Upgrade and Archive Strategies for Oracle E-Business Suite

Streamline the Upgrade Process, Reduce Risks and Control Costs

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Contents

Executive Summary

IT technologies continue to evolve at a rapid pace. The hardware and software applications that you rely on to run your business must remain current in order to consistently deliver competitive advantage. With Oracle® E-Business Suite as the foundation for Oracle's expanded portfolio of ERP and CRM solutions from PeopleSoft®, JD Edwards® and Siebel®, Oracle continues to anticipate future requirements with breakthrough technologies that have revolutionized entire industries. IT organizations have to make intelligent and sometimes difficult decisions regarding whether to upgrade to the latest version or remain with the status quo for some period of time.

In view of Oracle's Applications Unlimited program and Lifetime Support policies, many Oracle E-Business Suite sites are now actively considering their upgrade paths. Oracle has committed to ongoing investments in its individual ERP and CRM product lines, which means that there are no forced upgrades to successive application versions or to Fusion Applications.

In evaluating an upgrade project, Oracle E-Business Suite sites should consider the benefits of best practice database archiving as an important component in any upgrade plan. It has been shown that archiving improves the outcome of upgrade projects, giving sites greater business value and higher overall success rates, and there are several options. Sites can shorten the data conversion process and achieve greatest benefit by archiving historical transactions before an upgrade. Where it is not feasible to archive before an upgrade, sites can manage the upgrade and archive projects in parallel. This approach allows sites to leverage certain planning and testing activities and reduce the overall time and effort.

Once an upgrade is completed, sites can manage continued data growth by implementing a routine archiving strategy. Archiving and removing historical E-Business Suite transactions from the production environment ensures peak performance of the upgraded application. Managing data growth will inevitably ease the next upgrade process. Most importantly, archives remain accessible for data retention compliance and reporting purposes.

This White Paper describes the alternative archive and upgrade scenarios and provides insight into selecting the solution to best meet your requirements.

What Drives Oracle E-Business Upgrades Today?

According to a recent study by Forrester Research, "replacing or upgrading applications is an important issue for many firms, ranking the fifth-highest priority among decision makers for 2006, with 18 percent rating it as a critical priority." [1] Industry-specific and custom applications top the list, with finance applications a close second, followed by customer service and human resources.

The Forrester report also notes that choosing not to upgrade to the newest software releases can actually increase risks and challenges. Losing vendor support for certain applications, like financial or human resources, can jeopardize your compliance policies and can result in penalties for non-compliance. Similarly, maintaining unsupported hardware and software platforms that become obsolete can increase the risk of performance issues and even system failure.

Adding to the complexity, managing multiple versions of ERP applications, whether inherited via acquisitions or acquired from changing corporate standards, only increases maintenance and operating costs. For example, 80 percent of companies surveyed by the Aberdeen Group reported having more than two ERP applications, and 74 percent reported that they intended to consolidate them.[2]

The same Aberdeen study reported that 44 percent of respondents voted to upgrade to the latest ERP release. While 17 percent opted for replacing the ERP application at selected installations, 39 percent said they would continue with their installed ERP and maintain the status quo.

Factors for Oracle E-Business Sites to Consider

Oracle Corporation has established a reputation for listening to customers and responding to their needs. Oracle sites are requesting more innovation, less complexity and customizations, more choices in the upgrade process and lower total cost of ownership (TCO).

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[1] Paul Hamerman, "Application Upgrades: When and Why," Forrester Tech Choices, December 18, 2006, p.2.

[2] Cindy Jutras, "Benchmarking ERP in Manufacturing," Aberdeen Group Presentation, August 2006.

Managing Innovation

With regard to innovation, Oracle has incorporated more industry-specific functionality into its enterprise applications. It is also helping companies prepare for the transition to system oriented architecture (SOA) by delivering next-generation solutions that integrate with existing IT infrastructures, without having to undergo a wholesale upgrade.

Although the major enterprise vendors have created substantial awareness around SOA, market adoption has been moderate. Companies are demonstrating reluctance to embrace such fundamental technology changes until they mature and demonstrate meaningful business value.

The costs of implementing SOA must be considered. These include both the soft costs associated with business process changes and user training (for example, in implementing a new user interface) and, in some cases, new license fees for additional technology components. As an example, for sites that plan an eventual move to Fusion Applications, Gartner predicts costs "similar to a 10.7 to 11i upgrade." [3] Oracle E-Business Suite sites, therefore, must plan their application deployment strategies, both immediate and longer-term.

Managing Customizations

Also consider that as your applications age, the number of customizations required typically increases to support your evolving business requirements. More customizations result in higher IT costs and increased maintenance efforts. Customizations also increase the complexity of any upgrade project. To offset this complexity, evaluate the new version features and benefits to determine how many of your customizations would be replaced with new features in the upgrade and how many would be brought forward.

In response to requests for less complexity and customization, Oracle provides the most integrated portfolio of ERP, CRM and industry-specific applications on a common, standards-based platform. Companies can reduce IT spending on non-critical functions and invest in new technologies that support a competitive advantage.

More Choices for Upgrades and Lower TCO

In providing more choices in the upgrade process and a lower total cost of ownership, Oracle introduced its Lifetime Support policies and Applications Unlimited program. Lifetime Support policies provide several viable options, which means that there are no forced upgrades to successive application versions or to Fusion.[4] With Applications Unlimited, Oracle has committed to ongoing investments in its individual product lines, including the flagship E-Business Suite application.

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[3] Yvonne Genovese, "Oracle Fusion: Understand the Road Map and Estimate Transition Costs," Gartner Research ID Number G00137744, p. 4.

[4] "Oracle Information-Driven Support – Oracle Lifetime Support," Oracle Corporation, October 2006.

Together, these two programs extend the useful life of existing applications. But although Oracle's lifetime support policies will enable companies to buy more time for using their current versions, this strategy may only postpone an inevitable upgrade.

Oracle surveys indicate an increase of 16 percent in customer satisfaction attributed to the Applications Unlimited program and Oracle's commitment to delivering continued enhancements to Oracle Applications, even after the release of Oracle Fusion Applications in 2008. Surveys also indicate that "98 percent of all Oracle Applications customers are planning to use, expand, or upgrade their current Oracle implementations." [5]

Over the past two years, Oracle has clarified its direction. Now is an opportune time for "renewing" technical infrastructures and Oracle E-Business Suite functionality through upgrades.

Planning Your Upgrade Strategy

In considering any upgrade strategy, the first question to ask is, "Why upgrade?" Some of the key business and application drivers that impact the decision to upgrade include objectives for reducing operating costs, streamlining business processes, improving customer service, connecting with global partners and operations, increasing revenue growth and supporting compliance requirements. In order to accomplish these goals, your business applications must deliver the technology, functionality and performance you need to succeed.

At present, Oracle's product roadmap is largely influenced by technology modernization. The introduction of SOA, as reflected in Oracle Fusion Middleware (OFM), serves as the basis for improved processing, greater interoperability and extended business functionality across the discrete business applications in the current portfolio (Oracle E-Business Suite, PeopleSoft Enterprise, JD Edwards EnterpriseOne, Siebel and others) and for future Fusion Applications. According to Gartner, "most OFM components will be 'inevitable' for Oracle application users and partners . . . and the Fusion Applications team will be the most important 'client' for OFM." [6]

As you consider an upgrade, determine the business and technical drivers for your organization and know the general availability and support date options for the Oracle E-Business Suite versions you are using. Business drivers typically focus on new functionality that supports your business cases for an upgrade. Technical drivers focus on the infrastructure components and application certifications that may drive your decision to upgrade.

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[5] "Information Creates Advantage – Applications Unlimited An Executive Update," Oracle Corporation, 2007, pp. 2 to 4.

[6] Massimo Pezzini, Michael Barnes, Michele Cantara and Kimihiko Iijima, "Oracle Fusion Middleware: On the Road to Service-Oriented Architecture and Beyond," Gartner Research ID Number G00145119, January 15, 2007, p. 3.

At present, two alternative deployment paths appear most viable for E-Business Suite sites. The first path envisions an "upgrade and hold" strategy executed over the mid-term. As Gartner forecasts, "through 2009, at least 60 percent of Oracle E-Business Suite (EBS) users will upgrade to EBS Release 12, where they will remain at least through 2012 as Oracle Fusion business applications mature." [7]

The second path envisions a longer term upgrade path, in which sites skip Release 12 altogether. "With the promise of 'best of the best' functionality in the Fusion product line, some Oracle EBS users will wait for new product capabilities in Fusion in order to avoid a two-cycle upgrade cost (to Release 12 and then to Fusion) . . ." [8]

If your IT organization is committed to using Oracle E-Business Suite, then the recommendation is to upgrade now, rather than delay the inevitable and force a multi-release upgrade process.

[7] Pat Phelan and Yvonne Genovese, "Business Application Suite Upgrades Through 2012: Evaluating the SAP/Oracle Upgrade Cycles," Gartner Research, ID Number G00141649, November 3, 2006, p. 2.

[8] Ibid, p. 5

Archiving and Upgrades

Typically, ERP and CRM application databases contain huge volumes of transactional data, both current and historical. One of the primary concerns during any upgrade, consolidation or reimplementation project is how to mitigate risk while converting the data. According to a 2006 study conducted by the Enterprise Strategy Group (ESG), database archiving has helped companies mitigate the harmful impact of rapid data growth.[9] Archiving strategies, whether applied to ERP, CRM, custom or legacy applications, are shown to distribute benefits to both the IT organization and the lines of business. Clearly, archiving has "crossed the chasm" to become an operational best practice.

The ESG research also reveals that enterprises are scaling the deployment of archiving to address issues beyond data growth. For example, companies are applying archiving strategies to facilitate the application upgrade process. Archiving historical application data prior to an upgrade reduces the amount of data to convert and substantially curtails downtime. In short, enterprise data management and database archiving capabilities deliver additional benefits.

Selecting Archiving Capabilities

If you are considering an enterprise data management solution with archiving capabilities that support your business objectives, then focus on the capabilities you will need:

- Focus on ensuring the integrity of the archived data in its complete business context without ties to production. For example, archiving a complete "invoice" business object would include the invoice and invoice lines, receipts, payment schedules, receivable applications, plus all the contextual information from related business objects (orders, items, customers, journal entries, contracts) along with all the master data needed to retain complete referential integrity (code combinations, bank accounts, transaction types and so on).
- Focus on managing archives and retention periods cost-effectively and consistently over the full lifespan of your data. Capabilities for saving archives on a variety of storage media allow you to future-proof methods for managing data, based on its business value and access requirements. You can retain access to your business records until the legal retention periods expire and archives can be deleted.

[9] Brian Babineau, "Database Archiving: A simple approach to Intelligent Information Management with tangible benefits," Intelligent Information Management Brief, Enterprises Strategy Group, May 2006.

- Focus on managing archive processing using capabilities that accommodate your Oracle E-Business Suite customizations. Also look for capabilities that ensure superior safety, control, job separation and administration and integration with Oracle E-Business Suite.

Archiving Supports Upgrade Success

To ensure that archiving supports the success of your upgrade project, the selected solution must align with your business objectives. If your business objectives for moving forward with your upgrade project include:

- Streamlining and automating business processes and improving application performance and customer service,
- Increasing ROI from your continued investment in ERP, CRM and custom applications,
- Reducing the time to upgrade and "go live" into production, while minimizing downtime during the conversion,
- Increasing your ability to satisfy data retention compliance requirements, ensuring that historical reference data remains accessible, even after applications have been upgraded, and
- Controlling costs associated with application upgrade time, resources and maintenance,

Then an enterprise data management solution that includes database archiving capabilities can help you ensure upgrade project success.

How Does Archiving Facilitate Upgrade Projects?

Maintaining and managing large volumes of historical transaction records in the Oracle E-Business Suite production environment degrades service levels, limits availability and impairs routine daily operations. Continued data growth also has a detrimental impact on your upgrade project, primarily in the areas of capacity, cost and accuracy.

Most importantly, excessive volumes of historical transaction data are an unnecessary cause of extended downtime during an upgrade. By archiving historical transactions, you can achieve the following benefits:

- Reduce the database capacity and IT resources required during the upgrade.
- Shorten the time for iterative testing cycles and refresh activities.
- Reduce downtime during the upgrade conversion by 50 percent or more.
- Improve application performance from the old version to the new version by reducing the online transaction processing workload.
- Reduce backup and recovery times by days or hours.
- Shorten database maintenance time for tasks like re-organizations, refreshes and cloning.

Can archiving be included into an existing upgrade project? The answer is “Yes.” The IBM® Optim™ Data Growth Solution for Oracle® E-Business Suite provides enterprise data management and archiving capabilities that have proven to ease the upgrade process, while saving historical data to a safe and secure archive.

In fact, enterprise data management provides the flexibility for managing your Oracle E-Business Suite data before, during and following an upgrade. After the upgrade, ongoing database archiving (monthly, quarterly or annually) helps manage database growth to keep Oracle E-Business Suite applications operating at peak performance, and your archived data remains accessible. As to which implementation approach offers optimal business value − that is for you to decide.

Planning to Archive with Your Upgrade Project

As with any major project, up-front planning drives success. If you are reading this White Paper, you may be planning for a future upgrade or perhaps you are in the middle of an upgrade. In either case, you have alternatives for easing the upgrade process:

- Archiving Before an Upgrade – Reduces the amount of historical data to convert during the upgrade process and reduces the downtime during testing and cutover activities. Archived data remains safe, secure and accessible.
- Archiving in Parallel with an Upgrade – Combines common functional and technical tasks to save overall elapsed time. Archiving as early as possible in the project offers the most benefits.

These two alternatives for incorporating archiving with your upgrade project are described in the following paragraphs.

Scenario 1 – Archiving Before an Upgrade

Archiving historical data and removing it from the production environment prior to an upgrade streamlines the database. During the upgrade, only the most current data is converted and migrated to the new environment. Managing less data reduces the risk and downtime that often accompanies the testing and conversion processes during the upgrade. Migrating only active application data shortens the time needed for production cutover and maximizes the application performance benefits in the upgraded version environment.

The process of archiving before the upgrade is illustrated in Figure 1. The first step is to install the archiving software, which integrates seamlessly with your Oracle E-Business Suite applications. Next, your team would adapt Optim's Archive Templates to adjust for custom tables. Finally, the team would initiate the archive processes against the Oracle E-Business Suite system. Historical transaction records are copied to a secure archive, and then removed from the production database.

After archiving is completed, you can execute your upgrade project as planned. The primary difference is that you will have less data to convert to the new Oracle E-Business Suite version. Accordingly, the upgrade testing and production cutover activities will take much less time. When users begin using the new version, they will experience improved transaction and query processing times. Your upgrade project is viewed as a success from day one.

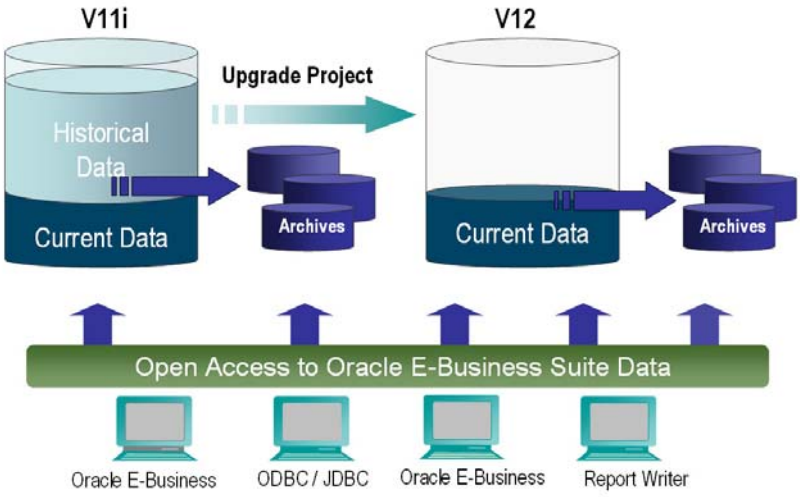

Figure 1. Archive before Upgrading

Note that even after archiving, business and functional users retain convenient access to historical transaction records outside the production environment for ad hoc queries and reporting purposes. It is possible, but not necessary, to migrate the archives into a production history instance after all critical-path upgrade activities have been completed.

Industry standard archive solutions allow the widest range of archive access options. Native application access enables users to interact with data in archives using the familiar E-Business Suite interface and processes. Application independent access alternatives support the use of standard report writers like Crystal Reports or Cognos, or other solutions that provide an ODBC/JDBC access method.

Scenario 2 – Archiving in Parallel with an Upgrade

When planning to incorporate archiving in parallel with your upgrade project, there are certain common tasks that must be planned and performed for both archive and upgrade testing:

- Technical tasks – Validating the individual steps in the archive or upgrade project (for example, moving query tables forward), or validating the new technical environment, as well as performance testing.
- Functional / Business tasks – Reconciling the “before” and “after” results for the archive or upgrade project (for example, after posting accounts payable transactions), or regression testing key business processes (for example, period-end financial close or payroll processing).

Although it may appear that performing archiving and upgrade projects in parallel requires incorporating additional tasks and potential risks into the upgrade project, the advantages far outweigh the disadvantages. If the parallel archiving and upgrade projects are well designed, there will be built-in synergy among common tasks, like building and maintaining the upgrade environment, as well as staged testing activities.

For example, reconciliation testing that confirms the pre- and post-system balances are performed for both the upgrade and the archive project. Regression testing confirms that the common business processes function correctly after an upgrade or archive. Performance testing ensures expected service levels and processing times as part of the upgrade and archiving project. Keep in mind that the archive and upgrade projects can be managed independently at any point in time.

You save time and resources by planning and building these common tasks only once, and then executing each task at the appropriate point in the upgrade project and the archive project. Reusable test scripts ensure consistency to support a repeatable and efficient validation process. Your upgrade team can eliminate duplicated effort and minimize total calendar time and effort to complete the upgrade.

If you decide to manage your archive and upgrade projects in parallel, archiving can be accomplished at various points in the project with minimal impact on testing resources (see Figure 2).

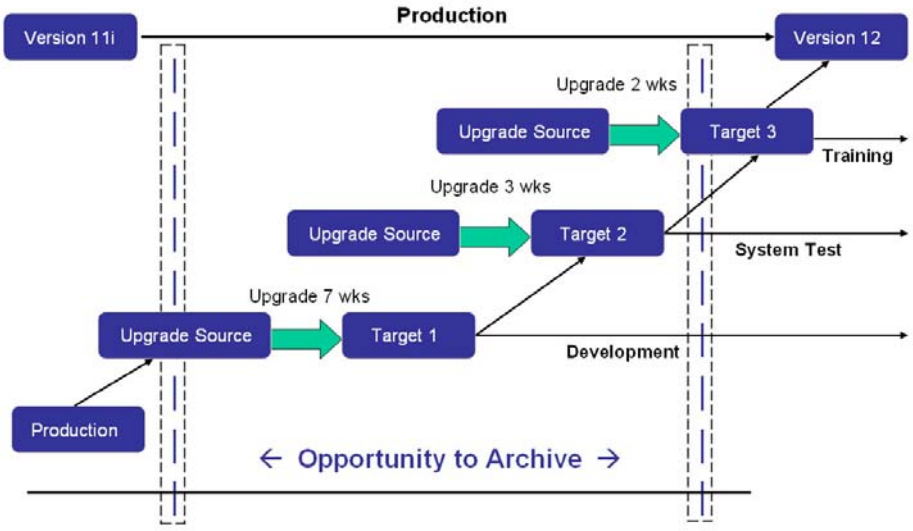

Figure 2. When to Archive within a Oracle E-Business Suite Upgrade Project

Post-upgrade archiving can also be accomplished after system testing, as detailed in Figure 3. In this scenario, the site first completes the upgrade. However, before going live with the new system, they archive the historical transaction records from the upgraded Oracle E-Business Suite database. This approach reduces the size of the initial database, again supporting improved performance and overall perceptions of project success.

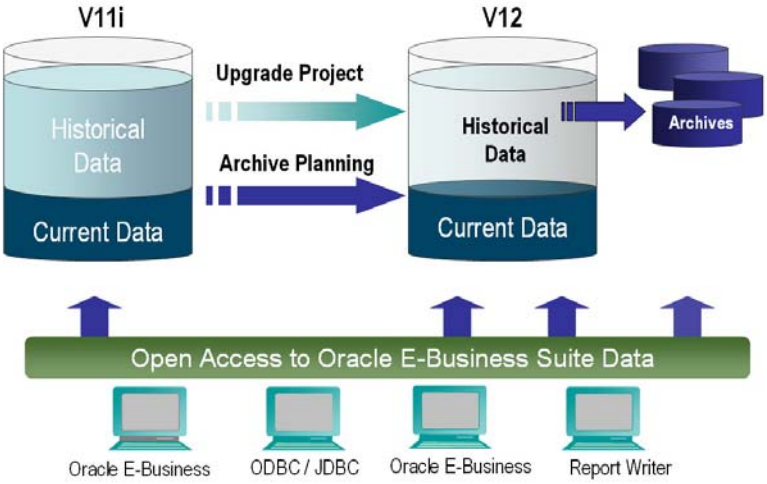

Figure 3. Parallel Archive and Upgrade Projects

The parallel approach provides the opportunity to derive more from the upgrade investment in time, effort and IT resources. No matter what alternative you choose, ongoing archiving helps you manage continued data growth, improve application service levels and facilitate the next upgrade.

Optim Meets the Upgrade Challenge

The time is right for sites to protect and extend their investment in Oracle E-Business Suite. Oracle's Lifetime Support policies and Applications Unlimited program should not delay or prevent your organization from upgrading to the newest version of Oracle E-Business Suite. Minimizing the number of release versions between your current and future E-Business Suite versions will ease your transition.

The IBM Optim Data Growth Solution for Oracle E-Business Suite delivers enterprise data management and archiving capabilities that offer the greatest range of options for meeting your current and future IT challenges. With Optim, you can manage continued data growth, ease the upgrade process and support your business objectives for data retention compliance. Optim has proven successful at client sites for streamlining the upgrade process, improving service levels and reducing costs and risk. Most importantly, archived historical transactions remain accessible for inquiries and reporting purposes.

Each Oracle E-Business Suite site must evaluate the business drivers, as well as the technical and application drivers in favor of designing an archiving and upgrade project before making a decision. Keep in mind that archiving historical records before an upgrade or in parallel with an upgrade would allow you to:

- Reduce or eliminate data volume problems that can negatively impact processing capacity and runtime issues.
- Reduce the need to perform and complete multiple upgrade passes within a predefined production cutover window.
- Reduce time required for tuning efforts on the new version.
- Ensure that the upgraded application meets SLA requirements for transaction processing and response times.

If you consider the business disruptions of downtime during an upgrade as an issue, then archive from your E-Business Suite production environment first. In addition, to ensure a positive user experience on the upgraded platform you can archive first to offset the increase in data volume during the upgrade and increase in IT resource consumption. Make the upgrade process easier on your IT staff, and ensure the success for business users by incorporating archiving into your upgrade project.

Implementing an Archiving Strategy Proves Successful

AVX Tantalum Division, a recognized leader in the global passive electronic component and interconnect products industry, relies heavily on Oracle E-Business Suite – Financials and Manufacturing – to manage daily business activities. One of the major corporate initiatives was to move to a single global instance for their Oracle E-Business Suite environment.

AVX runs Oracle 11i with licenses for 250 users for core applications, while Manufacturing resides on multiple servers located in each manufacturing site. "We thought about database archiving for our Oracle E-Business Suite applications during the definition phase of our global IT solution," said Jon Dodd, IT manager at AVX Tantalum Division.[10] "We needed to implement database archiving before adding the largest manufacturing site, which processes over 70,000 WIP move transactions a day. This site could potentially quadruple the size of the database."

One of the primary reasons for implementing database archiving was to reduce downtime during Oracle E-Business Suite upgrades. "Hardware is costly, but disrupting the business during an upgrade is a greater cost," said Dodd. "AVX is a 24/7 manufacturing business, so business does not stop. There is no time during the year when the whole business shuts down."

"The 11i upgrade was painful and took four, 24-hour days, including Christmas day and night. We never want to do that again," noted Dodd. "In the decision to implement a database archiving solution, we knew that performing archive processing before an upgrade would dramatically reduce downtime."

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Princeton Softech (http://www.optimsolution.com), an IBM Company, provides enterprise data management solutions that address critical business issues – data growth management, data privacy compliance, test data management, e-discovery, application upgrades, migrations and retirements. IBM® Optim™ aligns application data management with business objectives to optimize performance, mitigate risks and control costs. Optim delivers capabilities that scale across enterprise applications, databases and platforms. Today, more than 2,400 companies worldwide – including nearly half of the Fortune 500 – rely on Princeton Softech to maximize the business value of their enterprise applications and databases.

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