

Sun Microsystems, Inc.



Sun Applies Managed Services Expertise to Achieve Significant IT Cost Savings

Company/Organization

Sun Microsystems, Inc.
www.sun.com

Vertical Market

Computer Technologies

Key Challenges

- Gain competitive advantage by continuously improving efficiency of IT infrastructure.
- Manage IT service providers more effectively by leveraging their strengths in combination with Sun's managed services expertise.

Solution

- Innovative IT infrastructure governance model that partners Sun™ Managed Services with external service providers to reduce cost, increase operational efficiency and gain more visibility into IT expenses in relation to business processes.

Partner

- Best-of-breed data center and network administration service providers.

Business Results

- Achieved world-class service levels at 42% less than industry-average cost.
- US\$11 million savings in annual IT costs.
- Transparent, more granular visibility into IT program costs, enabling better decision making and planning.
- Innovative IT infrastructure governance model strengthened Sun's core service competency.

"Sun's governance model provides managed services and applied engineering, including process improvements, filtering of business issues, architecture oversight and policies and practices governing the environment. This force multiplier arrangement allows its vendors and partners to increase operational efficiency."

– Michael Shott, Director, Performance Benchmarking, META Group

The Quest for Efficiency

As the information highway becomes ever more vital to business operations, corporate information technology (IT) environments have grown increasingly difficult and expensive to manage. Reducing the cost and complexity of IT is a major reason why IT managers turn to Sun Microsystems, Inc. (Sun), a leader in enterprise computing hardware, software and services. Founded in 1982, the Santa Clara, California-based Fortune 500 company has excelled in helping businesses simplify their enterprise IT environments with its network, storage and data center technologies and services. And with over 32,000 employees in 170 countries, Sun itself maintains an IT infrastructure typical of Fortune 500 companies. It involves multiple data centers, hundreds of applications, complex networks and storage systems, as well as tight security measures to support the business needs of employees, customers, partners and investors.

Sun runs its business on its own hardware, software and services, a policy that the company calls "Sun-on-Sun." The Sun-on-Sun program validates that the company's offerings fully meet the demands of a global, multi-billion dollar organization in a highly competitive marketplace. Sun validates and refines its Managed Services approach in the same way, taking best practices in managing IT services, applying them to Sun's own IT operations, and sharing them with Sun's customers so that they can reap the benefits of Sun's success.

Sun Microsystems applied Sun Managed Services to the management of its own IT infrastructure, saving millions and creating a 42 percent cost advantage in IT services.

“We always share internal learning with our Managed Services business unit. Customers can rely on Sun for their Managed Services needs, and not only for their Sun environments, but for all heterogeneous environments as well. We have also shared our extensive experience in structuring cost-effective deals with outsourced vendors, and all that experience is ready to be leveraged.”
– Bill Howard, Chief Information Officer, Sun Microsystems, Inc.

As an advocate of partnered managed services for IT operations, Sun relies on a mix of internal and external service providers to run its IT infrastructure. Managing this partnered IT services model, however, can be challenging. “Not many companies know how to manage service providers, so outsourcing is a perpetual debate—which IT functions to delegate to service providers, which to retain in house and how to manage the mixed program,” says Max Rayner, Director of Worldwide Data Centers and Infrastructure at Sun Microsystems. “The typical problem today is that in outsourced relationships, costs tend to go up contrary to what is advertised, and service tends to be less flexible than companies want it to be.”

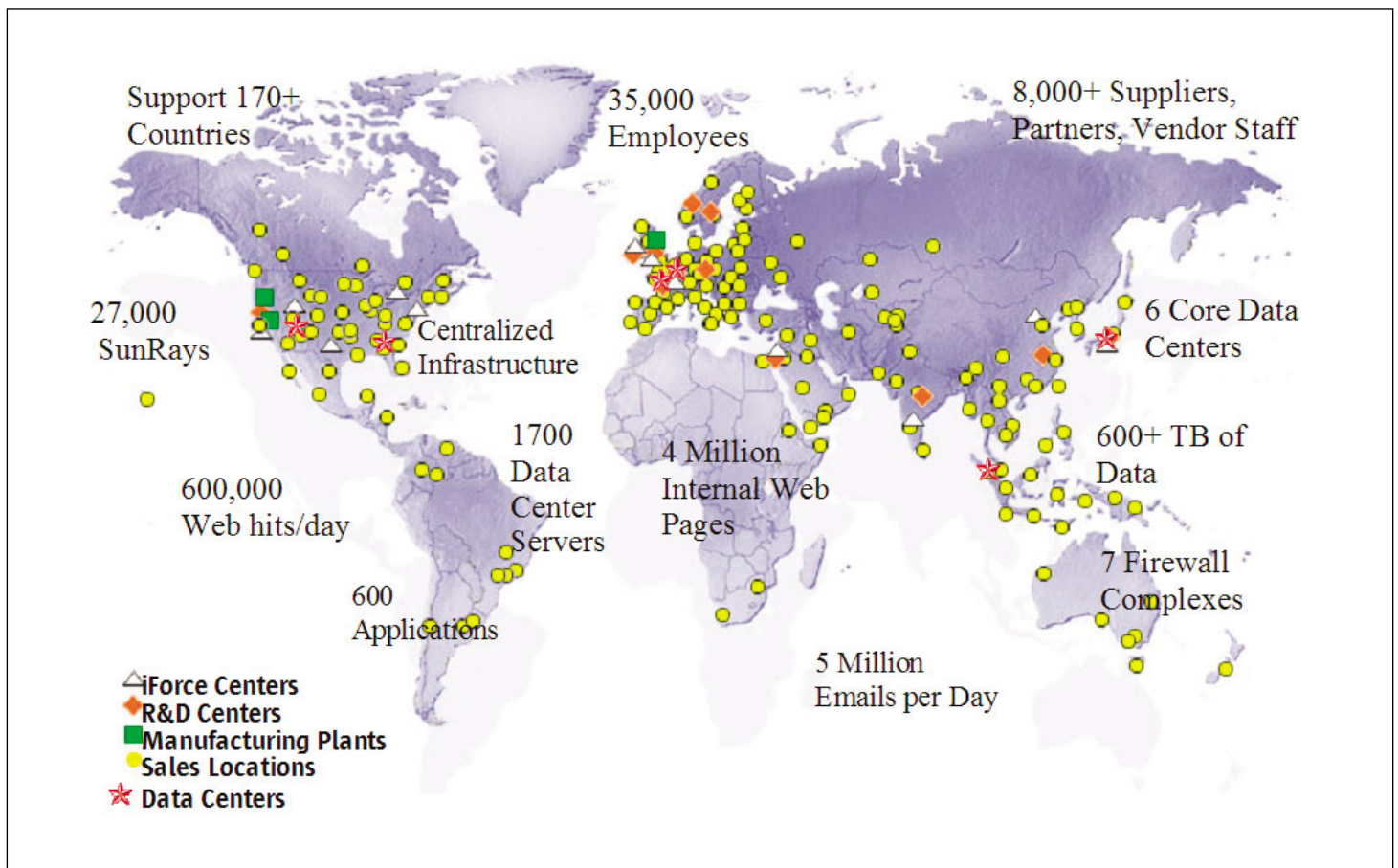
In Sun’s case, the data center and network administration tasks are delegated to best-of-breed service providers. Although delegating the day-to-day administration tasks enabled Sun to focus more on its core competencies, Sun faced the same problem that many of its customers had: declining efficiency stemming from rising costs and inflexibility of services. Fortunately, Sun had the advantage of its internal Managed Services organization for IT Operations to lead the way in its quest for efficiency. “We developed our Managed Services approach to address the problem,” says Rayner, “and to ensure that customers can benefit from the expertise of best-in-class vendors without having to surrender their wallet and control to ‘armies’ of consultants.” Sun’s Managed Services has solved similar problems for many Sun customers. This time, Sun took advantage of its internal services expertise to create an innovative managed services model that resulted in more efficient architectures, an improved cost structure and a more manageable set of service level agreements (SLAs) and operating level agreements (OLAs).

The results are stunning. So far, Sun is saving US\$11 million in annual IT costs. Furthermore, the new managed services model runs at 58 percent of the industry-average costs as validated by an independent research firm¹, giving Sun a 42 percent cost advantage in the area of enterprise IT service management. Service provider partners are happy with Sun’s proactive leadership as their “costs to serve” are taken into account as part of Sun’s service re-engineering and cost-cutting efforts. And Sun Managed Services is regularly replicating the lessons learned from the experience to bring added value to its customers. “We combined our core competen-

cies of strategic management, program management and best-of-breed technical excellence with those of our service providers, and we found the optimal way to run the IT machinery,” says Rayner. META Group, an independent IT researcher, agrees. “Sun and its vendors have prevented contract costs from increasing, unlike many outsourcing contracts where price increases occur. The stable or decreasing prices can be attributed to several factors including the implementation of processes, practices and tools for greater efficiencies,” says Michael Shott, Director, Performance Benchmarking, META Group.

Striving to Lower the Price of Performance

Sun’s data centers, Wide Area Networks (WANs) and Local Area Networks (LANs) are the backbone that keeps its more than 600 business and engineering applications running, including four million internal Web pages and five million daily e-mails. External service providers consist of two main classes. *Data center service providers* perform mission-critical system administration and batch operations to keep data center servers and applications running. *Network service providers* manage, monitor and analyze network performance. With Sun’s 1,700 servers at six data centers around the world



Sun’s Managed Services team helps Sun provide customers with consistent, highly available solutions on a worldwide scale.

¹ Based on an independent study by META Group, March, 2004.

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– Tom Wasilczyk, Vice President, IT Operations, Sun Microsystems, Inc.

and WANs and LANs across 300 locations, the service providers work hard to administer server applications, avoid and fix network faults, perform upgrade patches and recover from unplanned downtime.

Most of Sun’s information services require 99.99 to 99.999 percent availability, demanding constant vigilance to support these service levels while maintaining efficient resource utilization. Under previous practices several years ago, servers and storage were routinely added to ensure uptime, and a comfortable surplus of network throughput was reserved to avoid bottlenecks. As a result, many servers were needlessly underutilized, sometimes tapping only 5 percent to 15 percent of available processing capacity. Similar inefficiency occurred in network throughput capacities, disparate operating environments and redundant enterprise resource planning (ERP) instances.

In many corporate environments, IT managers can only afford new, strategic initiatives when existing applications are stable and maintenance costs steadily decline. Sun took notice when the cost of maintaining SLAs and OLAs did not decline as expected. Meanwhile, rigid terms and conditions in vendor contracts were starting to stifle Sun’s ability to change and grow. These terms often unintentionally gave service providers incentives to build cost premiums that penalized changes in the IT environment. “Like an insurance policy, the service providers already charged us a premium if they were not sure of the level of resources needed to deliver the required performance of certain applications. On top of that, it cost us even more when there was a change and downtime was unavoidable,” explained Rayner.

Excess cost also occurred when certain applications raised false availability alarms. One application, for example, triggered excessive alarms. The cost of responding to those calls was enormous.

“It wasn’t the fault of the service providers,” says Rayner. “To uphold our high standard of availability, security and performance, we initially encouraged them to do everything necessary to meet SLAs and OLAs with insufficient attention to whether those remained relevant to business needs.” No process was in place to re-assess the infrastructure as a whole to see if it was still running optimally. As a result, the data center footprint was slowly sprawling outward, and the cost to support, monitor and manage data centers would have swelled with it.

Part of the reason lay in price structures. Sun paid service providers a gross per-server, per-database, per-application or per-incident price. It learned about expensive crisis responses and unwarranted alarms only when the total cost went up. “We were not giving our service providers the incentive to help us manage change,” says Rayner. “But change was imperative. At the rate we were going, the whole model would eventually be incompatible with Sun’s competitive strategy.”

Sun Becomes Master of Its Domain

When Sun examined the situation from the perspectives of cost, flexibility and utilization of available resources, it looked to its Sun Services organization for a possible answer. With its knowledge, expertise and proven technologies, Sun Services had already played a leading role in helping its customers create flexible and highly available infrastructures at a fraction of the industry's average cost. Sun saw the perfect opportunity to apply the domain expertise of Sun Managed Services to improve the efficiency of its own infrastructure.

Understanding that customer business requirements must drive IT programs, Sun Managed Services specializes in helping customers manage their IT resources with reduced costs, complexity and risks. In a typical engagement, Sun service professionals use their knowledge and experience to improve processes, mold programs to meet business unit needs, provide architectural design and manage service level contracts for clients. Furthermore, the organization has developed strong competencies in delivering services in multi-vendor environments. By managing clients' heterogeneous IT environments, Sun has established trusting relationships with most industry-leading IT service partners. In parallel, Sun's IT Operations (ITOps) team,

the internal counterpart to Sun Managed Services, had applied the technological vision and expertise of Sun Managed Services. ITOps and Sun Managed Services had the right skills, experience and industry relations to help Sun realize its objectives. "We always share internal learning with our Managed Services business unit," says Bill Howard, Chief Information Officer at Sun. "Customers can rely on Sun for their Managed Services needs, and not only for their Sun environments, but for all heterogeneous environments as well. We have also shared our extensive experience in structuring cost-effective deals with out-sourced vendors, and all that experience is ready to be leveraged."

Taking a proactive stance, the ITOps team went to work to establish a new governance model focused on optimizing the partnered managed services operations. Day-to-day tasks would continue with external service providers, while ITOps would work on making structural changes based on business process, architectural understanding and applied engineering industry best practices.

Doing More With Less

After a team of Sun architects, engineers, project managers and business managers assessed Sun's IT infrastructure and current contracts with service providers, ITOps realized that Sun's IT infrastructure needed to undergo two dramatic changes to alter rising costs, inflexibility and underutilization of resources.

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The first change was re-architecting and consolidating the network, storage, server and applications environment. Following ITIL principles, a widely used framework for managing IT services, the team of ITOps professionals took stock of Sun’s server capacities and configurations, analyzed peak usage periods and application stability. They also worked with Sun’s network and data center service providers to retire some older hardware, deploy network area storage, upgrade operating systems and consolidate disparate ERP systems into one².

In a single data center consolidation project, the joint team saved US\$500,000 in annual maintenance, administration and collocation expenses by removing approximately 100 Sun Enterprise™ and older SPARC™-based servers. “By moving to larger, newer clustered Sun systems, we’re maximizing our computing resources, enjoying the benefits of simplified systems management and delivering the application performance our business users expect,” says Rayner.

Another part of the ITIL-based architecture re-design came via leveraging Sun Remote Services (SRS) and Sun Preventive Services. For example, data center support staff used to be assigned to six locations around the world. The team designed and deployed a 24/7 remote administration infrastructure, saving partners and Sun US\$1.2 million per year. In another instance,

utilizing Sun Preventive Services, the team has been administering preventive patching and developed an operational risk index to monitor systems and application performance so that problems can be spotted before calls are needed.

The second change involved redefining cost structures and contractual models. Employing Sun Sigma and Sun Tone™ best practices, the ITOps team set out to re-define and measure SLAs and OLAs. The initial diagnosis made it clear that the rigid, premium-based SLAs and OLAs were met at an unnecessary cost to both Sun and its service providers. The lump sum, per-database pricing obscured what was happening at the level of day-to-day application service delivery. Sun wanted more transparency and accountability. To do that, it first needed to understand the day-to-day activities, especially where extra costs were incurred.

By deploying Application Metering, an element of Sun Utility Computing Services, ITOps was able to monitor activity levels and understand application behaviors. Sun and its service providers then worked together to restructure the cost basis around activity levels. Instead of paying per capacity unit, Sun would now pay per activity unit. Not only did this cut Sun’s service cost on a permanent basis, but the transparency in application behavior also benefited service providers by lowering the frequency of service calls. For instance, through proactive monitoring, a formal problem management and resolution process, constant root cause analysis and corrective actions, Sun drove down unnecessary alarms and streamlined vendor tasks and costs.

² For more information on Sun’s consolidation projects, see success story “Sun Microsystems: Sun Leverages Consolidation Expertise and Technologies to Cut Costs and Complexity Internally,” http://www.sun.com/solutions/documents/case-studies/mf_sunconsoL_cc.pdf.

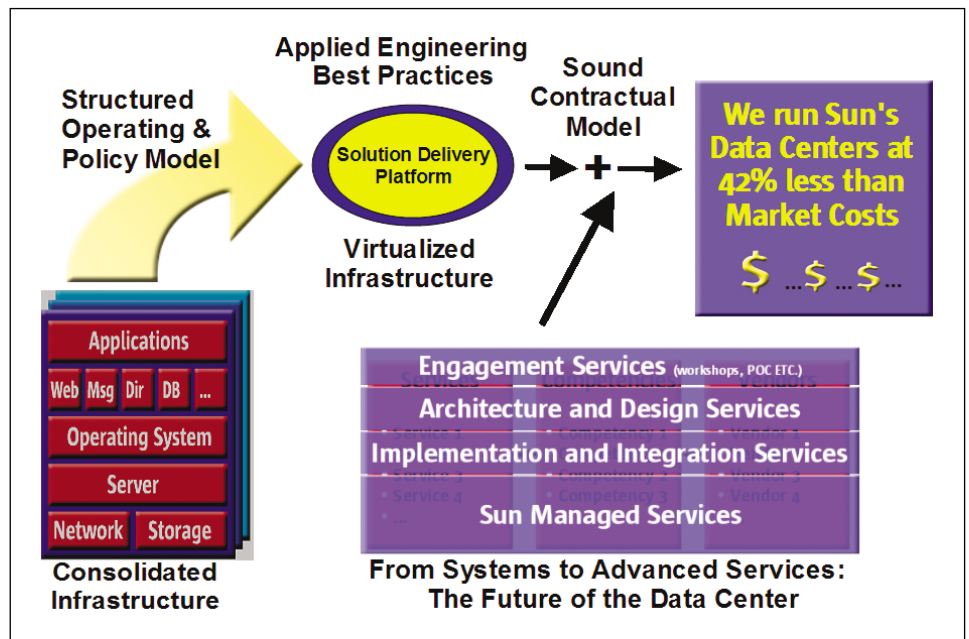
Now that the fundamental changes at the architectural and the contractual levels have taken place, application and service activities are transparent to all interested parties, and cost-cutting measures can be applied continuously. Service providers deploy fewer service personnel to maintain the same performance levels. Sun's IT environment is far more flexible and predictable.

While support levels met true business requirements, both sides found significant cost savings. Not only did they save 42% in annual IT costs, but also the new governance model produced one of the industry's most efficient IT management practices. "Sun's governance model provides managed services and applied engineering, including process improvements, filtering of business issues, architecture oversight and policies and practices governing the environment. This force multiplier arrangement allows its vendors and partners to increase operational efficiency," says Shott.

As the single contact point for all service providers, Sun facilitates monthly operations reviews and scheduled audits. Vendors receive feedback via regular contacts and scorecards, and accountability is clear. "We have developed specific best practices and knowledge, not only of how to structure the contracts correctly, but how to drive the vendors toward continuous cost reduction and highly productive cooperative ventures, with Sun serving as a single conduit for all vendors," says Tom Wasilczyk, Vice President of IT Operations at Sun.

Sharing the Good News

Sun's enterprise IT experience and business acumen have come together to produce real competitive advantage for Sun and its partners. At 42% percent less cost than the industry's average, Sun's managed services model can easily be replicated in other corporate environments, and Sun intends to do just that for its customers. "We've racked up all this knowledge and experience, and we think our customers will make good use of it just as we did," concludes Rayner.



By applying Sun Managed Services and best practices in applied engineering, Sun achieved a 42% cost advantage in operating its data centers.

Sun Technology

- Sun™ servers
- Solaris™ Operating System
- Sun Cluster software

Sun Services

- Sun Managed Services approach followed IT Infrastructure Library (ITIL) principles and provided strategic direction, consolidated design and key implementations of co-managed data center and network infrastructure.
- Application Metering, an element of Sun Utility Computing, helps analyze activity patterns and define the impact of individual applications on resource consumption.
- SunTone™ approach and Sun Sigma methodologies helped Sun Managed Services evaluate and restructure service level agreements (SLAs).
- Sun Preventive Services provided analysis of operational risks, proactive remediation measures and ongoing risk-reduction program.
- Sun Remote Services (SRS)-based 24/7 monitoring in support of global remote administration.

Get the details. For more information on Sun Microsystems, visit sun.com. And for more information on Sun Managed Services, please visit sun.com/service.

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