ORACLE APPLICATION REPLAY PACK

Oracle Application Replay Pack enables you to perform realistic, production-scale testing of your Web and packaged Oracle applications. Unlike traditional application testing tools, it uses real, production workloads to generate load against applications under test and does not require any script development or maintenance. With Oracle Application Replay Pack you can reduce your testing time by more than 80%. It provides the most efficient, optimized and highest quality testing for validating application infrastructure changes.

Oracle Enterprise Manager Application Quality Management Solutions

Save weeks on application testing time. Reduce Database testing time by 90%.

Oracle Enterprise Manager is Oracle’s integrated enterprise IT management product line, and provides the industry’s only complete cloud lifecycle management solution. Oracle Enterprise Manager’s Business-Driven IT Management capabilities allow customers to quickly set up, manage and support enterprise clouds and traditional Oracle IT environments from applications to disk. Customers can achieve best service levels for traditional and cloud applications through management from a business perspective and provide maximum return on IT management investment through the best solutions for intelligent management of the Oracle stack and engineered systems.

Oracle’s Application Quality Management solutions provide a complete testing solution for Oracle Database, Oracle Packaged Applications and custom Web applications.

Oracle Application Replay Pack

Today’s enterprise application deployments are highly complex and challenging to manage. They comprise multiple tiers, including Web servers, application servers, and databases – all running on multiple hosts. Their software architecture combines multiple independent components, such as client-side user interfaces, business logic and data access mechanisms, in addition to stateful client-server protocols typically built over HTTP.

Due to the complexity of these structures, predicting the behavior of the entire stack in a production environment is extremely difficult. Given the complexity of these deployments, and the absence of system-wide verification techniques, effective testing is critical to ensuring successful deployment after an infrastructure change.

Oracle Application Replay Pack enables realistic testing of planned changes to any part of the application stack from application server down to disk, by re-creating the production workload on a test system. Using Oracle Application Replay, you can capture a workload on the production system and replay it on a test system with the exact timing, concurrency, and transaction characteristics of the original workload. This enables you to fully assess the impact of any change, including new contention points, SQL execution plan regressions or undesired results. Extensive analysis and reporting is provided to help identify any potential problems, such as new errors encountered and performance divergence. Types of changes that can be tested with Oracle Application Replay Pack include application server upgrades, hardware updates, operating system changes, configuration changes, and so on.

Capturing real-world production workload eliminates the need to develop simulation workloads or scripts, resulting in significant cost reduction and time savings. By using Oracle Application Replay Pack, realistic testing of complex applications that previously took months
using load simulation tools can now be completed in days. As a result, you can rapidly test planned changes and adopt new technologies with a higher degree of confidence and at lower risk.

**Testing with Real-World Application Workloads**

The Oracle Application Replay Pack provides a testing structure that works by first capturing the entire workload relevant to an application, as generated by the application’s Web interface, at the production site.

The captured application workload is then moved to the test environment, where the replay infrastructure reproduces the captured workload, preserving its original properties, such as concurrency, dependency, and request timings. Extensive performance and correctness data from all layers of the stack is collected and reported. This enables you to compare the replay with the original captured workload at all levels. Any issues resulting from infrastructure changes that occurred during the replay can be easily identified, and appropriate troubleshooting action undertaken to prevent them from occurring in production.

The use of real workloads offers a number of significant advantages over testing techniques based on synthetic workloads. In particular:

- It provides a system-wide perspective starting from the user’s activity. This is in contrast to the traditional piecemeal testing of individual components that provides little information on their combined behavior and performance under a realistic workload.

- Rather than relying on pre-determined scenarios, the use of real workloads provides comprehensive testing, subjecting the system to real user’s operations. For Web applications, this not only means exploring all possible ways a user interacts with the system, but also all possible load conditions. This is necessary because systems behave quite differently under different workload characteristics (for example, the number of concurrent users).

- Far greater insight is obtained into possible errors. Test results include data for every layer of the stack, and these can be correlated across different layers. It provides a means to verify correct execution, by checking for errors or unexpected server responses.
Analysis and Reporting

Oracle Application Replay provides extensive analysis and reporting which encompass both a high-level summary and detailed drill-down analysis in terms of errors, performance and data divergence to help understand how the replay fared in comparison to capture or to other replays. The extensive reporting enables you to quickly identify problem areas and helps you determine an action plan to resolve those issues in context of user sessions and application pages.

![Oracle Application Replay Results](image)

**Figure 2. Oracle Application Replay Results**

Summary

With its ease of use, coverage of the entire stack, and extensive reporting, Oracle Application Replay Pack provides the most efficient, optimized and highest quality testing for validating application infrastructure changes.

Contact Us

For more information about [insert product name], visit oracle.com or call +1.800.ORACLE1 to speak to an Oracle representative.