

Three Immediate Initiatives to Cut IT Costs, and Keep Them Down

An ENTERPRISE MANAGEMENT ASSOCIATES® (EMA™) White Paper
Prepared for BDNA

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Table of Contents

Executive Summary	1
Introduction	1
Software Licensing	2
Recommendations for Better Software Licensing	2
Expected Outcomes	2
Consolidation	3
Recommendations for Effective Consolidation.....	3
Expected Outcomes	3
Green IT	4
Recommendations for Implementing Green IT.....	4
Expected Outcomes	4
BDNA Three-Prong Approach to Reducing Costs	5
Discovery.....	5
Catalog.....	5
Mapping.....	5
Outcomes	5
Case Study.....	6
EMA Perspective.....	6
About BDNA	7

Executive Summary

To handle budget reductions, IT can cut operational and capital expenditures in three specific areas:

- **Software Licensing** – lack of visibility into software use drives higher license costs, compliance costs, fines, penalties, and personal liability. Automatic software discovery can reduce help license costs by millions of dollars per year, and eliminate other costs and risks.
- **Consolidation** – virtualization consolidates servers by an average of 35%, reducing hardware, software, power, and facilities costs. Data center consolidation eliminates costs of up to \$2,000/ft². Detailed hardware and software discovery is critical to fast, error-free consolidation.
- **Green IT** – Consolidation, virtualization, power management, and energy-efficient hardware reduces energy costs by as much as 60%. These initiatives require accurate discovery of hardware and software utilization to avoid mission-critical outages.

BDNA Insight discovers, catalogs, and maps hardware and software utilization, providing the visibility that is critical to these initiatives. A NYSE-listed financial services firm that deployed BDNA for 10,000 servers in just 2 months expects to save several million dollars per year through better sourcing, license harvesting, faster procurement, lower project costs, improved compliance, and eliminating unauthorized software.

ENTERPRISE MANAGEMENT ASSOCIATES® (EMA™) analysts believe that, by providing environmental visibility and understanding, BDNA offers immediate, achievable, and strategic capabilities for widespread cost reduction.

Introduction

The challenges of a tight global economy are creating significant pressure on IT budgets. EMA has found that almost twice as many organizations are facing IT budget cuts in 2009 as in 2008, with a median decrease of 10-25%. Even where budgets are increasing, most are only going up by less than 10%. Yet despite tightening IT budgets, businesses are not expecting reduced IT service.

Without understanding software utilization, organizations are wasting money on excess license deployment, hardware purchasing, power, and utility consumption

IT cannot reduce workloads, so it needs to both cut day-to-day operational expenditures (OpEx), and defer or eliminate one-off capital expenditures (CapEx), to meet immediate cost objectives, and to drive efficiency and optimization that will help the business emerge even stronger when the economy does finally recover.

An immediate starting point is eliminating the cost and waste hidden in a poorly understood IT environment. Without understanding software utilization, its links to specific license, hardware and power costs, and its connection to business requirements, IT organizations are wasting money on excess license deployment, hardware purchasing, power, and utility consumption.

This EMA white paper covers three immediate and actionable areas where better environmental understanding can drive both operational and capital cost reduction – software licensing, consolidation, and Green IT.

Software Licensing

Many organizations buy more software than they need to, because typical software management techniques – like license tracking spreadsheets, disparate tools for software deployment and asset management, and infrequent manual audits – do not provide reliable visibility into actual usage.

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They cannot harvest and reuse licenses, so they buy new licenses for every new deployment. They cannot track hardware types, so they buy high-capacity (multi-CPU) licenses for every deployment.

They also have weak negotiating power with software vendors during audits and renewals because they cannot rationalize software deployments or prove reduced usage. Conversely, if an audit shows a compliance breach, they must pay full price for additional licenses, plus possible fines, and loss of reputation (which can lead to a direct drop in share values). Executives can even incur personal legal responsibility that may result in termination.

Poor license management also wastes human resources and drives up OpEx. Devoting staffs to manual license tracking, deployment, harvesting, auditing, and accounting wastes valuable resources that would be better devoted to higher-level operations.

Virtualization makes license tracking even harder, effectively ‘hiding’ software on dormant images, which can be deployed in seconds, and rapidly moved from one machine to another. Even otherwise good license management processes can quickly lose track, risking license overutilization.

Recommendations for Better Software Licensing

Increase visibility with automatic discovery of software deployment across all active environments, and by connecting deployment with actual usage, hardware, license variations, contract expirations, etc. This should be an ongoing process, because software deployment, renewal, and purchase are always changing, and without automatic monitoring, can drive dramatic and unexpected changes in license costs at any time.

This requires a sophisticated solution with a comprehensive and frequently updated catalog of ‘signatures’ that can continuously identify software product names, vendors, and versions; the hardware configurations that affect license attributes (e.g., number of CPUs, cores, VMs, etc.); and variable product forks and merges, version changes, and changes due to mergers and acquisitions.

Expected Outcomes

This visibility and understanding will allow IT to connect real license needs with purchasing decisions, harvest and reuse existing licenses, and prevent accidental breaches of software license agreements. This will reduce costs by establishing a better bargaining position with software vendors, reducing the number and cost of licenses deployed and paid for, freeing up strategic resources to work on value-added projects, and avoiding fines and penalties – as well as staving off potential personal repercussions from budget overruns.

Consolidation

Consolidation – of servers, data centers, and software – can also dramatically reduce CapEx and OpEx. EMA research has found that server virtualization in particular consolidates an average of six virtual servers (and up to fifteen or more) onto each physical machine, and allows up to a

Virtualization consolidates an average of six virtual servers onto each physical machine, and allows up to a 35% reduction in physical servers

35% reduction in physical server utilization, deferring server purchases and reducing power and facilities costs. Data center consolidation (or avoiding data center expansion) eliminates or defers data center costs of between \$1,000 and \$2,000 per square foot. Consolidating applications and rationalizing versions reduces both the cost of unused or excess application licenses, and the overhead costs of maintaining multiple software versions

Achieving these consolidation goals is almost impossible without detailed visibility into software and hardware deployment, and understanding of software and hardware utilization. Recording and correlating workloads manually, using multiple tools, and without a common component catalog, is a major effort that is typically incomplete, error-prone, and rapidly obsolete – especially where virtualization adds complexity with dormant images and dynamic systems.

Recommendations for Effective Consolidation

Start by discovering all of the software and hardware assets in the enterprise, across physical and virtual servers, multiple systems and platforms, LAN and WAN boundaries, multiple data centers, and diverse applications. Again, make sure to continue discovery over time, so consolidation can continue to deliver value, enabling ongoing cost reductions without damaging user service levels.

Sophisticated tools will help to discover, catalog, and map software and hardware assets, consistently identify consolidation candidates, and determine the effect of consolidation on end users. They should incorporate an in-depth software and hardware inventory, with intelligence and correlation, to identify, map, and provide ongoing understanding of the changing dependencies between discovered software and hardware.

Expected Outcomes

The resulting detailed software and hardware inventory will allow IT to identify applications, servers, systems, and entire data centers that are candidates for consolidation, and to plan and predict both immediate and ongoing savings in software, hardware, rent, power, and facilities costs.

This in turn facilitates a fast, error-free, efficient, and continuous consolidation strategy, a clear migration path to virtualization, and a seamless rationalization of software and systems, with minimal impact on business users, resulting in substantial OpEx and CapEx cost reductions, without service disruption.

Green IT

While social values are important, the business value of Green IT is primarily in reducing energy costs – by an average of 20%, and as much as 60%, according to EMA research.

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Servers account for 31% of average data center energy costs, followed by HVAC (heating, ventilation, and air conditioning) at 17%, storage devices (14%), and network equipment (13%). According to the U.S. Environmental Protection Agency, data center energy utilization doubled between 2000 and 2006, and is expected to nearly double again by 2011. Add the \$1-2,000 per square foot cost of the data center itself, and reducing the IT footprint can significantly reduce costs.

Virtualization and consolidation are two of the top Green IT initiatives. Both result in average energy cost savings of around 15%. Around half of all virtualization deployments result in a measurable reduction in energy costs and in floor space. Dynamic power management results in average energy cost reductions of around 20%.

Using manual records, poorly integrated hardware and software inventory, or an incomplete catalog of systems and services to identify which servers to shut down or consolidate is difficult at best. At worst – especially considering 81% of enterprises run most servers 24x7 to support business-critical systems – it risks accidentally shutting down business-critical systems, causing catastrophic service disruptions.

Recommendations for Implementing Green IT

Start by verifying actual energy consumption and identifying targets for consolidation. Track systems as they change and move to continue driving down costs over time. Implement automated power management solutions for idle systems, again maintaining up-to-date records to avoid accidentally shutting down critical systems. Using more energy-efficient server hardware is another key recommendation.

These initiatives require accurate and ongoing identification of hardware and software usage – such as which systems need to run 24x7, and which systems can be shut down without affecting users. Without continuous insight and understanding, these activities are highly likely to cause downtime to mission-critical systems and applications. Without continuous monitoring, savings are one-off, rather than ongoing.

Expected Outcomes

Green IT initiatives can significantly reduce or eliminate power, HVAC, rent, and other data center facilities costs. Data center consolidation reduces the physical footprint of IT, and avoids or defers additional building and fit-out costs. Server consolidation reduces ongoing maintenance and administration costs, and avoids or defers the capital costs of server replacement or additional server purchasing.

Of course, Green IT initiatives also provide PR value for the business, with improved market values and social perceptions. However, from the perspective of IT cost reduction, these are just “icing on the cake.”

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BDNA Three-Prong Approach to Reducing Costs

BDNA aims to help IT address all these challenges, and achieve these specific outcomes, by providing a complete and relevant view of IT assets. BDNA does this with a three-prong approach:

Discovery

With BDNA Insight, IT organizations can easily and quickly locate and identify systems, software, servers, and hardware. With remotely executed and agentless technology, this provides comprehensive discovery across diverse systems and applications, including virtual servers, and even dormant virtual images.

Catalog

Discovery alone is not enough to achieve these key cost reduction objectives, as all it produces is an overwhelming volume of configuration and platform details. BDNA Catalog therefore extends the value of discovery with extensive (and frequently updated) reference catalog of up-to-date software and hardware signatures that can identify specific products, vendors, versions, and hardware configurations. This allows discovery data to be categorized and normalized, providing a deeper understanding that makes the data usable.

Mapping

Tying asset discovery with the catalog, sophisticated mapping capabilities provide the critical association and correlation of discovered components, to identify the interrelationship of component assets (software, hardware, etc.), and how they combine into service delivery platforms (i.e., collection of hardware and software), to provide real value through visibility and understanding of even a complex IT infrastructure.

Outcomes

Combined, these capabilities serve the needs of license management and compliance, consolidation and virtualization, and Green IT initiatives, by providing comprehensive and in-depth discovery, understanding and recognition of environments and components, and mapping that connects these components. These capabilities will help drive direct cost reduction through license costs, improved server and data center utilization, deferred hardware purchases, reduced facilities costs, and more.

In addition, trending reports and comparisons over time allow IT to apply these cost reduction techniques on a continuous basis, so the benefits multiply over time, rather than just accruing as a simple one-off exercise.

Applied to these strategic projects, BDNA provides the basis for real, immediate, and ongoing cost reduction for both capital and operational budgets.

Case Study

Jason Mills is a Vice President at a NYSE-listed financial services firm, with over 200,000 employees and millions of customers worldwide.

“We were undergoing a major renegotiation with one of our major vendors,” Mills explains, but despite a heavy investment in other discovery tools, they still did not know how many licenses they needed. “It was money down the drain – we weren’t able to save any money on our renegotiation.”

After trying, as Mill’s describes them, “another agentless technology” and “one of the largest solutions in the industry,” Mills chose BDNA. It fit his critical requirements – an agentless solution that was updated regularly, imposed minimal system impact, operated without admin rights, discovered both hardware and software, and delivered fast results – all “at the right price.”

With BDNA, Mills completed a full software inventory for three lines of business (out 10,000 servers) in just 2 months. “Allowing our sourcing team to have access to this data provides enormous negotiation value that they never had before,” Mills explains, and it allows them to reuse existing licenses, rather than buy new ones. “That kind of cost avoidance will net several million dollars per year in savings,” he says. He also expects it to reduce procurement times, lower project costs, improve compliance, and reduce unauthorized software installation.

With plans to deploy BDNA across 60,000 servers worldwide, in under 4 months, Jason says, “We are very excited with the potential of BDNA – we believe that we can get ahead of the game, at the forefront of being completely compliant, but also hold our vendors’ feet to the fire.”

EMA Perspective

In this tight economy, enterprises are seeking specific and achievable reductions in both OpEx and CapEx. Facing substantial and immediate budget cuts, enterprises cannot afford to spend years to achieve these goals, so it is important that any cost reduction opportunities deliver fast results, so that budget owners can justify a business case in a short, measurable period, and prove fast payback.

Beyond these immediate goals, smarter organizations are using efficiency initiatives to establish long-lasting optimization goals, which will help them to emerge even stronger when the economy finally rebounds. To maintain sustained benefits, such enterprises must revisit cost management processes regularly, monitor trends and changes over time, and make sure costs do not just come down, but also stay down; and ensure outcomes are not just planned, but also achieved.

By providing environmental visibility and understanding, BDNA Insight offers immediate, achievable, and strategic capabilities for widespread cost reduction

Clearly, there are significant short- and long-term opportunities for cost reduction, asset optimization, and enterprise efficiency from license compliance, consolidation, and Green IT initiatives. However, they all need a certain level of sophistication in asset discovery, cataloging, and mapping, so IT has the environmental visibility and understanding to achieve their goals. By providing these capabilities, BDNA Insight offers immediate, achievable, and strategic capabilities for widespread cost reduction.

About BDNA

BDNA's software provides IT organizations the tools to significantly reduce IT spending through a best-in-class agentless discovery, the industry's best IT products catalog and award-winning IT asset management solutions. Their 350 customers are trend setters in ROI-driven initiatives; they include HSBC, Lockheed Martin, Motorola, Pfizer, State of California, Telecom Italia, US Army and the World Bank.

BDNA is based in Mountain View, California, with sales offices and partners throughout North America and Europe. For more information, please visit bdna.com.

About Enterprise Management Associates, Inc.

Founded in 1996, Enterprise Management Associates (EMA) is a leading industry analyst and consulting firm dedicated to the IT management market. The firm provides IT vendors and enterprise IT professionals with objective insight into the real-world business value of long-established and emerging technologies, ranging from security, storage and IT Service Management (ITSM) to the Configuration Management Database (CMDB), virtualization and service-oriented architecture (SOA). Even with its rapid growth, EMA has never lost sight of the client, and continues to offer personalized support and convenient access to its analysts. For more information on the firm's extensive library of IT management research, free online IT Management Solutions Center and IT consulting offerings, visit www.enterprisemanagement.com.

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