2007 Networking Needs Survey

Executive Summary

CMP
United Business Media

How is the financial industry handling networking challenges in today's competitive environment? This study of industry practices, conducted during May and June of 2007 with the help of more than 900 respondents, reveals a steady-as-you-go approach. But signs of the changing times — and hints about how these changes will be addressed — abound.
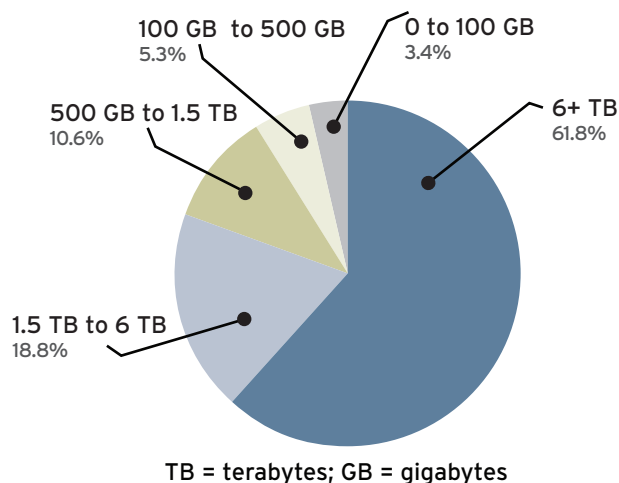
How the survey was done.

Peter McManus, publishing director at *Bank & Systems Technology*, mailed 25,000 surveys to readers of the magazine, inviting them to participate in the survey, which was also made available online.

Altogether, 939 individuals responded, 47 percent of whom work at some sort of financial services enterprise. More than 22 percent the respondents are either executive corporate or executive IT management (CEO, CFO, CIO, VP, etc.). Nearly half — 49 percent — are directors or managers of network- or IT-related operations.

In many ways, financial services organizations must stay ahead of the information technology curve and especially the data networking curve. There are several reasons for this, and together they impose profound pressures on existing wide area networks (WANs).

Figure 1: STORAGE CAPACITY NEEDS

- 100 GB to 500 GB 5.3%
- 0 to 100 GB 3.4%
- 500 GB to 1.5 TB 10.6%
- 6+ TB 61.8%
- 1.5 TB to 6 TB 18.8%

TB = terabytes; GB = gigabytes

Therefore, it's no accident that, in a survey skewed so heavily to financial services, nearly a quarter of respondents report a "very substantial increase" in site-to-site data traffic in the last year and that more than 69 percent are using bandwidth-intensive applications.

Business continuity and data backup depend on high-capacity networks.
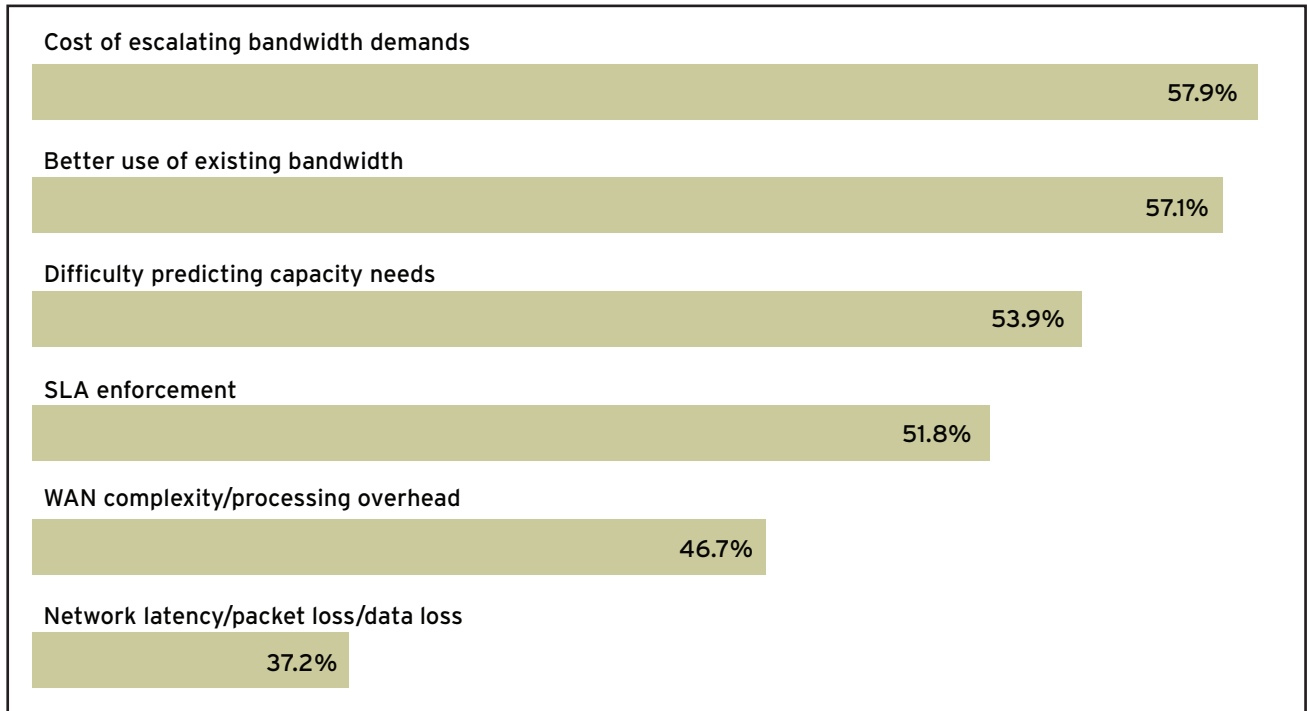
Both compliance mandates and diligent assessment of real-world risks are driving firms to improve their business continuity and disaster recovery plans and capabilities. Fully 79 percent of respondents to *The 2007 Networking Needs Survey* have business continuity/disaster recovery planning in place, and another 17 percent will do so within a year.

The data these organizations must protect is critically important to businesses and individuals alike. With each passing day there's more and more data, too, and it must be remotely replicated or mirrored, which requires near-continuous data backups (of larger and larger databases) transmitted over high-capacity WANs.

Not surprisingly, then, remote storage, data replication and/or disk-mirroring capabilities have been deployed at more that 68 percent of respondent businesses, and in 12 months more than 90 percent will have them. Enhanced data protection has been implemented by almost as many respondents (65 percent); another 24 percent will use it within a year.

Already, 40 percent of those responding to the survey need six or more terabytes of data storage in their data centers, and that percentage is projected to climb significantly over the next 12 months **(see Figure 1)**.

Figure 2: SOMEWHAT-PROBLEMATIC NETWORK ISSUES

Cost of escalating bandwidth demands

57.9%

Better use of existing bandwidth

57.1%

Difficulty predicting capacity needs

53.9%

SLA enforcement

51.8%

WAN complexity/processing overhead

46.7%

Network latency/packet loss/data loss

37.2%

Nonstop operations need lots of bandwidth.

Today's customers demand 24x7 access to their accounts via the Internet, which explains why 70 percent of survey respondents have implemented nonstop operations. The high-availability requirements inherent in nonstop applications are often met by running them on separate server clusters located in far-flung data centers. The result is a need for always-available network bandwidth to ensure continuous and reliable application performance.

Bandwidth-hungry Web services span multiple data centers.

A shift to distributed computing that began in the 1990s with client/server computing has evolved into multitiered ("n-tier"), highly agile Web services. These applications, which reuse software modules encapsulating business functionality, are accessed over IP networks. Web services-based apps require highly available, high-capacity WANs because they reside in and execute in multiple data centers.
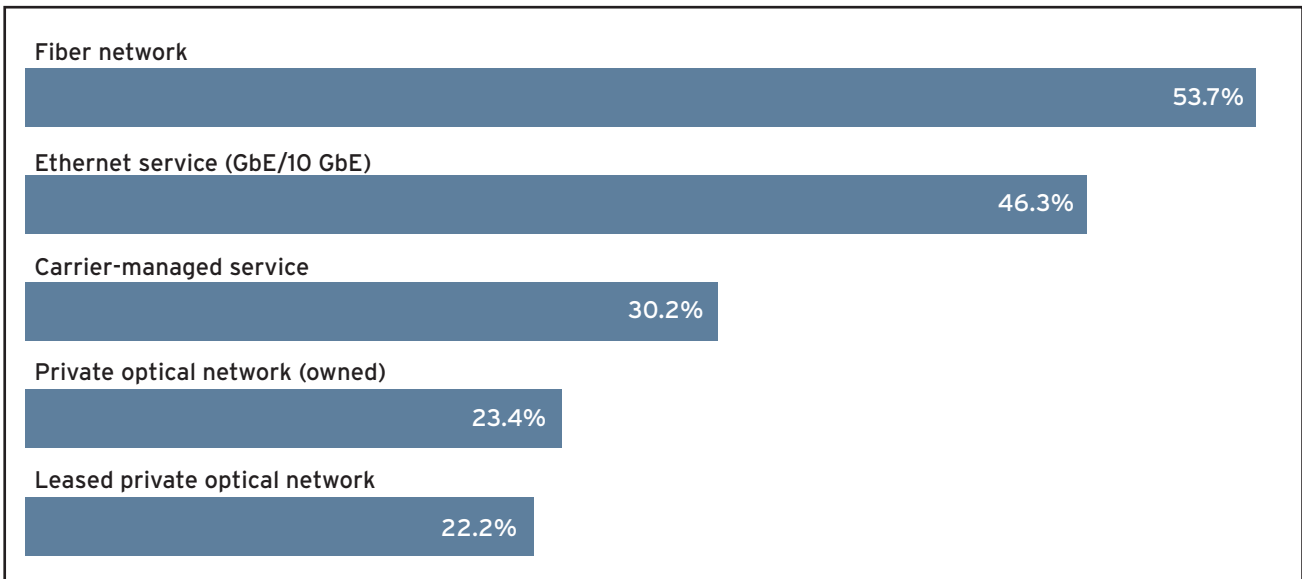
About 84 percent of survey respondents use Web services; by a year from now 95 percent say they will do so.

Server consolidation drives optimization of data center connectivity.

Increasingly, business-critical applications are being deployed in branch offices at the same time that organizations have been consolidating — taking servers out of branches and putting them into centralized data centers. Nearly 60 percent of survey respondents have already done this, and another 26 percent are planning do it in the coming 12 months.

Such changes, of course, boost network traffic. In addition, many of these apps were originally designed to run on a high-capacity LAN, so they perform poorly

Figure 3: TECHNOLOGIES WORTH EVALUATING

Fiber network

53.7%

Ethernet service (GbE/10 GbE)

46.3%

Carrier-managed service

30.2%

Private optical network (owned)

23.4%

Leased private optical network

22.2%

over a low-capacity WAN. This gives still further impetus to the need for high-performing, high-capacity WANs.

How risky are the networking issues?

Few respondents see key networking issues as serious problems. But for many **(see Figure 2)**, these issues are "somewhat of a problem." The real question, then, is this: At a time when the nature of risk itself is being dramatically reassessed, just how truly risky is "somewhat of a problem"?

Specifically, how much do these somewhat-problematic network issues contribute to the other notable "somewhat" in this survey — that is, the 30-plus percent of respondents who acknowledge being only "somewhat prepared" for such compliance challenges as:

> Assurance of data reliability/integrity/accuracy during transmission (37.6 percent)
> Secure network access by third party (37.6 percent)
> Ability to maintain uptime of critical business applications (36.1 percent)

> Adequate ability to meet regulatory and internal compliance requirements (35.2 percent)
> Protected and secure network assets/infrastructure (31.7 percent)
> Prevention of network intrusions and unauthorized access (31.2 percent)
> Secure transmission of confidential data (30.8 percent)

There's good news, too.

When it comes to anticipating WAN improvements, there is good news: More than 29 percent of those surveyed use fiber-based leased circuits; 26 percent currently use Gigabit Ethernet (GbE); almost 16 percent employ dark fiber; and 13 percent use wavelength division multiplexing (WDM).

And, for future consideration, a majority of respondents will evaluate precisely the technologies that will make their WANs high-performing, as well as highly available and highly reliable **(see Figure 3)**.