

## PINPOINTING INEFFICIENCIES THAT IMPACT CICS APPLICATION SERVICE LEVELS

Compuware Strobe for CICS helps IT professionals measure, analyze and improve the performance of applications that use CICS.

By contributing CICS-specific information to the Performance Profile — a series of hierarchical reports that identifies the sources of resource demand — Strobe for CICS supplies the comprehensive application performance information users need to locate application inefficiencies quickly and make improvements.

Strobe for CICS:

- pinpoints transaction components that use excessive CPU time or cause poor response time (including CICS and subsystem API commands)
- detects the inefficient use of CICS system services
- identifies inefficient I/O activity
- supplies CICS system statistics and configuration parameters.

By using Strobe for CICS in conjunction with iStrobe — a Compuware web server application product — application developers, performance

analysts and other IT professionals can improve transaction response times, increase transaction throughput and consistently meet service-level commitments.

### A COMPREHENSIVE VIEW OF APPLICATION PERFORMANCE

Users can quickly focus on the causes of poor application performance within both individual transactions and entire CICS regions, even in complex applications that are written in multiple languages and use multiple databases.

Information from Strobe for CICS is fully integrated with performance data from other Strobe products, such as Strobe for DB2, Strobe for COBOL and Strobe for WebSphere MQ, in a single Performance Profile, giving users a comprehensive view of application performance.

CICS-SAMPLE: CICS Service Time				Mean service time (sec)					
Transaction baseline				0.01 sec	Delay	Suspend	Exec	Total	
Total transaction count				293	Totals	0.02	1.20	0.00	1.23
Transaction	Count	Margin of error	CPU	Delay	Suspend	Exec	Total		
.CICS			26.30 %						
.CSQCSE			0.90 %						
CEMT	1		1.80 %						
CKAM	1		0.00 %						
CKTI	10		1.80 %						
CRTX	1		4.50 %						
CSHQ	1		0.00 %						
CSNC	1		0.00 %						
CSNE	1		0.00 %						
CSOL	1		0.00 %						
CSSY	2		0.00 %						
CSTP	1		0.00 %						

Figure 1: Performance Profile reports highlight resource-consuming CICS transactions, summarizing the percentage of CPU time used, the number of times a transaction executed and average service time, including execution time, suspend time and dispatch delay.

## IMPROVE CICS APPLICATION EFFICIENCY AND RESPONSIVENESS

With Strobe for CICS, users can identify and correct the causes of poor transaction response time; avoid the inefficient use of CICS system services; improve I/O efficiency; and select the most efficient CICS system parameters.

## IMPROVE TRANSACTION RESPONSE TIME

Strobe for CICS gives users an unparalleled view of CICS transaction response time, enabling them to easily diagnose and improve the causes of poor application performance. First, Performance Profile reports summarize the percent of CPU time used by individual CICS transactions, show the number of times a transaction executed, and display average service time, including execution time, suspend time and dispatch delay. Then, Profile reports supply detailed response time information, identifying the resources used by CICS and subsystem API commands (for example, EXEC CICS), as well as other transaction components, such as user programs and language runtime routines.

For each module and control section within a transaction, the Performance Profile shows the suspend and execution time caused by individual CICS and subsystem API commands and identifies the associated command resource, such as a file DDNAME, DBRM or PSB; the location within the user module that initiated the command; and the CICS resource or system service module that processed the command. iStrobe extends these capabilities, supplying detailed

descriptions of CICS resources and system service modules, and offering performance improvement hints. Performance Profile reports also detail transaction service time not directly related to CICS and subsystem API commands, including execution time in user programs and language library routines.

IBM's Hursley Laboratory — developer of CICS Transaction Server, the leading e-business Enterprise Application Server, and WebSphere MQ, the award-winning family of messaging software — is using Strobe to help develop its next generation of CICS for z/OS and WebSphere MQ for z/OS.

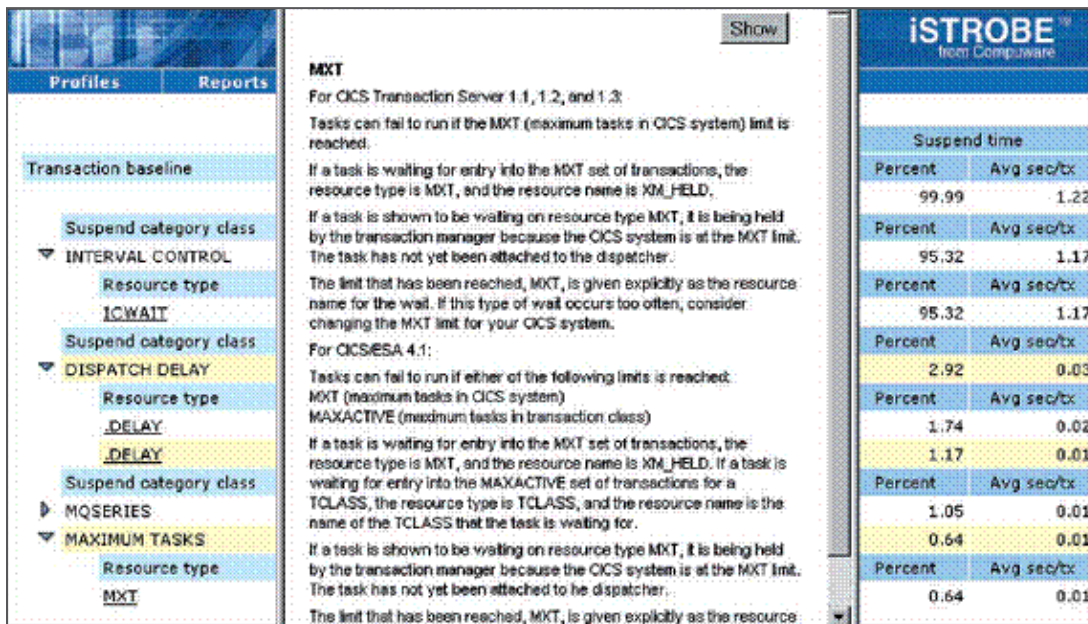


Figure 2: Detailed Performance Profile reports pinpoint the individual CICS and subsystem API commands that cause transaction suspend time or execution time and show the CICS resources and system service modules that processed the command. Extensive help for CICS resources and system service modules aids analysis and offers hints for improving application performance.

Figure 3: Performance Profile reports allow users to differentiate between API and non-API activities, such as in the MQAA transaction shown here.

iSTROBE™ from Compuware									
Profiles	Reports	Options	Help						
MQAA		31	0.98 %	10.90 %	0.03	2.31	0.00	2.34	
Non-API totals					0.03	0.03	0.00		
	Resource type	Resource name			Delay	Suspend			
	MXI	XML_HELD			0.00	0.02			
	.INTCALL	.MQ_TCB			0.00	0.01			
	.DELAY	.QR_TCB			0.03	0.00			
API totals						2.27	0.00		
	Module	Section				Suspend	Exec		
MQCGPAA	MQCGPAA					2.27	0.00		
Transaction	Count	Margin of error	CPU		Delay	Suspend	Exec	Total	
▶ MQAA	30	1.41 %	6.10 %		0.03	1.23	0.00	1.26	
▶ MQAB	30	7.58 %	3.60 %		0.01	0.03	0.00	0.04	
▶ MQBB	31	0.98 %	9.00 %		0.03	2.31	0.00	2.34	
▶ MQBB	30	1.41 %	4.50 %		0.03	1.23	0.00	1.26	
▶ MQBB	30	7.52 %	7.20 %		0.01	0.03	0.00	0.04	
▶ MQCC	31	0.98 %	10.90 %		0.03	2.31	0.00	2.34	
▶ MQCC	30	1.41 %	6.10 %		0.03	1.23	0.00	1.26	
▶ MQCK	30	7.49 %	1.80 %		0.01	0.03	0.00	0.05	

## MANAGE CICS RESOURCES EFFECTIVELY

With Strobe for CICS, users can avoid the excessive use of CICS system services and identify the CICS resources that cause transaction delays. For all transactions observed during measurement, Performance Profile reports identify the CICS resources causing transactions to wait, the percent of region suspend time and the suspend time for the average user transaction.

## IMPROVE I/O EFFICIENCY

Efficient file access is critical in online environments. Strobe for CICS helps users reduce transaction wait time by improving I/O efficiency. Performance Profile reports highlight application data sets with high physical I/O operations (EXCPs) and show DDNAME, access method type, device type, volume ID, block sizes, buffers, CI/CA splits, string waits, logical I/O operations and VSAM LSR statistics. In addition, users can view information on CICS system data sets such as journals and transient data queues.

## CHOOSE THE MOST EFFICIENT CICS SYSTEM PARAMETERS

Strobe for CICS also helps users select the most efficient CICS system parameters by supplying CICS system statistics and

configuration parameters. Performance Profile reports detail task statistics; the number of times a program was loaded and called; VTAM statistics; and main, temporary and dump storage statistics. Strobe reports transactions by terminal ID and by user ID. This helps analysts pinpoint troublesome transactions more efficiently.

## A SIMPLE WAY TO MEASURE AND ANALYZE CICS APPLICATION PERFORMANCE

Strobe for CICS and iStrobe make measuring CICS application performance easy. Whether users request measurement of a single transaction or a group of transactions, performance data for CICS API commands, user-written code, system services, language library routines and database calls is captured automatically and reported. No recompiles, relinks or JCL changes are needed. And, because Strobe is designed to use minimal resources, it can be used with confidence in both production and test CICS environments.

iStrobe works with Strobe to allow IT professionals to measure performance of applications and pinpoint inefficiencies within them. The CICS Performance Supplement is available in iStrobe. With iStrobe, users can view and analyze Performance Profile information interactively using a standard browser such as Internet Explorer.

## APM PROBLEM SOLVER SERVICE

The Application Performance Management (APM) Problem Solver service assists clients in identifying and resolving specific performance problems in their mainframe-centric, business-critical applications.

Using Compuware's industry-leading products, our experienced Delivery Consultants work closely with a client's 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 can not only resolve problems quickly and effectively, but also 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. They 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 *for CICS*, visit:  
[compuware.com/strobe](http://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*

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](http://compuware.com).

**Compuware Corporation World Headquarters** • One Campus Martius • Detroit, MI 48226-5099

© 2011 Compuware Corporation

Compuware products and services listed within are trademarks or registered trademarks of Compuware Corporation. Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

11.04.11 20116pcg

