

SOURCE-LEVEL SUPPORT FOR LEGACY SYSTEMS

Compuware Abend-AID helps bridge the gap between developer experience and legacy system support requirements. Abend-AID combines ease of use with powerful fault analysis and diagnosis features to lead developers directly to the information they need to resolve faults and abends.

Over the past two decades, many have predicted that legacy systems would soon be a thing of the past. In stark contrast, companies are now realizing greater benefits from their legacy systems as they connect them to distributed systems. However, companies face several major challenges in managing their legacy systems in these rapidly changing environments.

Legacy systems are increasingly being managed by programmers less experienced in their design, functions and code. Businesses are asking IT staffs to have a higher-level understanding of business objectives — leaving less time to become experts on the technologies with which they work. Furthermore, the underlying technologies continue to be exposed to changes, making their management in complex environments even more difficult.

All these challenges make it harder to find, analyze and fix faults in PL/I, COBOL and Assembler systems. In the face of reduced experience in reading arcane “dumps” from legacy applications, and the need for increased productivity, IT organizations are seeking tools that will help speed fault resolution for every staff member.

Abend-AID is the solution — and has long been the tool of choice for IT staffs working with legacy systems. Abend-AID bridges the gap between development and legacy system support requirements by automatically providing IT staffs with precise, accurate data on faults. System-passive and transparent to the user, Abend-AID provides true online source-level debugging for PL/I, COBOL and Assembler.

Developers use Abend-AID to:

- identify errors and verify test results through a directory of all fault activity
- view the actual text of the statement in error and contents of related fields
- clearly display data in storage and data being transferred between programs
- identify field lengths and index values for multi-dimensional tables
- view source code for program logic.

USER INTERFACES

3270 — “GREEN SCREEN”

Abend-AID continues to support the traditional “green screen” interface most familiar to today’s users.

ABEND-AID WEB BROWSER INTERFACE

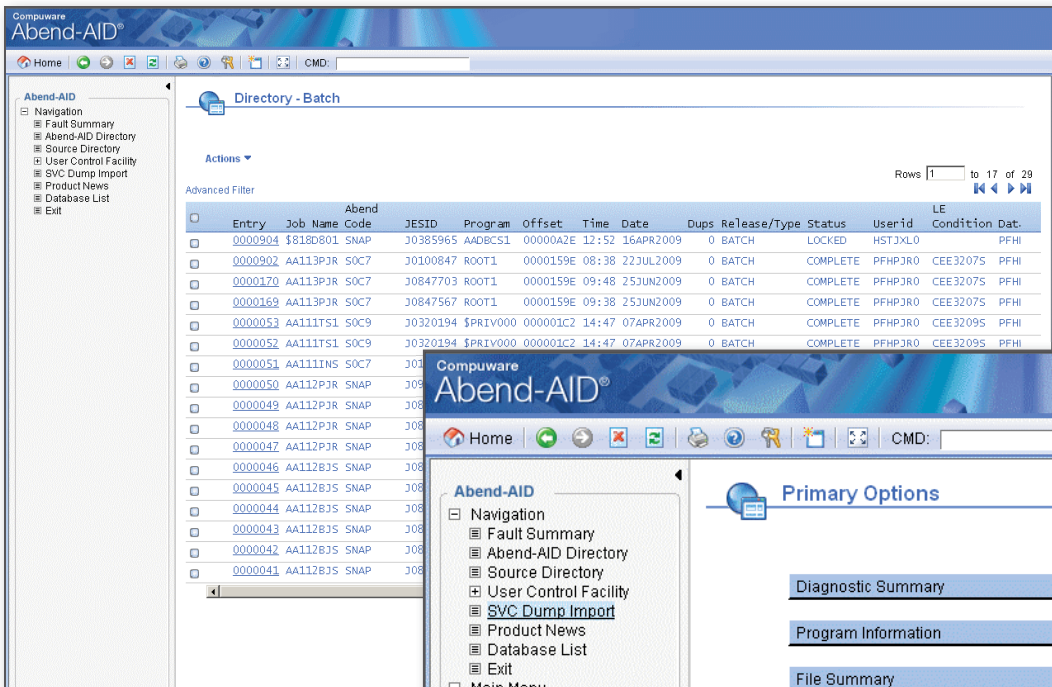
Abend-AID now has a web interface for tomorrow’s users who will be more comfortable with a GUI interface. The Abend-AID Web Browser Interface only requires a browser on the client machine and there is NO intermediate server required.

The Abend-AID Web Browser Interface is available through the Compuware Workbench, a modernized open development environment for managing mainframe application development activities.

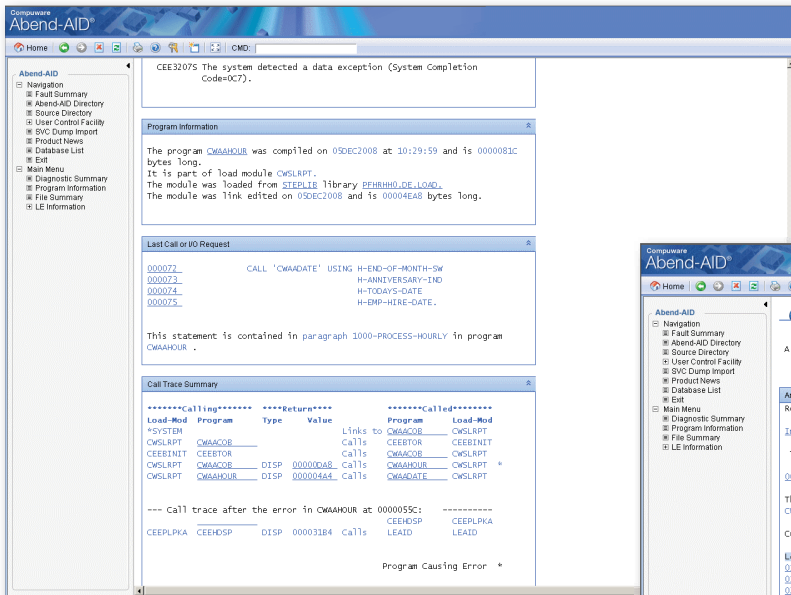
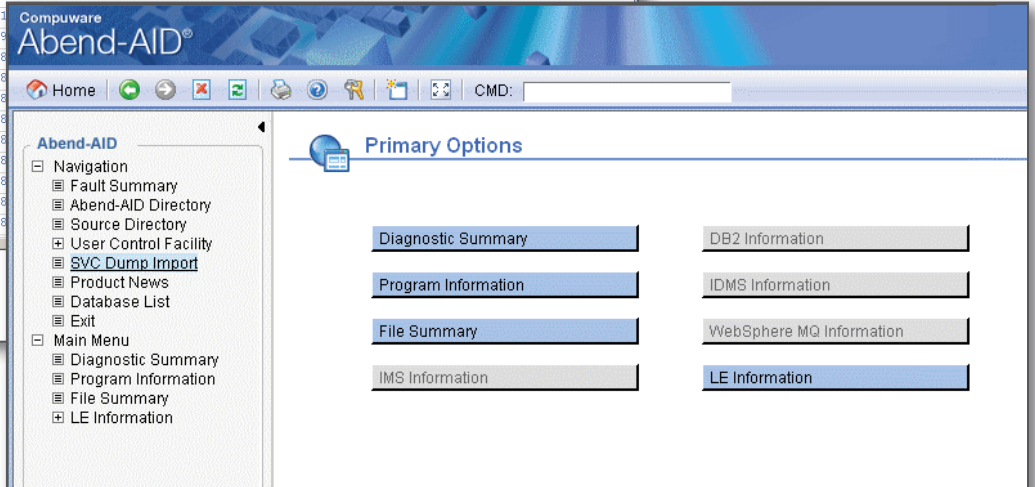
PROGRAMMING LANGUAGE SUPPORT

When a PL/I, COBOL or Assembler program fails, Abend-AID delivers an added level of power and versatility to help IT staffs simplify and speed the error-resolution process. It combines true online source-level debugging for programs with the interactive capabilities of the TSO/ISPF environment.

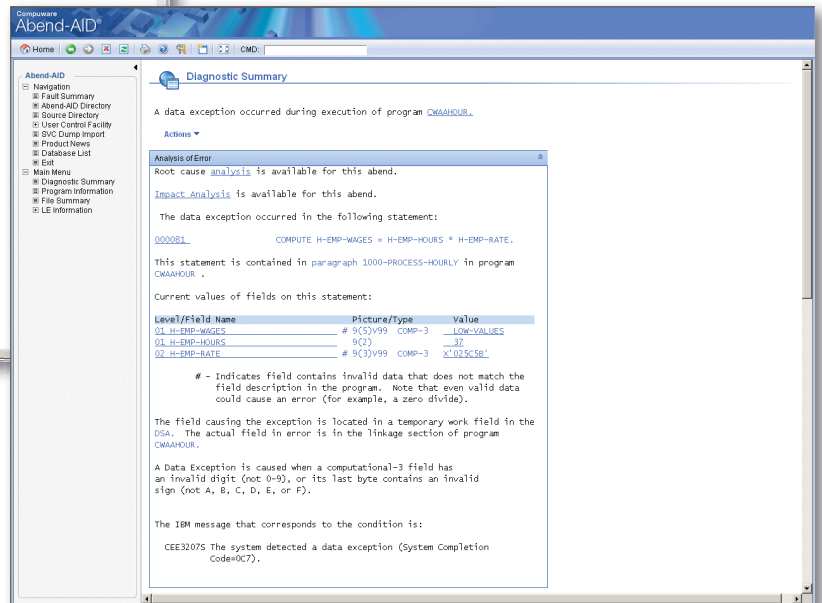
Without Abend-AID, when an abend occurs, programmers must manually cross-reference the dump with the correct version of the application source code, a tedious, time-consuming task. Abend-AID provides developers powerful features that help solve even complex faults more quickly and easily. Gone are the multiple reruns required to re-create the problem, and the multiple compiles required to add and remove displays and traps. Abend-AID is an efficient, accurate analysis and fault resolution tool that increases productivity, accelerates and increases knowledge and releases personnel to tackle higher-priority work assignments.

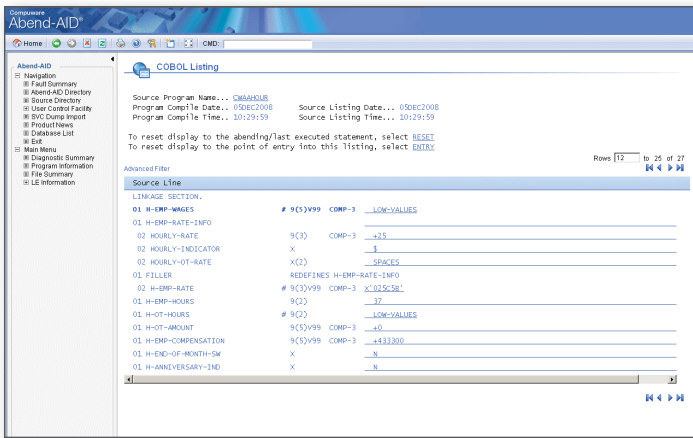


The Abend-AID Directory and Menu screens allow developers to quickly select the appropriate Abend-AID report.

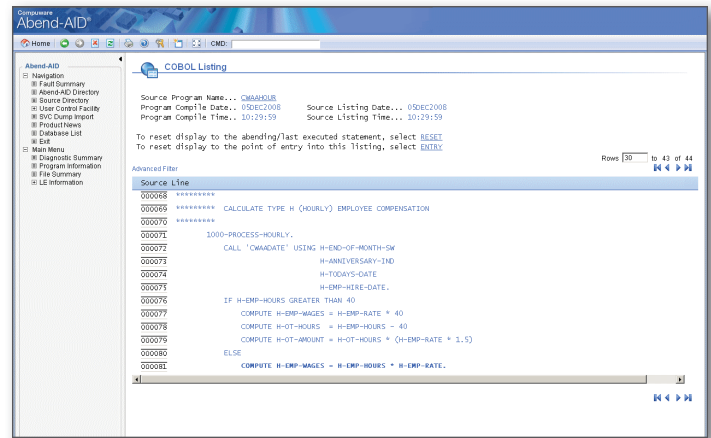


Abend-AID helps developers determine what the problem is, where it occurred and the suggested solutions. Using Abend-AID, developers receive a report of the actual statement in error and the name, types and current contents of the related fields.

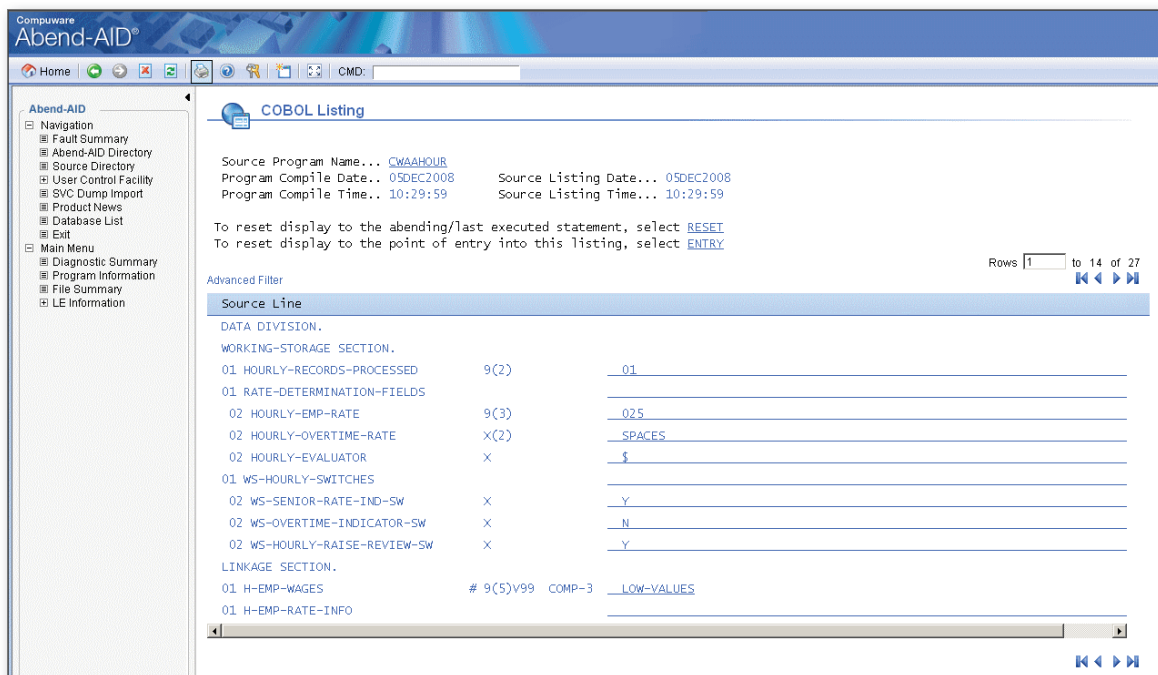




With Abend-AID, fault data is presented by field name, picture type, the current contents of the field and the table field values.



Abend-AID shows the actual source code that caused the error.



The contents of each field are converted by Abend-AID to decimal/character format, which developers can use to determine if the fields contributed to an abend.

COMPREHENSIVE SUPPORT FOR IBM LANGUAGE ENVIRONMENT

The IBM Language Environment (LE) provides services to developers who are using the latest technologies to build systems such as e-business solutions. However, even developers maintaining and extending legacy systems must understand and work within this more complex environment. For example, LE implemented new ways of handling and reporting errors and introduced more than a thousand new error messages and codes.

Developers may find it difficult to debug LE problems that were once easy to solve. Much of the information needed to resolve errors effectively must be obtained by navigating the internals of LE using a dump. Using Abend-AID, developers benefit from unparalleled support for the IBM LE in several ways:

- **Abend Diagnostics.** Abend-AID provides the same excellent level of diagnostic support for all system messages and codes when an LE application abends. When LE reports a blanket runtime condition of CEE3250C, Abend-AID makes it easy to determine the original problem and its cause.

- **Runtime Condition Diagnostics.** Abend-AID clearly explains software-raised errors, and often recommends possible resolutions. Many runtime conditions represent errors manifested previously as COBOL II user abends.
- **Heap Storage Analysis.** Compilers are beginning to manage certain types of program storage using LE user heaps. Abend-AID reduces the tediousness of dealing with storage heap complexities by thoroughly analyzing LE-managed heaps. Abend-AID provides a storage allocation map of allocated and free elements, a validation report of the LE user heap and identification of overlay errors in the LE user heap.
- **Runtime Options.** Much of LE's runtime behavior, including the manner in which errors are handled and reported, is controlled by options either set as system-wide defaults or overridden by various other means. As a result, similar program faults may be handled differently from job to job and may even produce varying levels of LE diagnostic output. Abend-AID, on the other hand, is consistent in its reporting of application errors. Abend-AID also shows the runtime options in effect at the time of error and how they were set, thus providing potentially valuable debugging information.
- **LE Control Blocks.** Abend-AID displays important LE control blocks and points out fields within them containing useful debugging information.

DISTRIBUTED VIEWING OF SOURCE CODE

Because applications are often developed on one processor and distributed to others for production, source files often do not reside on production systems. This makes finding and resolving application problems time-consuming at best. The distributed viewing capability of Abend-AID allows real-time merging of source files located on remote systems. This eliminates the need for developers to transfer file contents manually across multiple systems, reducing the time and errors involved in the problem resolution process.

CROSS-PRODUCT INTEGRATION

FILE-AID ACCESS

Abend-AID links directly into Compuware File-AID. Developers can keystroke directly into File-AID *for DB2*, File-AID *for IMS* or File-AID/MVS from a file section. They simply enter an edit or browse command to access the related dataset via File-AID's edit or browse modes.

XPEDITER INTEGRATION

Integration between Compuware Xpediter and Abend-AID saves compile time — and DASD space — because only a single file is needed for Xpediter and the Abend-AID source support. Additionally, the dynamic link between Xpediter and Abend-AID saves time in interactive testing sessions.

DEVENTERPRISE INTEGRATION

Abend-AID integration with Compuware Xpediter/DevEnterprise delivers further insight into data-related abends through Impact Analysis. This allows the user to trace where “bad” data came from and what “downstream” impact could also occur.

COMPUWARE PROGRAM ANALYZER

Abend-AID, in conjunction with Compuware Program Analyzer, provides developers with additional information on an abending program. Using the same Compuware source listing file, they can view a program's structure chart and its paragraphs, as well as valuable information on the flow of data through the program. This enables developers to quickly understand unfamiliar programs and resolve abends sooner.

ABEND-AID FAULT MANAGER

The advanced technology behind Abend-AID Fault Manager provides a high-level view of fault activity, allowing developers and managers to pinpoint and resolve recurring problems. Abend-AID Fault Manager archives data created by Abend-AID to provide real-time and historical reports that help managers analyze, manage and control IT problems more effectively.

To learn more about Abend-AID, visit compuware.com/abendaid

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