



# peakmarks® Benchmark Workshop

Data Sheet

July 2019

## Business Value

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This 2-day workshop provides the necessary techniques for a systematic benchmarking of Oracle Database Services, On-Premise and in the Cloud. The most important key performance indicators for price/performance comparisons, capacity planning, and performance monitoring will be presented.

Concrete benchmark results with systems of the market leaders deepen the knowledge and enable fact-based decisions.

## Audience

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The workshop is aimed at database administrators, system engineers, system architects, and performance specialists who are responsible for the efficiency, performance and benchmarking of Oracle Database Services, On-Premise and in the Cloud.

## Requirements

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For practical exercises laptops with appropriate equipment or customer systems can be used (pre-installed Oracle database, Oracle 12.2, 18.3, 18.4 or 19.3 Enterprise Edition, 16+ GByte main memory, 128+ GByte capacity for benchmark data, access via putty and winscp).

## Agenda

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### Part 1 Benchmark methodology

- The complexity of Oracle platforms
- Why TPC, SPEC, and SPC figures and proofs-of-concept for Oracle platforms are not representative enough
- Requirements for benchmark tools for database services

Part 2 peakmarks® installation

- Server classification
- Database configuration for benchmarking
- Installation of the peakmarks® Benchmark Software
- Platform monitoring

Part 3 peakmarks® configuration and loading the benchmark database

- peakmarks® configuration parameters
- Loading the benchmark database

Part 4 peakmarks® performance tests for server systems

- Key performance indicators for evaluating server performance in database operation
- peakmarks® workloads for server systems
- Performance optimization and monitoring of server performance tests
- Specific aspects: NUMA effects, scalability of multi-socket systems, scale-up versus scale-out, virtualization, license costs
- Benchmark results

Part 5 peakmarks® performance tests for storage systems

- Key performance indicators for evaluating storage performance in database operation
- peakmarks® workloads for storage systems
- Why tools such as vdbench, iometer, fio, orion, etc. do not provide representative performance indicators for database operation
- Performance optimization and monitoring of storage performance tests
- Specific aspects: I/O stack optimization, deduplication, compression, encryption, replication, license costs
- Benchmark results

Part 6 peakmarks® performance tests for critical database service processes

- The importance of Log Writer and Database Writer processes for database performance
- Key performance indicators for evaluating Log Writer and Database Writer performance
- peakmarks® Workloads for Log Writer and Database Writer performance tests
- Specific aspects: the impact of DataGuard on the response time of local transactions
- Benchmark results

Part 7 peakmarks® data load performance tests

- Key performance indicators for evaluating data load performance
- peakmarks® Workloads for Data Load Performance Tests
- Specific aspects: Loading techniques, the impact of Data Guard on loading performance, data reduction by deduplication and compression, REDO throughput optimization
- Benchmark results

Part 8 peakmarks® Data Analytics Performance Tests

- Key performance indicators for evaluating Data Analytics Performance
- peakmarks® Workloads for Data Analytics Performance Tests
- Specific aspects: «column store» versus «row store» versus «SQL offloading», license costs
- Benchmark results

#### Part 9 peakmarks® Transaction Processing Performance Tests

- Key performance indicators for evaluating transaction processing performance
- peakmarks® Transaction Processing Workloads
- Specific aspects: Size of database and buffer cache, REDO latency optimization, DBWR throughput optimization, the impact of Data Guard on the service time of local transactions
- Benchmark results

#### Part 10 peakmarks® Performance Tests Application Performance Tests with PL/SQL

- Key performance indicators for evaluating PL/SQL application performance
- peakmarks® workloads to determine PL/SQL performance
- Performance optimization and monitoring of PL/SQL performance tests
- Specific aspects: efficiency of multithreading and virtualization
- Benchmark results

## Cost

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The 2-day workshop will be held at the customer's premises or Peakmarks AG. The number of participants is limited to a maximum of 12 persons.

Contact us for an offer: [contact@peakmarks.com](mailto:contact@peakmarks.com)

## About Peakmarks Ltd.

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Peakmarks Ltd. is a manufacturer-independent company that offers services and software for benchmarking Oracle Database Services. Oracle database customers use peakmarks® benchmark software for quality assurance, platform evaluation, capacity planning, and license cost optimization.

Cloud service providers and cloud consumers use the peakmarks® benchmark software to check service quality regularly.

Hardware manufacturers use the peakmarks® benchmark software to continuously test the performance of their technology in Oracle database operation with representative workloads and under realistic conditions.