



Keep **DATA** Out of **DANGER**

Use the right tools to implement your large-object strategy

If you haven't seen "Attack of the Killer LOBs" yet, it's coming soon to a DB2* environment near you. No, this isn't a new science fiction movie—it's a lurking danger in your environment today. Your vital data may have already been compromised, leaving you with a customer service, legal and compliance nightmare.

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Even worse, because of the structure of DB2 large objects (LOBs), you might not even know you've been hit by data corruption until an employee or, worse yet, a customer can't access the necessary information to resolve a question, support or dispute a claim, or prove compliance. How much could this simple mistake cost your company's brand or bottom line? Waiting to learn you have a data integrity issue isn't a wise strategy in today's

digital economy. Fortunately, you can prevent this attack on your LOBs with the right strategy and modern tools.

Reality Check

Digital business keeps expanding, and the amount of data stored in DB2 is growing at staggering rates. In addition, new types of unstructured data, such as pictures, videos, voice recordings and other large documents, are commonplace.

Unstructured data is saved as LOBs and accessed differently from structured data. Traditional structured data (e.g., account information, names, addresses, etc.) is processed at incredible speeds every day. In contrast, unstructured data is often written into a DB2 LOB and accessed months or years after being saved. Because this data, such as a customer call recording or document image, is often needed to resolve a dispute,

settle a claim or prove compliance, its integrity is important.

Procedures designed to prevent this scenario from happening exist, but traditional LOB data management practices are difficult, disruptive, expensive and seldom used. As a result, employees and customers may find problems accessing the data before the IT staff is aware. LOB issues don't occur frequently, but when they're discovered, it's often too late to recover the data.

Because LOBs aren't regularly accessed and traditional management best practices are difficult to implement, some organizations are left wondering if it's necessary to spend time performing regular maintenance on them. Yes, it absolutely is.

Maintenance Matters

To understand why a new strategy is required, we must look at the structure of LOBs. LOBs are stored and maintained differently from traditional relational data.

This means that the traditional DB2 database maintenance practices running daily in your environment aren't ensuring the integrity of your LOB data like they do for your normal row and column tabular data. Some database professionals incorrectly assume that a standard DB2 reorganization of their LOBs will detect these integrity issues, but this isn't the case.

LOBs require more attention, including extra steps to check structure and data integrity by running three utilities:

1. Check index
2. Check data
3. Check LOB

These must be run frequently enough to capture any problems while a valid image copy is

available. Once they are done, run regular reorganizations. These processes have their own challenges of resource consumption and application availability.

Understanding and Mitigating the Risk

Organizations need better visibility into LOBs. Based on a survey, only 26 percent of respondents said they know how many LOBs they have and over 80 percent said they weren't regularly checking the integrity of them.¹

For unstructured data use to be successful, organizations need an effective strategy to manage LOBs—whether this involves using existing tools or a modern solution that can manage structured and unstructured data automatically and intelligently. Developing a strategy is important for three key reasons:

1. Corrupted LOB data can be lost forever if not properly maintained. Organizations must be able to validate data integrity at all times. In a recent survey¹, more than 50 percent of DBAs interviewed said they couldn't confidently prove their data was intact.
2. Traditional data management methods don't apply to LOBs. LOB integrity must be regularly managed to avoid loss that can be disruptive or even catastrophic to a business. It doesn't matter how infrequently LOB data is accessed, it must be maintained regularly.
3. The manual maintenance procedures for LOBs will introduce a significant increase in workload and complexity. How will your

organization cope? LOBs require frequent integrity checks. However, the standard integrity checking tools require extensive resources and time, which can impact the availability of the data to the applications. Organizations must turn to modern tools or determine what additional people and compute resources are needed to manage the ever-growing data volumes.

Strategy Considerations

Companies must make the regular management and validation of LOB data a priority. Modern tools can ensure that indexes, data and LOBs are constantly and frequently validated as part of a daily automated maintenance process with no additional work required.

But first, creating a strategy is imperative. Begin by performing a data management assessment that includes your current state and long-term objectives. Typical questions to explore include:

- Do you have LOBs?
- How many?
- What is stored there?
- How critical is this data to your business?
- How often are your LOBs validated and reorganized?
- How much time does it take to complete all of the manual LOB housekeeping?

Unstructured data will only grow, and you must be prepared. Now is the time to develop your LOB strategy and ensure you have the tools and processes to manage them. Don't let unmanaged LOBs disrupt your business. **2**



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1. IDUG EMEA LOBs Survey Report, BMC