

IBM Application Performance Analyzer for z/OS, Version 1.1

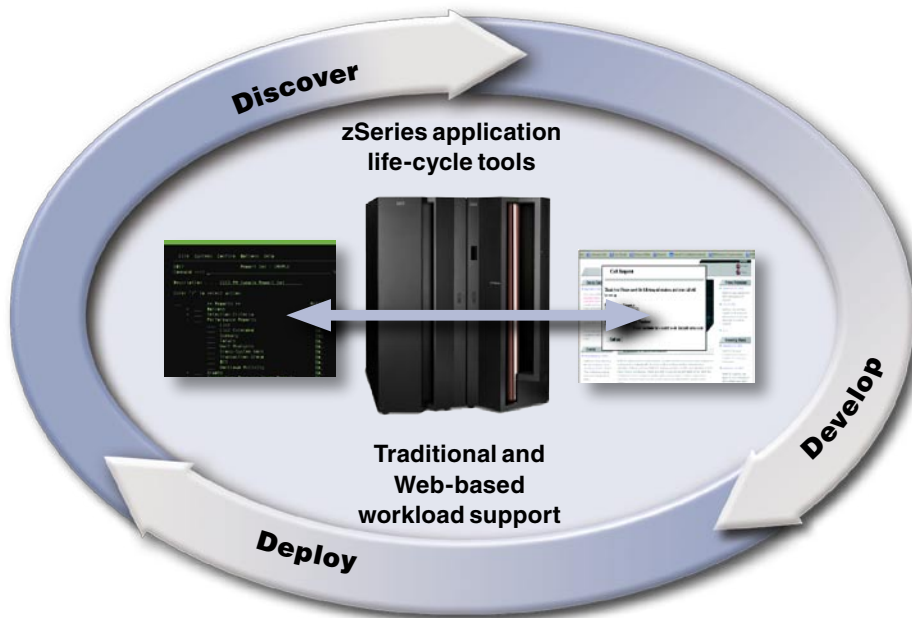
Highlights

- *Provides easy-to-use function that facilitates isolation of performance problems in applications*
- *Helps pinpoint performance bottlenecks impacting online transaction-response times*
- *Assists in reducing batch application turnaround time*
- *Supports CICS, Assembler, COBOL, PL/I, DB2, IMS and WebSphere MQ*
- *Increases application understanding during stress and regression testing*
- *Can be integrated with Fault Analyzer and Debug Tool software with common side files*

In an increasingly complex and competitive business environment, managers, system programmers, application developers and performance specialists are under pressure to operate their systems at peak level. Adopting on demand business strategies and implementing Web services, for example, create more-complex, business-critical applications, increasing the risk of you missing your service-level commitments. To mitigate this risk, you must carefully consider performance and, ultimately, customer satisfaction as part of your on demand business strategy. Historically, traditional performance tools haven't provided the application developer with comprehensive solutions.

Take steps to improve application performance

IBM Application Performance Analyzer for z/OS, Version 1.1 is an application performance-measurement tool designed for use on IBM z/OS® systems. The product's key function is to measure and report on how



IBM @server zSeries application life-cycle tools support the development and deployment of traditional and Web-based applications.

system resources are used by applications running in virtually any z/OS address space. For example, Application Performance Analyzer can measure a step in a batch region, transactions running under an online subsystem (such as IBM IMS™ or IBM CICS® transactions) or a Time Sharing Option (TSO) region.

Using Application Performance Analyzer software helps you maximize the performance of your existing hardware resources and helps you improve the performance of your applications and subsystems. Application Performance Analyzer software aids application design, development and maintenance cycles. It helps you evaluate application prototypes in the design phase, review the impact of increased data volume or changes in business requirements on performance, and generate historical data and reports to analyze performance trends and evaluate program changes for cost-effectiveness.

Application Performance Analyzer collects samples from the monitored address space and analyzes the system or resource application in the following categories:

- *Total address-space usage of all modules in the address space*
- *Control section (CSECT) usage within each load module*
- *Instruction or statement usage within each CSECT*
- *Assembler, COBOL and PL/I statement usage within each module*
- *IBM WebSphere® MQ queue information*
- *Direct access storage device (DASD) statistics*
- *Processor usage*

If you select the IBM DB2® option, Application Performance Analyzer provides the following DB2 categories for a DB2 application:

- *CSECT and Structure Query Language (SQL) usage within each load module*
- *Detailed DB2 delay information*

Robust features to help you meet your application-performance objectives

Application Performance Analyzer software includes a number of robust features designed to help you optimize the performance of your application resources.

Interactive online analysis

This feature provides displays of overall system activity, enabling you to check on all jobs running online or to select a specific active job to monitor.

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File View Navigate Help
P01: Source Program Attribution (0018) Row 00021 of 00047
Command ==> Scroll ==> CSR

LineNo  Offset  Count  Source Statement
000052                                     CAL-PARA.
000053 000730   21   PERFORM STOP-PARA.
000054
000055                                     START-PARA.
000056 00074E                                     ACCEPT TIME-START FROM TIME.
000057
000058                                     STOP-PARA.
000059 00078E   47   ACCEPT TIME-STOP FROM TIME.
000060 0007C8  129   * CPU time attributed to above statement
000061                                     COMPUTE TIME-INTERVAL = TIME-START - TIME-STOP.
000062
000063                                     INITIALIZE-PARA.
000064 0007F2           MOVE 'SIRISHA' TO TABLE-VALUES(1).
000065 0007F8           MOVE 'SUSARLA' TO TABLE-VALUES(2).
000066 00085E           MOVE 'VEENA' TO TABLE-VALUES(19).
000067 000864           MOVE 'SONALI' TO TABLE-VALUES(20).
000068
  
```

Application Performance Analyzer helps you determine where potential performance problems might be in your code.

DB2 analysis

This feature delivers relevant information for DB2 performance analysis and tuning, including SQL statements and processor usage by SQL statement. This information helps you understand where an application is running most.

Flexible monitoring

The flexible monitoring capabilities of Application Performance Analyzer offer a wide variety of ways to help ensure that the performance of your applications meets your needs:

- You can specify the number of times that Application Performance Analyzer should monitor a job's performance when that job or program becomes active.
- You can enable DB2, IMS, WebSphere MQ and CICS applications to be monitored.
- You can select how long to monitor selected applications – based on when the job ends, the duration of sampling or the number of samples to be taken.
- You can invoke the monitoring capability from another program using the Application Performance Analyzer batch command interface.

Reports

Reports generated by Application Performance Analyzer help you to identify key performance bottlenecks that need examination and resolution. This data is available in printed reports that you can choose to create as Adobe postscript files to view on your workstation.

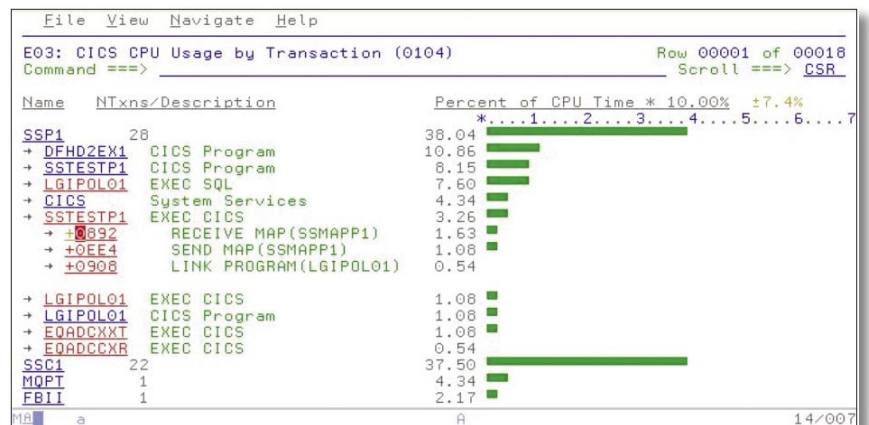
Other monitoring information

Along with providing performance information about your application code, Application Performance Analyzer also delivers other important information. For example, you can use Application Performance Analyzer to track performance issues to a DASD problem. Processing performance analysis shows processor usage by procedure, referred attribution, wait time by task, category and module, as well as multiple DASD statistics including execute channel program (EXCP), virtual storage access method (VSAM) statistics and input-output wait times.

Support for IBM subsystems

Application Performance Analyzer, a single tool, provides application-monitoring support for all of IBM's major subsystems:

- *IBM CICS Transaction Server support enables you to monitor specific CICS transactions or transaction prefixes with wildcards. With this support, you can trace transactions during critical situations, rather than waiting to review data collected periodically.*
- *Support for IMS applications means you can have IMS application-performance data-on-call time and service-call time for DL/I. You can also choose to trace all IMS calls.*
- *WebSphere MQ support provides CPU usage by queue, by request and by transaction in WebSphere MQ. Application Performance Analyzer also provides service time by queue, request and transaction, as well as wait time, for the same categories.*



Application Performance Analyzer provides detailed information about running CICS transactions.

- *With support for IBM Parallel Sysplex® Coupling Facility, you can monitor jobs and transactions on any logical partition (LPAR) image in the Parallel Sysplex environment you choose.*
- *With a single interface, you can monitor applications in test, as well as in production, and in multiple source languages, including Assembler, COBOL and PL/I. Optimized code support for COBOL and PL/I is provided to enable you to monitor production applications.*

Part of a leading-edge family of z/OS tools

Application Performance Analyzer, Version 1.1 is part of IBM's full problem determination suite of products for the z/OS environment.

These include IBM File Manager, IBM Fault Analyzer, IBM Debug Tool Utilities and Advanced Functions, and IBM Workload Simulator. Designed to help you maximize your investment in IBM @server® zSeries® products, this portfolio includes a suite of integrated development tools that enable you to improve IT operational efficiency and transform applications to achieve greater business flexibility.

For more information

To learn more about IBM Application Performance Analyzer for z/OS, Version 1.1, contact your IBM representative or IBM Business Partner, or visit:

ibm.com/software/awdtools/apa



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IBM Application Performance Analyzer for z/OS, Version 1.1 at a glance

Hardware requirements

Any hardware configuration supported by the licensed programs specified in the following software requirements

Software requirements

Unless otherwise announced by IBM, Application Performance Analyzer for z/OS, Version 1.1 runs under the control of, or in conjunction with, the following programs and their subsequent releases or their equivalents.

Required licensed programs (one of the following)

- IBM OS/390®, Version 2.10 or later
 - IBM z/OS, Version 1 or later
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