

*Product Brief*

# EMC Data Protection Advisor Streamlines Management

**Date:** February 2010 **Author:** Lauren Whitehouse, Senior Analyst

**Abstract:** Data Protection Advisor continues to expand data collection for various components in the data protection realm. Its latest iteration is expanding coverage for replication technologies. Data Protection Advisor’s automated data collection and alerting and unified view eliminate manual efforts and reporting silos, further streamlining management of the data protection environment.

## Overview

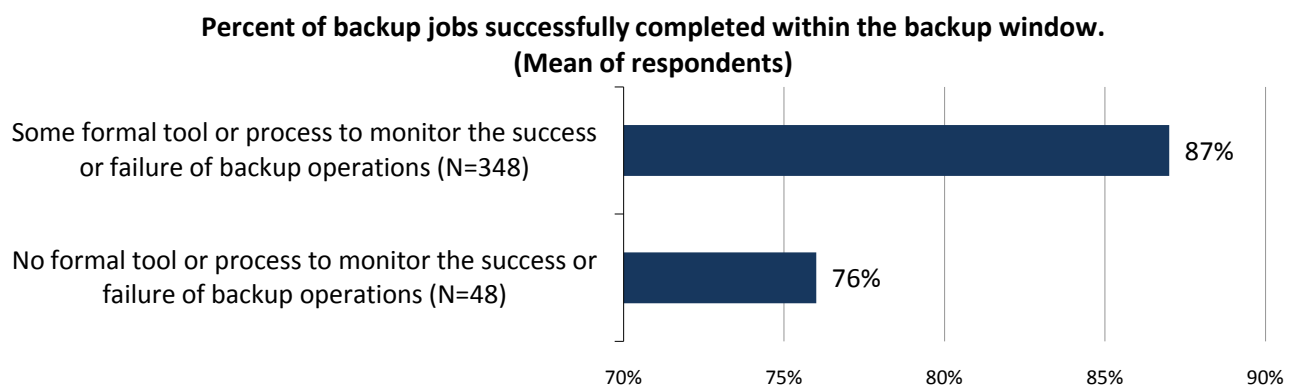
Explosive data growth, complex infrastructures, and governance and compliance pressures all create data protection challenges. Adding the current economic climate and the resulting cost reduction initiatives impacting staff levels, IT is tasked to manage more with less while still meeting service level agreements (SLAs). In order to do so, IT staffs need to leverage automation, implement best practices, and gain the insight needed to drive operational improvements.

Some operations gain visibility into the data protection environment and processes using ad hoc tools, manual processes, and scripting while others utilize backup reporting tools included with backup applications. Oftentimes, administrators resort to cobbling together the information they need in a reactive fashion. When it comes to managing copies of data created outside of backup applications (i.e., replication solutions), there are even fewer tools and less insight available. The result is stove-piped data and manual efforts that come up short.

For example, simply determining whether or not a backup operation was successfully completed has long been a vexing problem for administrators. ESG research found that 40% of respondents cited “difficulty validating backup and recovery success” as a major challenge in their current data protection environments.<sup>1</sup> When asked which technologies—if any—their organizations currently use to monitor backup and recovery operations, the majority of respondents revealed they are most frequently using the tools that come packaged with backup applications, while 12% percent of organizations indicated that they had no formal tools or processes to monitor the success and failure of backup operations.

When IT staffs take advantage of some form of reporting and monitoring solution, success rates for backup operations tend to be higher. For those ESG respondents using formal tools or processes, the percent of backup jobs successfully completed was 87%, compared with 78% for those users with no formal tools or processes in place (see Figure 1).<sup>2</sup> Similar results can be anticipated with monitoring and analysis of replicated applications and data.

Figure 1. Backup Success Rate Based on Usage of Backup Monitoring Tools or Processes



Source: Enterprise Strategy Group, 2008.

<sup>1</sup> Source: ESG Research Report, [Data Protection Market Trends](#), January 2008.

<sup>2</sup> Ibid.

More progressive IT organizations may venture beyond the tools within backup applications and log files to a data protection management (DPM) solution that delivers automated, cross-technology, cross-domain data collection and correlation to provide custom reporting and powerful analytics.

Since data protection environments consist of multiple components—beyond basic backup software—a more unified approach is warranted. In addition to backup applications, IT administrators need visibility into everything that creates or stores a copy of data for recovery purposes including replication technologies, storage devices such as SAN and NAS disk, and physical and virtual tape.

That's where EMC Data Protection Advisor (DPA) comes in. It enables backup monitoring, analysis, and reporting of heterogeneous server and storage infrastructures. With DPA, IT organizations can be more proactive with data protection management, enabling them to confidently analyze data recoverability, predict risk vulnerability, and identify opportunities for cost reduction. It monitors the data protection environment, providing the timely information and historical perspective that enable IT organizations to find and anticipate problems and make effective decisions.

## Analysis

EMC Data Protection Advisor doesn't just gather data from the major backup applications; it collects system information from backup servers and clients, replication solutions, physical and virtual tape libraries, and SAN/LAN/WAN switches in the data protection environment. Leveraging DPA's analysis capabilities, this collection of data helps identify areas of exposure and also aids in planning by providing a view into the utilization of resources for backup/recovery operations. Planning for growth can be more streamlined and efficient with improved visibility into the data protection environment and actual usage of resources.

Some of the key functions of EMC DPA include:

**Monitoring and alerting.** DPA performs real-time activity and event monitoring of resources in the data protection environment, including disk space, CPU, memory, network utilization, missed service levels, slow backups, and changes in backup volume or backup time. Consolidated information from systems, applications, and data protection applications in multiple locations is presented in a single interface, streamlining administration. Proactive alerting notifies administrators of out-of-policy events like missed service levels, replication gaps, or capacity threshold situations.

**Troubleshooting.** DPA provides access to information to aid in quickly identifying problems. All components of the backup data paths are examined and data is collected and presented to facilitate troubleshooting. The ability to drill down into specific devices or components to determine the causes of issues saves time. With replication analysis, hundreds of replication gaps are captured, allowing administrators to be alerted to potential recoverability issues and resolve them in a timely fashion.

**Performance optimization.** Charts and reports help identify performance bottlenecks, over- and under-utilized resources, recoverability gaps, and high- and low-utilization timeframes. Armed with activity information, workloads can be better balanced across resources to optimize performance. Significant time savings can be achieved by automating the analysis and tuning of the environment.

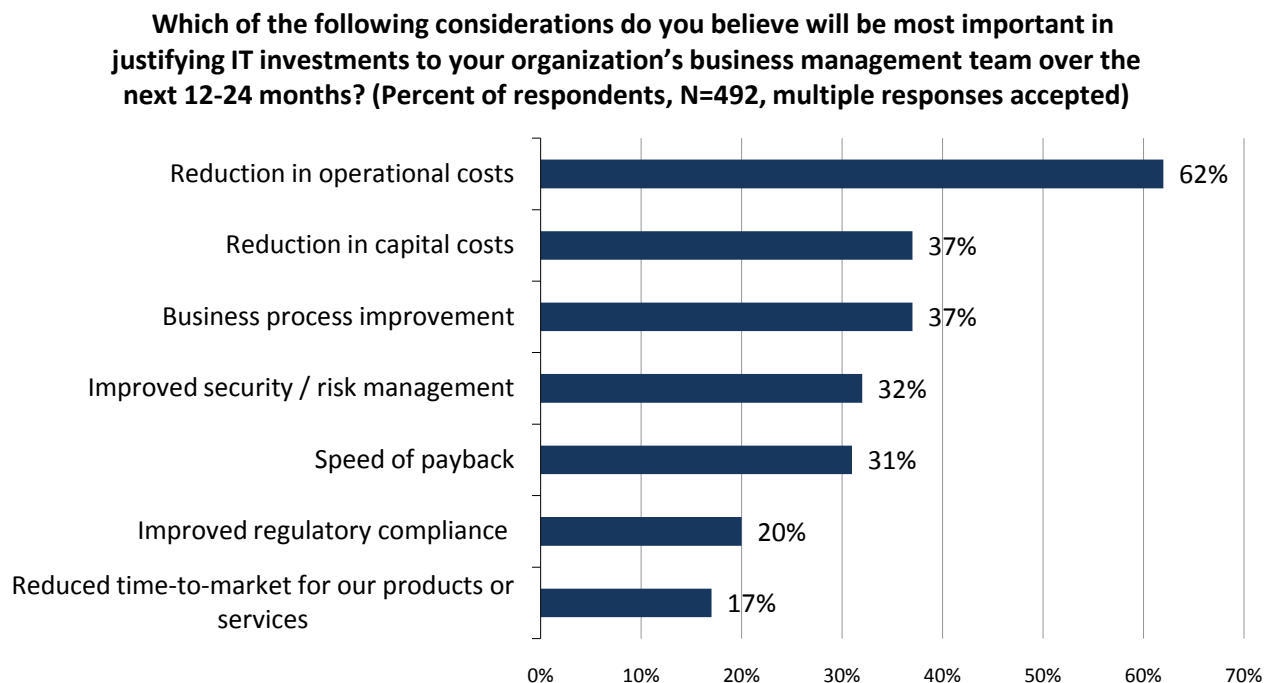
**Capacity planning.** Capacity trend analysis and forecasting demonstrates how requirements will evolve over time, allowing for better planning and budgeting. Formerly manual processes are automated via reports and alerting, eliminating fire drills and the over-expenditures that typically accompany them. Anticipation of problems leads to early action, which improves service levels.

**Reporting.** Reporting goes beyond the basics. With standard reports and the ability to filter them (even dynamically updating queries as new components are added and removed) to further customize information, DPA delivers a comprehensive view of the environment. The ability to publish reports, such as backup success/failure or chargeback, to constituents could also result in higher customer satisfaction.

Through these functions, IT can reduce costs, more effectively manage change, and minimize risk. Cost savings can be achieved in several ways, including higher operations staff efficiency, improved resource optimization, better purchasing decisions, and improved system availability. Change management improvements can be realized via monitoring and automation, resulting in improved performance and reliability, streamlined operations, and faster response times. Risk can be mitigated by resolving vulnerabilities, improving SLAs, providing more predictable recoverability, and improving preparedness for recovery, compliance, and audit events.

The benefits derived from EMC DPA are in line with considerations IT uses to justify investments. In fact, ESG research on data center spending intentions revealed respondents' belief that ongoing operational cost reduction is, by a significant margin, the most important justification for IT investment both now and over the next 12-24 months (see Figure 2).<sup>3</sup> This reinforces the view that organizations favor products and services that allow them to improve management processes, reduce headcount, or otherwise streamline operations.

*Figure 2. Most Important Considerations for Justifying IT Investments*



Source: Enterprise Strategy Group, 2009.

DPA's comprehensiveness is evident in its ability to monitor, analyze, and report on replication technologies, file servers, and VMware server virtualization environments.

**Replication.** Recognizing that data protection goes beyond backup copies, the latest release of EMC's DPA incorporates replication support. Basic analysis and alerts for WAN/SAN usage, replication lag, journal threshold, and link state change as well as chargeback, SLA, performance and capacity reporting are available for EMC RecoverPoint. For EMC Symmetrix and CLARiiON, DPA goes even further, providing analysis rules and detailed mappings. DPA discovers applications, databases, and file systems; maps them to physical storage devices; and tracks all recovery points. Identification and reporting of recoverability gaps exposes risk in the environment. Database support (now in the base DPA solution) provides monitoring and analysis for performance and policy enforcement on supported databases, automating these labor-intensive tasks.

<sup>3</sup> Source: ESG Research Report, [2009 Data Center Spending Intentions Survey](#), March 2009.

**File servers.** The DPA File Server support collects data from EMC Celerra and NetApp file servers to simplify management and improve operations. Key tasks—such as comparing file servers’ configuration settings to make sure they are paired for failover, identifying unprotected shares, and managing/monitoring uptime—can be easily performed. Similarly, for EMC Celerra Replicator, the latest release of DPA analyzes and sends alerts for CPU, memory, throughput performance, and user and file system quotas and volumes, and reports on Celerra Replicator relationships.

**Server virtualization.** Finally, DPA Virtualization support collects data from VMware servers to track performance, resource consumption, data protection, server location of host images, and more. DPA tracks server *and* guest data protection status, enabled via a VMware vCenter plug-in. Less time and effort are needed to gain access to information to monitor, manage, and troubleshoot virtual servers, contributing to reduced costs and improved operations.

## The Bottom Line

EMC Data Protection Advisor provides the visibility necessary to truly understand the details in managing large and complex data protection environments. Obtaining data on all of the major data protection components, serving up the information in different views and reports—published via a browser interface or sent via e-mail to constituents—and alerting administrators regarding out-of-policy conditions provides business, operational, and financial benefits.

In today’s economic climate, it’s never been more important to make the most of existing resources, including the operational staff that manages the data protection environment. EMC DPA provides multiple layers of efficiency that contribute to time and cost savings as well as capabilities that mitigate risk and, importantly, deliver higher service levels.