

# Ensuring the Success of Oracle Exadata Database Machine Consolidations & Migrations

As Oracle Exadata gains significant market acceptance, organizations are increasingly seeking ways to reduce the time, cost and risks of consolidating and migrating applications and databases to the Oracle Exadata platform. Teleran's Consolidation and Migration Assessment Service minimizes the time, cost and risks of Oracle Exadata projects by identifying and mitigating potential risk factors in customer environment prior to the implementation of Oracle Exadata.

## The Teleran Consolidation and Migration

- Reduces time and cost to complete Oracle Exadata consolidations and migrations
- "Pre-optimizes" environment for smooth Oracle Exadata consolidations and migrations
- Minimizes risks and surprises that slow projects and increase costs
- Ensures that Oracle Exadata meets business needs and expectations
- Reduces ongoing Oracle Exadata application operating costs

## consolidation and MIGRATION ASSESSMENT service overview

The Teleran Assessment is conducted by experienced Teleran analysts using Teleran's automated assessment software. It tracks and analyzes the overall user, application, and data usage activity of the existing environments that will be migrated to Oracle Exadata. By analyzing this usage information, application and user risk factors are identified and can be addressed, preparing an optimized environment to be migrated or consolidated to Oracle Exadata.

Teleran Assessments for Oracle Exadata findings have included:

- Uncovering very inefficient non-standard data access tools that slowed performance and increased resource consumption
- Finding undiscovered database errors that caused business-critical application failures
- Discovering unsanctioned multi-terabyte downstream data marts that violated compliance policy, consumed network bandwidth and wasted server resources
- Revealing inappropriate queries that generated incorrect results sets and wasted system resources
- Identifying and archiving dormant (unused) data thereby decreasing the data load-time window by 50% and improving availability and service levels in the new system



Teleran's assessment software products, iSight™ and iSight Analytics™, automatically and continuously track and analyze all database and application usage across the entire environment. Without Teleran this process consumes weeks of time and labor, and in the end usually results in capturing just a small sample or worse, anecdotal and often inaccurate descriptions of actual usage. This comprehensive process provides visibility across the whole system and significantly reduces project time and labor needed not only to collect the usage information, but also to thoroughly analyze it. In addition, this process significantly improves the accuracy of the usage analysis, and guides adjustments to the current applications, user behavior and data models to remove risk factors and "unpleasant surprises" further on in the consolidation and migration process.

iSight Analytics delivers a combination of business user, application and data level usage metrics that enable organizations to see, often for the first time, an overall picture of how business users and applications are interacting with their database environment. iSight profiles usage activity from the network, putting no resource demand on the database. Because iSight brings in both the business user and application context and continuously tracks that activity, it highlights opportunities and problems in the overall environment not visible via OEM or other snapshot-based database monitoring tools.

## teleran ASSESSMENT details

The Teleran Exadata Application Assessment Service is conducted by experienced Teleran staff and consists of one or more of the following components:

### *Analysis of Current Usage*

During this analysis a comprehensive profile of users, applications and database object usage patterns of the current environment is developed. This profile is used to identify inappropriate, malformed queries, inefficient or unsanctioned applications, inappropriate or wasteful user behaviors, required adjustments to the application data models, and rogue data marts and data extractions. The benefit of this analysis is to identify and address inefficient and inappropriate practices and activities that can impede the consolidation and migration of applications and data as well as reduce the benefits of the Exadata solution in production. A collateral benefit of the usage analysis is that it identifies and allows sites to address potential security and compliance issues and reduce risks in the new Oracle Exadata environment.

### *Data Dormancy Analysis*

This analysis reviews data usage patterns and develops a strategy to migrate unused, or infrequently used data, to archival or low cost storage. The benefit of dormant data analysis is that it targets the power of the Oracle Exadata solution on the data most frequently used and drives unnecessary cost out of customer data handling and storage operations.

### *User, Application and Database Error Analysis*

This analysis identifies and categorizes user, application and database errors that should be addressed prior to the installation of Oracle Exadata. These include identification of user errors, programming and applications errors, permissions errors, time-out governor errors, and critical database errors such as dead-locks. The benefit of error analysis is that it reveals and addresses performance-robbing errors, enabling Oracle Exadata to deliver or surpass the expected performance, cost efficiency and value to the business users.

### *Efficient Data Model Indexing Analysis*

This analysis identifies all of the indices within the current databases, prioritized by their frequency of use and index type with a focus on evaluating if they will be efficient and effective in the new environment. Keeping unneeded indexes on the Oracle Exadata platform can impede optimal performance. The benefit of this analysis is that it directs the removal of unnecessary indices from the data model enabling Oracle Exadata to develop optimized data access plans. A collateral benefit of index reduction is associated decrease in data load times and storage requirements.

### *Optimal Data Load and Distribution Analysis*

This analysis identifies the most frequently used tables, columns, views and other database objects, based on actual data usage patterns. This data usage pattern analysis guides the development of a migration strategy that places the most frequently used data optimally in the Oracle Exadata disk environment. The benefit of this analysis is to position the most frequently used data in the fastest access positions, ensuring optimal Oracle Exadata performance.

## application USAGE ASSESSMENT approach

The Teleran Assessment can be scheduled to occur as an initial phase of an Oracle Exadata consolidation or migration and usually requires two to three weeks to complete. Assessments typically include these phases:

### *Planning and Discovery Phase*

In this phase Teleran staff will meet with customer staff to confirm the objectives of the assessment, agree on roles and responsibilities, identify the applications and databases that will be migrated to Oracle Exadata and create a project plan that accommodates the planned project schedule. This is generally accomplished in one or two meetings.

### *Assessment Software Installation and Data Collection Phase*

In this phase Teleran staff will install the Teleran assessment software solution, iSight and iSight Analytics, Teleran's non-intrusive assessment tracking and analysis solution that resides on the network, outside of the database. Upon installation, usage data will be collected for an agreed upon time period.

### *Analysis and Presentation Phase*

In this phase Teleran staff will analyze the application usage data collected in the previous phase to identify optimizing opportunities in each of the component areas described above. The results of this effort will be documented and delivered in a management presentation that highlights observations, findings, and recommended actions.

At the completion of the Teleran Assessment, the customer will benefit from having a comprehensive understanding of the actions and activities that occur within their existing applications and data environment and a plan of action to prepare for delivering an optimized Oracle Exadata solution faster with lower costs and lower risks.

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