



# **Consolidation by the Numbers:**

*How Fortune 100 Companies  
Consolidate and Simplify DPM*



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## Overview

Consolidation efforts in the broader IT realm are mostly about merging and simplifying physical infrastructure. Consolidating data protection requires a different, process-driven approach. A centralized data protection reporting application speeds the effort by aggregating information about global operations. Organizations quickly realize seven key advantages that mirror the broad operational goals of every IT department. In addition, they can achieve physical consolidation, with assets realigned to match the organization's stake in protecting its most critical data.

## Consolidation—An Emerging Strategy for Overburdened IT Departments

As IT departments struggle to meet new demands—including compliance and accountability reporting, amid ever-growing amounts of data—consolidation has emerged as a key strategy.

Complexity has been widespread and growing in IT structures at large corporations, introduced over time by a number of factors, including:

- One application-per-server architectures, created over time through a piecemeal approach
- Mergers and acquisitions that result in disparate, extremely heterogeneous environments
- Historical deployment of single-purpose point solutions
- Key data stores in widespread, far-flung servers/locations, or residing on single direct-attached hard drives in remote offices

Consolidation aims to make IT structures more nimble and efficient by reducing the overall complexity.

At its core, consolidation is about simplification and standardization: fewer data centers, fewer servers, fewer disparate applications, fewer systems to manage. Consolidation frees the staff to take a more proactive role, focus more efforts on strategic improvements, and handle new burdens. The ultimate goal is to perform more tasks with fewer resources—a mandate faced by virtually every IT department today.

Organizations have realized that consolidation brings greater efficiencies and ability to respond to change. As a result, consolidation is moving from singular event to an ongoing process, as IT departments continually realign their resources with business goals.

## Data Protection Consolidation: Unique Requirements. A Different Approach.

Typically, consolidation efforts are driven from the viewpoint of physical infrastructure—specifically servers and storage. By merging data centers, consolidating applications on fewer servers, installing blade servers and/or moving from direct-attached storage to storage-area networks, IT has fewer discrete devices to manage and gains new efficiencies in managing the infrastructure.

In the data protection realm, however, the hardware-driven approach is ineffective for a number of reasons:

*Consolidating the broader infrastructure doesn't necessarily drive efficiencies in data protection.* Even if data and applications are moved to fewer servers or storage devices, the same amount of data needs to be protected.

*Consolidating data protection hardware requires a process-oriented view.* Just looking at physical assets is not enough. The number of backup servers and tape libraries is driven not just by the amount of data and number of data stores protected, but by the available backup windows and degree of protection required. This includes the frequency of full/incremental backups, the frequency of restores and the potential need for immediate restores on demand.

“ In data protection, a consolidation effort is best driven by focusing first on people and processes — gaining a view into data protection activity. ”

*Inefficiencies, where they exist, are by and large invisible.*

Data protection resources and the activity they support are by nature difficult to visualize. Rote backups of useless data, retention of outdated data, and regular, full backups of seldom-changed data are all too common, but they are difficult to detect without an exhaustive, time-consuming audit. “If I could only get a handle on what we're doing” is a common refrain among data protection team leaders.

The enterprises that have been most successful at consolidating their data protection efforts have focused on processes and people, rather than hardware. They have first gained a consolidated view of their operations with an easy-to-deploy, centralized data protection reporting application. In short order, they have achieved the simplification, standardization, cost take-out and shift to proactive management that is the ultimate goal of any consolidation effort.

## Achieving Broad Operational Goals: Seven Key Advantages

The advantages delivered by a report-driven data-protection consolidation effort are not trivial. These are broad, operational goals that virtually every IT department would like to achieve.

**Simplified management and standardization of processes.** Consolidated reporting reduces the reliance on internal (or external) experts devoted to the intricacies of individual backup applications. It brings all activity under a single umbrella for tracking, monitoring and reporting. The new standardized process includes:

- A standard, off-the-shelf application that replaces custom scripting solutions that require specialized knowledge and large amounts of time devoted to updating and maintaining
- A common means to identify the most critical failures, prioritize them for immediate attention, drill down to find the source of errors and spot patterns that indicate chronic failures
- Automated creation of standard reports, encompassing those most-often needed by upper management
- Direct report distribution to data owners, pushed out via e-mail or published to a web server
- Custom reports created by accessing a central database via standard querying methods and tools

**Consolidated views of operations.** A typical data protection environment employs backup applications from multiple vendors. A reporting application aggregates and organizes all data about protection activities, and canonizes it into a common format. It then presents a hierarchical view, from the highest-level view of the number of gigabytes backed up, to explicit details about individual errors. Because of this data consolidation, the IT department gains most of the operational efficiencies of standardization, without having to invest in new tape libraries, software licenses and other infrastructure. Most important, the data protection team moves beyond a focus on individual backup successes and failures, to a strategic view of the organization's total data protection activity. This enables a shift from a reactive stance to one that is both predictive and proactive.

## Case in Consolidation: Process Improvements

### Organization:

- Unilever

### Results:

- Met business users' requests for consistent success/failure reports
- Gained objective, third-party verification of performance, reliability and cost
- Published and shared all reports automatically
- Achieved 99% backup success rate across Europe

### Central management of global work

**teams.** A properly designed reporting application is agentless, requiring no installation or configuration on remote servers and imposing little to no change-management burden. In fact, it can be up and running within a few hours and fully configured within a matter of days.

In addition, it collects data about data protection activity, rather than monitoring the data itself. This puts a minimal load on the network and makes it possible to collect data across multiple, far-flung locations. It can look into the activities at data centers both individually and collectively, revealing the number of bytes being protected, restores performed, server loads and other operational data.

This global capability is especially important for consolidation efforts driven by corporate mergers. It allows the virtual merger of data protection efforts across heterogeneous environments, without a tear-out and rebuild.

**Task automation.** Much of the work involved in data protection is highly manual and time consuming. Simply compiling reports about backup successes and failures often requires sifting through log files generated by individual backup applications, and can take many hours. In a large-scale environment or if upper management calls for a large number of reports, it may even be a full-time job – or several.

A data protection reporting application automates much of this tedious manual labor, automatically generating complete, professional reports on schedule with minimal intervention.

**Proof of service delivery and compliance with regulatory mandates.** With consolidated reporting, the IT department is able to prove that services are delivered and data is protected, by furnishing regular reports to data owners and upper management.

They are also able to avoid the excessive drain on IT resources imposed by audits to prove regulatory compliance. Proof of data protection can be generated quickly and easily. And because the backup reporting solution is vendor neutral, captures activity over time and presents it, it removes any taint of skepticism that might arise because the backup application or IT department is reporting on itself.

## Case in Consolidation: Reduced Costs for Overprotected Data

### Organization:

- Deutsche Bank

### Results:

- Created service-level agreements to reduce retention periods, and related media and warehousing costs
- Eliminated 1200 TB in overprotected data in one year
- Removed 1600 unnecessary tapes for one overprotected server alone
- Implemented chargeback system, causing data owners to voluntarily exclude non-essential data

**Transition from existing processes to best practices.** By boosting the visibility of data protection activities, consolidated reporting makes it possible to incrementally improve processes and efficiencies. It supports the evolution from a situation in which the scope and impact of data protection is typically unclear and unknown, replacing it with clear, objective measures of performance. Metrics and standards can be established, performance goals set, and the bar continuously raised to meet the organization's goals for protection and compliance.

Ultimately, consolidated reporting allows Service Level Agreements (SLAs) to be implemented, which provide performance promises for data owners, backed with proof of service delivery.

**Management of increasing data burden without additional resources.** Aided by a consolidated view of data protection

activity, organizations have found that they can reallocate resources to meet increasing demands for data protection, often without needing to ask for new resources.

They can spot resources such as backup servers and libraries that are under-used and leverage them, eliminating long idle periods for expensive resources. And staff previously devoted to script maintenance, manual report creation or bogged down in non-essential troubleshooting can be reassigned to plan for and handle data growth.

At the same time, data protection teams are able to see the trends in data growth and forecast accurately. When the sheer volume of data outstrips the data protection capacity, they can present clear, empirical evidence of the need for additional resources.

## The Data to Drive Strategic Hardware Consolidation

By making operations visible, consolidated reporting reveals opportunities to better utilize the hardware that supports those operations. It reveals instances where hardware can be merged, moved, or repurposed, or schedules adjusted to make more time-efficient use of expensive resources.

At virtually every organization that undertakes report-driven data protection consolidation, they find:

- Tape libraries are used to a fraction of their capacity, or sit idle much of the time
- Backup servers with additional window capacity that can be devoted to additional backup jobs

## Case in Consolidation: Cost Take-Out in Hardware and Operations

### Organization:

- Large Software Company

### Results:

- Identified over 200 tapes stored overseas, past retention period
- Saved equivalent of two FTEs
- Improved overall operations while absorbing 300% data growth
- Uncovered 100TB of failed volume backups, saving \$600K/year
- Achieved 10:1 ROI
- Realized 30% reduction in demand for services overall, by implementing chargeback

- Overprotection of non-critical data with too many full backups and/or redundant backups, allowing those backup servers and libraries to be freed for other uses
- Retention of media with irrecoverable or outdated data

IT organizations can ultimately achieve hardware cost take-out for data protection, as well as infrastructure simplification with fewer backup servers, tape libraries and tape sets to manage. Those lower hardware costs are matched by a reduction in man-hours devoted to duplicate and unnecessary procedures. They include monitoring and maintenance of unnecessary backup jobs and the tape swaps that come with them, backup retries due to unexpected window overruns, and failed recoveries due to irrecoverable data.

An extremely effective strategy for lowering total data protection costs across the board is to implement a chargeback system to the data owners. A centralized data protection reporting application tracks the cost of services, and assigns them by business unit, location, server OS, backup products or other category. This virtually always results in a decrease in hardware, media supplies and staffing requirements—all driven by the data owners themselves. Through this strategy, IT can not only achieve consolidation, but consolidation that reflects the protected data's true value to the organization.

## About Bocada®

Bocada is dedicated to ensuring that data protection services, systems and processes meet organizational objectives for quality, cost and compliance. Our solutions provide objective insight into SLA performance, helping companies to improve data recoverability, reduce the cost of managing data protection operations, ensure compliance and communicate results. Bocada solutions have been deployed in more than 180 market-leading customer and partner environments worldwide, including Amgen, BankOne, Cap Gemini Ernst & Young, SBC Sprint, Unilever and Xerox. Bocada is a private company headquartered in Bellevue, Washington.

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10500 N.E. 8th Street, Bellevue, WA 98004

Tel: (425) 818-4400 | Fax: (425) 818-4455 | [sales@bocada.com](mailto:sales@bocada.com) | [www.bocada.com](http://www.bocada.com)

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