

# VSAM Conversion and Migration

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DB-Shuttle™ provides automated technology that protects legacy assets, reduces maintenance costs, provides agility and flexibility, and enables Service-Oriented Architecture (SOA) within business-critical applications.

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The ATERAS conversion includes the generation of new relational databases to replace the functionality and content of VSAM files. The new target databases can reside on or off the mainframe, and can use any of the standard relational database management systems:

- Microsoft SQL Server
- Oracle
- IBM DB2

## Database Functionality

The ATERAS solution provides a complete replacement for all VSAM file functionality:

- VSAM record layouts
- Group-level elements
- Re-defined data within records
- Occurring data
- Multi-View record types
- Indexes

## Relational Results

The resulting relational database is fully relational. Primary keys, foreign keys and index definitions are automatically created. All constraints are generated into the resulting DDL. Table spaces, indexes, table names and column names are all generated according to your naming standards and preferences.

## Delivered Components

As part of the delivery process, ATERAS generates and delivers the following component types for installation in the new relational database processing environment by using DB-Shuttle:

- Data Definition Language (DDL) Syntax for the new database
- VSAM Data Extract programs, generated in COBOL and fully self-documented, to unload all VSAM data to the correct format for the relational database load utility
- VSAM Data Extract JCL, customized for your environment, to execute the extracts and other key-processing utilities
- Load Syntax (optional) for use by relational database load utility
- RI Check Syntax (optional) for use by relational database utility package
- RUNSTATS Syntax (optional) for use by relational database utility package
- DCLGEN syntax (optional) to define COBOL layouts of the tables for replacement applications

## VSAM Data Conversion

The VSAM data extract and relational load process is simple and straightforward. During the extract process, all VSAM data is extracted and written to a set of sequential files that are ready to load to the new relational database target. The VSAM data extracts are fast and can be executed simultaneously. ATERAS can provide a number of extract variations for sites that have special requirements for a short VSAM data conversion window. Data conversion during the cut-over weekend or evening is always fast and complete.

## Customization Workbenches

Special workbenches within DB-Shuttle provide additional capabilities for tailoring your VSAM migration so that the resulting relational database better meets your needs and requirements:

- Re-name Workbenches to allow full naming of all tables, columns, table spaces and indexes using a rules basis or a full-name basis
- Multi-view workbench processing to allow the specification of multiple data layouts for a single VSAM record so that the conversion can include multiple tables to replace the multi-function VSAM record
- Data Cleansing Workbench to provide rule-based data cleansing during the VSAM data extract process
- Date Conversion Workbench to allow DATE type columns in the new relational databases (all date formats are supported)
- Element Re-name Workbench that allows selection of group-level or elementary VSAM fields for use as columns in the relational database
- Record Definition workbench where copybook or hard-code record layouts are associated to the VSAM database segments

## Visibility and Knowledge-Building

ATERAS ensures that the customer teams (and the ATERAS teams) have a full understanding of the existing VSAM files, as well as a full understanding of the post-conversion relational database. DB-Shuttle generates many reports and diagrams to assist with this knowledge-building process:

- Complete Entity Relationship Model (ERM) diagrams for the new relational databases
- Summary reports of the VSAM file sizes and usage
- Matrix reports that relate files to tables, fields to columns, VSAM files to extract programs, and more
- Date Finder reports that allow team members to define selected fields and columns as DATE fields for the new database
- Additional ad hoc reports that assist in further detailed identification of the unique characteristics of the VSAM file conversion

## Related Applications

ATERAS also converts the applications that use the VSAM files. Visit our website at [www.ateras.com](http://www.ateras.com) to see how ATERAS converts COBOL, PL/1, Assembler, Easytrieve, JCL and Procs for VSAM applications.

