

Next-Generation WAN Optimization Is Happening Now

August 2011

Introduction

WAN optimization has traditionally involved the acceleration of files, email, backup, storage, and business applications between the data center and branch office locations. Today, however, there are forces at work that are changing the nature of what a WAN optimization solution needs to be. Today's businesses are driven to increase their competitiveness by reaching their own employees in different ways and embedding their services and products into customers' lives. Because of this, their employees are becoming increasingly dispersed, empowered, media savvy, and mobile to support their customer's needs. To spin up resources quickly and meet these business needs, infrastructure and operations (I&O) teams are igniting cloud resources. This, in turn, is revealing the need to access and optimize applications that include video, social networking, and business apps that originate from public or private clouds to support users who are accessing applications and service from here and there to get their jobs done. In this profile, we examine how I&O teams are:

- Building out traditional WAN optimization to support the increase in streaming and on-demand video, unified communications, and collaboration services that further enable consolidation and connect the dispersed user, as well as the explosive increase in live and on-demand video use by end users and employees.
- Being driven to change their application optimization strategy from traditional on-site WAN hardware deployments to virtual or single-sided (asymmetric) instances to support applications that increasingly reside in public clouds.
- Looking for solutions that can coordinate, control, and optimize applications and services originating within private or public clouds to provide their users with secure and optimized access to these external resources.

Businesses Face Divergent Drivers Of IT Consolidation And Business Expansion

On one hand, organizations are eliminating infrastructure to increase efficiency. Yet, according to Forrester Research, while 56% of I&O professionals continue the trend of saving cost and consolidation, there are also trends indicating businesses are positioning themselves for expansion by getting closer to their customers (see Figure 1). Almost as many organizations are prioritizing increased use of collaboration tools, indicating a focus on bringing together geographically dispersed employees and keeping a close connection with customers in any and all locations. And nearly half of the businesses we surveyed indicate that increasing the number of mobile applications available to employees as a high priority, which is indicative of the growing desire to branch out of the enterprise and into customers' lives.



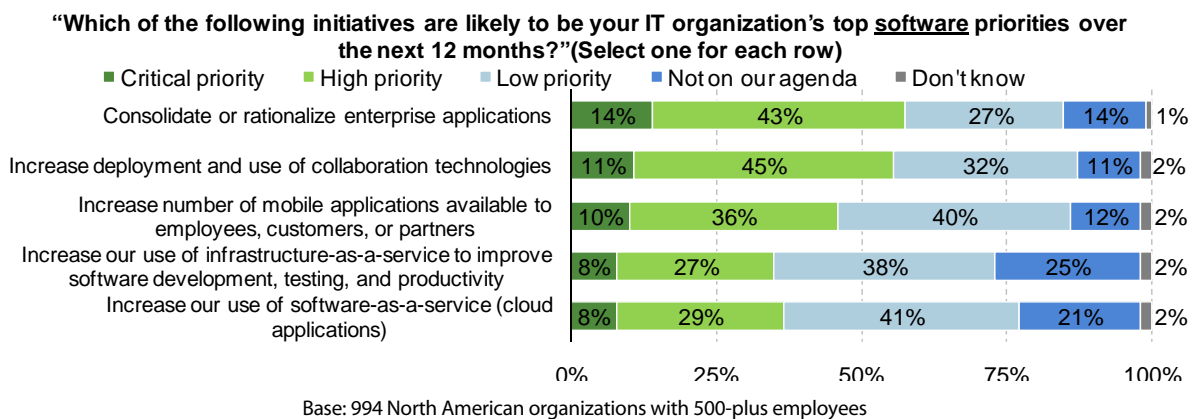
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For a significant number of businesses, embedding themselves in the lives of their customers doesn't mean buying more infrastructure to enable new services. Though businesses are remaining true to their consolidation mantra, they are also now leveraging the cloud to do it. Thirty-five percent of surveyed businesses, concerned about the capital costs associated with building out hardware yet not wanting efficiencies to decrease, are investing in cloud services to support potential growth. The trend toward leveraging cloud was further revealed when Forrester asked businesses to look toward the future — a compelling 33% predict that their primary deployment of business applications will be cloud-based, either public or private, and a not insignificant number see the same fate for other key technologies and processes (see Figure 2).

Figure 1

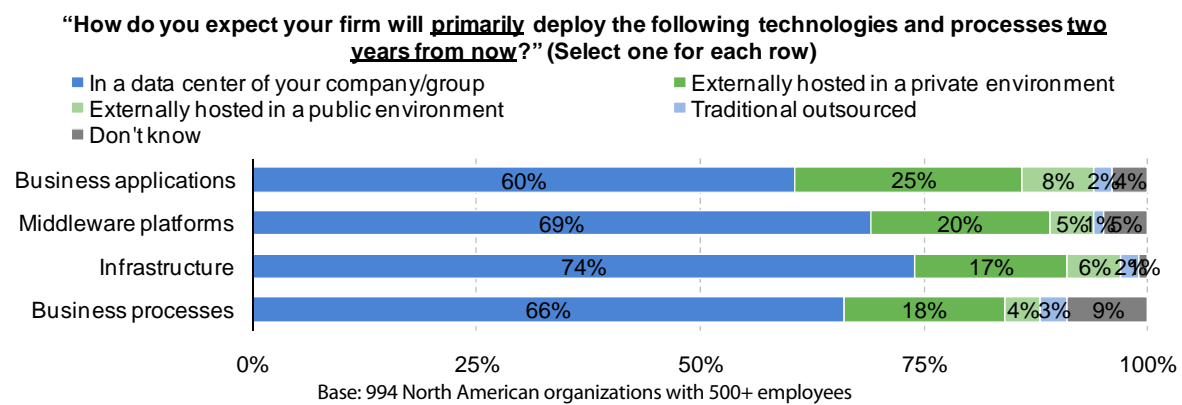
Software Priorities Show A Push To Consolidate As Well As Expand By Way Of Collaboration And Mobile Apps



Source: Forrsights Software Survey, Q4 2010

Figure 2

Future Deployment Plans For Business Technologies And Processes



Source: Forrsights Software Survey, Q4 2010

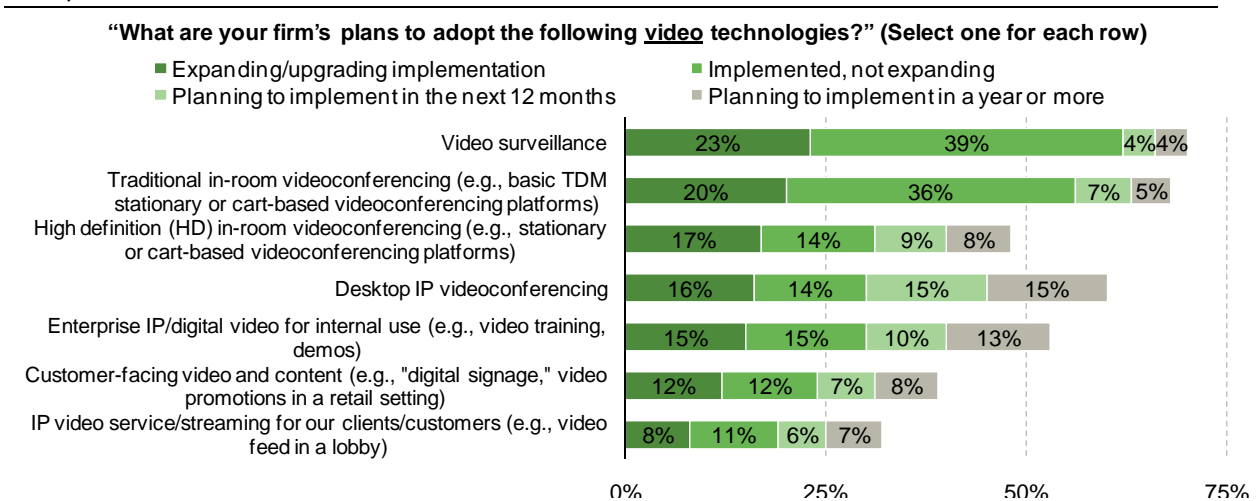
At the same time as businesses are moving to the cloud, they are also driving toward a more dispersed, mobile, and empowered workforce to support expansion. And as employees become more dispersed, they expect I&O teams to support them as they leverage the mobile devices and other tools they need to get their

jobs done. Today's mobile priorities include support of more types of user devices than ever before as well as the extension of internal systems for mobile access, both of which are driving traffic from dispersed locations — the branch, remote offices, etc.¹ Nearly half of the businesses we surveyed indicate that increasing the number of mobile applications available to employees as a high software priority, which is indicative of the growing desire to branch out of large corporate campuses or branch offices into smaller more dispersed locations.

To bring together geographically dispersed employees and keep a close connection with customers everywhere, many organizations are also prioritizing the increased use of collaboration tools and video, which will appear as a mixture of:

- Videoconferencing.** With an eye on the negative effects of poor communication between remote users, videoconferencing has become a tool for employees to keep in contact with each other and develop strong bonds. Second only to surveillance, traditional videoconferencing has seen high levels of adoption among video technologies, with 56% of organizations having already implemented this technology (see Figure 3). As importantly, 48% and 60% of organizations have implemented or plan on deploying IP videoconferencing for HD conference rooms and desktops, respectively.
- Streaming video.** Just as consumers began using MP3 players for business purposes when podcasts on relevant topics became available, today's workers who use video in their personal lives will increasingly expect it at work. In its Video Metrix study, comScore revealed that more than half Internet users in the US watched an average of 14.7 hours of video content in November 2010, engaging in 5.2 billion viewing sessions, which often bleeds into work time.² Likewise, Forrester's research shows that 40% of organizations have already adopted or have immediate plans to adopt enterprise video for internal use (e.g., training, demos, communications).

Figure 3
Enterprise Plans For Video



Source: Forrsights Networks and Telecommunications Survey, Q1 2011

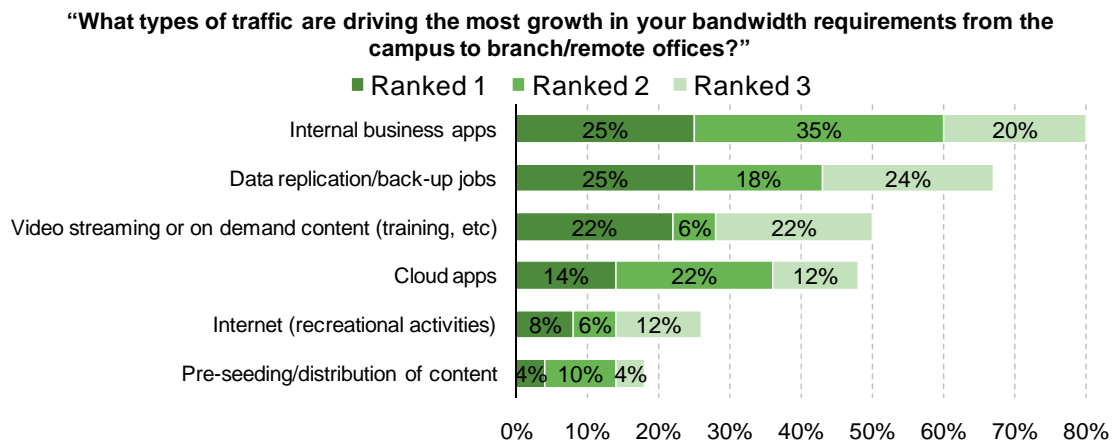
Organizations Are Realigning To Become More Dynamic, Flexible, And Multipurpose

In July 2011, Blue Coat Systems commissioned Forrester Consulting to take a closer look at organizations with branch offices to gain insight into growing traffic from branch and remote locations and to uncover their views on WAN optimization to tackle the challenge of this growth. Forrester found that I&O managers are tackling a much different world from the one where every application, database, hardware, and information source was bought, deployed, maintained, and controlled by the business. Historically, I&O managers had to oversee a handful of apps from a central location while others were deployed, locally, at branch locations with a set of users that consistently accessed them from relatively the same place and same time, every day. WAN optimization solutions were developed to push a lot of layer 3 data down a small pipe. But these traditional WAN optimization appliances were not designed to support the new business.

Today, as businesses align and embed their services, organizations will need optimized access to more and varied types of applications from both internal and external sources. A strong majority of surveyed businesses ranked internal business apps (80%) and data replication (67%) as top drivers to branch/remote traffic growth. These internal applications will compete for the same pipe with video and internet content, which also ranked significantly among those drivers for branch traffic growth (see Figure 4). Compounding the issue are external, public and private cloud-based applications that will need to be prioritized and optimized along with internal applications. These new business needs are the driving force behind next-generation WAN optimization solutions.

Figure 4

Internal Apps Are Driving The Most Growth In Bandwidth Needs Between The Campus And Remote Locations



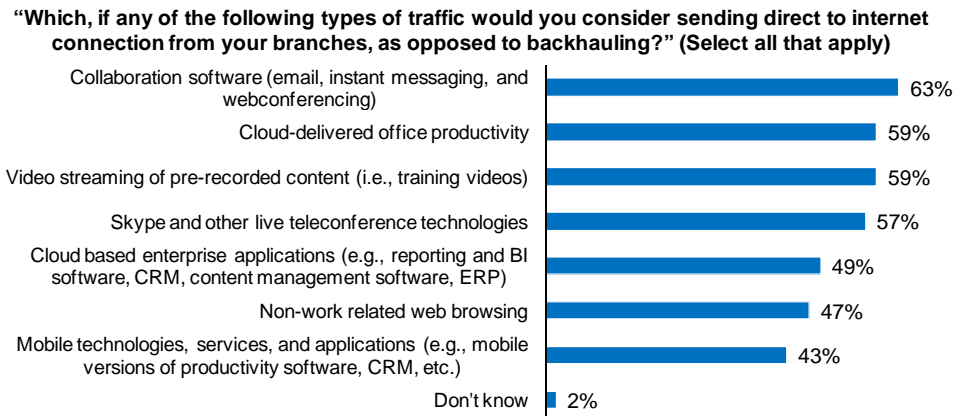
Base: 51 North American IT decision-makers with responsibility for telecom/network decisions

Source: a commissioned study conducted by Forrester Consulting on behalf of Blue Coat Systems, July 2011

Next-generation WAN optimization technology is poised to improve the user experience and cut costs by understanding where users are located, what they need, and where the information resides. For instance, Forrester found that up to 63% of organizations would consider going direct to the Internet for many classes of application and types of network traffic including video, collaboration software, cloud-based enterprise business applications, and web browsing (see Figure 5). In the interest of the user experience, I&O managers realize that real-time applications need the path of least resistance and prefer not to backhaul that type of application. On the security front, it doesn't make sense to backhaul business applications residing in the

cloud when security profiles and settings can be applied where the application is hosted. Consequently, I&O managers see a cost benefit by having users connect directly from their location. For less secure data or traffic, businesses are more reticent to push straight to the Internet, wanting to keep closer tabs on this data.

Figure 5
Common Traffic Types Are Ripe For Direct To Internet Send From The Branch

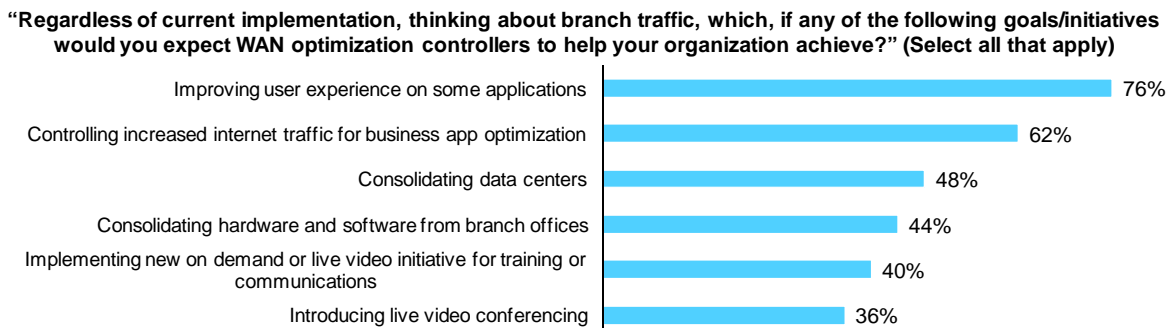


Base: 51 North American IT decision-makers with responsibility for telecom/network decisions

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For I&O professionals, next-generation WAN optimization technology may become a critical ingredient in supporting the control and delivery of an ever-expanding list of applications from a multitude of places in the most cost-effective way, while ensuring the best user experience. Although 76% of survey respondents reported that they expect WAN optimization to help them improve experience for some applications and 48% see WAN optimization as helping data center consolidation efforts, 40% see WAN optimization aiding in the implementation of video initiatives, and 62% see it helping control increased Internet traffic (see Figure 6). It is these more nontraditional video and Internet applications, not to mention cloud-based applications, where next generation WAN optimization really comes into play.

Figure 6
IT Decision-Makers Expect WAN Optimization To assist With Key Business Goals



Base: 51 North American IT decision-makers with responsibility for telecom/network decisions

Source: a commissioned study conducted by Forrester Consulting on behalf of Blue Coat Systems, July 2011

I&O Leaders Need Solutions That Offer Control And Optimizations From Anywhere

To remain competitive and relevant, business must readily react to employee and customer needs, while maintaining a competitive cost structure. This means new applications and services must be squeezed into current private infrastructures or leveraged from cloud sources. It also means that workforces are becoming more fragmented and dispersed, morphing users' connections from LAN to WAN to the Internet.

With these forces at work, I&O managers are escalating the adoption of application acceleration technology that can be deployed in hardware, software, and mobile forms to private cloud, public cloud, employee-owned devices, and remote locations. Businesses can be stymied by the crushing weight of video, hindering the flow of business applications. In addition, workforce productivity can be slowed if infrastructures cannot detect and then deliver a cloud app over recreational activities, or departments spend more money carrying flows that can easily be diverted off dedicated links. Compounding the difficulty of increasing operational efficiencies, there's no longer one defined type of connection, device, or application being used.

Next-generation acceleration technologies must coordinate with more traditional WAN optimization components to control the right amount of services to each user based on the policies of the company. With so many variables needed to deliver the right service to the right user at the right location and at the right time, businesses will look to next-generation WAN optimization solutions to intelligently balance security profiles, users' needs, locations of applications and users, connection types, and business policies.

Methodology

This Technology Adoption Profile was commissioned by Blue Coat Systems. To create this profile, Forrester leveraged its Forrsights Software Survey, Q4 2010, and Forrsights Networks and Telecommunications Survey, Q1 2011. Forrester Consulting supplemented this data with custom survey questions asked of 51 IT decision-makers who are responsible for telecom/network decisions at organizations with more than 500 employees. Survey questions related to trends in branch office traffic and perceptions or expectations around WAN optimization solutions. The auxiliary survey was conducted in July 2011. For more information on Forrester's data panel and Tech Industry Consulting services, visit www.forrester.com.

Endnotes

¹ Source: Forrsights Networks And Telecommunications Survey, Q1 2011

² See the May 9, 2011, "Preparing For Uneven Corporate Adoption Of Video Communications" report.

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Forrester Consulting provides independent and objective research-based consulting to help leaders succeed in their organizations. Ranging in scope from a short strategy session to custom projects, Forrester's Consulting services connect you directly with research analysts who apply expert insight to your specific business challenges. For more information, visit www.forrester.com/consulting.