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Data Replication and Integration Tools Reducing Risk & Improving Reliability for Federal Agencies

A WHITE PAPER PRESENTED BY:



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DATA REPLICATION AND INTEGRATION TOOLS

Reducing Risk & Improving Reliability for Federal Agencies

The amount of data federal agencies manage and collect continues to grow. As it grows, so does the opportunity for inaccuracies—inaccuracies that can impact the mission, data security, and compliance requirements. Data replication and integration tools help manage this data, keeping it accurate and secure.

EXECUTIVE SUMMARY

Federal agencies are always looking for ways to serve their constituents and users more efficiently. Given the vast amounts of data agencies collect, integrating applications and data from numerous sources while also improving operational efficiency and increasing information consistency is critical. Agency IT organizations must also remain accountable to the public and comply with Federal mandates. For example, accountability-driven laws and regulations, such as the [Federal Funding Accountability and Transparency Act of 2006](#), the [American Recovery and Reinvestment Act of 2009](#), and the [Open Government Directive](#) of 2009 and 2010 mean agencies must be accountable for every expenditure.

In agencies where data is often collected and stored on different systems located in different places, bringing it all together in a timely and efficient manner can be a challenge. Data replication and integration tools take data from these different sources and aggregate it, making them a critical component in a federal IT department's data management plan.

To assess how IT managers in federal agencies are faring with their data management strategies, Dell Software commissioned a poll to uncover the biggest frustrations in managing data replication and what agencies consider the most critical database replication features.

MISSIONS AND MANDATES

More than one-third (37%) of the poll respondents work in Defense agencies. This response from a group that is traditionally reticent to engage in discussions about their internal planning and processes illustrates how important database replication is. After all, when public safety and lives are at stake, it is critical agencies have the right tools to carry out the mission.

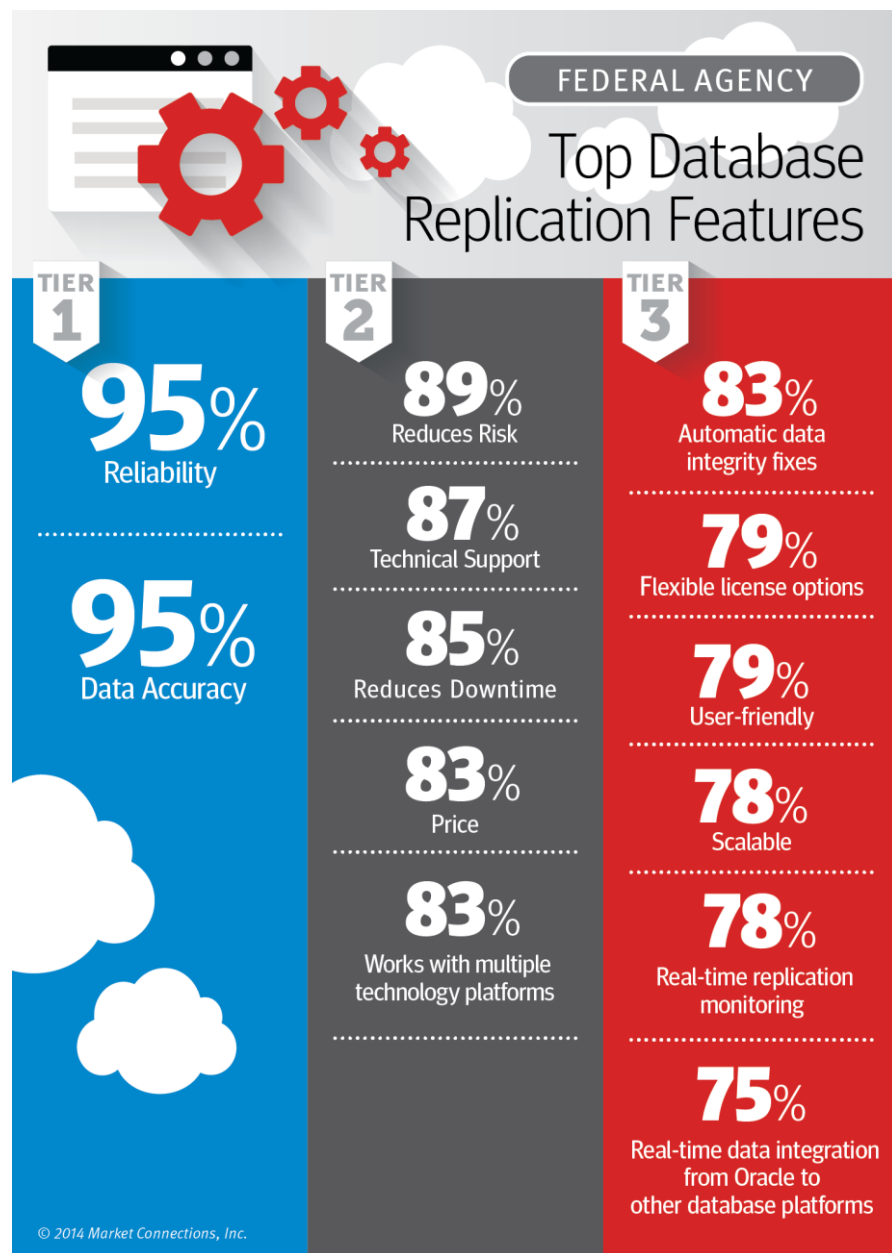
They must also be able to comply with mandates. In a recent survey Dell Software sponsored on usage of Governance, Risk, and Compliance software, 72% of federal agencies reported that they comply with three or more mandates—each of which has different compliance requirements. Keeping the data current and the agency able to quickly respond to audit requests is a cornerstone of any sound compliance program. Agencies also achieve compliance through the rigorous audit capabilities that provide

Dell Software commissioned leading government research provider Market Connections, Inc. to poll federal IT administrators on awareness of, and attitudes toward, the use of data replication and integration tools, especially the features they deem most critical when selecting a tool.

metadata to enable auditing with information about originating source, transaction type, date/time, and other audit characteristics.

Data replication and integration tools help agencies address the issues of delivering the mission and complying with mandates with near-zero downtime, real-time continuous availability, and minimal overhead. When it comes to selecting the right data replication tools, 95% of federal IT managers value reliability and data accuracy above any other feature.

After those two must-have features, IT managers want tools that reduce risk (89%) and downtime (85%), a good price point (83%), good technical support (87%), and the ability to work with multiple technology platforms (83%).



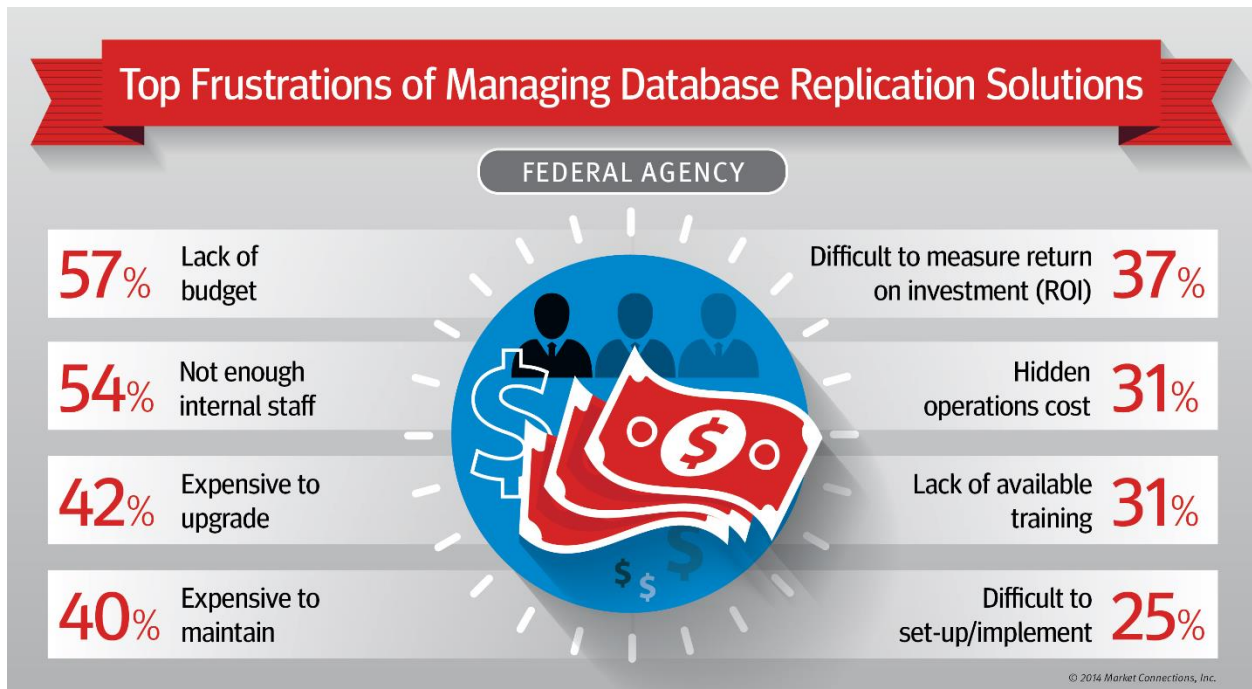
MANAGING DATA REPLICATION TOOLS

Important as they are, managing data replication tools causes a host of frustrations for IT managers. As databases continue to grow, so does the need to find simple and scalable tools with good technical support. When asked to identify the biggest frustrations for IT managers, the answers were not surprising: in terms of management, internal staffing is top-of-mind, while budget was top-of-mind with respect to cost.

Management Frustrations

Not having enough internal staff to manage the tools concerns more than half of the respondents (54%). However, those who consider themselves a resident expert of managing database solutions are significantly less concerned with internal staffing than those who know a little—40% versus 70%. This is not surprising since those who work with data replication tools understand a scalable and nimble tool reduces staff management time rather than increases it—not just in managing the system, but in supporting compliance and security requirements.

More than one-third (37%) of respondents also find it difficult to measure the return on investment (ROI), thus making it difficult to justify the costs and staff resources associated with implementing the tools. Lack of available training (31%), difficulty setting up and implementing (25%), and insufficient or inflexible reporting (13%) round out the top frustrations of managing database replication solutions.



Cost Frustrations

Considering the scrutiny federal agencies face when it comes to spending, frustrations around the lack of budget are lower than expected, coming in at just over half (57%) of respondents. However, when it comes to upgrading and maintaining the tools, the frustration level rises to 82%. Resident experts are more concerned with upgrades and maintenance than those who know little about this—55% versus 23%—likely because they understand the cascade effect upgrading can have on the entire ecosystem if the database infrastructure in use is cumbersome.

A big part of this frustration lies in the hidden operations costs (which tend to occur with à la carte solutions), a concern for 31% overall. However, resident experts are less concerned than those who know little about managing these tools (30% and 43%, respectively).

Given these cost frustrations, IT managers may be tempted to use a variety of tools based on specific features. However, 68% agree that it is best for the total cost of ownership to work with one database replication solution for all possible scenarios, while only 11% disagree. The trick lies in finding one solution that addresses all of an agency's pressing needs.

THE MOST SOUGHT-AFTER FEATURES

When it comes to addressing the management challenges while also complying with mandates and other performance goals, IT managers want to see a host of features, the most important of which fall into three tiers.

Tier 1—Reliability and Data Accuracy

Accountability and security require accurate, reliable data. The fact is, data is useless if it's suspect. There is much risk in maintaining multiple instances in multiple places and making sure the data is synced, current, and not dropping bits of corrupt data. The ability to find differences and use automation to resolve them greatly enhances the ability to maintain accuracy between loosely-coupled systems with different security models. Not surprisingly, 95% of respondents rate these features as the most important.



Tier 2—Reduced Risk and Cost

Given the importance of data security and accountability, agencies need tools that will mitigate risk. Monitoring and maintaining an unpredictable, complicated tool increases risk, price, and the chance of downtime. IT managers simply do not have the time or money to chase problems. A vendor's ability to respond to changing operational conditions and to improve the product beyond their own perceived market requirements is important. If there is a problem, IT managers need a quick response or even the ability to troubleshoot the problem online. It's important for the vendor to have technical support personnel that understand the tools and how to address issues.

IT managers want tools that:

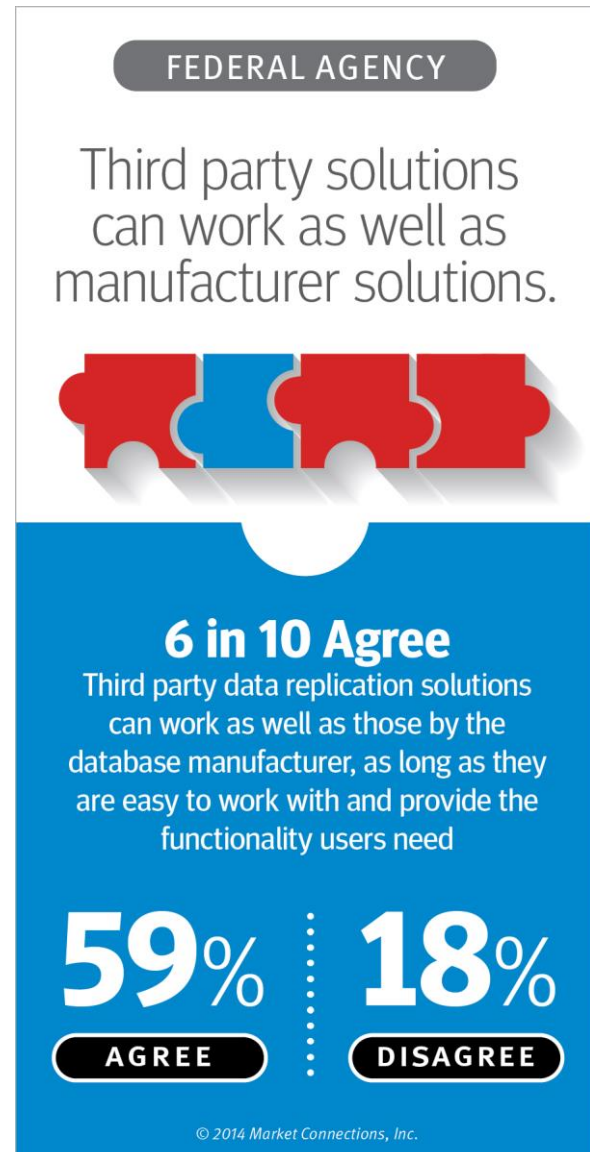
- Reduce risk: 89%
- Have good technical support: 87%
- Reduce downtime: 85%
- Have a good price point: 83%
- Work with multiple technology platforms: 83%
- Have automatic data integrity fixes: 83%

Tier 3—Simplicity, Support, Scalability

When it comes to time and valuable staff resources, IT managers need simple tools, good support, and the ability to scale as their databases grow. Tools native to their database provide some functionality, but a third-party solution is often more complete and requires fewer manual steps. Ease of learning and ease of use are important, but in complex environments, availability and quality of support are essential.

The following features support the more critical features cited in the top two tiers:

- Flexible license options: 79%
- Simple to use/user friendly: 79%
- Scalable: 78%
- Real-time replication monitoring: 78%
- Real-time data integration from Oracle to other database platforms (Hadoop, Sybase, SQL Server, JMS, Flat SQL files, etc.): 75%



Data replication and integration tools help agencies address the issues of delivering the mission and complying with mandates with near-zero downtime, real-time continuous availability, and minimal overhead.

CONCLUSIONS

In today's fast-paced data environment, in which accountability and security are paramount, controlling data and its dispersal is a mission-critical and challenging task. Federal agencies need easy, cost-effective, and reliable solutions. Having the right data replication and integration tools supports an agency's need to be accountable and secure.

All of the features of a data replication and integration tool ultimately have an impact on compliance. A good data replication tool will run efficiently on its own, have no hidden costs, and grow with the agency, giving IT managers the peace of mind that data is being replicated and integrated when needed.

The right tools remove technology as a barrier in meeting the mission of federal agencies.

ABOUT THE STUDY

Dell Software commissioned Market Connections to determine to what extent agencies are using data replication and integration software and what features they deem most critical when selecting a tool. Of the 150 respondents from federal agencies, 37% were from defense agencies and 63% from civilian. Almost two-thirds (60%) know quite a bit about management of Oracle database solutions, and 13% are a resident expert. A little over one quarter (27%) know a little. Respondents were familiar with database replication in their organizations with 73% knowing quite a bit, 18% resident experts, and 9% knowing a little.

ABOUT DELL

Dell Software makes it easy to securely manage and protect applications, systems, devices and data to help organizations of all sizes fully deliver on the promise of technology. Dell's simple yet powerful software—combined with Dell hardware and services—provide scalable, integrated solutions to drive value and accelerate results. Whether it's Windows infrastructure, the cloud and mobile computing, or networks, databases and business intelligence, Dell dramatically reduces complexity and risk to unlock the power of IT. For more information visit www.dell.com/software.

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