

Putting The Personal Into Managed Services

David Rohde

Large carriers are now forced to compete in a world where management means the actual end user experience.

Is it finally time for managed services in your shop? Well, better get together with all the IT management personnel in your enterprise to make sure you're talking about the same thing. Especially the final result as viewed by your end users.

The convergence era has ushered in a period of stress for definitions and expectations around managed services. To enterprise telecom and computer networking people, managed services have typically referred to device management, measurement and reporting that's tied to a broader wide area transport service. But to IT people and the end users who rely on them, managed service generally refers directly to the experience of the user, not just the device.

So it's fair to assume that in a converged, IP, fixed-mobile world, truly effective network management will increasingly refer to how happy the person is, not how happy the equipment is.

The Carriers: Well-equipped Or Not?

In the telecom world, traditionally the term "managed services" has referred to a managed-router service in which the carrier (or a subcontractor) stages, installs and reports on a piece of customer premise equipment. Thus, the focus has been on network site-to-network site communications where acceptable service levels were one step removed from the end user.

But now the major carriers are being forced to think in more personal terms. One good illustration is that some of the telecom providers that promote the real-time MPLS class of service practically require that customers who want to actually use this service class purchase a managed voice over IP (VOIP) service on top of the connectivity. That means these carriers must think through the

resulting service level agreements (SLAs) directly in terms of end-user experience.

Another example is the emergence of managed wireless voice and data services, where the suppliers—whether they are independent vendors or one of the major wireless carriers themselves—must satisfy demanding end users, even more than they have to please telecom or network administrators. Almost no end user really cares any more about the call plan or enhanced features on their desktop telephone, but just about all such users care deeply about such things on their mobile handsets.

The dilemma for enterprise network professionals is to probe and see whether their principal network providers—the large carriers that have merged into giant monoliths—are truly the best candidates to perform these functions.

Covering The Waterfront

As AT&T, Verizon and the handful of other large carriers have grown ever bigger and purported to extend their worldview to all things networking-related, they have been forced to take a look at every aspect of managing communications functions, rather than just providing links.

That task now encompasses a tremendous scope of possibilities. All of the following can be considered manifestations of managed services:

- Telecom expense management
- Broadband access aggregation
- Managed security
- Virtual network operators (where one management specialist is "providing" a classic data service like frame relay or MPLS but riding over a large carrier's network)
- All the way up to datacenter outsourcing.

Some of these services can be very sophisticated. On the other hand, some of these services can mostly involve repetitive, menial tasks—in the judgment of many enterprise managers juggling new sets of responsibilities, such tasks can be worth handing off to someone else.

Where the large megacarriers fit into this picture can be confusing. These carriers can generally come up with a service in practically any of

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these areas, save for their past failed ventures in datacenter-based outsourcing.

But whether they are truly offering the managed service themselves or are private-labeling it from someone else takes some probing. Even for tasks traditionally associated with large carriers, subcontracting these functions has a long history. Historically, AT&T has had a bevy of specific vendors for router staging, broadband access aggregation and other services.

Gaining Experience With MPLS

In the 1990s, the carriers made a major push for enterprises to employ managed frame relay service. Yet most users still took a pass on actively buying such service.

But carrier services based on Multi-Protocol Label Switching have started out the other way around. At first, MPLS services were effectively available *only* in a managed-service guise. Only recently has MPLS developed a critical mass of users who wanted transport only and felt they had learned enough about the technology to do the “management” themselves.

In fairness to the carriers, MPLS is still a new technology that does usually require customers to acquire new capabilities. Service providers have reacted to this by developing integrated managed MPLS products in a way that was never really seen with frame relay and ATM services. These managed MPLS services typically include the WAN access router (rental, monitoring and maintenance), enhanced reporting and end-to-end SLAs.

The class of service nature of MPLS adds to the burden. Remember, CoS is not just a feature of MPLS, it’s basic to the service and, indeed, a rate element itself in many MPLS pricing schemes, supplanting the “permanent virtual circuit” bandwidth-reservation, city-pair mechanism of frame relay. Thus, enhanced measurement and application management tools are inherently needed to monitor and report on the performance of discrete classes of service.

Many enterprises tend initially to put most of their traffic on one particular assured-forwarding MPLS class of service. But their long-term business case is often based on ultimately employing MPLS’s real-time classes of service for voice and video. Even if users do not start out using multiple classes of service on MPLS, the service is almost always procured with the expectation that they eventually will.

When purchasing MPLS as a managed service, additional pricing components apply, whether stated as a bundle or broken out into line items:

- **Router charge**—Rental/lease
- **Router maintenance**—Break/fix and preventive maintenance
- **Management charge**—Management and monitoring of the router and MPLS connection
- **Moves, Adds, Changes and Disconnections**

(MACDs)—One-time charges for changes to the service. Some suppliers include a limited number of MACDs

The very fact that MPLS comes with discrete and meaningful classes of service ups the ante on considering the carriers’ managed services. If you don’t sign onto the managed service, many users will have expenses anyway for new management tools; these tools are designed for monitoring and reporting on the performance of discrete classes of service, and you’ll need them in order to understand what’s happening on your network.

If you do buy the managed version of the MPLS service, you will have other factors to consider, including:

- Will you require read-only access to managed routers?
- What network security requirements do you need your supplier to comply with?
- What obligations do you want your supplier to have for reacting to individual security threats?
- What equipment maintenance coverage and response times do you expect?
- What back-up and network resiliency options do you need?

Because carriers generally require more explicit up-front design criteria from users in order to give a credible MPLS bid, there is far more opportunity for them to pitch the various ways in which a managed solution will purportedly solve the problem better than an unmanaged—that is, enterprise user-managed—service.

Adding Up The Costs On Managed VOIP


Managed VOIP-over-MPLS offerings are a notable example of this tendency. Carriers now routinely offer managed VOIP services for enterprises, but these services often need to be purchased in conjunction with MPLS transport service. That means that while there is—usually—no usage charge for on-net voice traffic, additional recurring charges will apply for service. And off-net usage may be priced in bundles of minutes, but is still essentially a per-minute-based charge.

That’s just the beginning. Enterprise buyers need to watch for additional, miscellaneous VOIP-related charges such as VOIP-related MACDs, additional installation charges, charges for network-hosted call management infrastructure, PBX re-programming charges and any type of “custom solution” charges.

Also watch out for tricky little extras styled as “interface specifications,” and remember that all this is on top of paying for real-time CoS bandwidth on your MPLS network.

Especially with an application like voice, with its stringent performance requirements, the question of service level agreements (SLAs) becomes vital. As a starting point, the MPLS service level metrics should vary by class of service, and to be meaningful, those should include end-to-end and not just PE (provider edge) router-to-PE router

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Managed wireless services represent a wide range of processes

metrics. And the SLAs should include not only network availability but also customer site availability, especially since some carrier MPLS points of presence may be farther away from your locations than you think. Finally, the SLA must include performance metrics like limits on latency and dropped packets.

If you then buy a managed VOIP package on top of the MPLS transport service, you'll need some very specific additional SLAs:

- Call quality, usually measured by Guaranteed Mean Opinion Score.
- Post-dial delay—end-users hate even the transitory sense that “nothing is happening” after they finish punching in the phone number.
- Percentage of completed calls.
- Percentage of blocked calls.
- And of course, jitter. It's not sufficient that latency be extremely minimal, but also that the latency of each packet be consistent.

Managed Wireless Services Emerge

All the above just covers wireline voice! Many enterprise users are, for the first time, organizing their wireless handset and transport spend around corporate liability purchases—rather than reimbursement for employee expense reports—and are putting out their first comprehensive wireless RFPs. If this is the case in your enterprise, it's not a bad idea to ask what the responding carriers can do to manage, rather than just provide, wireless service.

Most users will want to state in their wireless RFPs that they are searching for this additional information, rather than committing to buying managed wireless service right off the bat. Reason: Managed wireless services constitute a continuum of processes, from provisioning management to an outsourced help desk for the end-users, that different carriers may define differently or provide differently depending on whether it is exclusively their own devices they are managing or competitors' as well.

Along those lines, one of the first questions to ask is whether any third-party or partner services are being employed to provide the service, with the carrier merely private-labeling the service. Especially if you go into your corporate wireless procurement determined to make awards to more than one carrier—which is a good idea for most larger enterprises—you may find the wireless carriers less capable or willing to provide managed services themselves, compared with using an underlying, independent vendor.

Then, one of the most important questions to ask involves provisioning management. For large enterprise carriers, this takes on a whole new dimension beyond the usual staging and delivery of routers. Now it involves delivery of a telecom device to the true end user, one who is likely very experienced himself or herself with the device in question. That means that order status and track-

ing, delivery of the correct calling plan and features, and coordination of delivery to the end user of the activated device must be handled pristinely. If any of this goes wrong, employees are likely to seek out the same internal telecom management—likely you—that they have in the past, thus defeating the whole purpose of procuring managed wireless service in the first place.

Additional areas that should be explored include single point of contact, help desk, fault management, configuration management, inventory management and invoicing and reporting. A true managed wireless service provider will also offer optimization management, which is especially key in corporate wireless service where usage patterns can vary widely among users. Such optimization should include rate plan reviews and management of pooled minutes-of-use arrangements, either of the enterprise as a whole or by business unit or other cost center.

Watch The Definition Of “Managed” Internet Connections

Finally, the very term “managed” can be meaningful, or it can be simply a buzzword in certain key network circumstances. Long ago, AT&T named its enterprise-class dedicated Internet access service “Managed Internet Service” or MIS, but if you actually want the “Managed Router” version of MIS, you have to specify that. Otherwise, you essentially have “unmanaged” Managed Internet Service, where unmanaged really means user-managed from a CPE perspective.

Originally AT&T did not charge much of a premium for truly managed MIS. The monthly charge for the managed-router version was little more than 5 percent higher than for the unmanaged-router version on typical schedules for common orders such as T1 Internet access lines. But earlier this year, in redoing the list pricing schedule such that it could more readily discount the service, AT&T changed the pricing such that the delta between “managed” MIS and “unmanaged” MIS has widened to something more on the order of 15 percent.

Conclusion

From a marketing standpoint, the idea of “managed services” covers a wide variety of possible functions and outcomes. But from a delivery standpoint, all of these services now are expected to cover the user experience in more explicit ways than they ever have before.

Which provider can deliver which managed service ultimately is a question of execution, thinking all the way past the machinery and to the end user at a desktop, laptop, phone or handheld. Working backwards from that end-user experience is the best frame of mind for enterprise network professionals as they consider procuring these services□