

# A Flexible and Highly-Functional Application Tracing Solution

A powerful tracing tool for z/OS applications.

## TraceMaster

### Interactive Debugger

TraceMaster is a flexible and highly-functional application tracing solution.

Macro 4's TraceMaster is offered as part of its industry leading Application Availability suite of z/OS tools.

TraceMaster provides a comprehensive range of features that allow users to analyze and test source level code interactively, expediently and with flexibility.

- Using TraceMaster, your users will change the way they debug and thus problems will be identified and resolved faster and more accurately than using traditional methods.

### Supported Environments

TraceMaster provides source level support for programs written in:

- COBOL, PL/1, Assembler.

Which may be traced interactively through:

- TSO, CICS, IMS/DC, Batch interfaces.

## Overview

### Application Tracing Accelerator – Interactive Control

- **An intuitive interactive interface** — allows users to manipulate large volumes of code quickly and easily, so they can rapidly trace and resolve hidden logic errors and program abends.

- **'Point and Shoot'** — all information is displayed in fully configurable windows. The interface provides a cursor sensitive 'Point and Shoot' control to simplify and accelerate the testing process.
- **Context sensitive HELP** — windows enable new users to benefit from TraceMasters' full functionality.

### Logic Control

- **Unlimited conditional and unconditional breakpoint** — capabilities allow users to control a tracing session at their desired pace and powerful "stop-on-condition/run until" facilities enable users to control and suspend program execution.
- **PF Key** — the logic flow of previously executed program statements can be easily reviewed by simply executing a PF Key.
- **A powerful test session replay capability** — automatically provides a user the capability to return to where the previous session ended. Even more powerful is the capability to execute everything but the last command that was in error so the user can quickly step through the logic error and identify the resolution.

### Data Control

- **Proactively supports resolution of data related abends** — by identifying where an abend is about to occur. If this is a data related abend, the user can simply overwrite the data and continue tracing.

- **Variable display & modification** — 'current variables' are displayed automatically through the trace session; other program variables may also be displayed; any variables may be easily modified.
- **Variable monitoring** — program variables may be monitored during the the entire tracing session, even when switching between programs/subprograms.

### Simple Menu-Driven Set-Up

- **Quick and simple** — trace session setup.
  - After the initial tracing session is established, the session never has to be set up again unless a user's JCL significantly changes.

### Source Level Program Tracing

- **TraceMaster synchronizes source program display** — with execution and allows program testers to view and identify problems as they occur.
- **Tracing can be performed** — at the COBOL, PL/1 or Assembler statement or machine instruction level.

### Instruction Pathlength Analysis

- **Instruction Pathlength Analysis** — enables programmers to analyze execution paths and identify coding inefficiencies.

## Audit Test Results

- **Audit Capability** — TraceMaster provides a full audit capability, allowing program testers and managers to monitor and trace back through the results and steps taken during a test session.

## Additional Features

- **Full DB2 support** — including long names (DB2 Version 8) and stored procedures.
- **Powerful support of DB2 Stored procedures** — using Work Load Manager (WLM) spawned service tasks. As TraceMaster intercepts the WLM, the client source can be a mainframe application, a web-based application or a distributed application.
- **Full assembler support** — including supervisor mode and trace execution.
- **Full COBOL support** — including display and update of any Data Division item, and program path coverage analysis.
- **Full IMS support** — including interactive entry of, and detailed tracing of DL/I calls, and program testing under BTS.
- **Full CICS support** — including the capability to allow users to save the last 15 sessions traced, MRO support and the capability to browse/edit files that are opened and enabled to CICS as well as browse / edit Temporary Storage Queues, Transient Data Queues and MQ Lists.

## Fault Analysis Portal

Fault Analysis Portal is a new, innovative web interface that further extends the powerful TraceMaster and facilitates an increase in the productivity of your application developers.

### It gives you:

- **Intuitive interfaces** — instructive graphics and a unique reporting capability of drilling down from high-level description to minuscule details.

- **Simplicity** — users of all skill levels can easily identify program problem areas directly from their web browser.
- **Fault Analysis Portal** — can also be used with DumpMaster (Macro 4's Dump Analysis tool), and when used together with TraceMaster, gives you a powerful, easy to use fault analysis portal.

Fault Analysis Portal provides users with a familiar interface to both TraceMaster and DumpMaster. This means that abends, production or otherwise, diagnosed using DumpMaster can be easily analyzed using TraceMaster to address errors in the program logic safely and quickly outside of the live production environment.

*"...Fault Analysis Portal is simply COBOL in colour...with lots of user-friendly features."*

## Benefits

With the addition of Fault Analysis Portal to TraceMaster, users have a facility that enables them to more quickly service customers and implement new business programs faster (for a greater competitive edge), resulting in direct cost savings within the IT department.

Users gain all the benefits of a Windows graphical environment. These include:

- No need to re-train mainframe application developers to use the new intuitive interface.
- Multiple, scrollable windows open at the same time.
- Online context-sensitive Help to answer questions.

With Fault Analysis Portal for TraceMaster, all that is needed is access to a web browser to begin testing your application(s) efficiently and effectively.

## Intuitive Features

### Take an Active Look

Using Fault Analysis Portal, TraceMaster lets you have full source-level access for supported programs. Go straight to the abending line in the Active Listing window.

Scroll through sections of the application listing on your screen and take advantage of the powerful interface to tailor the display to meet your needs.

**Enhanced navigation** — on the Main Trace Window, the Tree view allows you to drill down.

**Displaying variables** — the Current Variables window displays all of the variables in the current and previous statement, in the program listing.

**Setting up breakpoints** — Breakpoints can be easily set up for a trace session.

**Stepping through the application** — users can step or run through the program one or more instructions at a time.

## About Macro 4

Macro 4 is a global software company that helps organizations to improve the performance of their critical business applications by making the complex simple. Macro 4's solutions for Application Performance, Document Management and Application Availability are easy to use, fast to implement and deliver value quickly in even the most complex IT environments.

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