



Data Protection Management Assessment: Step One on the Path to Excellence

Step **1**

The Bocada Data Protection Management Path to Excellence™ (DPM P2E™)





Overview

The Bocada Data Protection Management Path to Excellence (DPM P2E™) model is a well-defined, phased approach to achieving operational excellence in data protection management.

An objective assessment of current data protection activities and outcomes is the essential first step on the path. On its own an assessment can reveal many opportunities for improvements that help cut costs, streamline processes and simplify the infrastructure. These immediate results, however, are only the beginning of what can be accomplished along the path. The improvements free IT staff time, allowing them to apply their energy to higher-value tasks and services, acting on the insight delivered by automated, repeatable assessment. The team is able to refine policies, prove and improve service delivery, manage risk to the enterprise and ultimately achieve operational excellence.

The Benefits of a DPM P2E Initial Assessment

Regular, repeatable and automated assessment helps the data protection team track down problems and solve them, continuously improve service levels and increase efficiencies. Even enterprises that seem to be further along in the DPM P2E—for example, those with established policies that may be delivering against SLAs—can profit immensely from assessing the data protection environment.

Typically organizations that are candidates for an initial assessment of their data protection infrastructure exhibit the following characteristics:

- Have limited visibility into company-wide success and failure rates (often collecting data manually)
- Have not conducted recent policy reviews
- Existing SLAs are implied, but not agreed on

The Data Protection Management Path to Excellence (DPM P2E)

Developed with leading enterprise customers, the Bocada DPM P2E is an actionable methodology that shows how the Bocada solution can be applied in phases to continuously improve the effectiveness of data protection operations.

When customers implement new DPM processes using the P2E as a roadmap, they achieve:

- Ensured recoverability
- Improved services delivery
- Effective risk management
- More efficient and effective responses to audits
- Operational excellence

The P2E leverages the collective experience of Bocada enterprise customers over the past four-plus years, and draws upon their best practices using the Bocada Enterprise solution. The P2E model steers organizations through the progressive stages and helps them incrementally demonstrate higher degrees of operational excellence. The P2E phases include:

Phase 1 Initial Assessment

Reveal the effectiveness of an organization's data protection environment, pinpoint and eliminate trouble spots and identify opportunities for improvement

Phase 2 Policy Development

Modify policies and processes to better ensure success, recoverability and IT business alignment

Phase 3 Services Delivery Management

Accurately set services management SLAs and effectively measure adherence and success rates

Phase 4 Risk Management

Utilize information to expose risk areas, identify unprotected assets and confidently pass compliance audits

Phase 5 Operational Excellence

Standardize on the processes developed in previous phases, enable streamlined operations, reduced TCO and increased IT business contribution.

Each phase of the path represents a distinct level of operational effectiveness. As the IT operation moves up from one level to the next, it realizes a wide range of benefits such as a shift from reactive firefighting to proactive management, and greater appreciation for IT's total contribution to the business.

- Company is challenged to pass audits
 - Response times too long
 - Insufficient records available
- Unaware of customer need -- which applications are critical?
- Have no benchmarks to measure effective utilization rates

An automated, heterogeneous DPM reporting tool—such as Bocada Enterprise—is essential for performing a complete and accurate assessment. Bocada Enterprise easily deploys into large, multi-site environments and supports multiple backup vendors, providing a single pane-of-glass view across the entire data protection environment.

By effectively conducting a DPM assessment organizations should expect to reap benefits far beyond identification of common errors. The overall benefits of implementing the first phase of the P2E are as follows:

- Reduced task time and cost through automated data collection
- Faster problem resolution to ensure recoverability
- Elimination of repetitive problems to reduce trouble tickets
- Identification of recoverability levels
- Increased alignment with internal/external customers
- Laying the foundation for improved service processes and auditability

Reduced task time and cost through automated data collection

Bocada Enterprise greatly decreases the time spent finding and troubleshooting individual errors and generating reports. It automatically collects data about DPM activity, consolidates it into a database and disseminates it in aggregated reports with drill-down capability, allowing users to zero in on details of interest. This makes it far more efficient than typical homegrown solutions, which usually employ reporting tools from various backup software or hardware vendors tied together with scripts and manually created spreadsheets.

Universally, implementing this reporting has freed valuable staff time spent combing through log files, maintaining custom scripting solutions and manipulating Excel spreadsheets. Instead this time has gone toward higher level or more proactive tasks such as effecting improvements, strategic planning and implementing measures to prevent problems rather than simply respond to them.

This reporting imposes very little overhead of its own. Agentless design means that no client software has to be installed on individual backup servers. This eliminates change management issues when backup software or other alterations are made in the environment. Installation often takes less than an hour and typically data protection teams are accessing useful reports the same day.

A managed-services provider's data protection team, serving a major airline, was able to save 40 man-hours a week through Bocada reporting. The time recovered was mostly in the hours spent reading logs in order to troubleshoot individual failures.

Faster problem resolution to ensure recoverability

With automated assessment from Bocada Enterprise administrators no longer need to laboriously scan through large log files to identify problems. Bocada delivers clear success/failure indications at a glance, including the error types, data sources and protection assets involved. The interface allows drill-down to the full text of the error message as produced by the backup application, which speeds the troubleshooting process.

A managed services provider was charged with protecting 30 TB of data for a leading manufacturer. Within five minutes of installing Bocada Enterprise the team was pulling reports "with a depth of analysis and information they hadn't been able to accomplish in three months with a homegrown tool."

Elimination of repetitive problems to reduce trouble tickets

A high-level assessment takes the data protection team out of firefighting mode. It spots key assets subject to cyclical or chronic failures by revealing errors across time, by backup server, location or other classification. This allows administrators to quickly spot repeat failures and resolve dozens of errors at once. They can easily detect recurrent file-open errors, tape loads regularly missed, window overruns, capacity shortfalls and network connectivity problems that could each underlie hundreds of individual errors.

In the experience of Bocada, enterprises have improved their success rates by 25 - 55 percent in short order by remedying the most immediate and glaring errors.

At an international telecommunications company Bocada revealed that the majority of Windows NT backup jobs were not completing successfully with more than 3,000 backup-related errors in the environment. The team sorted the errors by category and focused on high-priority sleuthing of the most chronic errors. They quickly brought the success rate from 25 to 80 percent.

Identification of recoverability levels

An assessment from Bocada Enterprise gives the data protection team—often for the first time—a true overall picture of backup successes/failures and data recoverability.

In nearly all cases the assessment uncovers unprotected assets and problems that have flown "under the radar." Enterprises regularly overestimate their backup success. One analyst firm has estimated that approximately 60 percent of backups fail, resulting in irrecoverable data. The Bocada field experience corroborates those findings. Before assessment, enterprises often estimate backup success rates of 90 percent or better, while in truth only a few data protection teams with extremely labor-intensive processes actually achieve such high rates. Most often, success rates fall in the range of 50 to 60 percent.

Increased alignment with internal/external customers

With a clear, hierarchical view of data protection activity administrators are able to view individual data assets and reassure customers that their data is protected. Furthermore, teams can assure data own-

ers that their most valuable assets are receiving the protection they deserve with appropriate levels in terms of RTO and RPO.

A managed services provider, serving an international pharmaceutical company, found that: "From a perception standpoint having Bocada Enterprise turned things around. We may have 400 job failures a month, but we're also running 50,000 jobs a month. Maybe in the user's mind the server is failing all the time, but when they look at the report, they can see it's actually succeeding most of the time. They get a more accurate read and it helps them feel protected."

Laying the foundation for improved processes and auditability

Assessment is not a one-time event, but a continuous process on the path to operational excellence. An automated assessment via a consistent, repeatable process enables fine-tuning amid ever-changing storage environments. Most important, it forms the basis for reaching more strategic and higher-level business goals, such as compliance reporting and aligning protection efforts with business value.

For a major telecom and wireless company: "Success rates have moved from the 60 percent range to consistently more than 98 percent. We use Bocada to support not only operational efforts to achieve and maintain service level commitments, but even more importantly to review performance with very senior management and to meet IT governance requirements."

A Structured Approach to Assessments

Bocada Enterprise presents numerous predefined reports with adjustable parameters and filtering criteria. These reports support the complete DPM P2E beginning with a structured approach to the initial assessment. The following are key best practices relayed by Bocada Enterprise users.

1. View success/failure reports by business priority

Bocada Enterprise can map data assets by application, department, operating system, priority, region or any other classification scheme. This allows protection teams to identify and track the most business-critical assets such as the CRM or financial data, separate from lower-priority data that is largely static or on users' desktops.

The various *Backup Success and Failure* reports show the mapped data assets in a tree display with graphical readouts that clearly show successes, partial failures and failures, sub-categorized by volume and with drill-down to the actual files involved. This allows administrators to quickly assess the severity of the failures and the risk they pose to the business.

The *Success and Failures with Backup Level* report shows when the last full backup was completed, while *Failures in Last 7 Days* reveals the last successful backup of any type. These assist in further assessing the risk to the data, especially data that is highly changeable, and whether RPO and RTO objectives can be met. *Backup Failures* shows only the failures for prioritizing troubleshoot-

ing. The *Locked and Skipped Files* report, which can be sorted by file type, backup server and backup client, zeros in on critical files that are going unprotected. *Orphaned Servers* identifies servers that are receiving no protection at all.

2. Follow the 80-20 rule; solve the most common problems first

A hierarchical view of failures allows data protection teams to see patterns of failure and resolve whole classes of errors all at once. Without this hierarchical view teams typically devote much of their time to hunting and pecking, resolving errors on a one-off basis. With a hierarchical view administrators can sort and rank-order the most prevalent errors, often resolving entire classes of similar errors all at once.

The *Errors by Type* report shows the most common errors throughout the enterprise to help direct the troubleshooting effort. Other reports are useful for detecting recurrent window overruns; files habitually left open; network throughput problems; or chronic failures on individual servers, disk arrays or tape drives that could indicate hardware problems.

3. Use trending to analyze enterprise backup growth and better plan for resource requirements

At the macro level, *Total Backup Activity by Week, by Month and by 6-Month* report the total number of bytes backed up across the entire data protection environment, giving the highest possible trending views for overall planning.

Top-Ten Clients is often the most useful report for operational planning because it shows the largest consumers of protection resources at a glance. A related report, *Ten Longest Jobs*, shows the jobs that most bear watching for potential window overruns which could severely impact the entire slate of backups. Reports of loads on individual servers, volumes backed up by tape libraries, media utilization and Gantt charts that show backup window usage reveal when capacity overruns are imminent.

4. Use Load balancing reports to determine how resources are being used

High level views of total bytes backed up by each server, by each library and the load on each server over time allow protection teams to better balance the load across all data protection assets for maximum efficiency.

Library Utilization 24x7 is a three-dimensional graph of utilization across the entire week and is especially designed for balancing loads. *Library Level Most/Least Utilized Devices* singles out the libraries most in need of load balancing, while *Library Utilization*, a Gantt chart, clearly shows open windows.

The *Average Load by Day* report shows the day-to-day load and which activity is devoted to different backup types. It is especially designed to show how the mix of full and incremental or differential backups is impacting overall efficiency.

5. Use reports to communicate with customers on success

Once the initial assessment is complete and the major shortcomings resolved, Bocada Enterprise allows regular reports of successes and failures to be published directly to the data owners via the Web. The reports are secure as users can only view information related to their business needs. Typically these are high-level views of successes and

failures, total volumes of data backed up and the number of jobs run and restores performed. Users can easily drill down into reports to gather additional information and configure the reports for different business views. Once set up and scheduled by the administrator, outputting these reports requires little additional IT intervention.

By automatically publishing the data, the data protection team moves from a stance where they only draw attention if a restore fails to one where their success at meeting objectives is regularly visible.

Initial Assessment and its Overall Contribution to the DPM P2E

An accurate assessment is invaluable in its own right but also lays the essential groundwork for progressing along the DPM P2E. The steps after the initial assessment are:

Policy Refinement. An assessment delivers the necessary insight into current policies, identifying opportunities to make improvements to achieve cost savings, boost efficiency and reduce the number of trouble tickets.

Services Delivery Management. Bocada Enterprise pushes proof-of-performance directly to data owners, including the cost of services. This helps to bring service level demands into line with data value.

Risk Management. Complete and automated documentation that policies are being followed and data is recoverable increases confidence in the IT department. Ability to respond quickly and accurately with proof-of-compliance and audit requests reduces overall risk to the business.

Operational Excellence. Using ongoing assessments to automate, standardize and consolidate on an ongoing basis reduces total cost of ownership, while tightly aligning IT with the business.

Conclusion

The DPM P2E Initial Assessment offered through Bocada Enterprise delivers impressive results. Companies that have completed this step have realized significant and immediate returns — lowered costs, improved backup success rates, quicker response times to audits and overall risk reduction. But an assessment is much more than a mere troubleshooting phase. It provides a platform for achieving operational excellence, allowing IT operations to advance along the Data Protection Management Path to Excellence.

About Bocada

Bocada provides automated insight and visibility into data protection processes, enabling IT organizations to confidently analyze data recoverability, predict risk vulnerability and identify opportunities for cost reduction. Based on patented, agent-less technology, Bocada solutions deploy rapidly and scale to meet the demands of the largest multi-vendor data protection environments. More than 400 brand-name customers and partners worldwide trust Bocada for their data protection operations, including Microsoft, AT&T, Sprint, Unilever and Valero Energy. Headquartered in Bellevue, Washington, Bocada is privately held, funded by leading venture investors. For more information, visit: www.bocada.com

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