NMSaaS

A Unified View of Network Monitoring

One Cohesive Network Monitoring View and How You Can Achieve It with NMSaaS

Executive Summary

In the past few years, the enterprise computing technology has changed dramatically. Virtualization, SaaS, and cloud computing are creating fundamental changes, and leading to an time in which enterprises distribute critical IT applications across multiple service providers and infrastructure. These changes are rendering legacy monitoring tools, which have their roots in the computing environments of a decade or more ago, virtually useless. This paper explores today's computing trends and their monitoring implications. In addition, it reveals how a new monitoring paradigm, the NMSaaS architecture, uniquely addresses the monitoring realities of today's and tomorrow's enterprises—whether they rely on internal platforms, external service providers, or a combination of both.

Introduction

Changing technologies and economic realities have completely changed enterprise computing. And the changes are on-going. Virtualization is moving through data centers. Economic pressures are forcing IT managers to accelerate outsourcing to managed service and hosting providers. Enterprise class SaaS applications have emerged. And cloud computing seems to have really arrived.

Together, these trends are ushering in an increased reliance on externally hosted computing services, marking the beginning of what some believe will be a move to the "all cloud enterprise", an organization that relies totally on externally hosted services for its computing infrastructure. Whether or not this vision turns out to hold true for most enterprises, there is no doubt that external SaaS and cloud offerings are here to stay, and will play increasingly important roles in how enterprises deliver and use business applications in the coming years.

Already, these trends are delivering significant benefits—and even more significant challenges for IT operations groups. Specifically, in an environment with an increasing mix of externally hosted services, how do enterprises monitor and manage service levels? In today's always-on business environments, the benefits of adopting external services can't come at the expense of service availability or performance.

Virtualization, SaaS, cloud computing, and outsourced infrastructures have made it difficult for IT operations staff to understand, let alone control, service levels. Tomorrow, as organizations continue to rely increasingly on external platforms, the challenges will grow more pronounced—rendering the legacy monitoring systems of the past irrelevant. In order to successfully leverage these new service delivery platforms, IT operations teams will need a cohesive, sophisticated view of the disparate, remote services on which their business relies.

The NMSaaS architecture delivers just that. It is a complete technical and business solution platform for monitoring the performance and availability of business services and assets across all different computing environments.

With the NMSaaS architecture, IT operations can understand performance and availability of services, react to and prevent problems, and optimize service delivery—regardless of the type and combination of computing environments on which those services are based. As a result, organizations can confidently leverage the opportunities of today's emerging trends—without increasing staff or operational costs, or requiring new tools or training.

Emerging Computing Environments

Monitoring IT assets to ensure service delivery in today's emerging data centers—which are employing virtualization, internal clouds, and other complex technologies—is extremely challenging on it's own. At the same time, the increased outsourcing of vital services—whether through SaaS, cloud, or traditional outsourcing—further compounds matters. These technologies and approaches all promise great benefits, but also raise important implications and monitoring requirements for IT operations staffs. Following is an overview of these benefits and challenges.

IT Trends: The Opportunities and Challenges

Next Generation Data Center:
- Opportunity - Virtualization provides easily expandable use of resources while reducing footprint
- Challenge – Getting a meaningful view into the virtual environment

SaaS:
- Opportunity – Reduces project startup, infrastructure, and maintenance costs
- Challenge – Avoiding risks of service interruption and downtime

Cloud Computing:
- Opportunity - Provides infinite scalability to adapt to changing market conditions, delivered through cost effective pay-as-needed pricing models
- Challenge – Managing the complexity of a virtualized environment, coupled with the complexity of an outsourced cloud

Challenges of Monitoring Today's Environments with Yesterday's Tools

In an era of tight spending, reduced profit expectations, and rising energy costs and environmental concerns, enterprise computing infrastructures are increasingly reliant upon Virtualization, SaaS, and cloud computing. As outlined above, for all the benefits promised by these emerging computing approaches, there is an alternative side, with each new computing environment presenting a new set of challenges. In these emerging environments, monitoring and service level management grow both more challenging—and more critical to success.

As a result, internal IT operations groups, already resource constrained, play a vital role in monitoring and managing service levels. Across outsourced/hosted, SaaS, and cloud environments, a large monitoring burden still falls on the IT organization.

For most enterprises, it's traditionally been difficult to cost effectively monitor and manage service level delivery. With traditional monitoring solutions, monitoring a business service housed entirely in the internal data center was difficult. Much of the frustration with these legacy solutions is that, to get a full view of the performance and availability of an internal business service, IT may need to deploy anywhere from 3 to 6 products, from SNMP to application performance. These traditional solutions were architected long before the advent of virtualization and were solely designed to manage internally hosted environments. In today's Next Generation computing environment, these limitations and complexity make monitoring service levels next to impossible.

In the case of an E-Commerce service, for example, that E-Commerce service may rely on a SaaS vendor, a cloud-based provider, a virtualized data center, back-end database services, and more. While the scope of responsibilities may change, in all cases monitoring and management remains a critical means to ensure availability. If a customer reports an issue encountered during a transaction, how does an IT organization quickly and accurately assess where the source of the issue lies? Simply put, with traditional tools, they can't. In the past, because of the complexity of their legacy systems, enterprises were frequently forced to settle for sub-optimal service monitoring, unacceptable TCO, and huge investments in staff time. Unfortunately, as outlined above, emerging trends are only going to emphasize these issues.

Legacy Solutions Require Many Products to Provide Complete Monitoring

The frustration with traditional monitoring solutions can be summed up in one word: complexity. To do data center monitoring—including business service and SLA management, event correlation, and performance and availability management—a business may require up to 12 distinct products.

Requirements for Gaining a Unified Monitoring Perspective

In order to affordably and effectively address today's monitoring challenges, organizations need a monitoring solution that offers a unified perspective, one that offers several key capabilities:

An architecture that scales and extends to meet evolving challenges
Any architecture built for this environment must have the following characteristics:
- High scalability - The architecture must scale both within and across environments.
- A single, integrated set of components - Approaches that require different components and products and integration among them, simply can't be deployed cost effectively in the hybrid environments of the future
- High availability - The architecture must be resistant to both component and communication failures
- Rapid deployment - The architecture must be fast and easy to deploy into all relevant environments

Flexible Data Collection
To monitor today's emerging computing environment, organizations need a means to collect monitoring data, wherever that data exists—including across disparate platforms, virtualized and non-virtualized environments, externally and internally hosted and managed systems, and SaaS and cloud environments. The collection of information must present minimal overhead for the target systems.

Service Correlation across Multiple Computing Infrastructures
While ultimately comprised of an array of systems and infrastructures, in the end what really matters is the performance of the business service, whether that's e-commerce, email, or other vital services a business relies on. The monitoring data being generated across disparate sources needs to be intelligently analyzed and correlated in order to deliver service level insights.

Intuitive Visualization and Robust Reporting Capability
All of the monitoring data being collected and aggregated needs to be useful. Administrators and business management need visual, intuitive dashboards, alarms, and reports—and those views need to be based on real-time status. Views need to be tailored based on roles, so users get only the information they need or are authorized to see.

A Flexible Business Model
Finally, without the right business model to support it, even the best solution won't be fully adopted. To be viable, a product must be supported by a flexible pricing structure. Cloud monitoring must be effectively licensed on a "pay-as-needed" basis.

NMSaaS Delivers a Single View of the Entire Computing Environment

NMSaaS is the most practical, cost-effective way to leverage a complete monitoring solution for today's and tomorrow's emerging computing environments. With NMSaaS, organizations gain the insights they need to cost effectively manage all business services and ensure they deliver the availability and performance required.

The NMSaaS architecture is a next generation, integrated architecture that delivers complete infrastructure coverage, breadth of functionality, scalability, ease of deployment, and ease of use. Organizations can get a complete view of the systems and services that business services rely on, regardless of whether they are based on virtualized infrastructures, SaaS offerings, or cloud-based services.

The NMSaaS architecture addresses these key monitoring requirements:

An architecture that scales and extends to meet evolving challenges
The NMSaaS delivers scalability, high availability, flexibility, and rapid deployment. The architecture provides a single implementation across all computing platforms and infrastructures. With NMSaaS, there is no hodge-podge of multiple products and solutions.

Flexible Data Collection
NMSaaS represents a single solution that can support the monitoring and management of the entire IT infrastructure. It collects monitoring data, wherever that data exists—including across disparate platforms, virtualized and non-virtualized environments, externally and internally hosted and managed systems, and SaaS and cloud environments. The collection of information presents minimal overhead for the target systems.

Service Correlation
NMSaaS not only enables aggregation of monitoring data from disparate sources, but it enables the effective correlation of this data to provide an effective view of a business service— regardless of the number or type of systems or services on which it is based.

Intuitive visualization and reporting
NMSaaS offers a means for organizations to fully leverage the monitoring data being gathered. The solution delivers the intuitive, sophisticated reports and alerts that enable fast analysis and provide real insights. NMSaaS makes it easy to tailor views and reports based on users' groups and roles.

Flexible Pricing and Licensing

NMSaaS has been deployed in enterprises, SaaS, and service provider environments. We've created a variety of flexible licensing and pricing models. Pricing is "pay-as-needed", and you select just the features you need. NMSaaS is a subscription service, and you can cancel at any time.

Conclusion

Virtualization, SaaS, and cloud computing can deliver real and meaningful benefits across a range of organizations. With the benefits of these emerging trends comes a corresponding increase in the complexity and criticality of monitoring service levels. In order to take advantage of the benefits of these emerging service delivery platforms—without rapidly escalating costs and complexity—organizations need a monitoring solution that offers a truly unified perspective. NMSaaS delivers just such a solution. With the NMSaaS architecture, organizations can efficiently and cost-effectively ensure today and tomorrow's emerging computing platforms deliver optimal performance and reliability.

Lowest total cost of ownership

NMSaaS customers realize a total cost of ownership that is up to 80% lower than legacy network management vendors—and they can now extend their monitoring to new computing environments, without having to make new product, staffing, or training investments.

Rapid time to value

With the platform's ease of deployment and use, organizations can deploy and benefit from the solution very quickly. Customers realize benefits in days - rather than months.

Optimize Operational Efficiency

IT operations can reduce the time and cost associated with monitoring, while business and IT management can gain the insights needed to optimize resources, planning, and investments. With NMSaaS, businesses can more effectively improve the performance of the IT services on which the business relies—turning this efficiency into increased business performance.

About NMSaaS

NMSaaS provides integrated, modern IT management solutions for enterprise and service provider customers globally. The platform is an industry-leading solution that helps organizations easily monitor and manage IT services in increasingly complex business environments. NMSaaS products are usage-based by the number of network devices, and are available on a pay-as-you-go basis.

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