



Managed Services: Business Efficiency and Growth through Infrastructure Management Solutions

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Introduction

Today's Managed Service Providers (MSPs) face tremendous pressure to improve services, reduce costs, and manage risks in order to deliver revenue and profitability in an increasingly competitive marketplace. The MSPs have expanded the breadth of their service offerings from networks to other adjacent elements in the infrastructure — including systems, applications, security and voice. They are also trying to address the market requirement for improving services and enhancing customer experience. As the enterprises are increasingly dependant on business-critical applications that are geographically distributed and interdependent, the demand is for comprehensive, end-to-end managed services with service level guarantees — across all the infrastructure elements. The scale, performance, and efficiency needed to succeed in this market can be achieved only through infrastructure management solutions that are comprehensive and proven. Long-term strategic partnership with the vendors of those solutions is also critical. CA is uniquely positioned to deliver against these needs through its proven leadership in infrastructure management solutions and strategic focus on service providers as a segment.

Business Challenges Facing the MSPs

The Managed Services market has followed the same trends as enterprise Information Technology (IT) in general, in terms of increase in complexity, convergence of technol-

ogies and criticality to the business. This has provided a number of new revenue opportunities for the MSPs. At the same time, it also has resulted in overwhelming business challenges, as enterprises increasingly expect clear, provable business benefits from outsourcing their infrastructure and IT management.

Revenue Challenges

The traditional areas of managed services such as network design, implementation and monitoring are getting more and more commoditized. Intense competition is putting significant price pressures, thereby impacting the revenue. To succeed, MSPs need to augment their existing services with new ones that are of higher value to their customers and offers better stickiness and cross/up-sell opportunities. This requires moving 'across-the-stack' within a set of services or 'up-the-stack' by offering more business focused services than traditional device centric services (see Figure 1).

A modular, grow-as-you-go approach is most effective for MSPs to augment their traditional services. Not only does each customer have unique requirements, but individual companies range in their desire to outsource functions to a third party. While some companies fully outsource all non-core IT management functions, others prefer to retain the majority of management functions. The MSPs with a flexible and modular service model will be able to respond to these demands quickly and effectively, and will have a clear competitive edge. In addition, an MSP's ability to increase revenue depends directly on their ability to prove

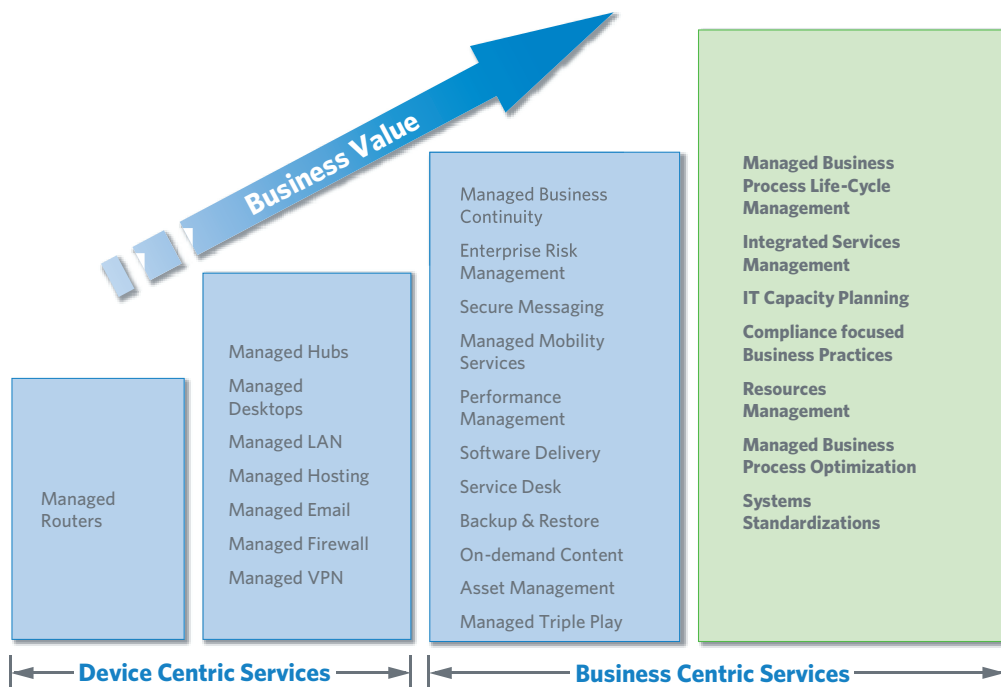


Figure 1. Managed services continuum.

the business value of their services, and constantly emphasize that value through a customer centric service assurance approach.

Cost Challenges

The breadth and complexity of services directly affects their cost structure. Enterprises are outsourcing more and more business critical services and hence round-the-clock proactive monitoring and follow-the-sun management have become the norm — adding to the overall cost. Also, as providers step out of their traditional domains of expertise, costs in ramping up staff, training, deployment of multiple management platforms and integration, etc. can become a significant cost factor too. In this regard, the number of disparate vendors/technologies in the provider management solution needs to be minimized and existing investments should be leveraged whenever possible.

Both the complexity and variation in customer environments being managed, and the range of management functions offered can increase the expense of customized solutions. Hence it is important that providers offer scalable and repeatable services, and avoid one-off offerings. Also, from that perspective, it is necessary to attain a critical mass of customers as quickly as possible to ramp-up revenue as well as to drive down per unit costs to competitive levels. The penalties for Service Level Agreement (SLA) violations also add to potential expense of service degradations. These needs can be effectively addressed through management platforms that allow high level of integration and automation, and provide comprehensive, end-to-end management capabilities across all the infrastructure elements.

Another factor that affects cost efficiency is security risks. Risk Management is, in effect, management of service availability and performance, whether it is provided as a service (up-the-stack revenue opportunity) or as a built-in component of managed infrastructure services (improved service assurance, thereby reducing cost). Further, customers increasingly expect that the services they receive meet certain minimum security standards and providers' multi-tenant environments do not compromise integrity of their data.

Leveraging CA Solutions for Growth and Efficiency

To respond to these market pressures effectively, CA's Enterprise IT Management (EITM™) strategy provides a flexible path and a range of solutions that focus on managed services by unifying and simplifying the management of enterprise-wide IT from three important angles; improving services and aligning with customer needs, managing

costs, and managing risk. EITM allows MSPs to assist their customers in the evolution of enterprise-wide IT management from a reactive event-driven approach to one that is proactive and business-focused.

Improving Services and Aligning with Customer Needs

CA allows service providers to implement an agile management integration platform to respond to rapid business changes and marketplace opportunities. Alignment between customers, services, and infrastructure allows operations staff to ensure meeting of customer service level commitments and prioritization of responses based on business needs. CA's focus on modularity helps MSPs in rapidly responding to market demand for new services, supported by a grow-as-you-go infrastructure management framework. This means that improving existing services and launching new ones can be done with incremental software purchases and minimal training time. Comprehensiveness of CA solutions allows consistent management of disparate technologies and complex infrastructure elements. CA's emphasis on openness of solutions architecture and integration with a large number of third-party solutions arm MSPs to leverage existing platforms and enables easy automation of services components such as workflow, fault management, service level monitoring, reporting etc. — there by improving customer experience and service efficiency.

Reducing Costs

Profitability of managed services to a large extent depends on implementation of a scalable framework and repeatable processes. To achieve this, automation of many steps in the services value chain becomes a necessity. This includes order management, provisioning, billing, service assurance and reporting, all driven through a comprehensive workflow. CA solutions are market leaders in a number of key areas in this value chain and also integrate well with other point solutions, to provide a management framework that allows high level of automation and process consistency. Also the comprehensiveness of CA solutions allow integrated management of disparate infrastructure elements and diverse technologies — whether they are part of the network, systems, applications, database or business process layers. Cost benefits of such an inclusive and integrated approach are significant, as services can be enhanced or launched with minimal incremental infrastructure investments, personnel resources, or training.

Managing Risks

Risk management is increasingly being looked at as a necessity for managed services' continuity and customer experience excellence. It is no more a security manage-

ment issue alone. Vulnerabilities in a customer environment that is being managed, if not patched, may allow unauthorized access to business critical systems. Also, if not managed well, a virus or worm could be propagated from one customer's environment to a broader set of customers and assets being managed by the MSP. Such a threat can result in service interruptions and increase in call volume to the service center - affecting not only the SLAs but also the reputation and brand equity of the provider. CA's solutions on threat and risk management ensure that these risks are managed well and minimized.

Specific Benefits to Key Organizations

Each of the stakeholder organizations in an MSP has unique business needs. CA's infrastructure management framework and solution sets comprehensively address these needs. Specific benefits of CA solutions to each of these organizations are:

Operations and Engineering

Challenge that today's MSPs face on Operations and Engineering side is in providing a provisioning and service assurance solution that is scalable, efficient, flexible and, most importantly, customer centric. CA solutions help the providers to address these challenges effectively.

• Customer Centric Operations:

- Portal solutions that allow role based access for customers — to status reports on orders, provisioning, migrations, assets, service assurance, tickets, performance trending, and SLAs (Figure 2).

- Portal solutions that allow role based access for support and management teams to monitor and manage orders, provisioning, migrations, assets, service assurance, trouble tickets and SLAs.
- Workflow solutions that monitor and manage the services value chain end-to-end. That is, order management, provisioning, billing, service assurance and reporting — including escalations management.
- Predictive capacity planning to identify bottlenecks in the customer environment and to make data-driven recommendations for additional infrastructure deployments.

For example:

CA CleverPath™ Portal solutions allow the **VP of Managed Services Operations** to access real-time snap-shot view of operational performance across all the managed services, and drill down into the details if needed. Built-in authentication and access control modules from **eTrust®** ensure that aggregated performance information and SLA related financial impacts can be viewed only by the management staff.

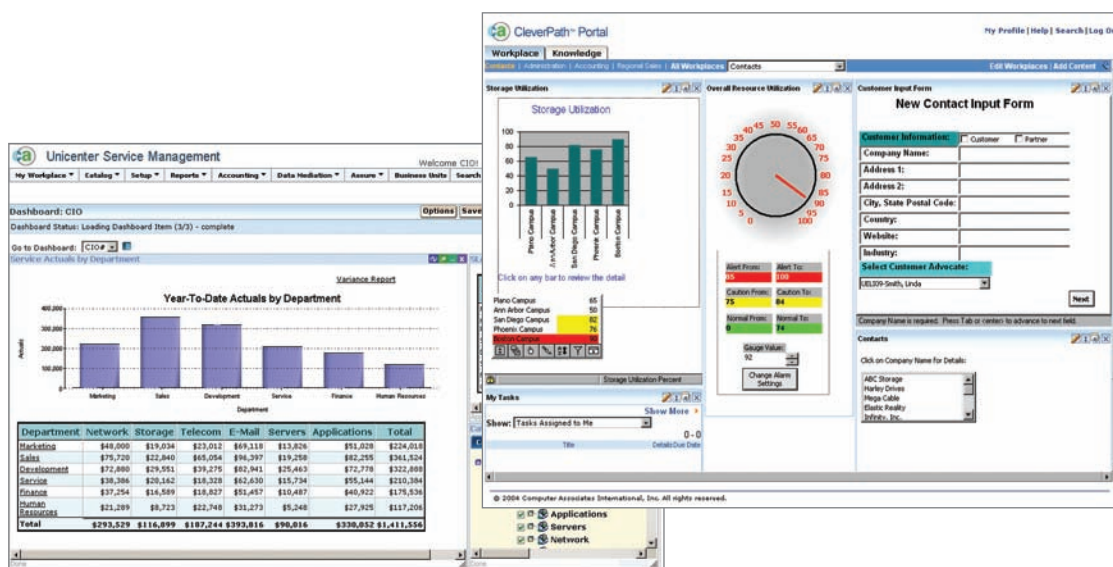


Figure 2. Portal solutions provide exceptional customer experience and operational efficiency.

- **Scalability of Operations Infrastructure:**
 - Modular service assurance solutions that allow grow-as-you-go management infrastructure. As number of managed elements and customers grow, scale to the need by adding incremental licenses and support hardware/software.
 - Modular and comprehensive service assurance solutions that allow easy addition of service specific modules as portfolio grows across-the-stack and/or up-the-stack — no new point-solutions or additional vendors needed, driving down per unit costs.
 - Technology and vendor independent coverage across the entire enterprise infrastructure that is being managed — networks (including data, voice, and wireless), systems, databases, applications and security.

- **Efficiency of Operations Infrastructure:**
 - Automated, built-in intelligence enabling proactive service assurance across a broad range of infrastructure elements and technologies. This allows the operations staff to manage large number of customer environments without adding unnecessary resources (Figure 3).
 - Vendor and technology neutral SLA monitoring and management and efficient response to incidents. Out-of-the box integration support of hundreds of third-party vendors and technologies, providing exceptional efficiency across the entire managed services value chain.
 - Workflow management solutions that improve efficiency across the operations setup — with measurable improvements in metrics such as Mean Time to Repair (MTTR), Mean Time to Fix (MTTF), and Mean Time between Failures (MTBF).
 - Automated asset discovery, asset intelligence and inventory allowing real-time monitoring, management and reporting on assets across the customer environments.

For example:

CA Spectrum® fault management solution set provides the **Director of Managed Network Services Operations** with proactive fault management capabilities across thousands of managed elements covering scores of vendors and technologies. Its easiness to integrate with existing point solutions such as trouble ticket management enables 100% automation in creation and routing of services trouble tickets.

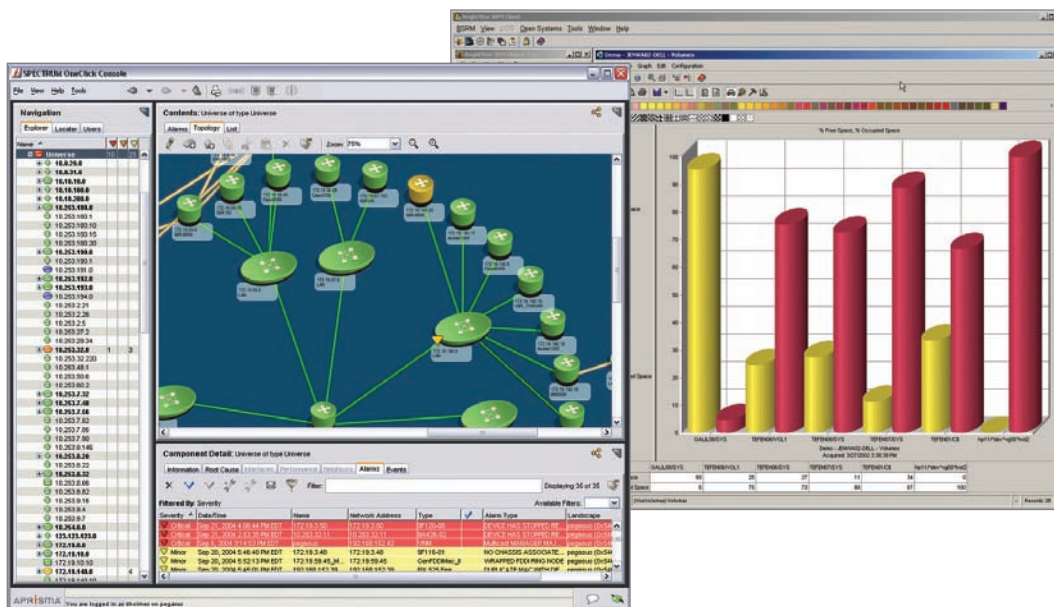


Figure 3. Comprehensive, integrated and modular management solutions — enable managed services across the enterprise infrastructure stack.

For example:

CA Aion® Business Process Management and **Unicenter® Job Management** solutions enable the **Service Delivery Manager** to quickly pinpoint causes for delay in service implementations and take corrective actions — all through a centralized service delivery dashboard.

CA eHealth® performance management solutions allow the **Operations Manager** to track, manage and report performance metrics against Service Level Agreements (SLA) on a single service or portfolio of services, and also identify and address operational improvements necessary to enhance the SLAs.

▪ **Flexibility of Operations Infrastructure:**

- Comprehensive solution set that allows disparate set of managed services — across-the-stack and up-the-stack — allowing maximum flexibility in service offerings. Cost-effective introduction of new services and support systems.

Internal IT, Data Center and Customer Service

The internal IT, business processes and OSS/BSS play a crucial role in overall success of managed services. The internal infrastructure of an MSP is very similar to that of the enterprise customers the MSP manages. Hence the business value that an MSP is asked to provide (by its customers) is strikingly similar to what their internal infrastructure provides. Specific benefits that CA solutions bring to these organizations are:

▪ **Business focused Management of IT Infrastructure:**

- Solutions that provide integrated fault and performance management of mission-critical systems, applications, and databases. Platform neutral, vendor independent support, and built-in intelligence reduce costs through platform consolidation, automation of incidents and systems management functions, and job scheduling.
- Security management solutions that monitor and manage internal and external threats/risks, and user authentication/access across networks, systems, databases and applications that are critical for the services that the MSP provide.

- Portal solutions that allow centralized command and control, easier workgroup collaboration, and reporting (Figure 4).
- Business process management and optimization solutions that allow management of IT infrastructure aligned with services goals and business objectives.

For example:

CA eTrust® Treat Management and **Security Information Management** solutions allow the **Director of IT** to implement and manage perimeter security on the support network/assets, thereby ensuring high availability of customer services portal.

▪ **Efficiency through automation of back-end processes:**

- Workflow management solutions that improve efficiency across the internal infrastructure management and customer services setup.
- Asset discovery, management and intelligence solutions that provide real-time view of asset inventory and capacity utilization — helping to make well informed decisions on resource allocation and augmentation.
- Storage management solutions that allow centralized, automated backup and recovery of mission critical data and ensure business continuity in the event of an emergency or disaster.
- Single sign on and password management solutions to streamline user provisioning and user administration across hundreds of assets, applications and databases.
- Configuration management, change control and software delivery solutions that provide fully automated patch updating, version control and software distribution across the infrastructure.
- Comprehensive and modular management solutions that cover the entire breadth of technologies and vendors — hand-held devices, distributed systems through mainframes; wireline networks through wireless networks; networks, systems, databases through applications.

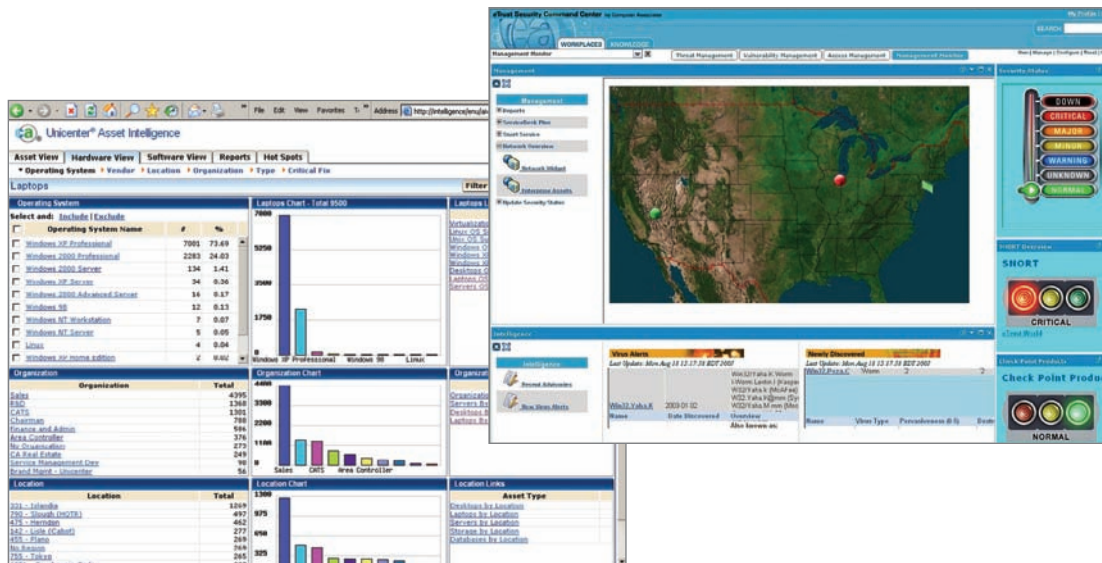


Figure 4. Sophisticated command and control dashboards allow end-to-end management of business support systems that Managed Services rely on.

For example:

CA Unicenter® Asset Management and Asset Intelligence solutions enable the **Manager of IT** to track internal assets and manage resources across those assets. Same solutions arm the **Manager of Product Management** to track and recover customer premise equipments (CPE) that are leased or rented by the customers, there by reducing cost of revenue.

CA eTrust® Directory, Single Sign On and Identity Manager solution set allows the CIO to control costs in user provisioning and user management across hundreds of assets — whether they are distributed systems or mainframes, web services or databases, Windows desktops or Unix servers.

CA BrightStor® storage management solutions enable the **Director of IT** to ensure business continuity of support systems, databases and applications through centralized management of backup, recovery and storage performance management.

Product Management and Product Marketing

Services that were once flagship offerings and comfort zones of the providers are fast becoming commodities. As managed services evolve from device/technology centric to business centric, traditional boundaries between MSPs and Systems Integrators (SIs) collapse — creating an extremely competitive market place. Primary challenges that Product Management and Product Marketing groups face are: limited budget and higher expectation on ROI, short go-to-market timelines on new services and enhancements, average revenue per customer, need for comprehensive, yet modular, solutions that cuts across network, systems, and application boundaries, and improving efficiency of support setup to drive down unit costs. In this regard, specific benefits of CA solutions are:

• **Limited budget and higher ROI thresholds:**

- Business process management tools that provide real-time view of services performance as a portfolio — informed decisions based on collective view of assets, portfolio, investments and resources.
- ‘Shared risk’ partnership based on application hosting services that allow success based investing. Flexible licensing, including subscription pricing - that enables ‘grow-as-you-go’ infrastructure management build-up.
- Comprehensive and modular solution set from a single vendor — allow cost effective addition of new services — ‘across-the-stack’ or ‘up-the-stack’, increasing cross-sell/up-sell opportunities and average revenue per customer.

For example:

Single vendor contract and **CA FlexSelect™** Licensing allow the **VP of Product Management** and the **VP of Finance** to reduce capital and operational expenditures — and hence per unit cost of services.

- **Rapid go-to-market timelines on new products and services:**
 - Application hosting services that allow quick go-to-market on new services.
 - Solutions that maximize existing infrastructure investments — out-of-the box integration with legacy systems and hundreds of third-party point solutions.
 - Comprehensive solution sets that allow rapid addition to existing services. For example, managed network services can be easily evolved into managed security services and managed desktop services, as infrastructure management solutions are integrated and modular.

- **Services evolution 'across-the-stack' and 'up-the-stack':**
 - Modularity of solutions enable quick evolution into business focused services such as business continuity, enterprise risk management, asset management, on-demand content, business process lifecycle management etc. — increasing stickiness of services and improving profit margins
 - Solutions that align with market and technology trends — including convergence of networking technologies, integrated multi-function network elements, integrated management of network, systems, application and security, comprehensive 'through-the-stack' management.
 - Risk management solutions that view security as a business enabler — allowing services with security as an embedded functionality or security management as a service itself.

For example:

CA Spectrum®, eHealth®, eTrust®, BrightStor®, Wily™ and **Unicenter®** portfolio of solutions and their interoperability through CA Integration Platform enable the **Director of Product Management** to evolve Managed Router Services to Managed Security Services (across-the-stack) or Managed Business Continuity Services (up-the-stack), quickly and cost efficiently.



Figure 5. Market leading resource optimization and business process management solutions enable informed decisions on services planning and execution.

- **Improving efficiency across the managed services value chain:**

- Role-based, service oriented dashboards that allow integrated view of services status, performance, and reports for customers, internal support groups and management — from anywhere, at anytime. Multi-source information aggregation, filtering and correlation.
- Customer portals that allow role-based self-service capabilities and business process intelligence to initiate workflow tasks. Integrated contract management and centralized support processes.
- Integrated workflow management tools driving efficiency across the value chain functions — bringing down unit cost.
- Resource optimization, project management and portfolio management tools that bolster efficiency of product launch planning and execution — conform to industry best practices through built-in intelligence as well as integration with third party tools. (Figure 5)

For example:

CA Clarity™ solutions arm the **Product Managers** to program manage new services development as well as lifecycle management of existing services with real-time view of budgetary information, schedules, resource constraints, etc. and their business impacts.

Summary

The MSP market has evolved and expanded significantly over the past decade. Although network and IT infrastructures are more business critical than ever, factors such as complexity of technologies, increase in internal support costs and necessity to focus on core business, are forcing enterprises to outsource more and more of their infrastructure management. The market demand is for comprehensive, end-to-end managed services with service level guarantees — across all the infrastructure elements in the customer environment. The scale, performance, and efficiency that are necessary to succeed in this market can be achieved only through infrastructure management solutions that are comprehensive, seamless and proven. As discussed in this paper, CA is well positioned to help and partner with the MSPs to address these market needs effectively. CA offers a comprehensive, integrated and modular portfolio of market leading solutions that the MSPs can rely on, to maximize their revenue growth and business efficiency.

Proof Points

- One of the largest telecom and mobile service providers in the world — with services in 120+ countries — wanted a scalable, high performing solution to provide highly automated managed services, leveraging investments in existing ordering, provisioning and trouble ticketing platforms.

CA solutions provide value through:

- A highly scalable and performing infrastructure management solution; currently manages 60,000+ end-customer network/security elements.
- Integration with legacy ordering, provisioning and trouble ticketing systems and end-to-end automation in fault management and problem resolution.
- 95–97% of tickets are generated automatically, lowering per unit costs
- Rapid extension of services (and revenue streams) from Managed Router Services on Frame Relay and ATM to Managed LAN, Managed IP VPN and Managed Security services on IP and MPLS.

- Seven of the Top 10 Internet Service Providers in North America, including AOL, the largest; total base of 50M+ subscribers. Wanted Threat Management solutions to provide — service differentiation and operational cost efficiency

CA solutions provide value through:

- Real-time protection of subscriber environments against Viruses, Worms, Spyware, Spam, identity theft, and hacker intrusions.
- Mitigating the risk of spreading threats on provider networks (and hence legal risks too).
- Increasing revenue and reducing churn.
- Deriving operational cost savings by reducing support calls and operational staff required to combat threats.

- One of the largest telecom providers in the world, with data services in 98+ countries; recognized leader in Managed IP services. Wanted comprehensive performance reporting provided on their fast-growing, flagship MPLS VPN services.

CA solutions provide value through -

- Best-of-breed platform for performance reporting on their managed and unmanaged network services.
- Differentiation of VPN services by offering tiered performance reporting; increased revenue stream.
- Reporting as a valuable customer retention tool and improving customer experience.

- Minimization of infrastructure investments by shared-risk partnership. CA's hosted ASP Services cut go-to-market timeframe to less than three months from a typical 18 months.

- One of the largest and fastest growing MSPs in Europe with over 14,000 kilometers of fiber optic network infrastructure. Wanted an end-to-end infrastructure management solution that provides competitive advantage in offering superlative managed services.

CA solutions provide value through:

- Proactive management of the 100,000+ network elements.
- Proactive notification of capacity constraints on end-customer networks - thereby improving customer experience.
- Improved quality and reliability across the suite of services.
- Performance reporting as a value-added service enabling the maximization of bandwidth utilization and quality of service.

- European MSP, with 800 enterprise customers, 8000 managed devices and \$12B transactions per day on the network. Wanted zero touch provisioning and real-time reporting, and integration with legacy order management systems, fault management and customer portals.

CA solutions provide value through:

- Retained Revenue of \$120M+ due to lower churn. Direct Revenue through Enhanced Reporting Services: \$4.7M.
- Leveraging existing investments through seamless integration with scores of legacy systems. Modularity of CA solution set and openness of its architecture played a critical role.

About the Authors

Michael Marks is a VP of Solutions Marketing at CA with responsibility for leading the efforts on strategizing and market positioning of CA solutions into Telecom, Media and Entertainment vertical. Prior to this role he was a VP of Market Development and Strategic Alliances at Concord Communications. Before joining Concord, he was a Senior Product Manager for 3Com's service provider network management products, and also held a variety of operations roles at Pacific Bell.

Venu Venugopal is a Director of Solutions Marketing at CA with responsibility for solutions strategy and market positioning for Telecom, Media and Entertainment vertical. Prior to the current role he was a Director of Product Management for CA's eTrust® Security Information Management product line. Before joining CA, he was a Senior Manager for Product Management & Marketing at Sprint, where he led the development and launch of Sprint's IP Virtual Private Networking and Managed Security Services product portfolio. During his tenure at Sprint, he also held positions as the Senior Manager for Network Security and the Principal Program Manager for Managed Network Services.

Contributors

The following individuals also contributed to this paper:
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