



# **Ten Questions to Ask *Before You Buy a DPM Solution***

***(And 50 More That Will Get All  
the Answers You Need)***



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More and more IT organizations are recognizing the critical role that data protection management (DPM) software can play in assuring that valuable corporate assets are protected. In fact, the storage-software market experienced its seventh consecutive quarter of double-digit annualized growth. And much of the spending was on software for data protection and the related functions of storage resource management and compliance.<sup>1</sup>

The increasing interest in automated solutions has been spurred by fast-growing data stores and the complexity of managing them. During one recent 12 - 18 month reporting period, demand for storage hardware rose 25 - 85%.<sup>2</sup> Other factors underlying the need for DPM solutions include:

- Security concerns and the potential impact of data loss on business continuity
- The looming possibility of penalties for non-compliance in the event that lost data cannot be recovered
- Mergers and acquisitions, resulting in distributed data storage on heterogeneous systems which must be efficiently managed
- Pressure on IT spending, causing departments to take a hard look at manual data protection processes that are often costly, time-consuming and error-prone

### **Data Protection Management (DPM) Defined**

Data protection management is a new class of software. DPM solutions allow organizations to ensure that their data protection operations meet business objectives for service level, cost and compliance. An ideal solution delivers insight that drives a wide variety of process improvements. It also answers the fundamental question that keeps CIOs awake at night: "Is our data protected, and can it be recovered in the event of a disaster?"

Many IT departments are currently or may soon be investigating data protection management software. Solutions are available from:

- Individual backup application vendors
- Independent third-party software companies that focus exclusively on data protection
- Software vendors with DPM solutions offered as part of a broad line of network management software

This paper presents a summary of issues to consider and questions to ask when evaluating data protection management solutions.

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<sup>1</sup> IDC, Worldwide Quarterly Storage Software Tracker, Q2 2005

<sup>2</sup> Meta Group, as reported in *Network Computing*, Sept. 2004



## Issues

### Scalability

A scalable enterprise-level solution must have the capacity to collect data on millions of transactions, across thousands of servers at multiple locations, and present the information to hundreds of users simultaneously.

System capacity and performance, however, is only part of the equation. Practical maintenance issues can be equally important. Experience has shown that a modular, agentless design is key to a system that scales well.

### Heterogeneity

Enterprise data protection is fundamentally heterogeneous. Thanks to mergers and acquisitions, the trend toward heterogeneity in data protection systems is increasing.

Consolidation and standardization can help, but wholesale replacement of servers, backup software and devices is usually too costly to be practical. A solution that consolidates information from disparate backup solutions might be a better fit.

### Installation and Maintenance

The goal of a DPM solution is to improve processes and ease management. A solution that is cumbersome to install and maintain adds new complexity to the environment, potentially offsetting the gains.

Agent-based systems are time-consuming to deploy and costly to support, because of the need to apply patches and upgrades on potentially hundreds of servers and devices every time there is a software or hardware change.

### Production Platform and System

Some solutions offer a choice of operating systems and databases, while others focus on a single operating environment.

## Questions to Ask

- Has the solution been successfully used in production installations of similar scope? With a similar number of servers? Across a distributed heterogeneous environment with multiple, far-flung locations?
- Does it use a modular approach that promotes scalability?
- Even if your immediate needs are met with a small-scale deployment, do you foresee a need for other internal groups to access the system in the future?

- Does the solution support all the backup applications that you are using, or might potentially use?
- What about support for other vendor-specific applications that are key to your environment, such as Oracle® RMAN and StorageTek® ACSLS?
- Is the solution furnished by or aligned with a single backup application vendor? Does this mean products from other vendors aren't fully supported, or deliver compromised or less-than-full functionality?

- What is the vendor's track history with installs? How long do they take, and how long before the solution delivers useful information?
- How frequently do you upgrade operating systems or backup applications? Will this mean installing new data collection agents for DPM solutions that use them?
- If a solution claims to be agentless, is it completely agentless? Or does it actually use a mix of agents and agentless technology?
- How easy is it for users to get up to speed quickly? Is advanced training available to tap more sophisticated functionality as your experience grows and your needs evolve?

- Is a choice of production platforms for your DPM solution important to you? Does it outweigh the impact that vendor support for multiple environments might have on their ability to resolve problems and fine-tune performance?
- Do you foresee integrating the DPM system with trouble-ticketing and other systems, which would call for an open database schema?
- Is the product built on a proven, extendable platform that is poised to support changes to your infrastructure, as well as new/emerging technologies such as CDP?



# Functionality and Usability

Issues	Questions to Ask
<h3>User Interface</h3> <p>Web consoles and dashboard views provide convenient user access from anywhere. But that advantage might be offset by security issues, and the depth of functionality and reporting supported.</p>	<ul style="list-style-type: none"><li>○ Does the solution provide rapid access to detailed information that directly impacts data protection? Is the interface for creating and generating reports straightforward and easy to use?</li><li>○ Do you prefer “any-machine-from-anywhere” Web access, or the more flexible reporting and functionality that a dedicated console application typically provides?</li><li>○ Do you prefer a model in which data owners have direct access to some functions, that can include running reports or generating restores? Or, one in which administrators control access to the reports available to the rest of the organization?</li></ul>
<h3>Data Collection</h3> <p>Data collection should be performed in a way that minimally impacts the production environment. Collecting metadata at scheduled intervals has less impact than real-time collection.</p> <p>Polling at intervals, such as hourly, is more than adequate for gathering data focused on data protection. Real-time collection is more appropriate when the solution's primary focus is on alerts and monitoring.</p>	<ul style="list-style-type: none"><li>○ Can the system retain historical data across large environments for proof-of-compliance and capacity planning?</li><li>○ Does the solution use collection methods that deliver the most complete and accurate data possible – including directly querying the backup products when those methods are supported?</li><li>○ How much of the data collected is directly related to data protection?</li></ul>
<h3>Troubleshooting</h3> <p>A solution that consolidates information from different backup vendors, normalizes the error reports and allows the data protection team to define appropriate criteria for success/failure effectively prioritizes the troubleshooting efforts. Rather than jumping from one isolated error to the next, the team is able to focus on fixing what truly matters, spot chronic failures and boost the overall success rate.</p>	<ul style="list-style-type: none"><li>○ Does the solution report successes and failures in a way that allows the team to prioritize their efforts and focus on protecting the most critical data?</li><li>○ Does it canonize results from different backup vendors so that similar errors are seen as similar in severity? Can it filter out locked-file and other errors that might be trivial?</li><li>○ Can it reveal patterns of backup failures, so that chronic or repeat errors can be quickly seen and corrected?</li><li>○ Does it allow the backup administrator to start from a high-level view, and drill down to the source error message in the backup application?</li></ul>
<h3>Information Delivery</h3> <p>A solution that quickly delivers extremely pertinent, enterprise-proven reports may be of more value than one with hundreds of predefined reports that are less focused.</p> <p>The ability to automatically publish reports through a Web interface, with role-specific security for access, can eliminate hours spent manually generating and disseminating reports.</p>	<ul style="list-style-type: none"><li>○ Are the most valued, most necessary reports easy to create and run?</li><li>○ Do all of the reports answer useful, high-value questions about the backup environment, data protection efforts and results?</li><li>○ Is there flexibility to create reports beyond the predefined set? Can the database be directly queried to create specific, custom reports should the need arise, or work in conjunction with data analysis tools such as Crystal Reports?</li><li>○ Can the reports be automatically published to the Web and notifications sent via e-mail? Is access to reports and contents permission-based, and customizable by user?</li><li>○ Does the scheduler support extremely fine-grained, customizable scheduling for automated reports?</li></ul>



Issues	Questions to Ask
<h3>Visibility</h3> <p>Some products are largely focused on collecting data from individual pieces of network hardware including servers and tape drives. These are primarily alarm-and-monitoring systems that alert administrators to specific backup failures.</p> <p>Other solutions provide operational information, but go beyond to make overall data protection operations visible. They provide insight that drives system improvements, increasing the overall backup success rate while lowering data protection cost.</p>	<ul style="list-style-type: none"><li>○ Does the solution collect information that seems more focused on responding to alarms or troubleshooting isolated incidents? Or is it focused on telling you that your data is protected and recoverable?</li><li>○ Can you zero in on your most strategic and valuable data assets, and immediately tell how well they are protected?</li><li>○ Can the vendor furnish documented proof of how its product has improved overall backup success rates and reduced costs? Can they give examples of positive results in enterprises and environments that are similar to yours?</li></ul>
<h3>Resource Allocation and Capacity Planning</h3> <p>A solution that provides views into the amount of total data being backed up, utilization of tape libraries, backup windows available and other metrics is an invaluable tool for reallocating underutilized resources. The ability to track that data over time is useful for planning future expansion.</p>	<ul style="list-style-type: none"><li>○ Does the tool support high-level views that show how expensive resources such as tape libraries are being underused, or nearing capacity? Can it assist in reallocating resources for greater cost efficiency?</li><li>○ Can it reveal when data stores are receiving a degree of protection that far outstrips the value of the data to the organization?</li><li>○ Does it support flexible grouping of servers and storage resources for creating aggregate views, such as by physical location or business unit?</li><li>○ How much historical data can the system track and retain? Does it present that data as historical trendlines over time, for forecasting and planning purposes?</li><li>○ If it has a forecasting function, how sophisticated are the algorithms? Can your enterprise confidently rely on its predictions?</li></ul>
<h3>Best Practices</h3> <p>Some solutions directly support reporting against service-level agreements, clearly showing how data protection teams are meeting their obligations to data owners. By pushing these reports regularly to the business units, IT departments are able to make the move from a reactive stance in which they respond to problems, to a proactive role that demonstrates they are delivering valuable services to the organization.</p> <p>In addition, making data protection services immediately visible and measurable provides a means for establishing controls and practices, automating them and driving continuous improvement.</p>	<ul style="list-style-type: none"><li>○ Does the solution support service-level agreement (SLA) reporting?</li><li>○ Does it support automatic publishing of performance reports directly to the data owners, without manual intervention which might call the reports into question?</li><li>○ Does the solution not only report performance against the SLAs, but also reveal the origin of the shortfalls so the data protection team can improve its performance?</li><li>○ Does it support chargeback functions so that data owners can see the actual cost of protecting their data, effectively bringing the degree of protection into alignment with the data's value?</li><li>○ Can it immediately output proof that data is protected and recoverable in the event of an audit or regulatory challenge? Does that proof come from an objective, independent third-party company, rather than from a backup vendor which may not be acceptable to an auditor?</li></ul>



Issues	Questions to Ask
<p><b>Product Support and Maintenance</b></p> <p>Solid pre-sales support can be an excellent indicator that a company has the customer focus and resources in place to support you fully after the sale.</p>	<ul style="list-style-type: none"> <li>Does the company offer educational materials to assist you in the buying process?</li> <li>Can you get a clear explanation of how the product works, and how it fits into your data center?</li> <li>How often does the company release new versions, hot fixes and upgrades?</li> <li>What do their maintenance and support contracts include?</li> <li>Will the solution's complexity mean that a paid, full-time, long-term, on-site consultant will be required?</li> </ul>
<p><b>References</b></p> <p>Customers who have had success with the product, in an environment similar to yours, are the best assurance that a product will live up to its promises.</p> <p>Adoption by managed service providers is an especially good indicator. It proves the solution can work in a broad array of environments, delivers the benefit of vast experience and knowledge of best practices, and has evolved in step with the industry.</p>	<ul style="list-style-type: none"> <li>How many customers does the vendor have? What size are the companies? Do they represent a handful of vertical markets, or a broad array of industries?</li> <li>Can they provide references in the same industry vertical as yours? In similar-sized environments? In enterprises that face the same challenges you face?</li> <li>Does the vendor provide services and have close working relationships with managed service providers, who provide data protection services for large global customers?</li> <li>What is their track record of annual support renewals (a key, objective measure of satisfaction)?</li> </ul>
<p><b>Focus and Stability</b></p> <p>Enterprise software development is a long-term proposition that requires solid financial backing. It's important to choose a vendor with staying power who can continue to develop and support the product.</p>	<ul style="list-style-type: none"> <li>How long has the company been in business?</li> <li>What is the company's focus? Is it solely on data protection management? On data protection and related activities? Or on selling backup hardware and applications, or supporting a broad range of network management functions?</li> <li>How many employees do they have? How many are devoted to working directly with customers in the field?</li> <li>If they are private, what is their funding source? How much money have they raised? When was the last time they raised money?</li> </ul>
<p><b>Futures</b></p> <p>The best long-term security comes from a vendor who can not only talk about future plans for their product, but has a track record of delivering on them.</p>	<ul style="list-style-type: none"> <li>When the company sells to you, are they selling what the product does now or what it will do in the future? Does the current version have the functionality you critically need? When they talk about the future plans for the product, are those plans a good fit for your future plans?</li> <li>Does the company regularly communicate with customers about their needs and expectations? Does it incorporate that feedback into new features and versions of the product?</li> </ul>
<p><b>Community</b></p> <p>A company with an established product and a good reputation will never shy from the limelight. A search for news stories about the company and product should turn up a substantial amount of material written by objective, third party analysts and reporters. In addition, the company should seek and facilitate meaningful exchanges with customers and prospects.</p>	<ul style="list-style-type: none"> <li>What do analysts say about the company and product?</li> <li>What kind of reviews or articles can you find? Are they favorable? Frequent?</li> <li>Has the company or product won any awards?</li> <li>Do they offer a forum for customers to exchange information with peers, or ask questions of the company?</li> <li>Are they easy to contact? Is there a phone number or e-mail address on their Web site that connects you with a person almost immediately?</li> </ul>



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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