

MANAGE THE EFFICIENCY AND RESPONSIVENESS OF MISSION-CRITICAL MAINFRAME APPLICATIONS

With Compuware Strobe, enterprise IT professionals can help their businesses stay competitive by improving the performance of their mission-critical applications, reducing CPU consumption, batch runtimes and online transaction response times.

When Strobe products are used as part of an application performance management (APM) program, they help IT organizations control the costs of applications, increase productivity and customer satisfaction, and support business growth and change.

MANAGE PERFORMANCE IN CHALLENGING ENVIRONMENTS

Strobe is the premier technology for managing application performance in complex environments. It measures the activity of both online and batch-processing applications in single and multiple system environments, including Parallel Sysplex. Strobe also produces a Performance Profile, a set of hierarchical reports that details where and how time is being spent during an application's execution. Our solution supplies the precise, in-depth application performance data IT professionals need to locate and eliminate sources of excessive resource demand with speed and accuracy.

For application developers, performance analysts, database administrators, technical support engineers and other IT professionals who work with mission-critical applications, Strobe offers multiple benefits.

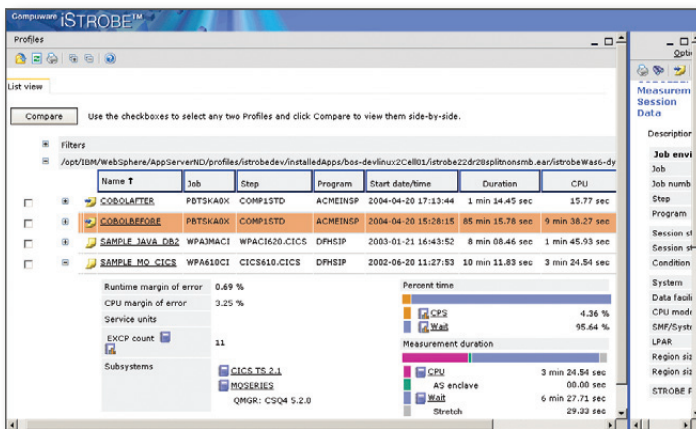


Figure 1: The main Compuware iStrobe screen displays a list of available profiles. Clicking on the left-hand down arrow creates a data report that provides high-level summary information on CPU and Wait percentages for a measurement session. This helps you to quickly determine which measurements are most important to review.

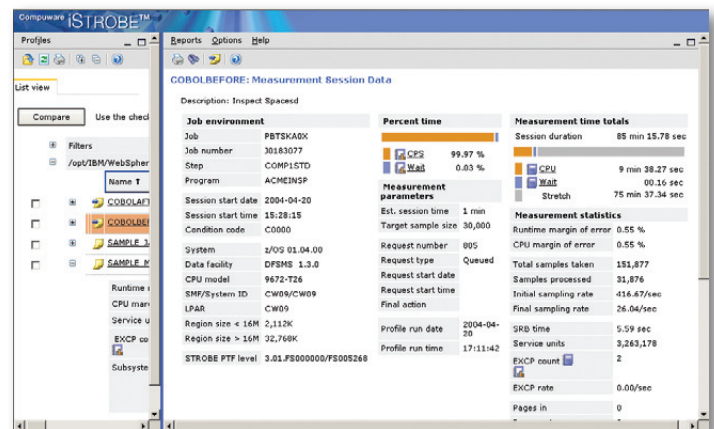


Figure 2: The Measurement Session Data Report provides in-depth information. Icons provide shortcuts directly to particular subsystem reports, allowing you to quickly check the CPU usage and wait characteristics of the job step.

A COMPREHENSIVE VIEW OF APPLICATION PERFORMANCE

Because Strobe measures and reports on many sources of resource consumption during an application's execution — from user programs, system services and library routines to I/O devices and data sets — you can locate sources of inefficiency quickly and easily. Even in complex environments with multiple languages, databases or teleprocessing subsystems, a single Performance Profile supplies a comprehensive view of an application's performance.

IMPROVE APPLICATION EFFICIENCY AND RESPONSIVENESS

By pinpointing the causes of excessive CPU consumption and wait time — in program statements, system services, language runtime routines and I/O operations — Strobe takes the guesswork out of application performance improvement. Detailed Performance Profile reports make it easy to locate and correct sources of inefficiency.

IMPROVE USER CODE

Complex applications may include thousands of lines of code. The Performance Profile can save hours of investigation time by pinpointing program statements that consume excessive CPU time. Profile reports also detail the percentage of CPU time used within modules and control sections, and display procedure names and statement numbers. It then automatically displays the complete line of source code.

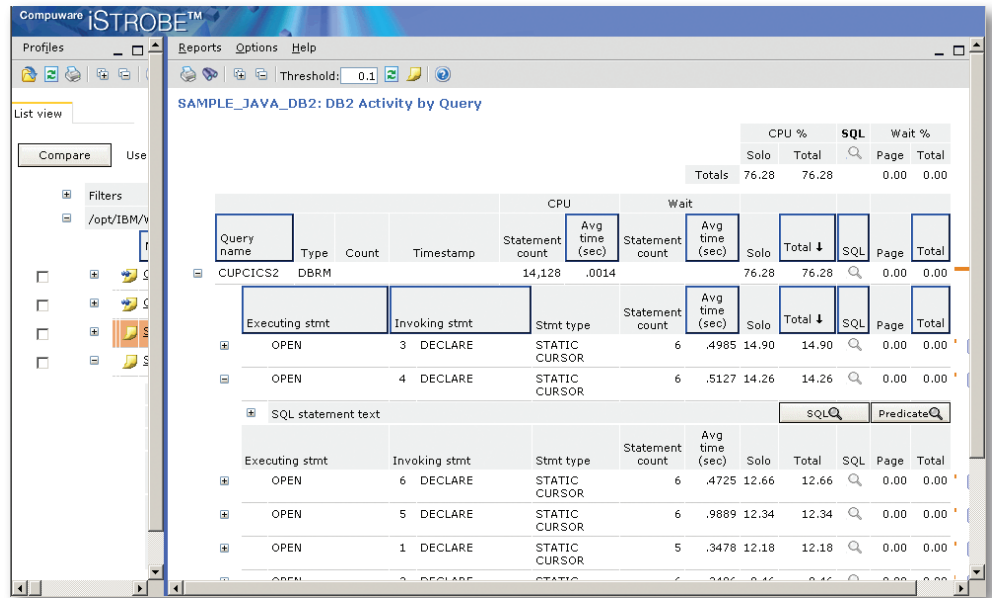


Figure 3: iStrobe combines several Strobe Wait and CPU reports into one comprehensive report, making it easier for you to find the information you need.

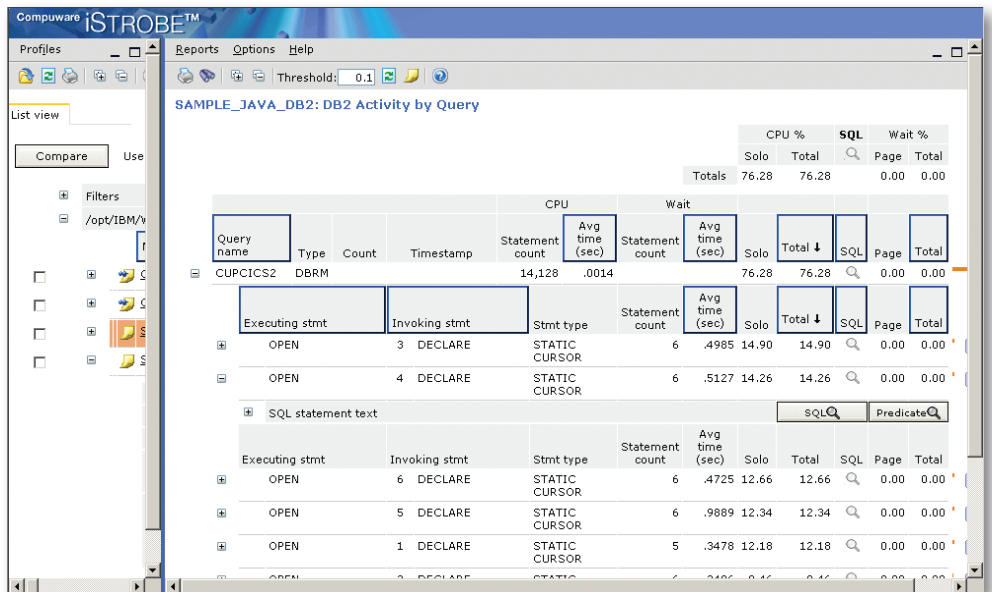


Figure 4: Clicking on any underlined module or pseudo-module in a report creates a pop-up window that provides a detailed description and hints on how to improve the performance of an application.

AVOID RESOURCE-CONSUMPTIVE SYSTEM SERVICES AND LANGUAGE ENVIRONMENT RUNTIME ROUTINES

System service routines that consume a disproportionate amount of CPU time can often be avoided. Performance Profile reports identify which program statements are calling resource-consumptive system services (such as MVS SVCs or coupling facility modules) as well as resource-consumptive COBOL, PL/I, C, Java and LE runtime routines. By describing the function that each executed module performs, these reports help you gauge the impact of compile and runtime options. They also aid in determining how coding decisions affect the use of these modules.

REDUCE I/O WAIT TIME

Inefficient file and database access is a primary cause of application delays. By analyzing the Performance Profile, you can identify the data sets responsible for excessive wait time within both online and batch-processing applications and examine data on I/O activity by device, volume, ddname and cylinder. Reports also include data set characteristics and parameters such as block sizes, EXCPs, buffers, strings, logical VSAM I/O operations, SMS statistics and SmartBatch statistics. This detailed information helps determine what changes to make for improving application efficiency and responsiveness.

A SIMPLE WAY TO MEASURE AND ANALYZE APPLICATION PERFORMANCE

Using Strobe makes application performance measurement simple. Measurement sessions do not require recompilation, relinking or changes to application JCL. In response to a single command, Strobe can automatically gather performance statistics and generate reports on application execution activity. With its nonintrusive, low-density sampling technology, Strobe can be used with confidence in both test and production environments.

Strobe offers a convenient, single point of control for measuring application performance. From anywhere in the Sysplex, you can submit measurement session requests for applications that execute on one, several or all systems. Strobe finds the system on which the application is executing and takes the appropriate measurements.

iStrobe extends the benefits of Strobe to IT professionals who develop, test and maintain mainframe applications. With its easy-to-use, browser-based graphical interface, iStrobe offers extra help in analyzing the information collected by Strobe and describing application performance improvement opportunities, as well as recommendations for actually improving application efficiency

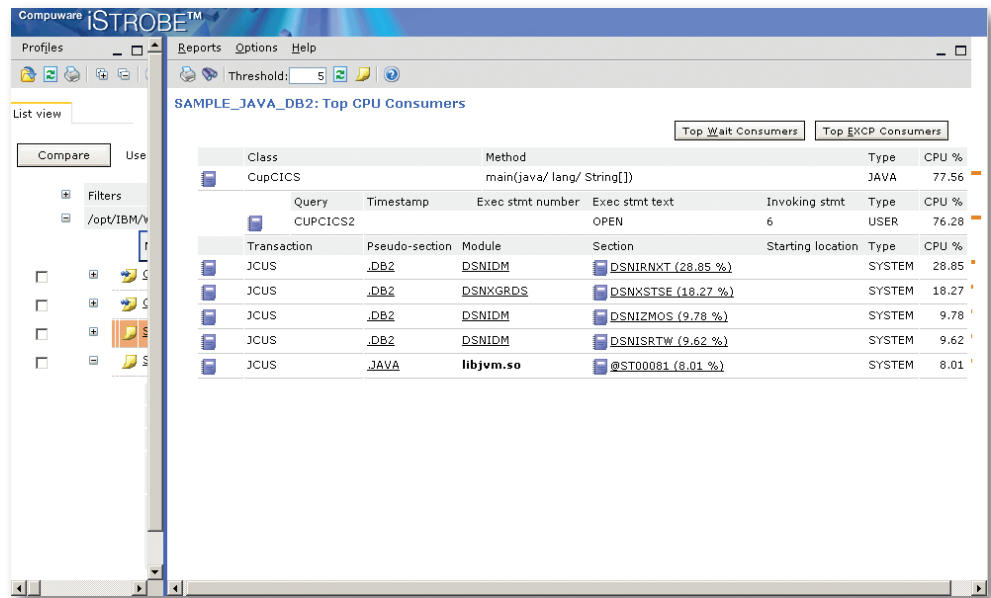


Figure 5: Quickly locate application inefficiencies with the iStrobe Top Resource Consumers Report. This report identifies the most resource-consumptive system service routines (CPU, Wait, EXCPs), files and user program statements, allowing you to drill down directly to detailed reports.

and responsiveness. With Compuware's modernized mainframe development environment, you also can initiate an Add Active request for an executing job from the JES Explorer in the Compuware Workbench to extend Strobe's flexibility even further.

Compuware AutoStrobe increases the flexibility of Strobe and iStrobe by making both measurement and analysis easier and more automatic. You can create reusable measurement session requests and schedule them to run at regular intervals. Also, third-party monitor applications can now initiate a Strobe measurement automatically when performance issues appear.

Global Batch Monitoring automates the detection of performance issues using a rolling average of CPU consumption and elapsed time metrics. AutoStrobe can automatically measure any job step that exceeds acceptable thresholds. This facility automatically sets CPU and elapsed thresholds based on performance data from previous executions.

If either threshold is breached, AutoStrobe will automatically submit an Add Active measurement. The Automeasure capability measures new and changed applications to determine proactively whether code changes have altered an application's performance. Historical data helps you analyze application performance over time, and user-defined resource utilization thresholds enable you to quickly focus your analysis efforts. Additionally, this feature quantifies savings that result from application performance improvements.

Combined, Strobe, iStrobe and AutoStrobe simplify and automate application performance measurement and analysis.

APPLICATION PERFORMANCE MANAGEMENT SERVICES

Strobe customers are supported by a unique group of Compuware professionals known as Consulting Engineers. Consulting Engineers deliver a variety of APM services ranging from simple installation assistance to comprehensive performance tuning projects. They are experts in managing APM projects and are industry leaders in performance tuning. They have the latest knowledge of subsystems, technologies and APM products and years of experience tuning mainframe applications.

The APM service offerings provide you with great value. The services are geared toward performance tuning and maximizing the return on your investment. Another strong point of Compuware's service delivery is in our approach. The goal is to transfer knowledge and make you self-sufficient, maximizing the long-term value you get from our APM product line.

APM PROBLEM SOLVER SERVICE

The APM Problem Solver service assists in identifying and resolving specific performance problems in mainframe-centric, business-critical applications.

Using Compuware's industry-leading products, experienced Compuware Delivery Consultants work closely with your IT personnel to measure an application's performance, identify performance improvement opportunities and make recommendations for implementing solutions.

With the APM Problem Solver services, organizations not only resolve problems quickly and effectively, but they gain the skills necessary to prevent future application performance degradation.

Compuware's Delivery Consultants are experts in managing APM projects. They have the latest knowledge of APM methodology and technologies and average 10 or more years' experience in OS/390 and z/OS application or system programming, database administration and/or application performance tuning.

To learn more about Compuware Strobe, visit:
www.compuware.com/strobe

APM PRODUCTS

Z/OS OPERATING ENVIRONMENT

- Strobe
- iStrobe
- AutoStrobe

SUBSYSTEM AND DATABASE ENVIRONMENTS

- Strobe *for CICS*
- Strobe *for DB2*
- Strobe *for IMS*
- Strobe *for WebSphere MQ*
- Strobe *for WebSphere Application Server*
- Strobe *for CA-IDMS*
- Strobe *for ADABAS/NATURAL*
- Strobe *for UNIX System Services*

LANGUAGES

- Strobe *for Java™*
- Strobe *for COBOL*
- Strobe *for C/C++*
- Strobe *for PL/I*
- Strobe *for FORTRAN*
- Strobe *for CA-Optimizer*
- Strobe *for CA Gen*

Strobe and its product options let you measure and analyze the performance of mainframe applications executing in Java, CICS, DB2, DB2 DDF, IMS, WebSphere MQ, WebSphere Application Server, CA-IDMS and UNIX System Services environments. Strobe products are also available to support the measurement of applications written in COBOL, PL/I, C++, CSP, FORTRAN, Assembler, NATURAL, ADS/O and CA Gen.

Compuware Corporation, the technology performance company, provides software, experts and best practices to ensure technology works well and delivers value. Compuware solutions make the world's most important technologies perform at their best for leading organizations worldwide, including 46 of the top 50 Fortune 500 companies and 12 of the top 20 most visited U.S. web sites. Learn more at: compuware.com.

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