


How do we optimize our multi-vendor voice and data network for service quality, responsiveness and cost of delivery?



The background of the slide is composed of several overlapping geometric shapes. A large dark green triangle is in the top-left corner. A medium green triangle is in the top-right corner. A light green triangle is in the bottom-right corner. A blue triangle is in the bottom-left corner. The text is centered in the dark green area.

The CA Network & Voice Management solution offers simplified, proactive and vendor-neutral management. It improves the quality of service, reduces the impact of service disruptions and controls OPEX and CAPEX through better use of resources.

Overview

Challenge

IT departments are expected to provide high quality services while maintaining costs, in other words, to do more with less. Anticipating service impacts, meeting and reporting on service levels, accelerating problem resolution, controlling network configurations and changes and keeping capital costs down are rigorous challenges. Additionally, the infrastructures they are managing are typically large, dynamic and complex and include multi-vendor voice and data.

Solution

With the CA Network & Voice Management solution (CA NVM) you get integrated, proactive fault and performance management for end-to-end service assurance of multi-vendor, multi-technology converged networks. Its scalability has made it successful in large enterprises, telcos and service providers worldwide. Root cause and impact analysis, intelligent performance insight, predictive capacity planning and automated service reporting help IT departments manage IT as a business service and meet expectations.

Benefits

CA NVM integrates the management of your voice and data networks that greatly improves your ability to meet service level agreements. It ensures proactive management that lets you address issues before they impact the business, thereby increasing customer satisfaction. CA NVM provides a single view of your resource utilization and speeds up problem identification and resolution. This consolidated information also enables predictive, accurate capacity planning. With better utilization and faster problem resolution, your capital and operational costs are reduced along with your downtime.

CA Advantage

Unlike solutions that offer fault or performance management, or data or voice management, the CA NVM solution is complete. When rolling out new business initiatives, an integrated solution reduces the complexity, operational costs and risks. Manual correlation of information between separate tools is eliminated, saving time and improving service performance. With fault and performance managed as a unified resource, customers see rapid returns on their investment. Based on interviews with CA customers worldwide, IDC¹ reported that the average ROI from CA's network management solution over three years is 493% with an average payback period of 8.1 months. CA NVM is part of CA's broader Enterprise IT Management (EITM), a vendor-neutral approach to managing all IT resources from a single view. EITM unifies and simplifies your entire IT environment, allowing diverse products and processes to work together with less effort and complexity.

Next Steps

For more information on how you can improve the availability and performance of your data and voice infrastructure, while managing costs and risk, visit us at ca.com/solutions.

* IDC White Paper sponsored by CA, Achieving Business Value and Gaining ROI with CA's EITM Software, #205383, January 2007

CHALLENGE

Assuring Service Across Diverse Networks

Stakeholders expect IT to provide services that meet their quality, responsiveness and cost expectations. They may view their service as a single entity, but services are actually a composite, crossing technology and vendor boundaries. For example, a typical online retail service may include network devices from multiple vendors, distributed systems, mainframes, databases, applications (some home-grown) and multiple telephony services. Service quality and cost can only be maintained if management tools are able to work through the entire service delivery platform, correlating the information to display the effect on the service as a whole.

Services vary in their importance to your business. No business can economically justify over-provisioning their network so that all services are fully resourced. Choices have to be made and the ability to manifest those choices and priorities over the network is a necessity. A quality of service (QoS) implementation enables effective priority handling but becomes another technology to manage.

Budget limitations and the anticipated savings from new technology, such as network convergence, mean that you don't get more IT resources to deal with these challenges. The bottom line is you need to improve the QoS across multiple service-level classes and reduce the impact of service disruptions, all while controlling capital expenditures through better resource utilization.

Improve Service Quality

The amount and diversity of traffic on enterprise networks is increasing rapidly as businesses turn to online services. As automation reduces labor-intensive tasks, it speeds up the pace of business. Web-based customer self-help is providing needed relief to call centers, and call center operations are being streamlined by migration to IP telephony. Network services are growing and settling into a range of service-level classes, each with its own set of unique characteristics and service requirements. Network managers must match applications to appropriate service levels, meet current service-level obligations without expensive over-provisioning and anticipate future needs.

The key to improving service quality is preventing downtime. Preventing downtime is the business view of increasing mean-time-between failures (MTBF). Proactive analytics and automated, policy-based responses are invaluable in avoiding problems and preventing failures. They enable you to avoid the unintended consequences of uncoordinated network device configuration changes. They alert you to problems before your customers do. Is performance unusual compared to normal behavior? Are resources becoming over-utilized? What types of problems are on the horizon? Your management solution must be able to answer these questions, automate responses based on policy and alert you when human intervention is required, in order for you to assure services to your stakeholders.

The sun never sets on businesses participating in our global economy, and this reality is making proactive service management an imperative. IT must predict and prevent problems in order to ensure appropriate service quality across all classes of service.

Reduce the Impact of Service Disruptions

Downtime has a negative strategic, operational and financial impact but problems are inevitable and not all can be prevented. When problems occur you want to resolve them as quickly as possible, reducing mean-time-to-repair (MTTR), and thereby reducing downtime. Doing a better job of managing increasingly complex networks with minimal headcount requires simplification. Your IT staff must be able to view and manage all the network components from a single point of control. Having a single view allows fewer people to identify and resolve problems much more rapidly, thus reducing the impact of an outage on the business. In addition, these problems need to be prioritized automatically according to their business impact.

To identify and resolve problems as they occur, your IT staff needs an integrated management solution that provides a unified view of all network elements, performs root cause analysis with drill-down capabilities and offers corrective actions that take the impact on the entire business into consideration.

Without this unified and integrated approach to management, your IT team will find themselves increasingly out of control as they work to keep track of hundreds, or even thousands, of business-critical network devices.

Control Capital Expenditures through Better Asset Utilization

When your IT staff is busy fighting fires they have little or no time for capacity monitoring and planning, but better asset utilization is important for control of capital expenses. The dynamically shifting requirements of most businesses and the high IT asset churn created by mergers and acquisitions make it even more important that IT understand utilization status. What assets are prime candidates for consolidation, redeployment or decommissioning? Which assets are overly stressed? The results of poor asset utilization are getting caught short of capacity and causing service disruptions or maintaining excess capacity to cover any planning shortfalls and wasting limited capital dollars.

Predictive capacity planning is the mechanism that allows you to “right-size” your network capacity. It should be easy to use, since the constant state of business flux will require it to be done frequently. Intelligent algorithms, combined with a solid base of historical and real-time utilization and performance information, is the foundation of accurate, predictive capacity planning.

Wanted: A Comprehensive, Unified View

Complex networks require the integration of fault and performance management, but that is just the starting point. It should be viewed as part of a comprehensive IT management strategy that incorporates many — ultimately all — management disciplines. To achieve optimal performance, reliability and efficiency of enterprise-wide IT environments, you need to unify a wide variety of IT functions.

Unify Management of Voice and Data Network Services

CA NVM provides optimal delivery of voice and data services, through integrated fault and performance management. It gives you a unified view of the whole multi-vendor, multi-technology network, and the ability to drill down into the details of every system, link and endpoint, all from one intuitive graphical interface. This kind of simplification eases the strain on your IT staff, making them more effective and productive. By bringing fault and performance management for all network services under a single point of control, CA NVM enables predictive service assurance, gets to the root cause of problems very quickly and provides the data correlation for effective capacity planning. Like other CA solutions, CA NVM takes a vendor- and platform-neutral approach, preserving your investment in third-party solutions and providing the broad umbrella needed for full service assurance. CA NVM comes with intelligent algorithms and default policies, enabling rapid out-of-the-box deployment and a shortened time to value.

Predictive Service Assurance through Integration and Intelligence

CA NVM is based on three core products that are integrated to give you predictive service assurance. Intelligent algorithms, embedded within these products monitor real-time status and either take action or provide alerts well before service is impacted. The core product families include:

eHealth®

eHealth® delivers the performance management you need to take control of the network and ensure quality of service across the entire infrastructure. Capabilities include ensuring performance of the network, documenting service levels, resolving outages and performance degradations, tracking usage and bandwidth and providing capacity planning tools and reporting services.

SPECTRUM®

SPECTRUM® provides fault management across diverse, multi-technology networks and scales to meet the needs of a broad range of enterprises and service providers. It includes extensive auto-discovery capabilities, alarm notification, configuration management and relationship mapping. Patented root cause and impact analysis technology immediately pinpoints the location of a degraded or failed network component, indicates who and what are impacted, and offers a fix. Additional reporting capabilities deliver at-a-glance, actionable information regarding IT asset, availability and performance metrics.

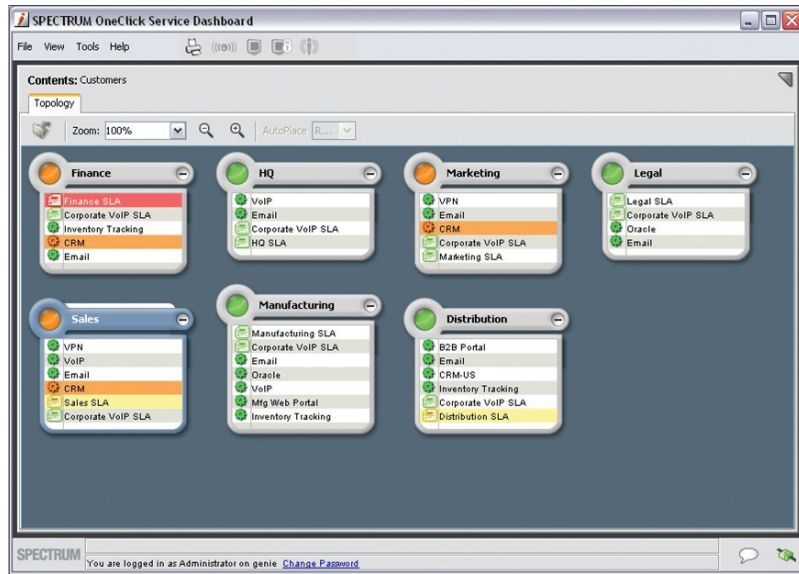
eHealth® for Voice

eHealth® for Voice enables you to deliver reliable, toll-quality voice service for a variety of legacy and IP-based voice systems, consolidating performance, utilization and QoS management. It continuously tests response paths on the network, assesses the impact of such factors as jitter, delay and packet loss on voice quality, and works with eHealth® to raise alerts based upon established thresholds.

FIGURE A

The status of business critical services can be organized in a variety of ways: by service, department, or customer

SERVICE DASHBOARD



With this combination of products acting in concert, network and voice management information is correlated to provide you with a single, real-time view of service. For example, eHealth provides Time over Threshold and Deviation from Normal algorithms that continuously assess performance and alert on either a threshold or “normal” behavior violation. eHealth for Voice provides the same threshold notification for IP or legacy voice services. These alerts are fed into SPECTRUM, which applies its intelligence on policy, models and roles to identify the severity and impact of the problem and provides notification accordingly. Thresholds can be set to alert you well before service impact.

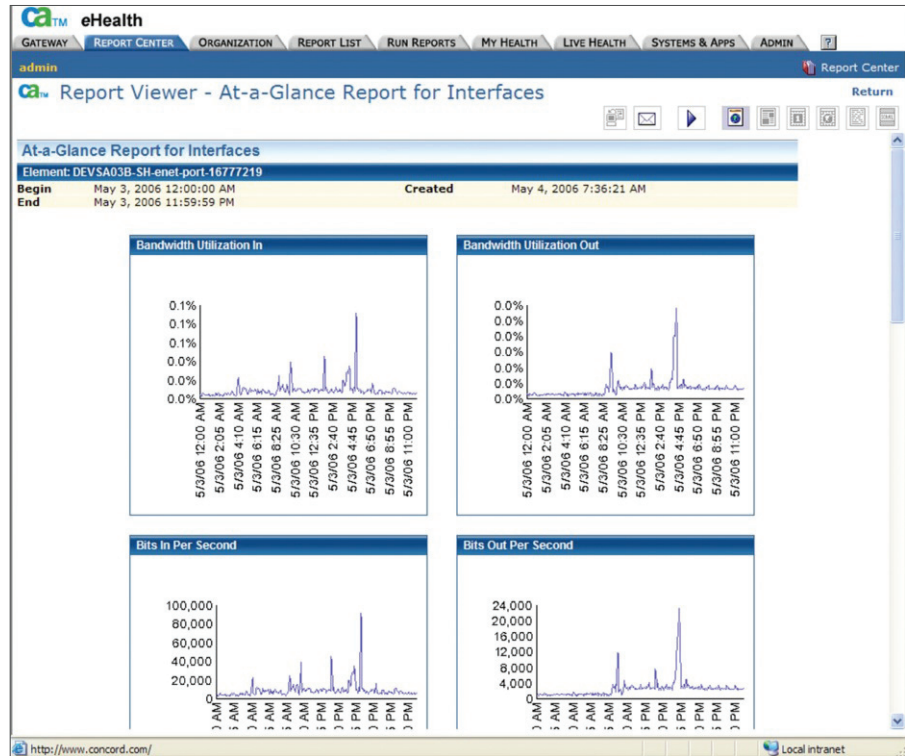
Satisfaction with service quality is enhanced through communication of service levels to your stakeholders. Service level agreements (SLAs) are a useful tool for specifying expectations. Also important is reporting on how well downtime has been prevented. eHealth provides Service Level Reports specifically designed to demonstrate overall QoS and SLA compliance. Versions of the report, targeted to executives, managers and service customers are presented in a simple format, color coded for ease of interpretation. SPECTRUM provides status of services via a simple dashboard, with customized views for operations or line of business managers, and formatted for internal or external customers (see Figure A). Reporting on service quality improves the quality of the relationship between you and your customers.

Rapid Problem Identification and Resolution

FIGURE B

Pre-defined report provides a comprehensive view of the availability and performance of a network device by displaying the key statistics automatically over a specified time interval.

AT-A-GLANCE REPORT



CA NVM uses the cooperative workings of eHealth, SPECTRUM and eHealth for Voice to reduce MTTR and minimize the effects of downtime on services. eHealth and eHealth for Voice alert SPECTRUM of network performance and voice problems. The SPECTRUM patented root cause and impact analysis quickly pinpoints problems, identifies the impact and recommends the correction. Using the SPECTRUM topology map you can easily identify problem devices anywhere in the infrastructure and drill down to alarm detail, including alarms initiated by eHealth and eHealth for Voice. Using probable cause information from SPECTRUM you can launch eHealth or eHealth for Voice to obtain additional historical information so you understand what the device was experiencing before the problem occurred.

Regardless of where in the infrastructure the problem occurs — in a router, a WAN link or an application — it will be managed with the same process: monitor and collect data, analyze, display and take action. Investigative dead-ends, commonplace when you are working with a variety of point management solutions, do not occur with the CA NVM solution.

Reports based on any and all of the fault and performance information can be generated through a simple point-and-click interface allowing you to spot troublesome trends or quickly drill down for fast, efficient troubleshooting (see Figure B).

Whether you want a topology view to monitor the health of the entire infrastructure, an alarm detail view or a high-level business view for an end-to-end picture of key business services they can all be customized to meet the needs of specific IT or business job functions.

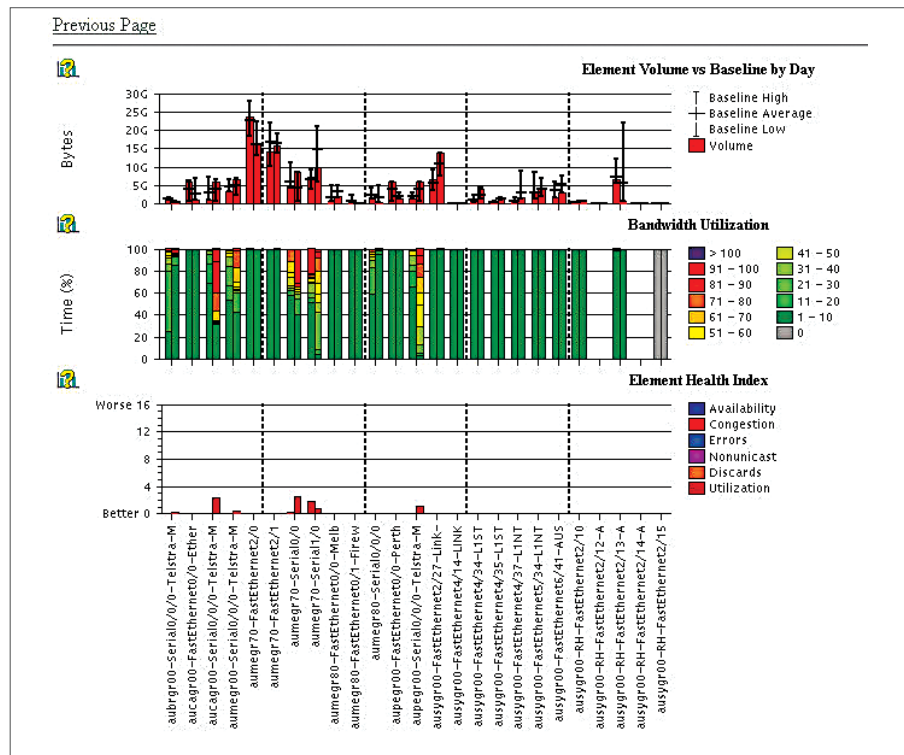
Control Capital Expenditures through Better Asset Utilization

Integration is very beneficial in asset utilization and capacity planning. It lets you see it all, model it all and present it all, in a dashboard or report.

FIGURE C

Identify which resources need to be upgraded and which ones can be downgraded or eliminated.

DAILY HEALTH REPORT



CA NVM collects and stores performance data from all network elements and generates standard or customized reports that tell you how efficiently your network is running. You can use this information to analyze trends and decide which capacity planning initiatives make sense (see Figure C). eHealth for Voice provides intelligent algorithms to identify where and when additional capacity is needed to maintain toll quality voice services. eHealth “what-if” analysis lets you test the impact of new applications, services or users on the existing services. With this information, you can identify where and when additional capacity is needed to continue to comply with service level commitments.

CA NVM can also help you solve the opposite problem — determining where you can reduce capacity without having a negative impact on business. Using “what-if” analysis and reporting, you can find under-utilized assets and conserve capital.

BENEFITS

CA Network & Voice Management Uses Integration for Improved Service

The CA NVM solution integrates network fault and performance management. Key benefits include:

- **IMPROVED SERVICE** Notification of developing problems enables you to take action before impact to your services and your customers, and prevents downtime. The results include improved service and increased customer satisfaction.
- **RAPID PROBLEM IDENTIFICATION** The faster you can find problems the faster they can be fixed. CA NVM provides patented root cause analytics to minimize MTTR and reduce downtime.
- **PREDICTIVE CAPACITY PLANNING** Drawing upon the rich historical database compiled by CA NVM, you can generate reports, analyze trends and determine which capacity planning initiatives make sense. You can stay ahead of business requirements without investing in a lot of excess capacity, and know when to downgrade underutilized circuits. You avoid downtime and preserve your capital.
- **SERVICE LEVEL MANAGEMENT** Automated Service Level Reports demonstrate the overall QoS achieved and document compliance with specific SLAs. You can use them as proof points for internal service levels, or to make sure you are getting what you pay for from external service providers.
- **INCREASED REVENUE** With CA NVM, you can get faster time to value and rapid return on investment because it provides out-of-the-box policies, reports and device certification. The solution is easier to deploy, easier to maintain and easier to use.

CA ADVANTAGE

CA Network & Voice Management combines and integrates best-in-class network fault and performance management to give you proactive control and end-to-end visualization of your complex, multi-vendor data and voice infrastructures. It improves your quality of service by detecting service degradations before your end users are impacted. You can reduce the impact of your service disruptions by performing rapid problem identification and resolution. CA NVM identifies the true cause of a problem through root cause analysis, event correlation and real-time and historical reporting. Integrated and normalized historical data enable you to track utilization trends and accurately predict capacity requirements.

Beyond Network & Voice Management: Enterprise IT Management

CA NVM is an important part of CA's overall approach to transforming IT management. With our unique capabilities, CA can help you unify and simplify IT management across the enterprise for greater business results. Our Enterprise IT Management vision, proven capability solutions and expertise help customers govern, manage and secure IT. Customers gain the ability to manage risk, improve service, manage costs and align IT investments with the needs of the business.

Through CA Technology Services™ and our partners, we can help you assess your current IT situation and management needs, define your goals in terms of process improvement and implement solutions to help you gain measurable results as quickly as possible. Our structured, proven, phased approach draws on the expertise and best practice knowledge developed during thousands of successful projects in large and diverse organizations.

CA Education, a preferred source for IT management and best practices training, can help you capitalize on the value of your CA NVM solution investment. We offer all levels of training around industry best practices and specific solutions, as well as certification. Our Unified Learning Approach helps you assess your training needs and develops a plan to address those needs to gain the most from your software investments.

Our CA Support's global network of people, systems and services delivers unparalleled technical and customer support devoted to keeping your CA solutions operating at peak performance. We also offer all levels of training around industry best practices and specific solutions, as well as certification through CA Education. Our Unified Learning Approach helps you assess your training needs and develop a plan to address those needs to gain the most from your software investments.

NEXT STEPS

Do these circumstances sound familiar?

- You need to reduce downtime by identifying service degradations before end users and business processes are impacted.
- You need integrated performance and fault management for your multi-vendor, multi-technology converged network.
- You need to increase IT productivity with automated root cause analysis, event correlation and real-time and historical reporting.
- You need to perform predictive capacity planning and know exactly when to upgrade or downgrade circuits.

Then you should consider the CA Network & Voice Management solution. It is the only truly vendor-neutral platform for integrated fault and performance management that embraces your entire voice and data network infrastructure for simplicity of use and maximum benefit.

To learn more and see how CA software solutions enable organizations to unify and simplify IT management for better business results, visit ca.com/solutions.

CA, one of the world's largest information technology (IT) management software companies, unifies and simplifies complex IT management across the enterprise for greater business results. With our Enterprise IT Management vision, solutions and expertise, we help customers effectively govern, manage and secure IT.



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