



BMC MAINVIEW Transaction Analyzer

Key benefits

- > Tracks complex transactions through the z/OS enterprise as the transactions travel through CICS, DB2, and IMS
- > Makes it easy to pinpoint problems by correlating and consolidating transaction information from different systems
- > Improves debugging capabilities by providing information about the flow of the transaction and by showing where delays occurred
- > Simplifies complex z/OS environments by showing what happened to a transaction while it was in z/ OS

For most large companies, the mainframe has evolved from being the dominant platform for processing critical business applications to being one platform among many. In today's Web-enabled world, businesses are adding Web front-ends to heritage databases. How can businesses monitor and manage applications that span heterogeneous platforms and parallel sysplexes? This level of complexity changes the meaning of monitoring and managing response times, and it makes it difficult to determine the root cause of problems and capacity requirements for application growth going forward.

As applications become more complex, determining the cause of problems becomes difficult, if not impossible. Users need tools that monitor, troubleshoot, tune, isolate and resolve problems across complex heterogeneous computing environments and applications.

BMC Software solution

The BMC® MAINVIEW® Transaction Analyzer product correlates the resources used by complex transactions across multiple systems. BMC MAINVIEW Transaction Analyzer uses existing data from other BMC MAINVIEW monitoring products to provide a consolidated view of the activities of components to give you a single source of information to analyze a wide spectrum of problems.

BMC MAINVIEW Transaction Analyzer aggregates multiple components into a single view and provides correlated, aggregated information in a format that the user can easily understand. BMC MAINVIEW Transaction Analyzer provides the consolidated data in near real-time (within sub-seconds after the transaction completes).

Components

At one time, all data lived on a mainframe. Today, users demand continuous access to that data. To meet this demand, many businesses have created non-mainframe front ends that enable users to query and manipulate online data. For example, a banking transaction 20 years ago could have originated with a teller entering data into a dumb

terminal. The transaction could have started in CICS and updated an IMS database. All of the work took place on the mainframe, and if something went wrong, technicians knew that they could find the problem in either CICS or IMS.

Today, applications and systems are much more complex. The bank in our example could still be maintaining account data in the same IMS database, but the access method has probably changed. A typical banking transaction today is an ATM withdrawal. A user requests money, and the transaction could travel from WebSphere MQ to CICS to update the IMS database, then the transaction is returned to MQ to print a receipt. If something goes wrong anywhere along the line, how will the technicians supporting the application find the error? Where should they start looking? And how quickly will they be able to resolve the problem? Will they be able to meet service level agreements (SLAs)?

BMC MAINVIEW Transaction Analyzer helps resolve these issues by tracking a transaction and showing each unit of work (UOW) that was committed. Because it uses data that is already being gathered by BMC MAINVIEW monitors, the overhead is minimal.

BMC MAINVIEW Transaction Analyzer version 1 tracks transactions as they move through CICS, DB2, and IMS. Subsequent versions will add support for WebSphere MQ, WebSphere Application Server, and other platforms.

Units of work and complex transactions

A UOW, or component, is the lowest level of information on which BMC MAINVIEW Transaction Analyzer will report. A transaction consists of one or more UOWs. Each transaction has an originating UOW and may have one or more related UOWs.

BMC MAINVIEW Transaction Analyzer displays a consolidated transaction and shows what happened when it was executed. It shows:

- > The component identifier and origination point (middleware or system type and instance identifier)
- > Response time associated with the originating UOW as known by BMC MAINVIEW Transaction Analyzer

For example, if a component within z/OS begins in the WebSphere Application Server and, via a JDBC invocation, creates a UOW within DB2, BMC MAINVIEW Transaction Analyzer will consider the DB2 UOW as the origination point for the component. The response time will be the response time of the DB2 UOW.

- > Performance metrics for each component, such as maximum CPU time and maximum elapsed time

Finding critical information

BMC MAINVIEW Transaction Analyzer shows the components that ran on the target system only, but you can retrieve records from multiple target systems. When you tell BMC MAINVIEW Transaction Analyzer to correlate the components of a transaction, it queries all BMC MAINVIEW Transaction Analyzer product address spaces (PASs) to collect and correlate all the components belonging to the transaction that you specified.

In near real time (within sub-seconds after the transaction completes), you can see all of the components of the transaction and the elapsed time of each component. When you have this information, you can easily pinpoint where the slowdown or failure occurred.

The amount of data that you can save is limited only by the amount of storage that you allocate to BMC MAINVIEW Transaction Analyzer.

Root cause analysis

BMC MAINVIEW Transaction Analyzer helps you determine the root cause for both operational and performance problems by correlating each of the components of a complex transaction. It provides basic metrics on each component. It also enables you to hyperlink to a BMC MAINVIEW monitoring product for detailed analysis. You can begin with any component in the complex transaction, quickly find all related components, and identify potential problems.

You can use historical detail data to drill down from the summaries to specific components that had problems. If you find a problem in CICS, for example, you can drill into BMC MAINVIEW for CICS to determine what caused the problem.

By providing the summary detail about components, BMC MAINVIEW Transaction Analyzer can dramatically reduce the time required to pinpoint and resolve problems.

Required products

Because BMC MAINVIEW Transaction Analyzer correlates information from other BMC MAINVIEW products, two or more of the following products are required:

- > BMC MAINVIEW for CICS
- > BMC MAINVIEW for DB2
- > BMC MAINVIEW for IMS Online

About BMC Software

BMC Software helps IT organizations drive greater business value through better management of technology. Our industry-leading Business Service Management solutions ensure that everything IT does is prioritized according to business impact, so IT can proactively address business requirements to lower costs, drive revenue, and mitigate risk. BMC solutions share BMC Atrium™ technologies to enable IT to manage across the complexity of diverse systems and processes — from mainframe to distributed, databases to applications, service to security. Founded in 1980, BMC Software has offices worldwide and fiscal 2005 revenues of more than \$1.46 billion. BMC Software. Activate your business with the power of IT. For more information, visit www.bmc.com.



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