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## Managing your VoIP network

Drawing on the latest analyst research, this article exposes the primary drivers for IP telephony adoption in the financial services industry, and uncovers the trends, challenges and industry best practices that are emerging in this sector.

Financial-service organizations have deployed IP communications more rapidly and more deeply than any other industry. Although most companies succeed with voice over IP (VoIP), there are consistent pitfalls to be avoided.

Analyst firm Nemertes Research recently interviewed CIOs from 26 major international financial-service firms to get their views on VoIP adoption and to uncover key challenges they faced.

“Almost half of the companies rated their deployments as extremely successful, 34 percent said they are on the way to extreme success, and 18 percent called their deployments somewhat successful. None rated their deployment unsuccessful,” said Robin Gareiss, executive vice president and senior founding partner at Nemertes.

Despite these positive reviews, VoIP rollouts are taking longer than anticipated. Where initially, large-scale deployments may have been seen as three- to five-year initiatives, it’s not uncommon for them to now be seen as five- to 10-year projects.

Many companies are finding their deployments are more complex than expected. As a result, these firms are taking time to ensure what they build is reliable and meets their needs before rolling it out further. These companies are also taking the time to develop skills in house and to integrate a VoIP-specific management solution to give support staff insight beyond the network, into the IP telephony applications and associated infrastructure.

### **So why the big push to adopt VoIP in the first place?**

During her interviews, Gareiss uncovered three primary drivers for VoIP adoption in financial-service organizations: cost savings, improved customer service, and competitive advantage (with improved productivity, a close fourth).

#### **1) Cost savings:**

Financial-service firms are typically the fastest adopters and biggest spenders on technology, generally fostering a culture of fiscal leniency and rapid investment pay back. Like wealthy investors, they may have plenty of money - but they’re always on the lookout for ways of saving it.

With VoIP, they’re looking for cost-savings in toll bypass, travel reduction (due to internal IP audio- or video-conferencing), virtual contact centers (with lower-cost remote teleworkers), and the opportunity to eliminate high maintenance costs on traditional ‘time division multiplexing’ (TDM) telephony systems. Savings on moves, adds, and changes (MACs) alone can be substantial enough to make VoIP deployment worthwhile.

Gareiss explains: “MAC costs vary depending on the nature of your business. In most industries, the average TDM MAC costs \$168. However, most financial-service organizations are in major cities,

where a TDM MAC is more likely to cost between \$300 and \$400. The comparable internally-managed VoIP MAC is \$10. Yep, that's \$10."

## **2) Improved customer service:**

Obviously, the ability to deliver better service is vital for retaining customers and increasing revenue in this highly competitive industry.

Examples of VoIP-enabled customer service improvements include:

- Enabling contact centers to communicate with customers and internal personnel in a variety of formats including chat, phone, email and conferencing.
- Enabling banks to spread the load of high incoming call volumes to ensure that customer calls are consistently answered in acceptable timeframes at lower staffing levels.
- Streamlining communication features that enable automated attendants to serve multiple small branches, such as those located in grocery stores.
- Enabling traders in investment firms to use wireless VoIP-enabled PDAs on the trading floor to access their contact lists, track their calls, and use features such as unified messaging, without the worries associated with traditional cell phone interference.

Many customer-service initiatives are the result of VoIP-enabled employee productivity improvements. These improvements streamline internal communications and workflow among branches, departments, and remote employees. For example, the ability to quickly track down internal experts or mobile loan officers through presence technology and better directory services can vastly increase banks' service staff productivity, while also improving the customer's quality of experience.

The CIO from a US investment firm provides another example: "We have several thousand advisors around the country, each bringing in about \$250,000 per year. By implementing collaborative, VoIP-enabled tools that allow us to track down the right people at the right time, we conservatively estimate we'll be able to increase each person's revenue by 1 percent."

## **3) Competitive advantage:**

Financial-service companies worry, always, about their competitors beating them to anything. Hype aside, there are valid business reasons for keeping up with (or ahead of) the Joneses. For example, it makes sense for highly competitive organizations to have the latest IP communications technology in order to be poised to quickly deploy 'killer apps' when they become available, rather than losing ground to competitors by taking six to 12 months to catch up.

### **How prevalent is VoIP in the financial services industry?**

"The fact that telephony vendors simply aren't investing in TDM technology anymore means that at some point, all organizations will have to fully migrate to VoIP," said Gareiss. "Our research data shows that only 4 percent of financial-service firms have no plans for VoIP. By contrast, the average across all industries for companies that have no plans is almost twice that."

On the flipside, however, only 17 percent of financial-service organizations have fully adopted VoIP (up from 7 percent a year ago), where across all industries the average is 23 percent. This lower-than-average 'full adoption rate' may be due to the complex and/or geographically dispersed nature of these deployments, or simply evidence that many of these organizations have sophisticated, full-featured, and reliable TDM telephony systems. Both are true for many large banks, some of which stated that they see some benefit in delaying their deployment until their service providers get better at offering what they need.

### **Are financial institutions doing it themselves or using service providers?**

Both. Most organizations (around 60 percent) want to do the initial rollout themselves because they want to address security, compliance and reliability issues. Once the rollout is done however, most are open to having a third-party service provider manage the IP telephony application and network. A number of large companies are comfortable enough with their established carriers, usually companies such as AT&T, BT/Infonet, Orange or Sprint, to turn the project over to them. One of the inhibiting factors though, is global coverage of hosted services.

Gareiss adds, "Forty percent of the companies interviewed wanted their carrier or managed service provider (MSP) to handle everything for them. The problem is that the carriers and MSPs often don't have services that are extensive enough in terms of functionality or geographical coverage. This lack of services is why only 10 percent of companies actually used their carrier or MSP to do the entire project, start to finish."

There is a definite trend toward using an MSP for managing IP telephony. Most companies are comfortable with in-house monitoring of their network (though 30 percent of those interviewed use MSPs). However, most don't have the internal expertise required to resolve IP telephony problems beyond the network, so they are relying on third parties to address these issues.

"Despite this desire to use service providers to manage the VoIP deployment, there is a common complaint that MSPs lack the tools needed to remotely monitor call quality and telephony performance, or to diagnose and troubleshoot problems when they arise," said Gareiss. "Their tools are typically network-centric and don't dig deeply enough or reach out to the application layer when there's a problem. However, we're now seeing MSPs and carriers moving rapidly to address this issue."

Nathan Brumby, a general manager at IP telephony management software vendor PROGNOSIS validates this move, "In the past 6 months we've seen a major increase in the deployment and use of our tools by carriers and managed service providers such as Orange, T-Systems, Sprint, IBM and AT&T. These companies are hearing what their customers are asking for and quickly getting their act together to provide these VoIP-specific management services."

### **What other challenges are being faced during VoIP adoption?**

About half of all financial-service companies experienced call quality problems at some point during their deployment and needed specialized tools to diagnose and resolve these issues.

About a third of the CIOs interviewed cited reliability as another challenge. In particular, schedule-driven deployments often have configuration consistency problems. Implementing quality of service (QoS) and multi-protocol label switching (MPLS) helped this significantly by enabling improved traffic prioritization and flow management.

A third of those interviewed also cited the challenge of finding skilled telecom staff as a major issue, while both user education and a lack of a solid business case were raised as issues by 16 percent of the CIOs respectively.

### **Do your people have the right tools for the job?**

One of the most common pitfalls companies experience is not recognizing the need to budget for and use VoIP-specific (telephony-centric) management tools until a major problem occurs.

"We have been conducting VoIP research for four years now, and IT executives consistently realize 12 to 24 months into their rollout that they need VoIP-specific management and monitoring tools to effectively run the converged infrastructure," said Gareiss.

In the traditional TDM world, carriers have a good understanding of the technology, mature tools, and highly regulated procedures for ensuring call quality and reliability. In the enterprise VoIP world, it is the enterprises themselves that are now responsible for ensuring call quality and reliability, often with limited in-house expertise on this new technology and the specifics of IP telephony.

A major misconception is that call quality and reliability is all about the network. This is one part of the puzzle, but in order to retain the service levels telephony users came to expect pre-VoIP, companies will need specific tools to go into the telephony applications and associated infrastructure, in order to manage other key components that can impact call quality and service reliability.

Beyond day-to-day operational insight, financial-service organizations will also want to understand business-level information such as telephony resource utilization, VoIP growth trends, and the service levels users are experiencing, as well as identify opportunities to optimize the VoIP deployment operationally (to make it work better) and financially (to make it run more cost effectively).

The only way to get this full picture is to deploy a tool that looks at telephony as an entire service, rather than as disparate components running on the network.

Gareiss recalls one CIO from a large financial-service organization who recognized the requirement right away. He stated, "We realized we needed to get to the application level. Without it, we were flying blind."

"Most companies go into their VoIP project believing their existing network management tools or tools that come free with their IP PBX will be sufficient," explains Gareiss. "But they soon realize they need not only insight to the network issues, but also the application—and they need that information presented in a consolidated way."

CIOs in financial-service organizations are coming to the realization that they need VoIP-specific management tools earlier than their counterparts in other industries.

Gareiss adds, "Typically, it takes companies deploying VoIP 12 to 24 months before they realize the necessity of these VoIP-specific management tools. With financial-service organizations however, the time is much shorter – typically at the 12-month mark."

The supporting data is surprisingly consistent. Companies that deployed VoIP during 2006 consistently stated they had no tools, while companies that deployed in 2005 or earlier have purchased and implemented some form of management solution within the 12 months after deployment.

### **Who's using what to manage VoIP?**

Many companies (39 percent) are using the PBX vendor-provided tools, but they typically find these fall short of their needs.

"The tools that come with IP PBXs generally are fine for small rollouts in fewer than five locations. But for large, complex enterprise networks, it's important to budget for specialty tools from MSPs or from the vendors, who are starting to enhance and sell add-on products," said Gareiss.

"Of the financial-service organizations that are managing their own deployment, the most commonly used VoIP-specific management tool is PROGNOSIS, which was used twice as often as competing tools like Concord, NetIQ and InfoVista. PROGNOSIS is likely to be the preferred tool due to its suitability to complex, large-scale deployments and due to the fact that it's been around since the

very early days of IP telephony.”

### **Enter the multi-vendor paradigm**

When you decide to look into VoIP-specific management tools, another consideration is the fact that a growing number of financial-service organizations are deploying multi-vendor solutions, where the company has a mix of technology from vendors such as Cisco, Avaya, Nortel and so on.

This is often the result of mergers and acquisitions, or a desire to push vendors to interoperate, but may also be the result of selecting the best solution for the purpose – deploying Avaya technology in a contact center, but choosing Cisco or Nortel technology for the interoffice telecoms network, for example.

An alternative reason financial-service organizations end up with multi-vendor environments is the geographical strength of vendors who may have serviced them in prior years. For example, a global company may deploy Cisco in the US, Alcatel in Europe, and NEC in Asia.

Regardless of the reason for it, using disparate technologies can create unique challenges – especially when it comes to monitoring and management. So any financial-service organization considering new management tools, should factor the ability to support multi-vendor environments into their evaluation.

### **Conclusion**

VoIP is clearly prevalent in the financial services industry. In general, these VoIP deployments are proving successful, however there are consistent hurdles that need to be overcome.

Deployments have typically been more complex and are taking longer than anticipated, but still raise the bottom line through costs savings, better customer service, improved competitiveness and productivity increases.

While some companies have expressed a lack of excitement around offerings from carriers and MSPs, these third-party providers are quickly getting their offerings together to meet the growing demand for their expertise.

Financial-service organizations are realizing the need for VoIP-specific management tools faster than any other industry, yet it's still taking up to 12 months of avoidable headaches to come to this conclusion.

Regardless of whether you manage your environment yourself, or get a third-party to do it for you, it's evident that VoIP-specific management tools make up a key component of any successful VoIP project – and that these should be budgeted for and used from day one, to eliminate risk and ensure you achieve your intended ROI.

For about PROGNOSIS performance monitoring tools, visit [www.prognosis.com](http://www.prognosis.com) and for information about The Nemertes Research Group, visit [www.nemertes.com](http://www.nemertes.com)