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IT Business Brief

Why Performance Management Matters

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A note from the founders

In this IT Business Brief, my colleague Jim Metzler begins an on-going process of refuting the now-famous claim by Nicolas Carr that "IT doesn't matter." For example, just because every company has a Web site does not mean that a given company cannot use its web site in ways that give it a strategic competitive advantage.

In particular, in the area of performance management, Jim explains that having unified performance management tools and systems enables the IT department to provide specific and measurable competitive advantages to the individual business units within the organization.

Indeed, in order for the IT department to continue to offer enhanced services to the enterprise, the strategic advantage of these services must be demonstrated. And managing the performance of the individual applications for each business unit is a highly effective and visible starting point.

- Steven Taylor, Distributed Networking Associates / Webtorials

Why Performance Management Matters

Demonstrating The Value of IT

One of the premises of IT Business is that IT offers measurable business value. In an article in the May 2003 edition of the Harvard Business Review, Nicolas Carr directly attacks this premise. Carr's assertion is that "IT has become a commodity. Affordable and accessible to everyone, it no longer offers strategic value to anyone."

One of the ways that companies demonstrate the strategic value of IT is by deploying service level management. However, companies that have deployed service level management have discovered one of the important principles of our industry - that a business unit manager typically perceives the applications that they use to be more valuable than the network that supports those applications.

One of the implications of this principle is that in order for the network organization to demonstrate its value to business unit managers, it must be able to demonstrate the linkage between the performance of key applications and the performance of the IT infrastructure.

Regrettably, it can be extremely difficult to demonstrate this linkage. Part of this difficulty comes from the complexity that is inherent in contemporary applications. For example, today many applications do not use a well-known TCP port, but rather use a range of TCP ports. In order to understand the performance of this type of application, it is necessary to gather usage information from multiple data sources.

The IT infrastructure has also become increasingly complex. For example, in order to improve uptime, many IT organizations have implemented technologies such as server load-balancing, redundant links, and fast fail-over protocols. Understanding the usage of a network with this type of complexity requires the ability to gather management information on each component of the network, as well as the ability to aggregate this information without loss of visibility.

Effective Service Definition and Reporting

Whether or not an IT organization formally implements service management, the successful marketing of the value of IT requires an IT organization to develop better relationships with the company's business unit managers. In order to build these relationships, an IT organization must achieve two key goals. The first goal is to create a set of Effective Service Definitions. The second goal is to implement Effective Service Reporting and Management.

The process of creating Effective Service Definitions entails having the network organization define network services and performance goals that make sense to a company's business unit managers. Representative services include remote access, conferencing services, messaging services, and Internet access.

Creating Effective Service Definitions can be challenging. However, there are three factors that make Effective Service Reporting and Management even more challenging. One of these factors is clutter. In particular, network professionals have a very wide array of sources of management data as well performance management tools.

The second factor is that the vast majority of performance management tools have a stove-piped data architecture. The phrase "stove-piped data architecture" has two meanings. The first meaning is that the scope of the vast majority of performance management tools is limited to just one component of the overall IT solution; i.e., the tool

only applies to the LAN, or to the WAN, or perhaps to Web based applications. The second meaning is that management data cannot easily be moved between perform-ance management tools.

The third factor is that most per-formance management tools are designed only to alert the user to the existence of a problem, but not to help resolve the problem.

Unified Performance Management

In order for an IT organization to show value to business unit man-agers they must implement a more unified approach to perform-ance management. This approach allows them to achieve the follow-ing three goals:
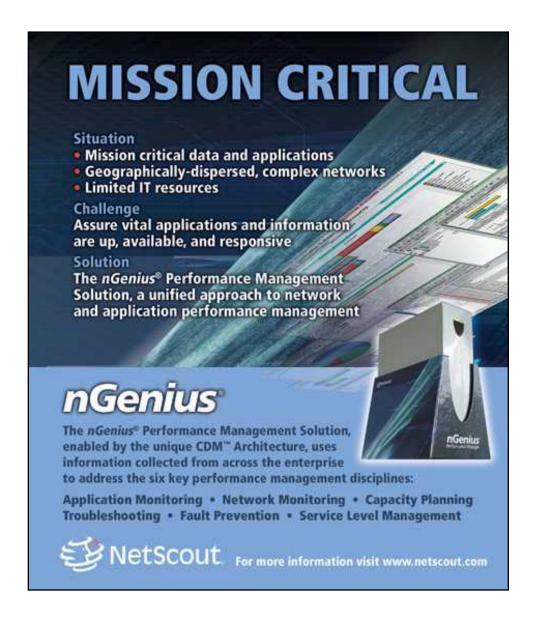
- Gather management data from multiple sources on a wide range of traffic types and applications and use this data for all service reporting and management

- Eliminate stovepipes and have all of the relevant perform-ance management tools be able to access to a unified data repository

- Get reports that both identify a potential problem as well as pro-vide accurate, actionable data

In general, there are three class-es of sources of management data. The class that provides the most

elementary management data comes from network devices such as routers and switches. This data source provides data link layer visi-bility across the entire enterprise network and captures parameters such as the number of packets sent and received, the number of packets that are discarded, as well as the overall link utilization. This

data can be used for a number of functions, such as elementary capacity planning; i.e., identifying where bandwidth is either under or over utilized.

A more advanced class of man-agement data comes either from industry-standard probes or from switches and routers that support

functionality such as NetFlow or sFlow. This class of management data can be used to identify which network users or applications are consuming the bandwidth.

The most advanced class of management data comes from probes that are specifically designed to capture this information. These probes capture management data from all aspects of the infrastructure and provide insight into a wide range of well-known, custom, and web based applications. This management data can be used to both measure the end-to-end performance, and report on the response time of critical business applications.

As mentioned, management data alone is not impactful. In order to achieve the three goals listed at the beginning of this section, we need an industry solution that provides the ability to easily capture all three classes of management data in a common format, and which allows a wide variety of performance management tools access to this data.

Summary

IT organizations are challenged to continually demonstrate the business value that they provide to the business unit managers. There is no magic solution to this problem. However, a critical component of demonstrating IT's business value is the creation and management of IT services that make sense to business unit managers.

Performance management is an absolute prerequisite in order to manage IT services. However, as an industry we have too much management clutter, too many stovepipes, and too many performance management tools that are just not that helpful. If we are going to respond to Carr's challenge, we must solve this problem by implementing a more unified approach to performance management.

Jim Metzler - *is a principle in Ashton, Metzler & Associates a consulting firm that focuses on leveraging technology for business success. During his career, he has worked in virtually every major segment of the IT industry. Jim can be reached at jim@ashtonmetzler.com.*