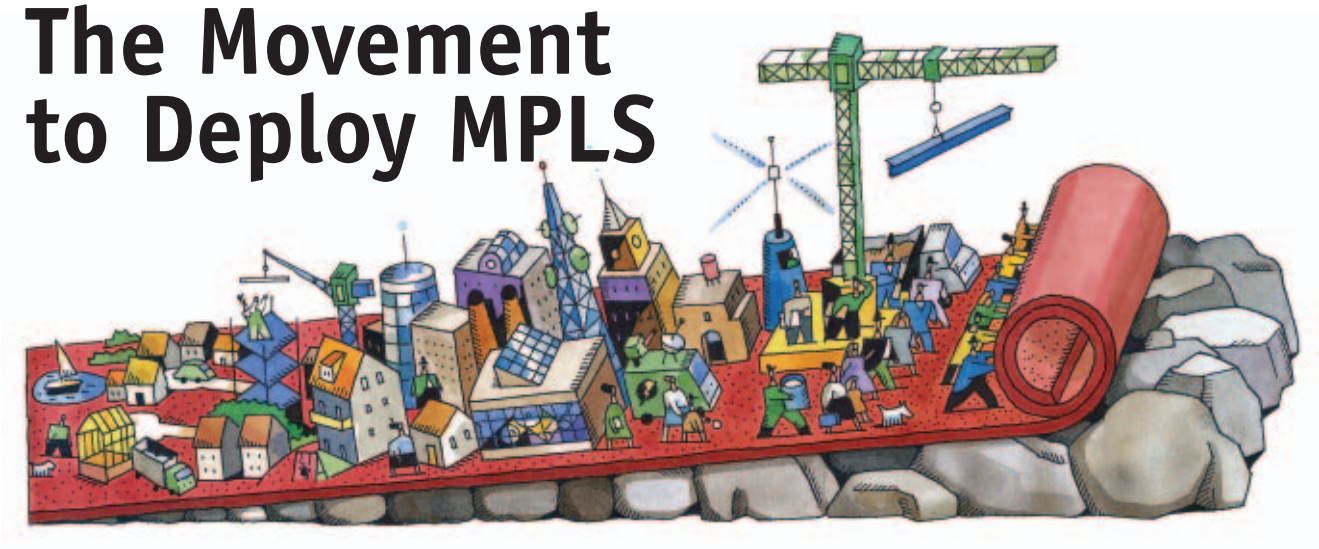
The Movement to Deploy MPLS



Jim Metzler
Ashton, Metzler & Associates
jim@ashtonmetzler.com

Introduction

In the last IT Impact Brief I discussed a survey that we recently gave to the NetScout community. That survey asked the respondents to identify the IT projects that would likely have the biggest impact on their IT budgets and infrastructure during the next year. In the last brief, I used those survey results to discuss VoIP deployment. The conclusion that I drew is that a lot of companies have deployed VoIP, but that most companies start by deploying VoIP at a small number of pilot sites. While a significant percentage of companies eventually do deploy VoIP enterprise wide, the process to do that typically takes a few years.

In this brief, I will use the survey results to discuss what is motivating companies to deploy MPLS services. In order to gain additional insight into MPLS deployment, I interviewed three of The Survey Respondents to gain a deeper understanding of their experience. One of the interviewees is a senior network engineer for an information solutions provider. The second is an IT manager at a large utility, and the third is a network planner for a company in the hospitality industry. In this brief, the interviewees will be referred to as The Network Engineer, The IT Manager, and The Network Planner.

The Motivation for MPLS

As I mentioned in the last impact brief, the survey that we gave to the NetScout community asked the respondents to rate the impact that a wide range of projects will likely have on their IT budgets and infrastructures during the next year. The respondents were given four possible answers: not on the radar screen, little impact, some impact, and significant impact. For each of these projects, I added the percentage of the survey respondents who indicated that the project would either have 'some impact' or 'significant impact'. For each type of project, this combined total will be referred to as The Percentage. For example, The Percentage for MPLS was 48%. That means that 48% of the survey respondents indicated that rolling out MPLS would have either some impact or a significant impact.

In order to understand what is motivating the NetScout community to deploy MPLS it is helpful to look at the deployment plans that the NetScout community has for a variety of potentially related activities.

Table 1: Impact of Related Projects

Project	Percentage
Implementing QoS	64%
New Deployment of VoIP	54%
Expanding Existing VoIP Deployments	50%
Rolling out VPNs	50%
Deploying MPLS	48%

Table 1 lists a number of potentially related initiatives that will have a significant impact on the IT budgets and infrastructure. However, what is not clear from the data in Table 1 is which of these initiatives, if any, are driving or influencing the other initiatives.

As is shown in Table 1, and as was discussed in the last IT Impact Brief, approximately half of the companies that were surveyed will either deploy VoIP or expand their use of VoIP over the next year. Given that expansion of VoIP, a very reasonable way that the initiatives in Table 1 fit together is:

1. To support VoIP, these companies are deploying additional QoS policies in order to ensure appropriate call quality.
2. One of the key ways that companies are deploying QoS is through deploying MPLS services that give them the ability to put voice traffic in what most of the service providers refer to as their real-time traffic class.

The survey data indicates that 76% of the companies planning new deployments of VoIP are also in the process of expanding their QoS policies. Interestingly enough, the same exact percentage of companies that are expanding their existing VoIP deployments are also in the process of expanding their QoS policies. While compelling, this survey data is not surprising. Today, virtually all IT organizations are aware that voice traffic is particularly intolerant of any level of network delay, jitter, and packet loss.

Having established that there is a strong linkage between QoS and VoIP deployment, I tried to identify what kind of a linkage exists between both of these initiatives and MPLS deployment. Based on the survey data, those linkages are:

- The 58% of the companies that are implementing new deployments of VoIP are also implementing MPLS
- The 54% of the companies that are expanding their existing deployments of VoIP are also implementing MPLS
- The vast majority (76%) of companies that are implementing additional QoS policies are also implementing MPLS

The IT manager stated that his company has not implemented MPLS yet, but will make the migration from Frame Relay to MPLS by sometime in 2007. He agreed with the notion that one of the factors motivating his company to deploy MPLS is the ability to implement more sophisticated QoS functionality in order to support a variety of applications, including SAP and VoIP.

The Network Planner said that his company started dabbling with MPLS several years ago. Last year they began their initial deployment of MPLS and now that deployment is "picking up steam". The Network Engineer stated that while his business unit had not yet begun to implement MPLS, MPLS has already been implemented in parts of his organization's parent company. He also said that he expected that his business unit would start to deploy MPLS in the near term, and that he expected that it would serve to be "the glue" to tie together the MPLS implementations of the other parts of the parent company.

What was a bit surprising in the interviews that I conducted with The Network Planner and The Network Engineer is that both of them were quite clear that QoS was not a major factor in their company's decision to deploy MPLS. In both cases, the major factor was cost savings.

Summary

Before any technology is successful in the market, there is a long period of time during which that technology is hyped in the media. The end of that hype cycle means one of two extremes. One extreme is that the technology has been shown to be of little value and so the media has stopped writing about it. The other extreme is that the technology has shown to be of significant value and now companies are actively deploying it.

The survey data clearly indicates that companies have now begun to actively deploy MPLS. However, the interviews highlighted that MPLS deployment will be similar to VoIP deployment. In particular, many companies are making the move to MPLS, but they are doing it slowly.

There are other connections between VoIP and MPLS. In particular, the vast majority of companies that are deploying VoIP are also expanding their QoS policies. In addition, the vast majority of companies that are expanding their QoS policies are also deploying MPLS as part of that effort.

However, supporting VoIP deployment is not the only reason that companies are deploying MPLS. As two of the interviewees indicated, it is now possible to deploy MPLS and save money over existing Frame Relay and ATM networks.

That leads into the next IT Impact Brief. That brief will look at the cost of MPLS services and will discuss the new management challenges that are created by deploying these services.