

The Need for a Unified Management View

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As has been pointed out in numerous reports, including the 2012 Application and Service Delivery Handbook¹, in the majority of instances in which the performance of an application is beginning to degrade, that degradation is noticed first by the end users and not by the IT organization. In addition, once the IT organization has been made aware of degraded application performance, it is usually a very difficult and time-consuming task for the organization to determine the root cause of the degraded performance. These two issues tend to combine to tarnish the reputation of the IT organization and in some cases make it difficult for the IT organization to get funding for new initiatives.

In order to move away from the type of environment described in the preceding paragraph, IT organizations need to become more proactive. That means that they must increase the percentage of time that they notice degraded application performance before it impacts the end users and decrease the percentage of time that they have to respond reactively to a trouble. In addition, whether they are acting proactively or reactively, IT organizations need to have the capability to rapidly identify the root cause of the degraded performance.

While it certainly is easy to say that IT organizations should become better at proactive network management, there are two key factors that complicate achieving that goal. One factor is the growing complexity of the IT environment. In the not too distant past, the typical IT environment consisted of a user in a branch office using a PC that was attached over a wired LAN. The branch office was connected to the corporate data centers via a WAN service such as MPLS. Within the data center, the corporate applications typically consisted of multiple tiers (e.g., Web tier, application tier, database tier) that each ran on a physical server. Proactively managing that environment is difficult due to the myriad devices from multiple vendors that sit in the end-to-end data path. However, while that environment certainly still exists, today it is equally as likely that the end user is accessing corporate application using a wireless device that they themselves own. The wireless device may be connected to a wireless LAN or to a 3G/4G service and the WAN service that gets used may be the Internet or it may be MPLS. If the application is in the corporate data center, it is likely housed on virtual servers. However, it is increasingly likely that all or part of the application is hosted by, or acquired from a third party. One thing is terribly clear – this new environment is dramatically more complex to manage than the traditional environment.

The second key factor that impacts the ability of IT organizations to become more proactive is the variety of data sources. For example, IT organizations can rely on being able to access management data from SNMP MIBs (Simple Network Management Protocol Management Information Bases) on network devices such as switches and routers. This data source provides link level visibility across the entire enterprise network and can be used to capture parameters such as the overall link utilization. However, monitoring SNMP MIBs will not allow an IT organization to identify which network users or applications are consuming the bandwidth. One

¹ <http://www.webtorials.com/content/2012/08/2012-application-service-delivery-handbook-2.html>

way to get that information is to use flow data, such as that provided by NetFlow. In addition, in those instances in which the IT organizations needs very detailed, granular data in order to trouble shoot a trouble, packet level data is required.

The variety of multiple data sources is actually a double-edged sword in the sense that having multiple sources of data provides more opportunities for the IT organization to get better at identifying and resolving troubles. However, if these sources of data are accessed using separate management tools, this tends to reinforce IT having separate pockets of management information and that approach tends to complicate, not simplify management.

As described, there are two key factors that make it difficult for IT organizations to get better at management. There is little, if anything, that IT organizations can do to reduce or eliminate the complex nature of the current environment. IT organizations can, however, respond to the opportunity and challenge of having multiple sources of management data by implementing a unified management solution that enables IT teams to use the multiple data sources in order to gain a complete view into performance that can be used across the entire IT organization.