# Entuity Delivers a Unified Solution and Proactive Management to Dell Services

For more than two decades, Dell Services (formerly Perot Systems) has been a worldwide provider of information technology services and business solutions, developing the right experience and expertise by working to keep customers in a variety of industries ahead of the curve. Entuity network management was initially deployed by Perot Systems. Dell Services continues to use Entuity today to manage the networks of its global customer base.

## Overview

**With more than a thousand customers spanning the globe and in light of the growing popularity of their Advanced Network Monitoring service, Dell Services needed an easily scalable approach to manage an increasing number of customer networks as well as their corporate backbone without additional personnel. Entuity was chosen as their single network monitoring platform.**

## Business Needs

IT services can be transformative in today's information economy, delivering a competitive edge to companies who use them effectively to keep businesses solvent and cost effective in tough economic times. But acquiring the skills and expertise to implement and remain current with the abundance of rapidly changing technological solutions can take resources beyond those of even large enterprises.

For more than two decades, Dell Services (formerly Perot Systems) has been a worldwide provider of information technology services and business solutions, developing the right experience and expertise by working to keep customers in a variety of industries ahead of the curve. Central to the technology and business solutions designed and implemented for end customers is the network as it provides the critical connectivity and economy of scale required to deliver IT services. Entuity was initially deployed by Perot Systems. Dell Services continues to use Entuity as one of its key network management solutions for its roster of clients worldwide.

With more than a thousand customers spanning the globe, the scope of many network projects that Dell Services routinely undertakes trumps that of the traditional enterprise. Where a typical enterprise network comprises 20 to 50 devices, Dell Services needed an easily scalable approach to manage nearly 4800 devices without additional personnel. For each new customer, Dell Services must properly plan and configure the customer's network while ensuring the adequate infrastructure is in place to support current and future needs. With Entuity, Dell Services can tackle the challenge of managing a sizeable number of devices and the exponentially higher number of associated network elements.

## An Integrated Approach for Efficiency

Properly provisioned and operating network infrastructure is at the heart of the business solutions Dell Services provides to its customers. Dell Services was in search of a scalable way to provide that infrastructure and also a flexible approach to provide customized network management solutions catering to customer requirements, all without increasing operational costs.

Historically, Dell Services used three separate applications to provide event detection and reporting services. An additional consideration was Dell Services own corporate backbone that was expanding for additional capacity and required a solution that would work for both its own corporate network and those of its customers.

Operating with three separate applications created a number of business challenges. To start, the network operations staff had three different views of network activity to track. Without a single unified view of the network, it was difficult for Dell Services to access a consolidated glimpse of network activity. In addition, each separate application polled the same network devices for similar data, creating redundant traffic on the network, while also affecting the resources of the hardware that was being polled, both of which contributed to overhead costs. Additionally, managing three applications required more administrative effort to support.

The most immediate challenge to Dell Services was its ability to efficiently and effectively service its customers. With a customer base that cuts across many industries and spans the globe, the demands of Dell Services customers are as diverse as its businesses. Dell Services needs to be able to provide network management reports and a guarantee that it will meet stringent Service Level Agreements (SLAs) in various formats. From three platforms, it proved difficult to synchronize the information imperative to meeting SLAs, providing effective fault and performance management and reporting on network activity.

## Insight to Resolve More

With Entuity, Dell Services migrated from three different platforms for fault and performance management and reporting to one platform that performed all three functions collectively. These capabilities were available out of the box from Entuity. With Entuity's flexible, easy-to-use solution for network management, deployment did not require a huge commitment in terms of labor hours from Dell Services. Even better, there was little need for custom adaptations to Entuity, even with the complex requirements of Dell Services network management environment.

"Within days, Entuity was up and running and had placed all of Dell Services corporate network and those of its 60+ global customers under management," said Dineta Cooper, lead subject matter expert for Dell Services (Perot Systems) network management. "We were pleased that implementing Entuity did not take an army of technologists to roll out. In fact, the deployment was accomplished with just two people, freeing our other associates to focus on serving clients."

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Dell Services was instantly able to monitor the nearly 4800 network devices that comprised its network, ranging from routers and switches to MPLS networks to firewalls, without a single lapse in network performance. But the true hallmark of technology achievement was the shift in the way network problems were handled.

"Entuity actually created additional work for our staff initially," said Kristin Morris, manager network management applications for Dell Services (Perot Systems). "Why is that good? Because Entuity proactively highlighted areas of focus to address before they became service impacting issues. This allowed us to ultimately provide better services to our

customers. We were confident that Entuity would continue to proactively identify even more opportunities for improvements over time."

## Capacity to Scale

As an MSP, Dell Services network management solution is the backbone of its global customers, as well as its own corporate network. The challenge Dell Services faced was one of scalability to provision new services for existing and future customers across its massive network without increasing operational expenses.

The three solutions Dell Services formerly used redundantly polled the network for data. By implementing Entuity, the redundant polling for similar data was eliminated, reducing the management overhead. This in turn reduced the amount of traffic traveling across the network. In addition, potential hardware inefficiencies were reduced by limiting the number of times a piece of hardware was polled for similar data.

Entuity offers network technologists at Dell Services another level of visibility into its infrastructure, actively monitoring, reporting and alerting on the routing protocols connecting its complex and distributed network. Entuity discovers and collects data, presents reports and visualizes active routers for each protocol. Proactive management of these devices is enabled through active notification on routing peer-related events. The centralized information captured within Entuity, along with the graphical visuals in the Connectivity Viewer, help network administrators, architects, and managers understand the topology of routing protocols that improve service delivery, reduce performance degradations and outages and eliminate manual trouble shooting processes. Dell Services uses the BGP routing alerts to identify and isolate MPLS anomalies that previously required manual effort to analyze. Network engineers are alerted to all events, even those that are not service impacting or

apparent to the user community. This data can be used to identify and document trends to review with carriers to help improve service delivery.

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Dell Services also uses Entuity's IP SLA module to create synthetic transactions to measure network response time and performance. Entuity analyzes and presents data as meaningful information such as measurement of jitter for streaming audio/video/VoIP, measurement of end-to-end metrics including client-server latency and availability and identification of slow/unreliable hops along a path. These measurements help technicians establish a baseline understanding of network performance and can be correlated to symptomatic events such as slow application response. Entuity proactively alerts on behavioral trends so they can be resolved before service is impacted.

Dell Services customer service expectations and requirements are unique. In provisioning new customers, not only does Dell Services need to establish appropriate SLAs, but they need a reliable way to measure and report compliance. With Entuity's built-in reporting and data export functionality, Dell Services can document operational level and prove service delivery.

Account teams use Entuity's capacity planning Heat Map reports to identify when customers are trending towards capacity problems and propose additional capacity. Network teams use router summary reports to establish trending and identify devices with resource trends highlighting devices that are over or under utilized. This gives them the requisite documentation from a technological perspective to recommend upgrades and accurately and efficiently size new hardware.

"Entuity handles reporting in an innovative way, allowing us to provide exceptional client service" shared Morris. "The software includes a powerful reporting solution, which enables us to interact with the data management core via a web interface and create new reports on the fly. This reporting functionality combines full access to stored data with an extensive variety of presentation styles.  We can schedule these reports to be created and automatically delivered or have them generated on demand."

With recent speed and reliability increases in its wireless mobility solutions, Dell Services has experienced heightened demand for wireless service. Wireless connectivity has quickly become commonplace and a standard feature on many of Dell Services client networks, as well as its own. The flexibility and mobility provided by wireless networking offers great benefits for users and complements existing network infrastructures, but shouldn't add to the burden of those tasked with its management or require separate processes to maintain. Using the Entuity Wireless Module, Dell Services is able to unify visibility and management of wireless and wired networks to reduce operational expenses and ensure availability of critical wireless access points and controllers for its customers. Entuity's Wireless Module helps Dell Services technologists from the initial infrastructure assessment to the ongoing management of its wireless devices, of which there may be thousands at any one location.

Entuity automatically discovers and monitors all wireless access points and controllers in use at the customer facility. By automating the process, the completed survey is done in hours versus the days it would have previously required. Without manual intervention, the accuracy of results is improved to facilitate informed technology architecture planning and budget-friendly hardware procurement advice. Within seconds, Entuity can produce reports on the details and distribution of wireless devices in a customer environment.

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## The Benefits

Using Entuity as part of Dell Services Advanced Network Monitoring service has delivered business benefits from both an operational cost and a revenue potential perspective. The most immediate impact to Dell Services bottom line was the reduction in operational costs by consolidating three separate applications to one. This not only reduced software and maintenance costs, but also the training costs associated with keeping personnel proficient. The streamlined system also increased the number of devices that network operations personnel can each effectively manage, reducing the overall salary expense as fewer support staff are now required when new customers are added.

Eliminating the redundant polling created by three separate systems not only reduces the management traffic overhead required to ensure proper operation, but also increases the available capacity to customers. The perceived performance increases have a positive impact on customer satisfaction. This spare capacity also allows Dell Services to add more customers without a corresponding increase in hardware infrastructure, thereby minimizing capital expense while maximizing revenue potential.

## Winning and Keeping Customers

In the managed services business, price and expertise land the customer, but continued delivery on agreed service levels keeps the customer and ensures satisfaction. The flexible reporting available in Entuity enables Dell Services to provide detailed and customizable reports on each customer's unique key performance requirements. It helps prove to customers the value they are receiving each and every day.

Capacity to serve the current and future requirements of a growing customer base brings added value. As more enterprises are choosing the cost-effective flexibility of managed services, more are turning to Dell Services for its demonstrated expertise in providing technology and business solutions. The advanced capabilities in Entuity help Dell Services ensure that customer networks are optimally deployed and efficiently

performing. The extensive infrastructure data and forensics delivered by Entuity help account teams proactively avoid service interruptions and identify opportunities to propose (and justifiably prove) additional capacity or hardware upgrades that will positively impact the customer's service levels.

Customers come to Dell Services for its demonstrated experience and expertise at delivering technology and business solutions. Entuity helps Dell Services manage networks efficiently and effectively in delivering services and keeping commitments to its end customers.

**entuity**
Taking the Work out of Network Management

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