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# 10 Steps to Better Application and Network Performance

**If you work on a network operations team, you know how increasingly hard it is to understand and ensure application performance for your end users.**

You need visibility into all the areas where issues may occur—end-user devices, the network, application code, and infrastructure—in order to identify and diagnose problems quickly and minimize downtime.

However, it hasn't been easy to gain this level of visibility without deploying additional packet capture devices, or remote site technicians. Blind spots are everywhere making it difficult to focus on monitoring the applications that matter most. And when the majority of your organization's traffic is web-based and it all looks the same to the network, identifying your important applications and staying ahead of their performance is more difficult than ever. That could mean inefficient troubleshooting, longer time to resolution, and an overall lack of application intelligence. Who wants that?

No application is perfect, even with the most stringent instrumentation. But, if you follow the ten steps below, your applications and underlying infrastructure can both be tuned for maximum performance:

## 1 Find problem sources

Voice, video, and social media traffic can slow down the network. With a tool that provides performance metrics per application, location, and user, you can identify the source of any problem and drill down from Layer 7 application information all the way to low-level addresses and ports, with just a few simple clicks.

## 2 Fix potential problems before they strike

Your solution should actively monitor and alert on meaningful changes in performance so that you can head off potential problems. The conundrum is, if you fix a problem before anyone actually notices it and calls the help desk to complain, was it actually ever really a problem?

## 3 Reduce brownouts and downtime

When your critical network connections or business applications fail, every minute counts. IDC finds that organizations using network performance management software have fewer downtime incidents per month, and the average incident duration is shortened significantly. This results in a measurable increase in end-user productivity.

Beyond identifying simple performance problems and managing incidents, such as disruption from hardware overload, network congestion, and security threats, you can and should enable the entire operations team to integrate and automate other network management functions:

- General network analysis
- Pushing out network changes
- Network audit/data collection/inventory management
- Correlation of network change to network performance/health
- Maintaining consistency of standards and policies
- Network monitoring, and deployment

## 4 Get proactive alerting and root-cause identification

With full visibility into your network and proactive, real-time performance analytics, you can deliver better security to your organization as well as avoid problems before they impact users. Advanced analytics lets you detect meaningful changes in performance, zero-day threats or unauthorized intrusions across the network, helping you achieve compliance with regulatory requirements and IT mandates. That means less resources are consumed, and both users and the bottom line are unaffected.

## 5 Map your transactions

A transaction map describes all the components used in delivering a specific transaction and is a fundamental template that is used to reach a more effective problem resolution and impact analysis. Because they reduce the sample of information to be analyzed, transaction maps are the cornerstones of an integrated monitoring strategy.

## 6 Consolidate your tools

Gathering several experts from across teams and manually aggregating data from multiple disparate sources into a meaningful view of a business service is usually a painful, resource-intensive, and wasteful exercise. A good performance management solution should simplify the number of tools you use to monitor and troubleshoot your environment, and provide a common dashboard for viewing integrated data from your network, applications, infrastructure and end-user experience domains.

## 7 Understand the dynamic context of each business service

You should understand how a service is delivered across your dynamic infrastructure. Modeling a business service and mapping the components used in delivering it to end users is the basis for an accurate analysis of performance issues and useful in planning digital transformation initiatives like cloud, virtualization and migrations.

## 8 Simplify management

Your toolset should have broad domain monitoring capabilities that can be abstracted in a way that focuses on services (such as a CRM application). That way, it can model business services' dependencies on the underlying infrastructure that is used to deliver each application. In turn, you get better cooperation across global teams, improved resource prioritization, and streamlined troubleshooting.

## 9 Cooperate with application support and development teams

Use comprehensive service dashboards with role-based access that get everyone on the same page. From the CIO and IT management to application managers to the security and network teams, everyone with access to the same data can see a unified picture of the network and the applications and services on the network. That means less finger-pointing and quicker problem resolution. A common, integrated view of all component data is a key feature of a management solution.

## 10 Plan for the future

The better the picture you have of what's currently happening on your network, the better you're going to be able to plan for future needs and expansions of the network. And you can also, more confidently, align your network and IT resources with your business' priorities. Planning for a new service rollout, addressing new cloud and mobile apps, and data center consolidation projects are much easier and far less risky.

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**About Riverbed**

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