

SYNCSORT



syncsort

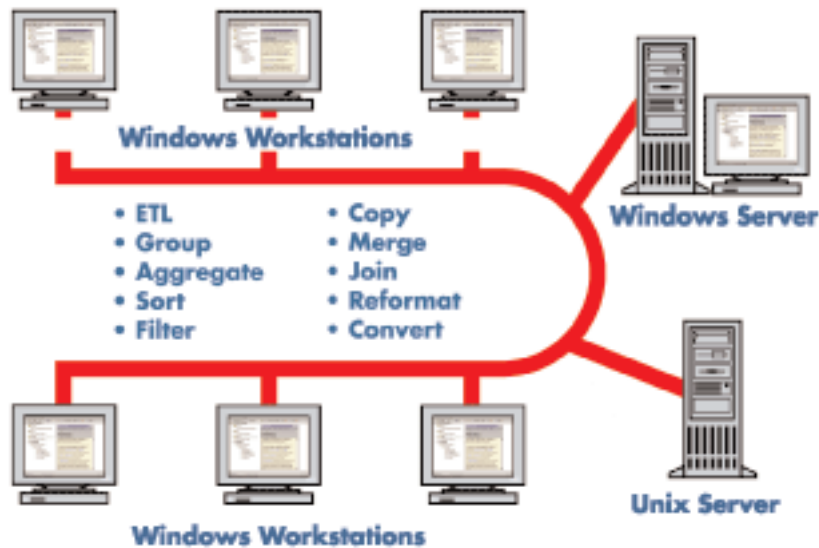
Proven Performance

HIGH-PERFORMANCE DATA MANAGEMENT

SyncSort is high-performance data management software. It dramatically improves performance of all kinds of data-intensive applications, including data warehousing, CRM, BI, delta processing, Oracle Financials and legacy migration. It speeds ETL transactions up to 90%, facilitates data mining and click-stream processing, and cuts hours off of typically long-running jobs with large data volumes.

SyncSort is specifically designed to minimize processing time for large volumes of data to significantly improve the performance of enterprise applications. Along with SyncSort's speed and efficiency, you also gain the ability to handle a wide variety of data and file types, and a full set of versatile features such as selecting, joining, grouping and extracting.

Designed to take advantage of distributed network architectures, SyncSort runs on all server and enterprise-level UNIX and Linux platforms, and server and data center versions of Windows.



This design allows you to quickly build applications on your desktop in a familiar graphical environment and keeps the complex, resource-intensive processing on an enterprise server, minimizing network traffic.

Whether administering a very large database or data warehouse, or managing data from Web sites and e-commerce, SyncSort delivers high performance for your data applications across the enterprise.

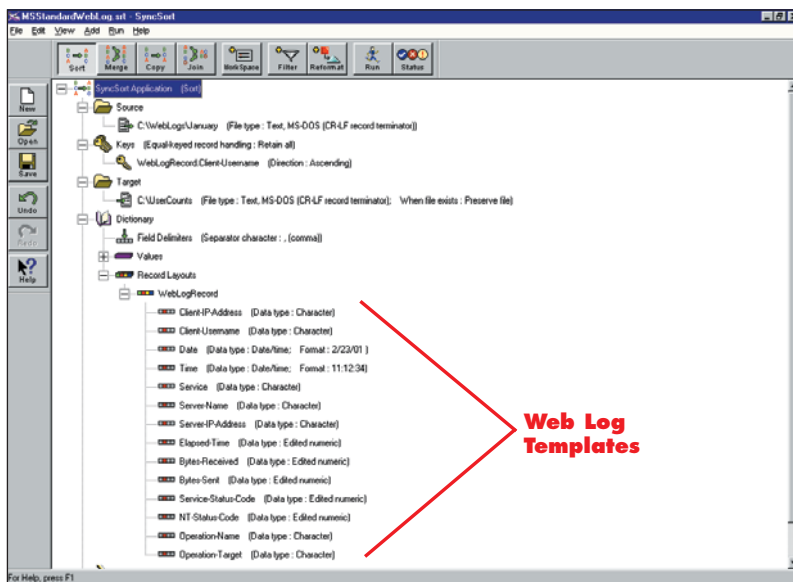


WHERE DO YOU NEED SYNCSORT?

SyncSort Features Facilitate Web Log Processing

Web logs are the repositories for click-stream records, which are created by the dialogs of user activity on company Web sites. Now SyncSort provides features to facilitate Web log processing and improve database performance:

- ◆ **Standard Web template files** define the layout of standard Web formats, so you don't have to define your own record layouts before accessing the data. Two sets of templates are provided: the NCSA Common Log File format and the Microsoft Standard (Microsoft Professional Internet Services) format.



Web Log Templates for Apache and Microsoft Web Server Formats

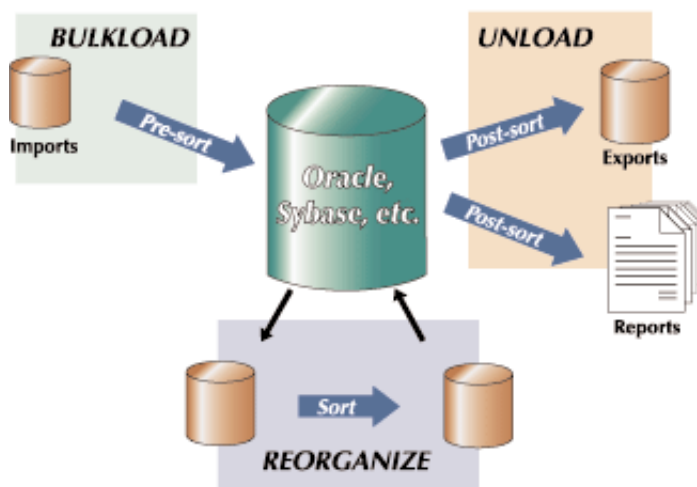
- ◆ **Date/time support** simplifies processing of date and time fields in the format found in Web logs. SyncSort supplies numerous date/time formats to choose from.
- ◆ **Pattern matching** simplifies extraction of any data that can be described through a regular expression.
- ◆ **Enclosing character support** allows processing of data where character pairs, such as quotes or parentheses, surround the data.

SyncSort Speeds Data Warehouse Implementation

SyncSort can reduce the number of passes through the data by speeding up or combining these steps:

- ◆ **Data Extraction** - SyncSort's INCLUDE/OMIT quickly identifies the exact records you need, reducing the total data to be processed.
- ◆ **Data Conversion** - FilePort, a related product, converts mixed-type mainframe data to UNIX format (or vice versa) without the ballooning of datasizes or destruction of record layout that comes from unpacking mainframe data.
- ◆ **Data Transformation** - SyncSort's REFORMAT quickly changes your legacy records into load record images.
- ◆ **Summarization** - SyncSort's SUMMARIZE aggregates records with duplicate sort keys into a single record, counting records and totaling numeric fields.
- ◆ **Join** - SyncSort's JOIN takes records from two different sources and creates target records containing data from both sources.
- ◆ **Data Partitioning** - SyncSort's multiple OUTFILE splits your data into separate partitioned table ranges.
- ◆ **Load Pre-Sorting** - SyncSort's world-record sort performance accelerates the database load itself.

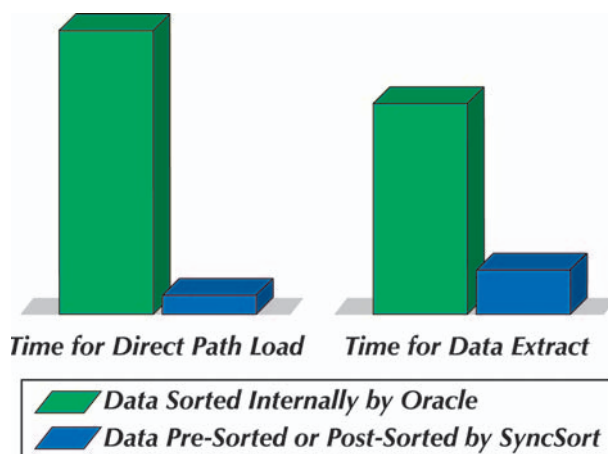
SyncSort Speeds Database Loads, Extracts, and Reorgs



If your relational database is very large, a lot of time can be spent loading data, extracting data for handoffs or reports, and running reorgs. SyncSort can cut significant time from these operations.

- ◆ **Bulk loading for high performance relational databases like Oracle and Sybase can be accelerated.** Pre-sorting data with SyncSort prior to bulk loading can cut 50% or more from the average load time.
- ◆ **Where a bulk load is not appropriate, loads can still be accelerated** by pre-sorting the data, using the clustered index as the sort key.
- ◆ **Extract processing can also be accelerated.** SyncSort's SUMMARIZE and KEYS functions are much faster alternatives to complex SQL SELECT, GROUP BY, SUM and ORDER BY statements.
- ◆ **The DB2 accelerator** speeds database load functions on DB2 databases.
- ◆ **Output record numbering** adds unique record identifiers to output data. This simplifies data loading for database tables that have uniqueness constraints.

Database reorgs will run significantly faster when database utilities are only used to unload and reload data, and SyncSort is used for the sort.





SyncSort Accelerates COBOL Applications

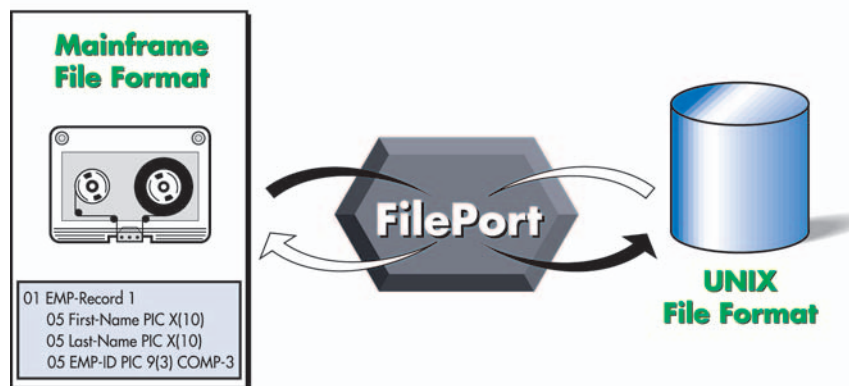
COBOL applications frequently use flat or indexed files, which require a great deal of sorting. SyncSort makes these sorts run faster whether they are hidden inside programs using the COBOL SORT verb or are done in shell scripts using the UNIX sort command.

- ◆ **SyncSort can improve the performance of COBOL applications by more than 65%.** SyncSort's COBOL Sort Accelerator automatically replaces COBOL SORT and MERGE verbs with SyncSort, resulting in major performance gains.
- ◆ **Significant time can be saved by using SyncSort instead of system utilities.** A compatible interface lets you sort with SyncSort, without editing your shell scripts. In addition, SyncSort's DATADictionary feature allows you to reference fields in your data files by their COBOL names, instead of by position, length, and format.
- ◆ **SyncSort's indexed file access capability lets you sort files easily at the command prompt,** whether they are Micro Focus indexed, AcuCobol, C-ISAM or UniKix VSAM format files.

Syncsort Products Speed Legacy Migration

If you're migrating applications from MVS or VSE to UNIX, you probably want to change as little of the source code as possible. Syncsort products automate much of the conversion, ensuring a faster migration and a more reliable application once it's up and running on UNIX.

- ◆ **MVS and VSE to UNIX Sort Converters** automatically change mainframe JCL sort jobsteps into UNIX shell script commands.
- ◆ **FilePort is a powerful, bidirectional data conversion tool.** It automatically converts mainframe datasets to UNIX format (and vice versa) without destroying non-character data or the record layout. FilePort uses existing COBOL copybooks to automatically transform mainframe data to UNIX format, or UNIX data to mainframe format.
- ◆ **The COBOL Sort Accelerator** speeds COBOL sorts, eliminating performance bottlenecks related to sorting within COBOL programs.



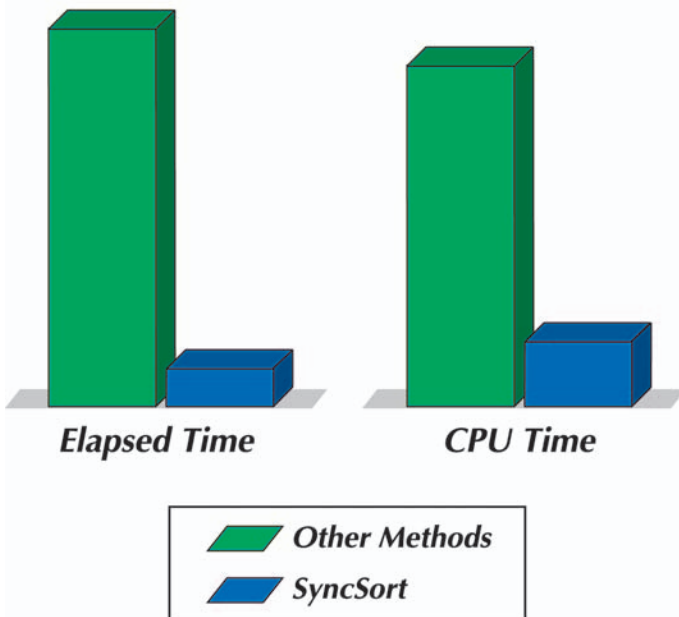
SYNCSORT PERFORMANCE

SyncSort Provides High-Performance Commercial Sorting

SyncSort has been selected by companies around the world for its sort performance. Its speed has been proven time and time again in benchmark tests.

But it doesn't stop there. Continuous technical enhancements ensure that SyncSort remains a performance leader on today's systems and tomorrow's.

Performance Comparison: SyncSort vs. Other Sorting Methods



SyncSort Performance Innovation

SyncSort's speed and efficiency are the result of years of specialized and continually advancing research and development across all major hardware platforms and operating systems. SyncSort is always among the first products to take advantage of changing system architectures and to respond to evolving information processing requirements.

- ◆ **SyncSort's design exploits the deepest levels of current architecture by incorporating highly sophisticated, patented technologies** like ParaSort, a parallel processing technique that optimizes the performance of today's multiprocessing systems. In addition, SyncSort combines proprietary sorting algorithms, advanced access methods, and dynamic optimization to ensure the most efficient use of system resources.
- ◆ **SyncSort automatically monitors and responds to system characteristics and current activity** with its built-in Dynamic Storage Management (DSM) technology. DSM systematically checks available memory, relative disk speed, and disk contention and automatically responds to its changing environment. This enables SyncSort to maintain superior speed and minimizes the use of system resources. The result is faster system throughput.



FUNCTIONALITY

- ◆ **SyncSort handles all your data.** SyncSort's ability to handle a variety of record formats and data types gives you the flexibility to process data from many different sources and to output data in the form required for downstream operations.

SyncSort's flexibility facilitates migrations and passing data to and from an RDBMS. Whatever data you have, SyncSort can handle it directly, without special conversion programming. SyncSort:

- Supports all record formats and data types and all major collating sequences, both domestic and international.
- Processes both text and binary data for input and output.
- Can pipe records from a preceding UNIX command or to a following command.

- ◆ **SyncSort can be invoked using any of the following:**

- The command prompt.
- AcuCobol and Micro Focus COBOL programs.
- Software AG NATURAL SORT statements.
- SAS applications.
- The IBM DB2 LOAD utility.
- Program calls in any system-supported language.

- ◆ **SyncSort supports:**

- Calls from programs in any language.
- Single-call or multi-call invocation.
- Active X, allowing SyncSort to be embedded within applications written in Visual Basic, Windows Scripting Host, or any other COM compliant environment.
- Records passed in a variety of ways: from an invoking program via file names, one record at a time, or in a table in memory.

- ◆ **SyncSort generates reports,** including a title page; columns and column headings; sections; totals, subtotals, and record counts; headers/footers at page and section levels; and a report trailer.

- ◆ **SyncSort provides a full set of data manipulation functions.** By eliminating the need for special programming, these functions can save days, or weeks, of programming time, while providing the full benefits of SyncSort performance:

- Record selection selects records for sorting and can group records for different processing.
- Reformatting extracts and reorders fields and creates new fields. You can reformat sort input records to reduce size for optimum sort performance, then reformat output to expand records after sorting.
- Summarization eliminates duplicate-keyed records.
- The join feature reads records from two sources, joins each record from one source with zero or more records from the other source according to the specified join type and join key, and writes the new joined records to the target. SyncSort can perform inner, outer, left, and right joins.
- Multiple output capability generates different extracts from a single input file.

- ◆ **FilePort automates time consuming conversions** of IBM mainframe data to UNIX format, or UNIX data to IBM mainframe format. FilePort automatically reads existing COBOL copybooks for record layout information.

- ◆ **The MVS to UNIX Sort Converter and the VSE to UNIX Sort Converter** smooth migration efforts by automatically converting mainframe JCL sort applications to UNIX shell scripts.



EASE OF USE

SyncSort is designed to fit seamlessly into your system:

- ◆ **Install in minutes.**
- ◆ **Use your existing data:**
 - Any record type or data format.
 - Existing COBOL data definitions.
 - Existing MVS or VSE sort applications.
- ◆ **Automatic tuning eliminates the need for manual tuning.** Self-optimization ensures optimal performance of SyncSort executions under changing conditions.

SYNCSORT SERVICE

Syncsort has built a reputation for superior product performance as well as reliable technical support:

- ◆ Syncsort Inc. has over 35 years experience helping customers.
- ◆ Over 95 percent of the Fortune 100 companies are Syncsort customers.
- ◆ An independent market research firm has named Syncsort as one of the top Data Warehouse 100 Vendors for seven years in a row.
- ◆ SyncSort supports mainframe, UNIX, Linux and Windows environments.

Syncsort Inc. makes an unqualified commitment to technical support. Expert Syncsort technical support is available to you 24 hours a day, 7 days a week.

Experience Syncsort Products on Your System

Choosing SyncSort ensures that those critical systems software components are simply the best... and will continue to be the best no matter how your system changes. But don't just take our word for it. Find out why so many companies worldwide rely on SyncSort.

Request a FREE trial of SyncSort and experience efficient data management and improved application performance. You can also take advantage of our Proof-of-Concept offer at no charge. Simply tell us what is running too slow and we will build you an equivalent, using a SyncSort application that cuts hours into minutes.

For your own copy of any Syncsort product, call (201) 930-8200, or visit our web site at www.syncsort.com.