

## **SLAs BECOME STANDARD FARE AS COMMUNICATIONS CONVERGES**

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As IP becomes the protocol of choice and we broaden our definition of digital data we are seeing a dramatic paradigm shift in the data and telephony industries. Data and telecommunications managers are aggressively exploring how they can receive multiple services over their digital pipes. Rather than separate voice, data and Internet connections they want a single connection they can use for all of their communications requirements.

At the same time organizations are creating leaner operations, beefing up their customer service and optimizing the use of their communications services to gain a competitive edge. More than just a technology shift, Internet-based solutions are helping forward-thinking management turn global communications into a strategic tool.

As enterprises focus on their core business, they can no longer justify the time, staff or budget to piece together and manage multiple suppliers for voice, fax, data, video and Internet services. As a result; innovative, facilities-based are offering a dizzying array of services; CFOs are expecting 'even more for even less. 'Traditional 'Best Effort' offerings are no longer sufficient as businesses demand higher and more consistent service levels from their communications providers.

Leveraging their assets, first-tier providers are delivering business-level benefits from the scalable pipe in the form of simplified management and reductions in fixed and operating costs. The single connections not only provide Frame Relay, ATM, VPN and IP services but they also deliver voice and video services over their public infrastructure.

Eager to use the Internet for their internal and external networks on a global basis; security, consistent performance, quality of service and efficient, effective network management has become major business priorities. To meet businesses' requirements, leading providers have developed robust and redundant network backbones. These organizations actively monitor their network links to maintain reasonable sustained utilization rates. When bandwidth requirements increase the providers upgrade their IP backbone. This combines with 24x7 network monitoring and management helps the provider ensure optimum network availability ratings.

Increasingly, businesses are using service level agreements (SLAs) as a standard tool for choosing the provider that will offer reliable service, doesn't skip on technical support and ensures optimum network performance. Rather than waiting for customers to complain, ISPs are increasingly taking action and holding their own feet to the fire to honor these agreements.

Today SLAs are being structured for:

- Availability
- Latency
- Throughput
- Web site performance
- Security
- Mean Time to Repair

The major obstacle arises because network managers have been unable to generate solid baseline data that quantifies the historical performance of their enterprise networks. While a plethora of performance tools enter the market everyday most simply clutter offices unopened. Most companies don't have the time or staff to install and use the tools or they fail to capture the data the organization needs for meaningful analysis.

Given the lack of solid data, it is extremely difficult for organizations to establish realistic service level expectations. Most of today's network management tools are ineffective in generating baseline data. At the same time it is often difficult to measure actual performance of a service provider over time. In many instances, network administrators are left without the data they need to make a judgment regarding the ROI of their network equipment, provider and their support services investments.

Since it is a fundamental management principle that you cannot manage what you can't measure, responsible ISPs are increasingly filling the void for corporate customers. These providers understand the performance metrics, which ensure network optimization. Most already have the data collection mechanisms in place to generate overall and specific enterprise-wide information on a real-time basis over an extended period of time.

For example, several major ISPs developed their own network monitoring and reporting tools back in their formative years. These have been continually upgraded and enhanced and more recently have been augmented with commercially available tools. All of these QoS tools enable the provider to do a better job of managing their service offerings at the macro and micro levels.

A good SLA will include a section that provides precise definitions of key terms. Next, specific service levels will be described in a number of categories. From such service levels the parties identify key service levels. Service level credits are then determined based on the percentage of key service levels missed.

In some cases the parties identify not only a threshold level of acceptable performance for each service level but also a level of increased impact if performance falls below the threshold service level. If performance falls below the increased impact level, a percentage service credit may increase substantially.

Another factor that can be included is a frequency factor that measures the number of times a particular service level is missed during a pre-determined period. If the frequency factor is triggered, the percentage of total service credit is increased.

While every company should have a set of SLAs that meet the organization's specific communications requirements, they are no substitute for a sound and total public network infrastructure. Firms that will ultimately outsource their voice, data and image communications services need to look closely at the business and technical side of the provider. While punitive damages for not living up to their SLAs may seem reasonable at the beginning of the relationship, companies have to realize that by the time they begin receiving service credits they should probably be looking for a new communications service partner.

Communications and network management need to look closely at the provider's infrastructure to ensure they have redundant connections and multiple private peering relationships. They also need to make certain the provider has multiple NOCs manned by seasoned personnel 24x7, the broadest possible range of service offerings and automated service monitoring and reporting systems in place.

Fully managed, end-to-end solutions are now available. They are becoming the flexible, cost-effective differentiators for many of today's forward-looking global competitors. Firms can now buy single digital pipe that will provide phone, data, Internet, audio and video conferencing services from a number of different providers.

The challenge for corporate management is to look under the covers, beyond the SLA, to ensure the specific service levels and services will be available and delivered. The converging services can be easier to use and easier to manage...but it still requires more than a little due diligence to obtain the services you really want and need.

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## Service Commitments

Despite recent service shortfalls, service providers continue to issue and enhance their service level agreements. With first tier providers these typically include:

<b>Feature</b>	<b>SLA</b>
Overall network availability including scheduled, unscheduled downtime	99.8%+
Customer network availability including local loop with minimum of 30 PVCs	99.8%+
Mean time to repair	four hours including local loop, two hours not including local loop
Delay	60msec one way
Data delivery	99.8% CIR

The shortfall with many SLAs is the provider's ability to report that they are administering them. To accomplish this, providers need on-line general and specific network metric reports and on-line trouble reporting and tracking mechanisms