How Do I Maximize the Availability and Performance of My Increasingly Dynamic and Complex Network Environment?
CA Spectrum® delivers the comprehensive capabilities, visibility and scalability your organization needs to keep the network up and running optimally—while reducing network monitoring cost and effort.
Executive Summary

Challenge

With so many critical efforts, activities and transactions relying on your network at any given time, it’s not an overstatement to say that the performance of your network is critical to the performance of your organization. IT agility is critical to drive new application and business services success. A new network paradigm has emerged, software defined network/network function virtualization (SDN/NFV), to support a dynamic network. Now more than ever, outages and performance issues can have a direct and significant impact on revenues, productivity, customer satisfaction and more. However, while optimizing network performance is vital, many administrators lack the visibility they need to maintain availability and performance across their increasingly complex and dynamic environments. Further, it continues to grow increasingly difficult to spot and address the root cause of issues. As a result, service levels of the network—and all the business services that rely on it—suffer.

Opportunity

With CA Spectrum, organizations can gain the comprehensive capabilities they need to track and control network availability, performance and service levels. The product enables you to do fault isolation, root cause analysis, service modeling, change and configuration management, and more. Providing mega-enterprise scalability and comprehensive coverage of physical virtualized and cloud environments, CA Spectrum represents a single platform that you can use to track all the services that matter to your business.

Benefits

CA Spectrum offers the visibility and control administrators need to manage and optimize service levels while they reduce the cost and effort associated with network monitoring by enabling advanced scalability and simplified management supporting millions of models managed from a single environment. With this solution, administrators can better understand and mitigate the issues associated with configuration changes and unanticipated events, such as dramatic spikes in traffic. Further, when issues arise, they can more quickly identify and address the root cause.
The Challenge: Limited Visibility Compromises Service Levels

At any given point, numerous applications, business services and end users are relying on your network, so performance is critical. Any downtime can lead directly to poor application performance and end user service levels which can hurt productivity, sales and customer satisfaction. As a result, it is vital to have a network management solution that helps ensure that your devices and circuits are up and running—and enables you to quickly isolate any faults when they arise. However, these efforts continue to get more difficult. Networks are growing larger, more complex and more dynamic which makes the task of fault and availability management increasingly challenging.

In order to examine how IT personnel are handling these challenges, CA Technologies commissioned an extensive survey. What’s clear is that, with existing tools, it is complex and time consuming for many administrators to keep track of their dynamic networks and troubleshoot issues. As a result, service levels continue to suffer. In fact, according to the survey, one-third of respondents are not meeting their performance and availability goals. Following are more details about the problems administrators are encountering.

Lack of Cohesive, Comprehensive Visibility

In far too many organizations, administrators are struggling with managing isolated tools that lack integration. As a result, it is difficult to assess and manage faults across disparate domains. In the survey, more than half of respondents said they were not satisfied with their capabilities for doing event

Figure A.
Satisfaction is lowest for “event correlation between multiple management tools” and “tracking and remediating configuration changes across the infrastructure.”

<table>
<thead>
<tr>
<th>How satisfied are you with your network fault and availability capabilities?</th>
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<tr>
<td>Event correlation between multiple management tools</td>
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<tr>
<td>Tracking and remediating configuration changes across the infrastructure</td>
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<td>Ease of configuration</td>
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<td>Automated discovery and topology mapping</td>
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<td>Root cause analysis</td>
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<tr>
<td>Support for IP services (VPN, MPLS)</td>
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<td>Real-time alarms and notifications</td>
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correlation between multiple management tools, making it the category in which satisfaction was lowest. In addition, the survey shows that this dissatisfaction will prompt change: 53 percent said this lack of integration among key components would be the factor most likely to necessitate a change in vendors, the highest response among the categories provided.

Lacking Visibility Into Virtualized Environments

As outlined earlier, networks are getting increasingly dynamic with more workloads running in virtualized environments than ever before. Relying on isolated tools and manual efforts, it is almost impossible for administrators to keep their network topologies up to date. Consequently, a significant percentage of respondents, over 40 percent, said they need, and would consider investing in, tools for monitoring and managing virtual and cloud environments so they can improve management. For those looking to invest in these technologies, it’s important to ensure that the purchase of a new tool for monitoring virtual environments doesn’t exacerbate the problem outlined above—that is, the lack of event correlation among disparate tools. Instead, it will be important to leverage a platform that can deliver insights into virtualized environments, while providing correlation of events across the physical infrastructure.
Limited Visibility and Control Over Changes

For too many network administrators, the bulk of issues that arise on a daily basis are self-inflicted and entirely avoidable. Frequently, it is the errors IT team members make in network configurations that are the cause of issues. Without robust change management capabilities, it is difficult for administrators to manage modifications and ultimately prevent the changes that introduce problems. Only about half of respondents report that they are satisfied with their ability to manage and track configuration changes across the infrastructure.

The Opportunity: Track and Optimize Network Performance and Availability With CA Spectrum

With CA Spectrum, you can track, manage and optimize not only the network infrastructure, but the business services running on top of it. CA Spectrum offers the robust, comprehensive and sophisticated capabilities IT organizations need to proactively and effectively manage their infrastructures and services. Through these capabilities, CA Spectrum enables administrators to address the key challenges detailed above. In fact, according to TechValidate, an independent research organization that conducted a study of CA Technologies customers in November 2013, 91 percent of IT organizations agreed with the following statement: “CA Spectrum has enabled us to gain significant control and visibility over our network.”¹

CA Spectrum is a single platform that features proactive change management, fault isolation and root cause analysis—enabling your organization to improve service levels while reducing costs associated with management server footprint. Through its network fault and availability management capabilities, CA Spectrum represents the foundation of network management. The product provides the capabilities you need to ensure that your devices and circuits are up and running and quickly isolate any faults when they arise. CA Spectrum offers:

¹ Source: TechValidate. TVID: DAC-451-4E3
CA Spectrum is Single Point for Event Correlation

“Spectrum is used as an event hub for all infrastructure, creating a single point to enable correlation among events from any technology layer that we need to manage.”

—IT Director, Medium Enterprise Computer Services Company

(Source: TechValidate. TVID: D38-21C-2BF)

- **Enterprise scalability and reduced TCO.** CA Spectrum 64-bit reduces time and cost associated with the administration of multiple management consoles by supporting tens of thousands of devices and millions of models, drastically improving scalability while simplifying staff management.

- **Service-aware management.** CA Spectrum helps staff discover, model, monitor and manage the relationships between the infrastructure and the business services it supports. Service-aware modeling provides insights into the performance and availability of business services, and it delivers insights that are vital for prioritizing those efforts that have maximum business impact.

- **Intelligent fault detection.** This solution delivers patented technologies that automate device discovery and root cause analysis, speeding issue detection and remediation. CA Spectrum can automatically draw a multi-layer (layer 2 and 3), multi-technology and multi-vendor topology and keep it up to date. As a result, administrators can work with a complete, current understanding of the environment—and avoid the effort of having to manually update this information. Event correlation capabilities eliminate the need for manual correlation, even across different data domains.

- **Change management.** CA Spectrum delivers the visibility and control administrators need to minimize the erroneous changes that lead to performance issues and outages.

- **Comprehensive coverage.** With CA Spectrum, managers can gain comprehensive visibility across physical, virtualized, cloud environments and Software Defined Networks (SDN), layer 2 and 3 infrastructure and across a wide range of technologies, platforms and vendors. Plus, CA Spectrum can accept data and traps from other tools, so IT teams can work with a single solution.

- **Customized, role-based views.** CA Spectrum offers prepackaged, easily customizable dashboards and reports that can be tailored to the specific needs of administrators, users and customers.
Benefits

By leveraging CA Spectrum, your organization can realize the following benefits:

• **Improve service levels.** By harnessing the solution’s service level awareness, your administrators gain the visibility they need to manage and control service delivery. The product speeds mean time to resolution (MTTR), helping your administrators reduce the severity, duration and incidence of downtime and performance issues. Further, your administrators can get the change management capabilities they need to more effectively track and control changes and minimize any potential negative impact on service levels.

• **Reduce monitoring cost and administration effort.** By leveraging a product that offers both comprehensive coverage and mega-enterprise scalability, your organization can significantly reduce the costs and efforts associated with managing multiple, disparate monitoring platforms. In addition, CA Spectrum provides automated discovery and topology mapping, supporting millions of models that reduce or eliminate the need for labor-intensive manual mapping.

Conclusion

Now more than ever, with the evolution of software defined networks (SDN), managing networks so they deliver optimal performance and availability is both critical and difficult. With CA Spectrum, your organization can get the comprehensive coverage and capabilities it needs to track and improve performance. At the same time, the product offers the automation and centralized visibility that significantly simplify the effort needed to do network monitoring.

About the Survey

This brief references a survey commissioned by CA Technologies. The survey was conducted by Gatepoint Research in March 2014, and was entitled “Strategies for Managing High Performance and Availability.” Survey participants were IT and operations decision makers who were responsible for infrastructure, data center and network operations. Of the more than 200 executives who participated, approximately 37 percent were directors and 63 percent were managers. Most respondents represented large organizations, with approximately 81 percent working for businesses with more than $1.5 billion in revenue.
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