

riverbed®

**A BEST PRACTICES
APPROACH TO BUILDING
A CLOUD-READY NETWORK**



Building a world-class, cloud-ready network is critical for taking business into the digital age.

INTRODUCTION

In today's digital economy, enterprises are under pressure to continuously develop and deliver new and innovative digital services to compete. As a result, IT teams have become key enablers for increasing business velocity, which means they need to find ways to be more agile and responsive to business needs.

Cloud services such as Microsoft Azure and Amazon Web Services (AWS) level the playing field. They allow businesses large and small to achieve greater agility and flexibility, and scale to capacity as needed — all of this on a near-real-time basis. However, to fully capitalize on cloud benefits, it's necessary to fundamentally change how the networks that connect everything together are designed, deployed and managed.

STATE OF THE NETWORK

Networking hasn't changed in more than 20 years. As a result, legacy, hardware-centric and CLI-driven approaches to managing a network can't meet modern businesses' needs for agility and efficiency. It takes IT staff months to make network changes, and the human error introduced into the system causes more than a third of all network downtime.¹

Furthermore, the rise of the cloud has added more complexity to distributed networks. Network architects are now deploying hybrid WANs (MPLS + Internet) in remote locations to cost-effectively meet insatiable demands for bandwidth-intensive applications and to provide a more direct connection to Internet-based applications and services. But, this introduces new operational, security and visibility challenges that legacy approaches to networking were never designed to address.

A NEW ERA EMERGES

With the introduction of software-defined wide area networking (SD-WAN) technology, IT teams now have a foundation to support rapid innovation and responsiveness.

According to Gartner, “SD-WAN is an emerging technology that offers several benefits compared with traditional, router-based WANs. Network decision makers can achieve cost savings, increased agility and simplification with an SD-WAN.”²

These capabilities will be network table stakes for forward-thinking organizations. However, to take networking to a best practices level, IT teams need a more complete architectural solution that combines cloud-grade SD-WAN with technologies that provide advanced visibility and optimization.

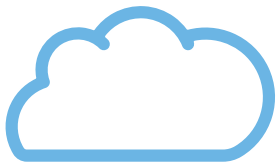
Most SD-WAN solutions enable IT teams to:

- Centrally manage and orchestrate network traffic with policies that are business and/or application centric.
- Provision new sites without the need for skilled IT workers in remote locations.
- Deploy and manage hybrid WAN topologies with greater agility and ease.



BEST PRACTICES APPROACH

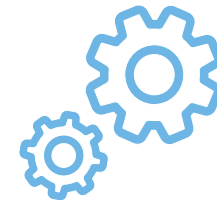
When devising a strategic framework for next-generation networking, be prepared to support these critical capabilities:



Cloud-Grade SD-WAN: Today, the landscape for housing and delivering business applications is incredibly diverse, spanning traditional data centers, cloud environments, remote branch offices and mobile users. Consequently, your SD-WAN solution must expand to handle automated connectivity and orchestration across hybrid WANs, cloud networks and remote branch LANs/WLANs. This expansion is critical to achieving significant gains in agility and operational efficiency.



Rich Visibility: Many SD-WAN solutions offer basic monitoring. Yet today's hybrid networks require much more depth. Make sure you're equipped with advanced application and transaction insight in heavily-encrypted environments, comprehensive end-user experience monitoring, and deep network intelligence to provide total visibility into application performance and fast resolution of problems.



Built-in Optimization: Point-product approaches to combining WAN optimization and SD-WAN network services compromise control over application performance as packets flow between WANOP and SD-WAN functions. Look for a single solution that unifies these technologies across hybrid WANs, cloud (SaaS, IaaS, PaaS) networks and branch LANs/WLANs, plus provides automated and dynamic path selection.

CLOUD-READY NETWORKS DELIVER BENEFITS

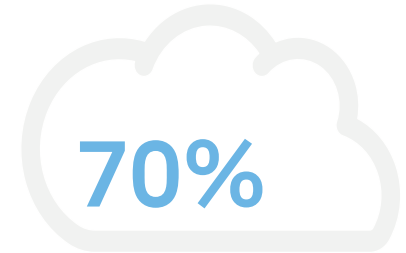
With a complete architectural solution that includes enterprise-scale SD-WAN, WAN optimization and advanced visibility, businesses can reap these benefits:



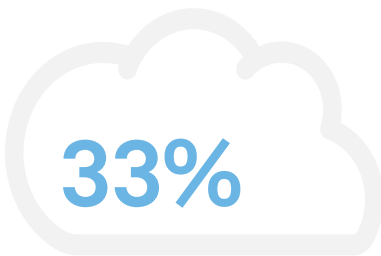
faster provisioning of new sites and services ³



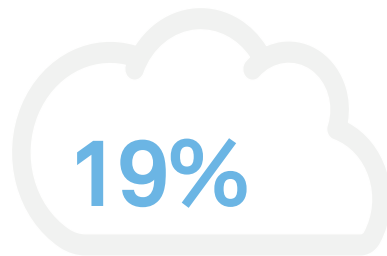
reduction in TCO ⁴



reduction in network-related unplanned downtime ⁵



fewer physical servers ⁶



more efficient WAN management ⁷



reduction in mean time to resolution (MTTR) ⁸



increased productivity ⁹

CONCLUSION

Modern, cloud-ready networks enable enterprises to effectively leverage cost-efficient, hybrid WAN topologies without worrying about performance, control, or security resulting in lower CapEx and OpEx. When SD-WAN and the tenets of centralized management and orchestration are applied strategically and broadly within an enterprise, IT teams are more efficient, end users are more productive, and customers receive the experience that digital enterprises strive to provide.

LEARN MORE ABOUT CLOUD NETWORKING SOLUTIONS 

SOURCE

- ¹ *An Application-Centric Infrastructure Will Enable Business Agility*, ZK Research, March 2014
- ² *Technology Overview for SD-WAN*, December 2016
- ³ *Gartner: Technology Overview for SD-WAN*, July 2, 2015
- ⁴ *Gartner: Technology Overview for SD-WAN*, July 2, 2015
- ⁵ *IDC: The Business Value of Riverbed SteelHead*, July 2016
- ⁶ *IDC: The Business Value of Riverbed SteelHead*, July 2016
- ⁷ *IDC: The Business Value of Riverbed SteelHead*, July 2016
- ⁸ *As reported by 84% of SteelCentral customers*
- ⁹ *As reported by 81% of SteelCentral customers*