



## FiRe Files to Relational Database

- **FiRe** is our tool for the automated migration of data pools from legacy systems into relational databases.
- **FiRe** combines scientific know-how with competence gained from successful migration projects.
- **FiRe** supports all components of a migration (data, scheme and program migration).
- **FiRe** enables data to be stored without redundancy, ensures its integrity and maintains application performance.

A professional database system at the target system must be built within the framework of a legacy migration. With our FiRe technology databases and files with different structures can be migrated to modern databases. This is proven by numerous successfully completed migration projects.

### Migration Paths between the Legacy and Target System

Legacy system	Target system
Sequential and index-sequential files	Relational database systems (Oracle, Db2, Microsoft SQL Server, ...)
Network, hierarchical and relational database systems	
Redundancies in the data pool	Cleansed and harmonised data
Inconsistent data scheme	Redundance-free scheme definition
Proprietary program access to data	Embedded SQL, dynamic SQL (Oracle, Db2, Microsoft SQL Server, ...)

### Features

- FiRe supports various data formats of files (like SAM, ISAM and LEASY files).
- The databases are checked by FiRe for correctness, plausibility and completeness. Duplicates are cleaned up.
- Various aspects of the migration are configurable. This allows all individualities to be mapped.
- Special features of the legacy systems are taken into account during the migration, e.g. redefines in COBOL systems.



## FiRe Technology

The migration takes place in the following phases:

- **ANALYSIS:** A tool-supported *analysis* of the database is carried out on the legacy system. For this, information on structuring of the data sets from the application programs and information from the files are merged and harmonised in a repository (*metadata*).
- **SCHEME MIGRATION:** Using the meta data the database scheme of the target system is created, where the file-oriented data management of the legacy system is mapped to a relational data management in the target system. The result is a set of table descriptions which serves as the basis for generating DDL scripts (*scheme generation*).
- **MIGRATION OF DATA ACCESS:** File information in the converted programs of the target system is accessed by logical file operations like `OPEN`, `READ`, `WRITE`, ... However, the data is stored in a relational database system and accessed by SQL operations. The communication between the two layers is assumed by a so-called *data access layer* which is automatically generated with the information from the metadata (*API generation*).
- **MIGRATION OF DATA:** Export programs (reading of data from the files on the legacy system) and import programs (writing data in the relational tables of the target system) are generated from the metadata of the repository and the data relating to the scheme migration. In this process, the data is harmonised. In addition, necessary EBCDIC-ASCII conversions are taken into account.

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