FROM DATABASE CLOUDS TO BIG DATA

2013 IOUG SURVEY ON DATABASE MANAGEABILITY

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EXECUTIVE SUMMARY

For many organizations, embracing new technology and methods such as database as a service (DBaaS) or big data is more than an academic concept discussed at conferences and in the trade press: it is a tangible part of everyday business. Many organizations are already providing faster delivery of applications, differentiated products and services, and some are building new customer experiences through mobile technology.

Organizations need to prepare for rising levels of big data streaming into their organizations. The ability to manage and assure 24x7x365 database performance, regardless of workloads and user demands, is key to agility and growth. Faster delivery of databases requires automated packaging and deployment processes, both at the initial instantiation and throughout the entire lifecycle of the databases in question including decommissioning. As data environments grow larger and consumers increasingly expect "on-demand" access, the ever-increasing complexity in governance requirements can potentially slow the roll out of database services. Database administrators face uphill challenges to address these challenges in today's multi-layered and globally diverse data centers. Those who succeed are able to adapt and evolve by translating database services into critical services the business can depend on.

This survey also provides valuable information for IT managers and decision makers who are concerned with meeting demand for database services in a world where both the number of requests as well as the associated data volumes are steadily climbing. The survey has discovered that the database as a service (DBaaS) delivery model has started to take root in IT, helping the early adopters to address agility and cost challenges of increasing database demand.

The opportunities and challenges for database manageability are addressed in a survey of 160 data managers and professionals who are part of the Independent Oracle Users Group (IOUG) and currently running Oracle Databases. The survey was underwritten by Oracle Corporation and conducted by Unisphere Research, a division of Information Today, Inc.

Survey respondents hold a variety of job roles and represent a wide range of organization types and sizes and industry verticals. The largest segment (36%) of respondents hold the title of database administrator, followed by that of director or manager. Close to one-third work for very large organizations with more than 10,000 employees. By industry sector, the majority of respondents come from IT service providers, financial services, education and government agencies. (See Figures 29–31 at the end of this report for more detailed demographic information on job titles, company sizes, and industry groups.)

Key highlights and findings from the survey, which explore key insights into database manageability issues and solutions, include the following:

- As demand for IT services and data volumes grow, so do the challenges with managing databases. Overall, data environments are not consolidated—enterprises are still running many separate databases for applications.
- During the twelve months preceding this survey, business demand for database services as well as the associated data volumes grew by more than 20% on average. In contrast, most IT organizations are experiencing flat or shrinking budgets. Other factors such as substantial testing requirements and outdated management techniques are all contributing to a cost escalation and slow IT response.
- Close to two-fifths of enterprises either already have or are considering running database functions within a private cloud. At least 50% will use non-production systems for database as a service deployments.
- As the growth of data accelerates—both in terms of number of databases and in data volume—database administrators need to know how it will impact their systems. In these fast-expanding environments, most respondents have management responsibility at the database level of the technology stack in order to address issues. As private, hybrid and public cloud adoption increases, the challenge of being able to manage data moving into virtualized environments will accelerate as well.
- Enterprises are beginning to get a better hold on managing database changes, leading to shorter cycle times throughout the database lifecycle. However, the work that goes into managing the database lifecycle is still the greatest consumer of respondents' time. A majority still overwhelmingly perform a range of tasks manually, from patching databases to performing upgrades. Compliance remains important and requires attention. As databases move into virtualized and cloud environments, there will be a need for more comprehensive enterprise-wide testing.
- Episodes of unplanned downtime are trending upward at many enterprises. When an outage does occur, respondents admit that it's difficult to tell what the root causes may be. Only a quarter of respondents can tell, if cross-tier components are affecting database performance.
- Close to half the respondents say they need visibility into the entire technology stack in order to do their job effectively. It includes everything from the database applications that encompass the service being provided to the business, down to the storage layer. The ultimate responsibility for troubleshooting application problems typically falls to database professionals, the survey finds.

On the following pages are the results of this latest examination into today's pressing database manageability concerns, and the most effective solutions.