



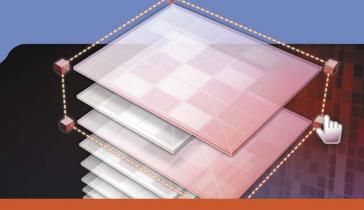
COMPUWARE_®

Compuware File-AID/CS™

Test Data Management for Application Quality



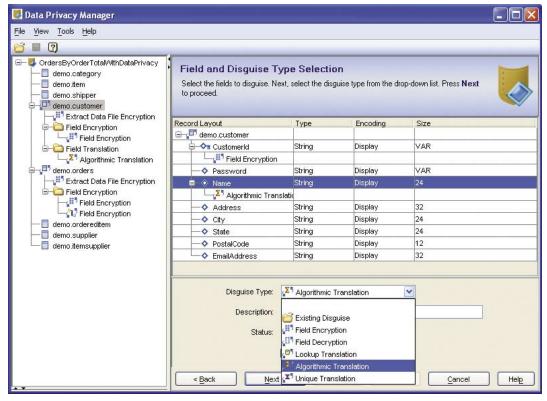
Test data management made simple



Compuware File-AID/CS is a test data management tool that saves time and reduces the level of complexity often associated with managing distributed data and preparing data for testing.

tudies show that up to 60 percent of application development and testing time is devoted to data-related tasks. Reducing time spent on test data management is critical in controlling IT costs and keeping developers focused on the task at hand—developing new applications and managing existing ones. Designing and building reliable applications today, however, entails a complex process involving a range of different and unfamiliar databases and file types. Often, developers and QA teams spend more time dealing with data-related issues than developing the actual application itself.

The Compuware File-AID/CS data management workbench simplifies the complex task of managing test data. Equipped with an easy-to-use graphical interface, File-AID/CS allows developers and QA teams to perform all data-related tasks without writing programs or scripts, coding SQL or using multiple utilities. File-AID/CS provides a standardized approach to managing data from multiple databases and file



The Data Privacy Manager is a common workbench that allows users to define, update and manage their data privacy criteria.

types, gives users the tools they need to effectively work with data and increases productivity, all without prerequisite training or expertise. IT organizations will immediately save time and reduce costs using File-AID/CS in their development and testing processes.

Protect sensitive data

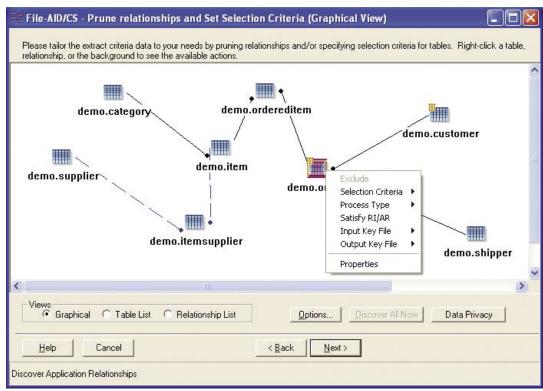
The powerful integration between File-AID/RDX, File-AID/Data Solutions and File-AID/CS provides a unique solution to help companies address data privacy requirements in the test environment. Our solution spans both zSeries

and distributed platforms, and uses consistent data disguise techniques across all environments:

Encryption: Replace sensitive values with arithmetically formulated data using an encryption key.

Masking: Conceal only portions of a field.





"We found the Data Privacy features in Compuware File-AID/CS 3.2 very useful when working directly with databases. We were able to scrub data and disguise our test databases with ease. We were also able to populate all the related tables, and the generated XMLs for the data scrub could be exported and used by other users."

Ssonko Mbatha Systems Engineer, QA Department, Prumerica Financial

With File-AID/CS, it's easy to include or exclude RI or AR table relationships from the extract and load process.

File-AID/CS Benefits

- Offers a comprehensive test data management solution in a single tool for all your data needs
- Eliminates the need to write SQL or special programs, enabling simple, accurate and secure access to distributed data
- Creates meaningful, manageable, disguised test data with minimal expertise
- Provides self-sufficiency for developers
- Ensures the quality and reliability of your application and data
- Leverages your current File-AID investment.

Aging: To protect dates that may or may not need to maintain birth-year integrity, the Data Disguise feature in File-AID/Data Solutions provides an aging function that allows dates to be aged according to the business need.

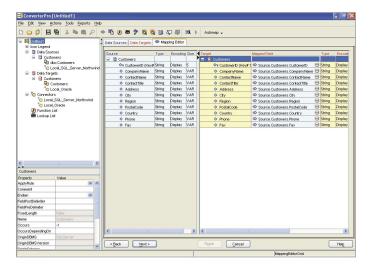
Date Generation: With this technique, you can generate fictitious data, from scratch or from some other source.

Translation: This is a very effective way to replace values consistently with fictitious, readable values, like names (e.g., replacing Rosemary with Susan) or birthdays (e.g., month and day only so that the original birth year is retained).

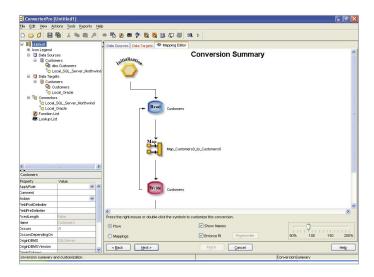
To help create and manage privacy specifications, File-AID/CS includes the Data Privacy Manager. This common workbench allows users to define, update and manage privacy criteria in a commonly shared repository. Once defined, privacy specifications can be applied in the File-AID/CS Related Extract component.

Easily subset data while maintaining data relationships

With File-AID/CS, users need minimal database expertise to extract related subsets of data from one database and transform and load them into another. They simply specify the selection criteria and transformation rules, and File-AID/CS does the rest—extracting the data derived from the relationships maintained by the database via referential integrity or external application relationships. Automatically creating meaningful subsets of relational test data from production databases saves disk space and time in test execution.



The ConverterPro component provides powerful data conversion and transformation functionality supporting a broad range of data types, including support for mainframe data.



In addition, when specifying privacy requirements, the Data Privacy Manager provides the ability to disguise data within the related extract process, at the field or record level, for all supported databases. Disguised values will be propagated automatically across related tables while maintaining database Referential Integrity (RI) and Application Relationships (AR).

Use spreadsheet-like access to view and edit data

Application reliability is a constant concern in IT organizations. Application failures are often data-related. With File-AID/CS, IT teams can analyze the cause and effect of data-related application failures more thoroughly, so they can fix errors fast. Its spreadsheet-like access provides easy edit-and-browse of the database using table structures defined in the database catalog. When editing related

File-AID/CS Client Edition

The File-AID/CS Client Edition is the base product and includes the following components:

- Data Editor for Databases
- >>> Compare
- >>> Related Extract and Load
- >>> ConverterPro
- >>> Data Generation Facility (optional).

All processing is done at the client level.

File-AID/CS Server Edition

This edition offers Server Engines for the Database Editor, Related Extract and Load, and ConverterPro. The Server Edition is ideal for managing a test environment where data volume is large and performance is essential. With this edition, you can leverage the power of the server for efficiency and speed. File-AID/CS Client Edition is required to run the Server Edition engine component.

File-AID/CS Enterprise Edition

This edition offers direct access to mainframe data supporting:

- >>> VSAM
- >>> QSAM
- >>> IMS
- >>> DB2 UDB for z/OS
- >>> File-AID/RDX DB2 extracts.

The Enterprise Edition is ideal for managing a test environment where access to mainframe data is needed. File-AID/CS Client and Server editions are both required for running the Enterprise Edition mainframe access module.

File-AID/CS Highlights

File-AID/CS lets users:

- run Data Editor for databases in a distributed mode on UNIX Solaris, Windows 2000 and Windows NT 4.0
- prepare test data for QACenter Performance Edition
- compare differences in triggers and stored procedures in Oracle, Sybase, DB2 UDB and Microsoft SQL Server
- access and execute File-AID/CS objects from a common shared repository
- >>> edit data with the look and feel of a spreadsheet
- copy, reformat and convert data between disparate heterogeneous data types

- extract and load related subsets of data from multiple databases
- apply selection criteria for extracting, copying or converting subsets of data
- automatically compare the differences between two sets of database tables, schemas, ASCII files, QACenter test scripts or QACenter's web-site analysis site checks
- compare XML data and XML streams to relational database data
- access multiple data types for both mainframe and distributed environments.

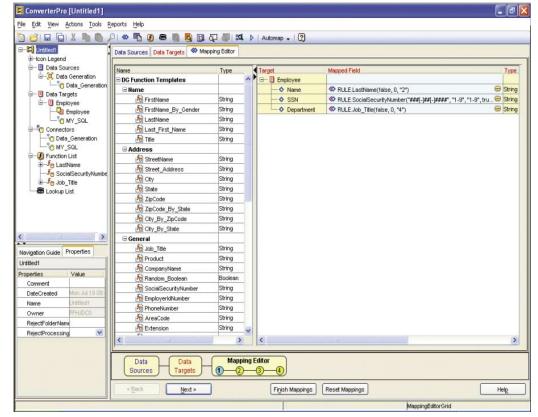
tables, a single click brings up information for all rows related to the driving table. Users avoid having to code SQL or write one-time programs to manipulate data. File-AID/CS lets the team remain focused on analyzing and correcting the data rather than writing code to access it.

Create reusable assets

File-AID/CS stores all criteria for converting, subsetting, reformatting, comparing, extracting and loading data. Users can easily access the criteria to re-create or revalidate test data—creating a repeatable process for consistent testing.

Access data consistently across multiple environments

Integrating client/server webbased applications with legacy applications and data is easy with File-AID/CS. It supports Oracle, Microsoft SQL Server,



Required data values can be easily generated by dragging the desired functions from the list on the left to the fields on the right.

DB2 UDB, Sybase, XML, VSAM, IMS and DB2 UDB for z/OS. Offering the widest

range of database support in the industry, File-AID/CS helps IT teams create and maintain business-critical applications with minimal expertise in any specific data environment.

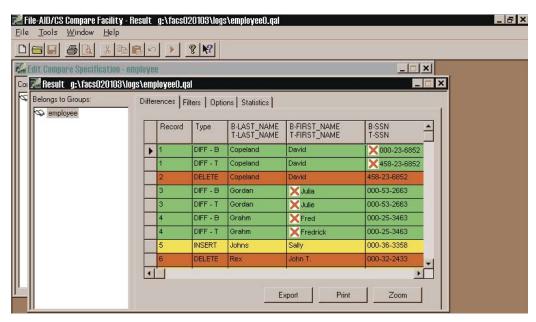


Copy, reformat and convert multiple database/file types with ease

File-AID/CS requires no specific database or programming knowledge to copy, transform and convert a range of data types and formats. File-AID/CS ConverterPro supports multiple data types including mainframe and distributed environments. For example, File-AID/CS converts data from VSAM to Oracle or transforms data from one Microsoft SQL Server table to another. A graphical user interface allows developers and QA teams to easily map multiple data sources and data targets. File-AID/CS provides the same interface regardless of data environment, eliminating the need to learn multiple utilities unique to each data environment. Users can split or concatenate fields, replace values based on lookup tables, change data formats and perform many other powerful functions.

Generate test data

File-AID/CS provides an easy method of creating meaningful test data with minimal effort or technical expertise. Users can generate millions of unique names, ZIP codes, area codes, cities, states and other values using a simple drag-and-drop method. Pre-built data generation functions and a data library are also provided in the product to populate the required data.



File-AID/CS automatically validates XML data results and displays differences in a color-coded comparison report.

Databases/ File Types E	Related xtract/Load	ConverterPro	Compare	Database Editor
Oracle (8.1.7 and above)	Χ	Х	χ	Х
DB2 UDB (6.x, 7.x, 8.x)	X	X	Χ	X
Microsoft SQL Server (7.0, 20	00) X	Х	Х	Х
Sybase (11, 12)	Χ	Х	X	Х
Access (97, 2000 and above)		X	X	
Excel (97, 2000 and above)				
DB2 UDB for z/OS (6.x, 7.x)		Χ		
ASCII Fixed		X	Х	
ASCII Delimited		X		
ASCII Text			Х	
XML		Х	Х	
PC Fixed Sequential		Х	Х	
File-AID/RDX Extract	Χ			
MVS VSAM		Х		
QSAM		Х		
IMS		Х		

Automate database comparisons to validate tests

Now there's a more efficient and accurate way to compare relational tables, database schemas, XML, ASCII or flat files. When comparing test data results to baseline data, File-AID/CS can compare specific columns or rows in the tables so users focus solely on the data changed by the test. File-AID/CS groups and compares related tables—saving the time and effort when compared to manual methods. The color-coded comparison report, available online or in print, identifies the exact data inserted, deleted or changed. File-AID/CS can also compare database stored procedures, triggers and schemas.

Validate XML data accuracy

File-AID/CS gives IT users the XML edge to develop web-based applications that are functional, reliable and open, allowing them to easily integrate with customers, suppliers and employees. The File-AID/CS GUI lets developers and testers transform complex relational databases into accurate streams of XML data. They can compare differences between two XML streams, or between XML streams and relational databases. The color-coded comparison report, available online or in print, identifies the exact XML data inserted, deleted or changed. The File-AID/CS automated process of managing and testing XML data accelerates B2B integration by allowing users to verify the accuracy and reliability of XML results on the spot.

To learn more about File-AID, visit www.compuware.com/fileaid

Hardware and software requirements

File-AID/CS Client Edition (base product)

The File-AID/CS client executes on Windows 2003 Server/XP/2000

File-AID/CS Server Edition

The File-AID/CS server executes on the following platforms:

- Windows 2003 Server/XP/2000
- WNIX Solaris 2.7, 2.8 or 2.9
- UNIX HP-UX 11.0 or 11iOE
- UNIX AIX 4.3, 4.4, 5.1 or 5.2
- Red Hat Linux 6.1, 6.2, 7.0 or 7.2

Note: UNIX platforms and Red Hat Linux require Windows Java Virtual Machine (JVM) Release 1.4.2.

File-AID/CS Enterprise Edition

The File-AID/CS Enterprise Edition executes on the following platforms:

- >>> OS/390
- z/OS 1.1, 1.2, 1.3, 1.4, 1.5 or 1.6

Communication products

- Oracle: Net8
- DB2 UDB: DB2 Connect
- Microsoft SQL Server: Wire Protocol—provided via ODBC
- Sybase: Wire Protocol—provided via ODBC

Compuware products and professional services—delivering IT value

Compuware Corporation (NASDAQ: CPWR) maximizes the value IT brings to the business by helping CIOs more effectively manage the business of IT. Compuware solutions accelerate the development, improve the quality and enhance the performance of critical business systems while enabling CIOs to align and govern the entire IT portfolio, increasing efficiency, cost control and employee productivity throughout the IT organization. Founded in 1973, Compuware serves the world's leading IT organizations, including 95 percent of the Fortune 100 companies. Learn more about Compuware at www.compuware.com.

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