goes down, routing traffic over the secondary MPLS circuit so quickly that users never notice anything wrong.

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### Riverbed – Empower the Experience

Riverbed is the only company with the collective richness of telemetry from network to app to end user that illuminates and then accelerates every interaction so that users get the flawless digital experience they expect across the entire digital ecosystem. Riverbed offers two industry-leading solution areas – Alluvio by Riverbed, an innovative and differentiated Unified Observability portfolio that unifies data, insights, and actions across IT, so customers can deliver seamless digital experiences; and Riverbed Acceleration, providing fast, agile, secure acceleration of any app over any network to users, whether mobile, remote, or on-prem. Together with our thousands of partners, and market-leading customers across the world, we empower every click, every digital experience. Learn more at riverbed.com.