

## DB-EXAMINER

# Enterprise-Enabling Solutions for Business Success through Database Schema Quality

### MISSION CRITICAL: DATABASE FOUNDATION

The database is a mission critical component to a business' ability to operate and compete. It serves as a cornerstone of the enterprise's information technology infrastructure. To ensure business continuity and enable disaster recovery, the heart of an enterprise's database – its schema – must be sound. With a flawed schema, applications are delivered late, with extremely high costs and delivery of poor information.

DBE Software's DB-Examiner addresses the critical integrity issues of a database throughout the many phases of an application's lifecycle. Information quality and operational integrity are paramount to maintain business continuity and mitigate risk.

### DB-EXAMINER - ENTERPRISE CLASS SOLUTION

The DB-Examiner solution significantly improves the consistency and quality of information across the entire enterprise IT infrastructure. Its comprehensive set of diagnostic tests validates the structural integrity of relational database schemas by enforcing the rules of the relational model.

DB-Examiner pinpoints design discrepancies, recommends precise improvements and corrections, and generates scripts to implement revisions. Schemas are graphically depicted and documented in a user-friendly format.

### RISK MITIGATION – WHAT CAN GO WRONG

The database schema changes with the business requirements of the enterprise. The schemas rarely get manually validated because this check is a complicated and tedious task. With DB-Examiner, multiple days of manual work are eliminated in minutes. Your company can rest assured knowing that it is operating on a safe database foundation.

### INTEGRATION OF DISPARATE DATABASES

DB-Examiner will compare disparate databases schemas (Oracle, SQL Server, DB2 Universal Database, DB2 OS/OS390, and Sybase), and display them in a common format to illustrate the similarities and differences. The compare facility is an invaluable aid for integrating systems using information from different applications.

### IMPROVE DATABASE DESIGN QUALITY

DB-Examiner is an intuitive analytical tool that validates the database schema whether manually created or generated by popular modeling tools. This powerful product provides numerous benefits, helping organizations:

- **Improve productivity and accuracy** by analyzing relational database schemas to identify integrity and consistency issues. DB-Examiner accelerates database design and deployment by improving the consistency and quality of data structures across the enterprise. Detailed diagnostic reports illustrate structural inconsistencies in a conveniently organized format. This powerful tool fine-tunes database design to ensure solid foundations for any business applications.
- **Enhance database design** by automatically generating scripts to fix problems based on the results of its comprehensive diagnostics. DB-Examiner recommends changes to database schemas, providing an efficient and consistent approach to improving database design.
- **Maximize design efficiency** by analyzing databases being built or databases already in production. It does so by direct interface with popular modeling tools, reading SQL Scripts directly, or

performing reverse engineering on the database schema. DB-Examiner allows users to check and validate alterations to a database design as a result of maintenance or new inclusions to the database structures. Design changes can be simulated before implementation.

- **Increase database performance** by identifying violations of good practices that adversely affect performance. Suggested changes are scripted for easy implementation.

## FEATURES

### Comprehensive Diagnostics and Reporting –

DB-Examiner analyzes the schema's data structure, keys, indexes, field columns and relationships for violations of relational theory. It also generates graphical documentation of the entire database structure, including column cross-reference and relationship listings. The diagnostics are customizable by selecting those most important to your organization and determining a severity level for each diagnostic. Diagnostic results are conveniently organized by categories or severity levels.

**Design Discrepancy Isolation** – DB-Examiner provides detailed diagnostic reports that can help increase productivity by accelerating the schema review process. Its innovative "Show Me" facility isolates specific design issues in complex database models, eliminating the task of finding the problem in a huge model. A window displays the particular part of the database structure that requires modifications. Modelers can also define and work with a subset of the model.

**Teach Me Facility** – In addition to providing specific diagnostics and recommendations, DB-Examiner explains the theory behind the violations. This valuable "Teach Me" facility reveals the impact of design choices or modifications in light of relational theory. By instructing data modelers on the effects of their design decision, DB-Examiner helps modelers construct higher quality databases. It also is a superb instrument for tutoring new personnel in relational database theory.

### RAMIFICATIONS OF SPECIFIC RELATIONAL ERRORS

Many things can go wrong if the database schema has flaws and inconsistencies. There are over 50 issues that DB-Examiner will identify and isolate.

Here are a few simple, yet potentially expensive flaws, omissions, or errors:

**Missing Relationships** – If a relationship is missing or not defined, the business rule to maintain the proper association will not be enforced; for example, the relationship between Orders and Client may not be properly defined. Orders may be accepted from an unknown Client, or worse, a client may be deleted with pending orders.

**Disabled Constraints** – For performance reasons, a redundancy may be created and a trigger coded to control the redundancy. If this trigger is inadvertently disabled, the redundancy is not controlled. This could cause the company to ship expensive merchandise to an old address.

**Missing Indexes** – If a necessary index has not been created, or was created and deleted for some unknown reason, applications will run much slower, causing problems in performance.

**Incorrectly Defined Relationships** – It is very common when dealing with large databases to define relationships that are incorrect. This will cause: a) lack of control of the correct business rule resulting in incorrect data or b) create performance issues because the system may be verifying a relationship that is unnecessary.

**Inconsistent Definitions** – Suppose you have Social Security Number defined in two files on your database, each with a different definition; one with 9 characters (123456789) and the other with 11 characters (1234-56-789). You will not be able to relate the two files unless you have this knowledge. If you move the larger field to the smaller field, you will lose data; and if you move the smaller to the larger one, you may also lose data. Using the same definition for the SSN avoids such risks.

## SUPPORTED ENVIRONMENTS

### Databases:

- Oracle
- Microsoft SQL Server
- DB2 UDB LUW (Linux, Unix, Windows)
- DB2 for OS/390 and z/OS
- Sybase

### Platforms:

- Windows 98SE, ME and XP Home Edition
- Windows NT, 2000, XP Professional, and Vista

