

# SQL WorkloadExpert™ for Db2 z/os

### Practical Uses

Increases depth of knowledge regarding the core business

Pinpoints precisely how one specific, a group of, or all applications utilize resources

Establishes an SQL Workload Warehouse, updated on a daily, weekly, monthly, or quarterly basis

Allows for complete flexibility regarding the length of time and detail levels of information stored

Finds "open" timeslots for REORGs with no negative impacts on end user services

Supports Db2 LUW as an Offline Performance Database

Db2 for z/OS Audit made "Simple, fast and affordable". Available as a Standalone Tool or within the WLX-Package.

Using up-to-the-minute technology and designed to collect ALL enterprise Db2 z/OS SQL, **SQL WorkloadExpert** (WLX) collects information, which is not otherwise readily available, from the DSC and EDM Pool. The information is then stored incrementally in a space-saving warehouse.

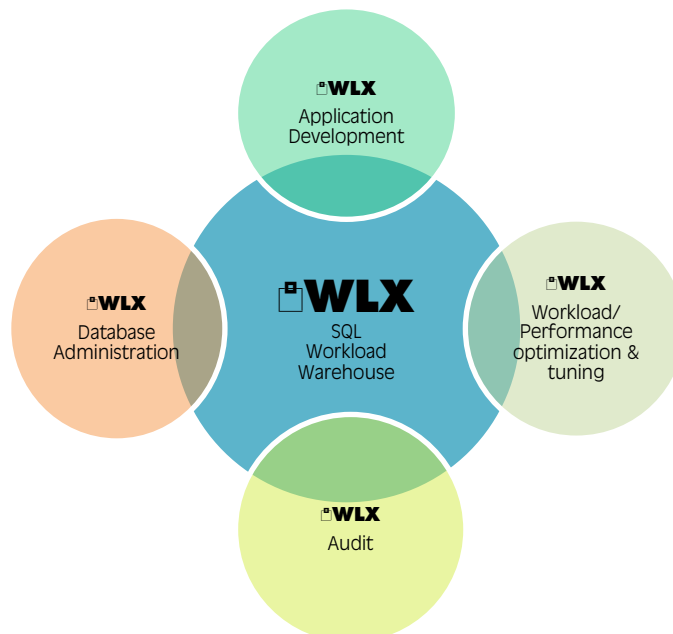
This collection of SQL data provides the basis for detailed analyses of the entire workload running against Db2 z/OS, and presents more than 30 KPIs regarding resource consumption and performance, as well as basic audit capabilities.

Used as a solid, reliable basis for measuring performance tuning and trending, WLX has the capability to compare two workloads (before and after) side by side, and to evaluate the quality of SQL using dynamic EXPLAIN.

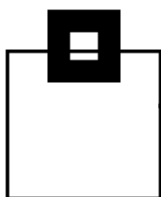
All the SQL is aggregated to provide global overviews, as well as drill-downs to detail levels. By providing "the whole picture", the tasks of performance management, database management and auditing becomes more transparent.

The intuitive interface allows users from multiple departments to access information which may not otherwise be obvious. This allows also less-experienced users – possibly from other platforms - to understand the details and improves inter-departmental communication.

The entire WLX product can be delivered as one cohesive solution or split into "functional packages of use cases" specifically tailored for the areas of Application Development, Workload/Performance Optimization and Tuning, Database Administration, and Auditing. All packages are built around the comprehensive SQL Workload Warehouse, and adding new functionality at a later date is simple.



**Any workload analytics query is fully zIIP eligible!**



Eliminates unnecessary administration and maintenance costs for unused SQL and objects

Easily detects multi-row fetch candidates to speed up processing and reduce costs

Uses the optimized family of performance tools from SEG:

**SQL PerformanceExpert**  
**Bind ImpactExpert**  
 (enhanced with Db2 hardware simulation) and  
**RealTime DBAExpert**

Integrates seamlessly with IBM recommended company standards, such as Eclipse, IBM DataStudio or IBM Rational

### IT Projects

Whether it's taking advantage of new performance features, accommodating the latest regulations, or integrating new software, every site has a "wish list" for tools to speed up projects. WLX can help with many of these. The possibilities are too numerous to mention here. If you have a particular "issue" that can't be solved, email us and ask

## WLX FUNCTIONAL PACKAGES OF USE CASES

### Application Development:

- Application Workload Analysis: E.g. which machine load is produced by a certain Application?
- Explain Tool link (e.g. **SQL PerformanceExpert**, IBM DataStudio)
- Visual – EXPLAIN Link (webve: plug-in)
- SQL Text Analysis for free text search (e.g.: BIF [Built-in Function] and UDF [User-Defined Functions] -usage, Java-formatted timestamps, etc.)
- View to detect "heavy-hitters" resulting from identical statements using different predicates
- Find unused (orphaned) SQL
- Multi-Row Fetch Candidate Detection
- BIF/ICI Detection
- Content Manager System (CMS)

### Workload/Performance management

- Workload-Change, Problem-Detection and Trending, Comparison of CPU consumption, I/O, execution rates, current KPIs and deltas – Calculated and summarized to the costs of multiple apps
- Disc Problem Detection – I/O Rates
- SQL KPIs – Background Noise and Exceptions
- SELECT Only Table Detection (READ only activity)
- Delay Detection (All queries which are delayed)
- Up and Down Scaling of SQL Workloads
- Flush Analysis
- CPU Intensive Statements
- Index Maintenance Costs
- SQL Timeline
- PKLIST Problem Detection

### Database Administration

- Find never used Objects (Tables, Indexes, and Tablespaces)
- Find never executed Packages
- Object Quiet Times for Maintenance (REORG)
- REORG Suppression + Detection ( RTDX)
- Utility review
- Bufferpool Overview
- Deadlock, Timeout
- Failing Statements

### Audit and Security

- AUDIT tables being accessed
- AUDIT Db2 data being accessed
- AUDIT data manipulation (insert/update/delete)
- See where updates came from (inside or outside the local network)
- See where data is being accessed from (IP address, intra-/extranet, etc.)
- SQL Text Analysis for free text search (BIF [Built-in Function] and UDF [User-Defined Functions] -usage, Java-formatted timestamp)

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