

MAINVIEW[®] Products

General Information



November 21, 2003

Contacting BMC Software

You can access the BMC Software Web site at <http://www.bmc.com>. From this Web site, you can obtain information about the company, its products, corporate offices, special events, and career opportunities.

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Support Web Site

You can obtain technical support from BMC Software 24 hours a day, 7 days a week at http://www.bmc.com/support_home. From this Web site, you can

- read overviews about support services and programs that BMC Software offers
- find the most current information about BMC Software products
- search a database for problems similar to yours and possible solutions
- order or download product documentation
- report a problem or ask a question
- subscribe to receive e-mail notices when new product versions are released
- find worldwide BMC Software support center locations and contact information, including e-mail addresses, fax numbers, and telephone numbers

Support by Telephone or E-mail

In the United States and Canada, if you need technical support and do not have access to the Web, call 800 537 1813. Outside the United States and Canada, please contact your local support center for assistance. To find telephone and e-mail contact information for the BMC Software support center that services your location, refer to the Contact Customer Support section of the Support page on the BMC Software Web site at http://www.bmc.com/support_home.

Before Contacting BMC Software

Before you contact BMC Software, have the following information available so that Customer Support can begin working on your problem immediately:

- product information
 - product name
 - product version (release number)
 - license number and password (trial or permanent)
- operating system and environment information
 - machine type
 - operating system type, version, and service pack or other maintenance level such as PUT or PTF
 - system hardware configuration
 - serial numbers
 - related software (database, application, and communication) including type, version, and service pack or maintenance level
- sequence of events leading to the problem
- commands and options that you used
- messages received (and the time and date that you received them)
 - product error messages
 - messages from the operating system, such as `file system full`
 - messages from related software

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About This Book

This book contains detailed information about MAINVIEW products and is intended for system programmers, system administrators, and corporate officers involved in evaluating prospective software products. The general information manual is the best starting point for individuals desiring an overview of the MAINVIEW environment and the products that it supports. This manual is part of a complete library of documentation for MAINVIEW products.

To use this book, you should be familiar with the following items:

- your client and host operating systems
- OS/390 and z/OS systems, the Interactive System Productivity Facility (ISPF), and Web browsers
- subsystems and applications that run at your enterprise, such as CICS, DB2®, IMS, TCP/IP, Linux, Unix, VTAM, and WebSphere.



NOTE

For additional information about any of the MAINVIEW products described in this book, contact your BMC Software Sales Representative, or visit the Customer Support page of the BMC Software Web site at http://www.bmc.com/support_home.

How This Book Is Organized

This book is organized as follows. In addition, this book contains an index.

Chapter	Description
Chapter 1, "Introduction to MAINVIEW"	provides an overview of MAINVIEW, including <ul style="list-style-type: none"> ■ performance management issues ■ solutions that MAINVIEW can provide ■ features and benefits of MAINVIEW products
Chapter 2, "How MAINVIEW Works"	explains how MAINVIEW works and describes <ul style="list-style-type: none"> ■ required operating environment ■ installation process ■ security interface ■ MAINVIEW processing ■ MAINVIEW user interfaces
Chapter 3, "MAINVIEW Products"	describes the individual MAINVIEW products that are available for performance management and automation
Chapter 4, "MAINVIEW Solution Packages"	describes some BMC Software solution packages that include MAINVIEW products
Chapter 5, "About BMC Software"	provides an overview of BMC Software, the maintenance and customer support that it provides, and the product trial that it offers for MAINVIEW products

Related Documentation

BMC Software products are supported by several types of documentation:

- online and printed books
- online Help
- release notes and other notices

In addition to this book and the Help, you can find useful information in the publications that are listed in the following table. As “[Online and Printed Books](#)” on [page 12](#) explains, these publications are available on request from BMC Software.

Category	Document	Description
Installation documents	<i>OS/390 and z/OS Installer Guide</i>	provides information about the installation of BMC Software products on OS/390 and z/OS systems
	<i>MAINVIEW Installation Requirements Guide</i>	provides information about installation requirements such as software requirements, storage requirements, and system requirements
	<i>MAINVIEW Common Customization Guide</i>	provides instructions for manually customizing the MAINVIEW environment for your products
	<i>Implementing Security for MAINVIEW Products</i>	explains how to implement basic MAINVIEW security, enhanced security, and MAINVIEW Alternate Access security
	<i>MAINVIEW Alternate Access Implementation and User Guide</i>	explains how to configure, start, and stop VTAM and EXCP AutoLogon sessions to access MAINVIEW products without an active TSO subsystem
	product customization guides	provide instructions for customizing individual MAINVIEW products

Category	Document	Description
User documents	<i>MAINVIEW Administration Guide</i>	provides information about MAINVIEW operations, targets, single system image contexts, data sets, and diagnostic facilities
	<i>Using MAINVIEW</i>	provides information about working with MAINVIEW products in windows mode, in full-screen mode, and from MAINVIEW Explorer
	<i>MAINVIEW Alarm Manager User Guide</i>	explains how to create and install alarm definitions that indicate when exceptions occur in a sysplex
	<i>MAINVIEW Quick Reference</i>	introduces the MAINVIEW family of products and lists the commands that are used to manage the MAINVIEW windows environment
	product user guides and reference manuals	provide detailed information about how to use individual MAINVIEW products

Online and Printed Books

The books that accompany BMC Software products are available in online and printed formats. Online books are formatted as Portable Document Format (PDF) files. Some online books are also formatted as HTML files.

Access Online Books

To view any online book that BMC Software offers, visit the Customer Support page of the BMC Software Web site at http://www.bmc.com/support_home. You can also access PDF books from the documentation compact disc (CD) that accompanies your product.

Use the free Acrobat Reader from Adobe Systems to view, print, or copy PDF files. In some cases, installing the Acrobat Reader and downloading the online books is an optional part of the product-installation process. For information about downloading the free reader from the Web, go to the Adobe Systems site at <http://www.adobe.com>.

Request Additional Printed Books

BMC Software provides some printed books with your product order. To request additional books, go to http://www.bmc.com/support_home.

Online Help

MAINVIEW products include extensive online Help. In the ISPF windows and full-screen interfaces, you can access Help by pressing **F1** from any product view or ISPF panel.

In the MAINVIEW Explorer graphical user interface (GUI), you can access general Help from the Help menu and object-specific Help from an object's pop-up menu.

Release Notes and Other Notices

Printed release notes accompany each BMC Software product. Release notes provide current information such as

- updates to the installation instructions
- last-minute product information

In addition, BMC Software sometimes provides updated product information between releases (in the form of a flash or a technical bulletin, for example). The latest versions of the release notes and other notices are available on the Web at http://www.bmc.com/support_home.

Introduction to MAINVIEW

The OS/390 and z/OS environment, with its myriad of subsystems and resources, is essential to business-critical applications such as inventory, purchasing, customer service, and Web access. Managing the performance of that environment is equally critical and can be complex. BMC Software MAINVIEW products provide an integrated, easy-to-use solution to monitoring and automating your OS/390 and z/OS resources.

Performance Management Issues

Managing the performance of OS/390 and z/OS environments today involves more than just the operating system and traditional subsystems. To be effective, performance management must encompass the operating system, databases, storage resources, middleware, and networks. New subsystems, such as UNIX System Services, TCP/IP, WebSphere, and Linux, must be considered along with CICS, DB2, IMS, and VTAM. The complexity of today's mainframe environment presents challenges for both management and technical personnel.

Information technology (IT) managers are under pressure to do more with less—provide better service with fewer resources. The people and products that manage the systems and the cost of those resources are major concerns to IT managers.

Staffing an IT department with qualified personnel is an ongoing challenge. The industry is experiencing a widespread shortage of mainframe technicians, and the technicians that are available typically have little experience with OS/390 or z/OS environments. In order to support those environments with fewer, less-skilled technicians, managers need to reduce the amount of time and expertise that are required for performance management.

The performance management products themselves can also present a challenge:

- How many different software vendors does the performance management plan rely upon?
- How well do all of those single-use products work together?
- Can a given vendor deliver support for new technology, such as WebSphere or Linux?
- Will the vendor still be in the performance management business next year?

IT managers need to have confidence in their performance management plans, both now and in the future.

For managers, it always comes down to the bottom line—total cost of ownership. In today's business environment, IT managers are expected to minimize costs and postpone expenditures whenever possible. That requirement means exploiting existing hardware and solving performance problems in ways that do not involve buying more hardware.

The technicians who actually manage OS/390 and z/OS performance have their own concerns related to time and service levels:

- How long has the problem existed and how does it affect the service that we promise our customers?
- How much time will it take to determine the cause of the problem and resolve it?
- How can we prevent the problem from reoccurring and improve the service that we provide?

In addition to the traditional problems of performance management—job delays, paging problems, storage constraints, shared DASD, and application performance—there are new challenges:

- Parallel Sysplex environments with n-way data sharing
- coupling facility monitoring
- Workload Manager Goal Mode
- dynamic versus static workload balancing
- transition to Workload License Charge (WLC)
- introduction of Linux to the mainframe
- Web enablement of legacy applications using WebSphere, UNIX System Services, and TCP/IP

And in this increasingly complex environment, technicians are always expected to deliver service and availability, with reduced resource consumption and improved performance. The technical staff in an OS/390 and z/OS environment needs comprehensive performance management tools. They need tools that are simple and reliable. And they need links between those tools to make managing the various systems and subsystems easier.

MAINVIEW Performance Management Solutions

To address the complex performance management issues of today's mainframe environment, BMC Software offers MAINVIEW—a full line of monitoring and automation products for OS/390, z/OS, and their associated subsystems in both the traditional mainframe and Parallel Sysplex environment. MAINVIEW products provide automated and integrated performance management for operating systems, databases, storage resources, middleware, and networks.

The strength of the MAINVIEW performance management solutions lies in

- unique architecture and integration that provides unparalleled depth and breadth of information
- single system image support that crosses sysplex and location boundaries with no additional products and no additional cost
- superior Parallel Sysplex and Workload Manager Goal Mode support
- product synergy between performance monitors and automation tools
- out-of-the-box automation for CICS, DB2, IMS, WebSphere MQ, and OS/390 and z/OS

- integrated displays for the operating system and every business-critical subsystem, including
 - CICS
 - DB2
 - IMS
 - Linux servers
 - storage
 - TCP/IP
 - UNIX System Services
 - VTAM
 - WebSphere Application Server
 - WebSphere MQ
- ease of navigation between products and the systems and subsystems that they monitor
- historical data, batch reports, and exception monitoring

The MAINVIEW performance management solutions are easy to use and require less OS/390 expertise than other tools. A common interface eases the transition between products. All product views are available through ISPF and MAINVIEW Explorer, a PC-based Web browser interface for MAINVIEW products. In addition to traditional command line access, MAINVIEW offers point-and-shoot navigation with extensive hyperlinks and quick-access menus.

With the MAINVIEW products, BMC Software delivers

- performance management leadership

MAINVIEW was the first to market with solutions for WebSphere and Linux.

- significant investment in new products

MAINVIEW for Linux – Servers and System Explorer for z/OS are just two examples of the BMC Software commitment to delivering new solutions.

- significant investment in existing products

BMC Software continues to enhance the MAINVIEW architecture and add new features to MAINVIEW products.

- best customer support in the industry

Customer Support representatives and developers are on the same team, providing support 24 hours a day, 7 days a week, 365 days a year as part of the standard maintenance agreement.

BMC Software and the MAINVIEW products have been providing performance management solutions since 1991, with MAINVIEW products running in over 1500 sites worldwide. BMC Software is committed to the performance management arena and is committed to Assuring Business Availability[®].

For more information about BMC Software, see [Chapter 5, “About BMC Software”](#).

MAINVIEW Features and Functions

MAINVIEW products can provide effective performance management solutions because of the range of features and functions that they offer.

Single System Image

With MAINVIEW products, you can collect data from many systems in many locations and display that data in a single view as if it were from a single system. The built-in single system image support gives you the power to monitor and manage multiple OS/390 and z/OS systems as though they were one system. And by using the MAINVIEW single point of control capability, you can control all of those systems from a single screen.

Single system image is required for workload management, coupling facility monitoring, and all system objects and resources, including

- shared DASD management
- application-owning region (AOR) routing in CICS
- message-processing region (MPR) routing in IMS
- data sharing in DB2
- multisystem QMGRs in WebSphere MQ
- root-cause analysis in enterprise-wide applications

Single system image support is provided for both Parallel Sysplex and non-Parallel Sysplex environments. Users can define the set of systems to be displayed in single system image. And all levels of data, including detail data, are available in single system image mode, which means that it is possible to display every data set that every job on every system is using on a particular DASD device.

Automation

BMC Software delivers a powerful, easy-to-implement data center automation package called MAINVIEW AutoOPERATOR™. This online product provides the tools, techniques, and applications to help an operator ensure high system availability. MAINVIEW AutoOPERATOR helps the operator with error minimization, improved productivity, and problem determination and prevention.

MAINVIEW AutoOPERATOR includes operator workstation applications that allow users to monitor ALERTs and manage CICS, IMS, WebSphere MQ, and OS/390 or z/OS resources and activity with simple line commands. MAINVIEW AutoOPERATOR also includes a full range of automation applications, both basic and advanced.

MAINVIEW AutoOPERATOR provides

- unlimited management of OS/390 or z/OS environments of any size
- out-of-the-box automated solutions for OS/390 and z/OS and their subsystems
- tight integration with other BMC Software products, including MAINVIEW performance monitors and PATROL® Enterprise Manager

For more information about BMC Software automation products, see [“MAINVIEW AutoOPERATOR” on page 41](#).

Views of Data

MAINVIEW products collect system performance information as data elements in a record. Each record contains real-time, interval, and session data. The data is also written to online history files. The data elements are arranged into views. Many methods are available for controlling the display and appearance of data in a view.

Simple or Complex Filtering

Use filtering commands or establish view filters to filter the data that is displayed in a view. Simple filtering allows you to specify one filter criterion per predefined parameter; for example, you could look at only the workloads that are running in a certain performance group or service class by filtering the data in a workload activity view. Complex filtering allows you to specify multiple criteria for any field in a view by using an SQL-like language to define filter conditions; for example, you could look at workloads that are running in four performance groups or service classes, with names beginning with PAY and a CPU utilization that is greater than 85 percent.

Sorting

Sort data in ascending or descending order by any field in a view. Sorting data allows problems to rise to the top automatically. For example, devices with high service times can be sorted so that they appear at the top of the view.

Summarizing

Summarize the data from a single system or across multiple systems by displaying a predefined or customized summary view. Summary views group several rows of data about multiple resources into a single row that represents all of the data for those resources. Resources are grouped together when they have the same values in a given field.

Summarization is useful when you want to look at overall performance. For example, you could summarize the performance of a device that is being used by multiple jobs on one or more systems. Summarization is also useful for long-term trending analysis. If you display multiple intervals of historical data in a view and then summarize the information, you can see the performance trends of resources over several hours or an entire day.

Threshold Conditions

Emphasize view data with color or highlighting to add visual indicators that reflect when resources are reaching a critical state. By establishing threshold conditions, you can control the appearance of data that meets a specified condition. For example, you can display workloads in red when they have a total delay of more than 25 percent, in yellow for more than 15 percent, and in blue for more than 10 percent.

Alternate Forms

Display views of the same data by using alternate forms and analyze a problem from different perspectives while conserving system resources. Data is not updated each time an alternate form of the same data is displayed.

View Customization

You can customize the views that are shipped with your MAINVIEW products to

- control the display of fields, including their format and position
- create or change graphs of view data
- create, change, or delete hyperlinks between views and other products
- set keyword and positional parameters for a view that can be used in filtering
- set or remove data threshold conditions for a field, change the color in which data appears when it meets a specific condition, or substitute text for data that meets a specific condition
- create a summary view, change which fields are summarized, or change how fields are summarized

Ease of Navigation

You can use hyperlinks, menus, and commands to navigate easily through performance data. You can transfer from anywhere to anywhere within the MAINVIEW suite of products and never have to back out of what you are doing to go somewhere else. A hyperlink or command is always available to get you started on your next task.

Hyperlink fields provide a link to additional data that can offer greater detail about a potential problem. MAINVIEW provides many hyperlinks that can help you diagnose problems regardless of location or product. And by using view customization, you can define your own hyperlinks between views of data in one or more MAINVIEW products. Hyperlinks can cross product, subsystem, system, and sysplex boundaries.

MAINVIEW includes an extensive network of menus, from high-level menus of products and components to object-specific menus that are related to a resource, job, or workload. Menus provide a quick, convenient way to access views by selecting from a list of options with descriptive names. You can even create your own menu views to meet your site's specific needs.

Often, advanced users prefer to type a command to get where they want to go. MAINVIEW offers a complete command line interface for displaying data, performing actions, and transferring between views within any MAINVIEW product on any system in any location.

Historical Data

With many MAINVIEW products, you can display data from the past, which allows you to

- re-create the operating environment as it existed yesterday, last week, or last month, and compare the historical data in one view with current system performance data in another view
- display multiple intervals of data that span hours, days, even weeks, and perform trending analysis on the historical performance of your system
- summarize multiple intervals of data and review past performance for a single resource or a group of resources over any time frame

Batch Reports

With the data that is collected by MAINVIEW products, you can produce historical performance reports by submitting batch jobs. An ISPF panel helps you generate the JCL and submit the job.

You might want to submit a job each day to report on some of the key elements of performance for the previous day. Parameters are available that you can use to specify time frames relative to today. So you can submit the same job on a periodic basis without having to change the JCL. The report output, which is nearly the same format as the online views, can be directed to a data set or SYSOUT.

Exception Monitoring

MAINVIEW Alarm Manager, a no-cost component of most MAINVIEW products, provides sophisticated exception monitoring capabilities.

MAINVIEW Alarm Manager performs these key functions:

- It enables other MAINVIEW products to define and generate messages that can be displayed in MAINVIEW Alarm Manager. Any data element from any MAINVIEW product can be used to generate alerts that
 - create console or subsystem messages
 - display messages that include hyperlinks back to the MAINVIEW product that produced the alert
 - trigger an automated alert or action from MAINVIEW AutoOPERATOR for quick problem resolution
- It can be used to display and manage all MAINVIEW alerts, regardless of their source, including
 - MAINVIEW AutoOPERATOR
 - MAINVIEW Storage Resource Manager (SRM)
 - MAINVIEW SYSPROG Services
 - any MAINVIEW product that uses MAINVIEW Alarm Manager to generate alerts

MAINVIEW Alarm Manager is capable of monitoring multiple systems simultaneously. You can display a single view that shows alerts for all MAINVIEW performance monitors within your enterprise.

Graphs and Charts

MAINVIEW performance data can be displayed in high-resolution charts and graphs with the IBM Graphical Data Display Manager (GDDM) support or in low-resolution charts without GDDM support. Many views are distributed with default graphs already defined. MAINVIEW automatically accesses a high- or low-resolution graph, depending on the terminal type. And from the graph display, you can customize the chart type and title, the range of the X- and Y-axes, and the fields that are graphed.

Online Help

All MAINVIEW products include extensive online Help facilities to guide the user in the operation of a given product. Online Help describes every view, every field in every view, and the common components of the MAINVIEW interfaces. In some cases, the Help includes tuning tips, usage hints, and other useful information. And many Help topics are joined with hypertext links for easy access from one subject to another. You can even create your own Help topics—or modify the original Help text—to address requirements or procedures that are unique to your site.

Benefits of MAINVIEW Solutions

The MAINVIEW performance management solutions

- assure availability by providing flexible and scalable management and automation
- reduce downtime by identifying bottlenecks and avoiding outages
- minimize the total cost of ownership by providing optimal responsiveness and ensuring cost control
- simplify complex environments by providing a single business view and point of control of the entire system

The following table summarizes the features and benefits of MAINVIEW products.

Feature	Benefit
proven architecture	confidence in your performance management plan and the tools that it relies on
innovative design for traditional and Parallel Sysplex environments	flexibility and scalability to manage complex environments
single system image support built in with no boundaries between systems or locations	reduced time and effort for root-cause analysis, resulting in improved service
technically superior products with a commitment to future enhancements	increased functionality and responsiveness to emerging technologies
tightly integrated products	ease of use and lower system overhead
common look and feel	ease of use, increased productivity, and a shorter learning curve for new users
choice of user interfaces	flexibility to choose between PCs with Web access and 3270 terminals

MAINVIEW is a high-quality, fully integrated solution for performance management and automation. MAINVIEW products are easy to install, maintain, customize, and use. MAINVIEW, in conjunction with other products from BMC Software, has the scope to provide broad system and performance management solutions.

How MAINVIEW Works

This section explains how MAINVIEW products work. It discusses

- required operating environment
- installation process
- MAINVIEW security
- MAINVIEW processing
- MAINVIEW user interfaces

Operating Environment

MAINVIEW products require the following minimum environment:

Hardware MAINVIEW products operate on any CPU that supports an IBM-supported version of OS/390 or z/OS.

Operating system

One of the following IBM-supported operating systems is required:

- OS/390 version 2.10 or later
- z/OS version 1.1 or later

TSO IBM TSO/E version 2.5 or later is required.

ISPF To use the ISPF interface, IBM ISPF version 3.5 or later is required.

To use the MAINVIEW Explorer Web browser, the following client/server environment is required:

Host server The MAINVIEW Explorer host server requires a TCP/IP Communications Server running at a level that is compatible with the host operating system. In addition, at least one MAINVIEW product must be operational on the host system.

Client Any workstation that will launch the MAINVIEW Explorer client requires the following minimum environment:

- any Pentium processor with 200 MHz or greater processing
- 64 MB of RAM minimum
- 110 MB of available hard disk space for application files and Internet caching
- VGA monitor with 1024 x 768 or higher resolution
- mouse or other pointing device
- TCP/IP connection hardware (an Ethernet card, token ring, or dial-up networking using a modem or ISDN line)
- Microsoft Windows 95, Windows 98, Windows 2000, or Windows NT Workstation release 4.0 or later with Java level 1.2 support
- Microsoft Internet Explorer release 5.0 or later.

NOTE



Netscape users can take advantage of all of the MAINVIEW Explorer features by using Netscape release 6. If you use Netscape release 4.7, you can invoke the Java Runtime Environment (JRE) by launching MAINVIEW Explorer from <http://hostname:portnumber/mvejre.ehtm>.

Installing MAINVIEW Products

MAINVIEW products are installed by using the BMC Software OS/390 and z/OS Installer. The OS/390 and z/OS Installer, which is packaged with all MAINVIEW products, is an ISPF application that generates a set of batch jobs in JCL. The installation batch jobs are used to

- install and customize products from distribution media
- apply maintenance to installed products

For complete information about the installation system, see the *OS/390 and z/OS Installer Guide*.

MAINVIEW Security

MAINVIEW products provide an interface to standard security packages (such as RACF, CA-TOP SECRET, and CA-ACF2) by using standard SAF calls. Two methods of security are available:

Basic Security

A method of securing your MAINVIEW products that uses basic SAF methods. Basic security uses static resources and limited customization of the resource name and class. Each product that uses basic security issues a standard set of resource requests and you decide whether to secure them or not.

Enhanced Security

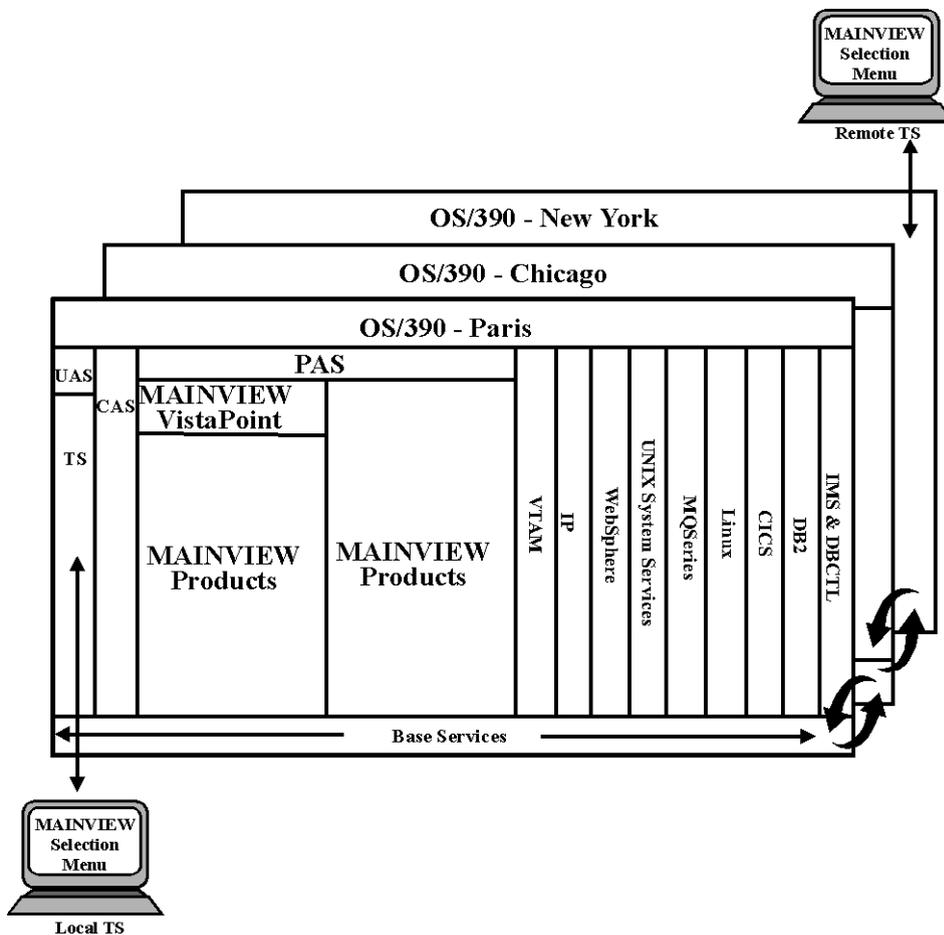
A method that uses advanced SAF methods to secure MAINVIEW products that operate in windows mode. Enhanced security is more customizable than basic security, allowing user-defined resource and class definitions. Online dialogs are available for administering resource definitions. Enhanced security fulfills the requirements for United States Department of Defense B1 security.

For complete information about MAINVIEW security, see the *Implementing Security for MAINVIEW Products* book.

MAINVIEW Processing

The integration of MAINVIEW products enables host system monitoring and automation (even in remote locations) through a common terminal session. A unique intercommunications technology integrates the products within a common communications framework that operates across multiple machines in multiple locations, as shown in [Figure 1](#). All MAINVIEW products access data from a common data bus that ensures high operating efficiency and imposes minimal overhead. This unparalleled level of integration allows a single terminal session, using one or more MAINVIEW products, to monitor and manage multiple local or remote targets, which might include the operating system itself (sysplex and nonsysplex) or subsystems like CICS, DB2, IMS, IP, Linux, Unix, VTAM, and WebSphere.

Figure 1 MAINVIEW Architecture



For products that operate in MAINVIEW windows mode, this architecture provides a built-in separation of the data, application, and end-use dimensions of systems management for maximum flexibility and extensibility. Cross-system communications, data collection, and the end-user terminal session run in three distinct address spaces:

- coordinating address space
- product address space
- user address space

This multiple-address-space structure provides a consistent, flexible environment for managing hundreds of OS/390 or z/OS systems. Depending on which MAINVIEW products are installed, this environment allows you to

- access different systems and products quickly and easily with simple target switching, direct hyperlinks between products, or multiple concurrent views on one terminal session
- summarize data on a single system or across multiple systems
- view historical or real-time data from multiple systems summarized into one view
- enter commands for multiple products on multiple systems
- apply simple or complex data filtering conditions

Coordinating Address Space

The coordinating address space (CAS) runs as a subsystem and is used by most of the MAINVIEW products. It manages communication with other CASs on other local and remote systems and allows direct communication between an individual terminal session and a product address space. Usually, one CAS runs in each system image, but any number of remote systems with CASs can communicate with a single CAS.

A product establishes an independent connection with its local CAS, so you can add new products or new upgrades to the architecture without affecting existing products or other configurations.

Each CAS contains a component called Plex Manager that provides administration and operations views that help you

- manage communication links with other CASs
- monitor the activity of accessible products
- create single system image contexts
- control security for products

Product Address Space

The product address space (PAS) runs as an MVS subsystem. It comprises special routines, including data collectors, to support one or more MAINVIEW products.

- The MVS PAS supports the following MAINVIEW products:
 - CMF[®] MONITOR
 - MAINVIEW for OS/390
 - MAINVIEW for UNIX System Services
 - MAINVIEW SYSPROG Services
 - MAINVIEW VistaPoint (for MVS workloads)

One MVS PAS runs in each system image. The MVS PAS always connects to the CAS on that system image.

- The BBI-SS PAS supports the following MAINVIEW products:
 - MAINVIEW AutoOPERATOR
 - MAINVIEW for CICS
 - MAINVIEW for DB2
 - MAINVIEW for DBCTL
 - MAINVIEW for IMS Online
 - MAINVIEW for WebSphere MQ
 - MAINVIEW VistaPoint (for CICS, DB2, DBCTL, and IMS workloads)

Multiple instances of the BBI-SS PAS can run on a single system image and contain one or more products. Depending on the products that are installed, the BBI-SS PAS may or may not connect to a CAS on that system image.

BBI-SS PASs on local and remote systems are linked together to provide cross-system communication for an individual terminal session through a local BBI-SS PAS to any other BBI-SS PAS.

- Product-specific PASs support the following MAINVIEW products:
 - MAINVIEW for IP
 - MAINVIEW for Linux – Servers
 - MAINVIEW for VTAM
 - MAINVIEW for WebSphere Application Server
 - MAINVIEW Storage Resource Manager (SRM)

For MAINVIEW for Linux – Servers and MAINVIEW for VTAM, multiple instances of the PAS can run on a single system image. In the case of MAINVIEW for Linux – Servers, each PAS can monitor up to 500 Linux images. You can run multiple PASs to support the number of Linux images that you plan to monitor.

For MAINVIEW for IP, MAINVIEW for WebSphere Application Server, and MAINVIEW SRM, only one product-specific PAS can be active for each product on a system image.

- The MAINVIEW Alarm Manager PAS supports all MAINVIEW products that run in windows mode.

The products must be connected to the same CAS as MAINVIEW Alarm Manager. See the *MAINVIEW Alarm Manager User Guide* for more information.

User Address Space

The user address space (UAS) is the home for a terminal session. A terminal session provides the end-user session for all MAINVIEW products. The terminal session connects to a CAS (if one is available), or to a BBI-SS PAS, or to both. The following types of UASs are supported:

- MAINVIEW Host Gateway using MAINVIEW Explorer

Using the MAINVIEW Explorer Web browser, your terminal session can access MAINVIEW products from a PC.

- TSO address space

Using a TSO address space, your terminal session can access MAINVIEW products and perform other TSO/ISPF functions.

- VTAM or EXCP address space using MAINVIEW Alternate Access

Using a separate address space that communicates with your terminal with either VTAM or EXCP, your terminal session can access MAINVIEW products and also perform other ISPF functions. For more information, see the *MAINVIEW Alternate Access Implementation and User Guide*.

MAINVIEW User Interfaces

The performance data that is provided by MAINVIEW products can be displayed in a variety of user interfaces, including a Web browser and two types of ISPF interfaces.

MAINVIEW Explorer

MAINVIEW Explorer is a client/server application that you can use to access MAINVIEW products from your desktop by using a Web browser. Using MAINVIEW Explorer, you can

- display data in various chart types, including histograms and three-dimensional bar charts
- use tree navigation to access all views
- use EZExplorer menus to access other views quickly and conveniently
- create and save personal configurations
- execute MAINVIEW product action commands
- customize views
- display context-sensitive Help for every view and every field in a view

MAINVIEW Explorer uses active icons that change appearance to indicate the status of an object. Newly added or active mainframes, systems, subsystems, and workloads are displayed in the navigation tree automatically.

MAINVIEW Explorer consists of the following components:

Host Server

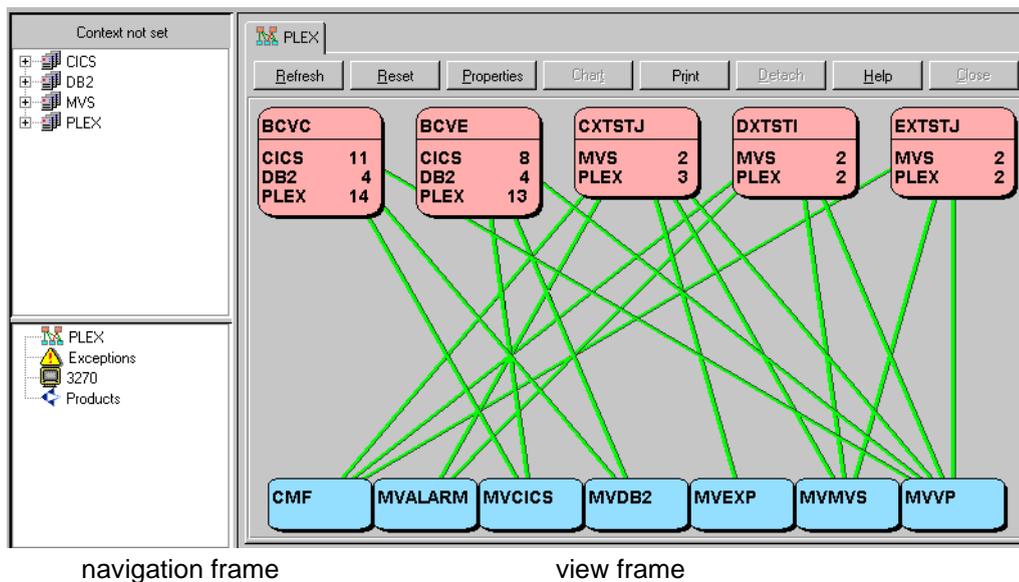
Runs as an address space on a host system. The host server uses TCP/IP to communicate with one or more clients. The system image must be running a CAS. Multiple host servers can run in a system image and communicate with the same CAS or different CASs. When a client requests information, the host server sends the request to the connected CAS. The CAS collects the information from the appropriate PAS and sends it back to the host server, which sends it to the client, where it is displayed in the Web browser.

Client

Runs as a signed Java applet under a Web browser. When you click a MAINVIEW Explorer icon or hyperlink, the Java applet sends a request for information to the host server. The requested information includes views, records, actions, and Help.

The MAINVIEW Explorer window consists of a navigation frame and a view frame, as shown in [Figure 2](#).

Figure 2 MAINVIEW Explorer Interface



You can use the navigation frame to select the system, subsystem (such as CICS or DB2), and MAINVIEW product that will be active. The view frame is where the performance data from MAINVIEW products is displayed.

Windows Mode

The MAINVIEW windows environment is an extension of the standard TSO/ISPF interface. When operating in windows mode, one or more windows can be displayed on your screen. A window information line defines the top border of each window.

Figure 3 shows an example of MAINVIEW product data in windows mode.

Figure 3 Product Data in Windows Mode

```

ddmmyyyy hh:mm:ss ----- MAINVIEW WINDOW INTERFACE (Rv.r.mm) -----
COMMAND ==>>
CURR WIN ==>> 1          ALT WIN ==>> 3          SCROLL ==>> CSR
>W1 -PLEX-----SYSB-----*-----ddmmyyyy--hh:mm:ss---PLEXMGR--D---12
C Product  Context  System  Description                               Status
-----
MVCICS    CICSALL  SYSB   MAINVIEW for CICS                        Active
MVDB2     DB2L     SYSB   PRODUCTION DB2                           Active
MVIMS     IMSCTL   SYSA   IMS                                         Active
MVIMS     IMSM     SYSA   IMS                                         InActive
MVMVS     SYSB     SYSB   MAINVIEW for OS/390                       Active
W2 =EZCFSSI=====CICSALL=*=====ddmmyyyy==hh:mm:ss====MVCICS==D====1
                                CICS SSI Menu
      Region Views                                Other Menus
. Region Analysis          +-----+ > CICS SSI Menu
. Region Overview         | Place cursor on | > Region Menu
. Region Summary by MVS  | menu item and  | > Task Menu
. Region Problems        | press ENTER    | > Monitor Menu
. Region DSA Usage       +-----+ > Workload Menu
>W3 =CREGION=====CICSALL=*=====ddmmyyyy==hh:mm:ss====MVCICS==U====3
CMD Target  SMF                EXCP  Real  Page  %Max  Tran  Avg  CICS
--- Name    ID    %CPU 0.5.10  Rate  Stg  Rate  Task  Rate  Resp  Rlse
    CICSMA1 SYSB  10.1 ***** 32.04 3527 0.31 92.0 42.01 0.202 530
    CICSMT1 SYSB   7.3 ***** 11.21  694 0.00 69.0 19.01 0.424 410
    CICSPT1 SYSB   3.9 **      4.03  231 0.00 11.0 13.01 1.005 530
    
```

By using windows mode, you can

- open as many as 20 windows of system performance data
- display multiple systems as a single system image
- navigate through views of data by using hyperlinks and menus
- summarize data for many resources into a single row
- sort data by any field in a view
- display historical data that was collected over time
- export view data to a data set or print it to SYSOUT
- customize views and online Help

Full-Screen Mode

The MAINVIEW full-screen environment is a standard TSO/ISPF interface. Products that operate in full-screen mode offer data displays and application displays or menus. These displays follow ISPF conventions for selecting, scrolling, and splitting the screen.

When operating in full-screen mode, the product data or application is shown on the entire screen, and the screen contains no window information line. [Figure 4](#) shows an example of a MAINVIEW application in full-screen mode.

Figure 4 Product Data in Full-Screen Mode

----- SERVICE REFRESH CYCLE -----					GENERAL SERVICES	
COMMAND ==>					TGT ==> CICSPROD	
					PAGE 1 OF 1	
	TARGET	TYPE	DTIME	LOG	DESCRIPTION	
SERVICE ==>	MFSUT	IMSPROD	IMS	3	MFS POOL UTILIZATION	
PARMS ==>						
SERVICE ==>	DB2ST	DB2A	DB2	3	DB2 SYSTEM STATUS	
PARMS ==>						
SERVICE ==>	DA	SYSA	MVS	3	DISPLAY ACTIVE	
PARMS ==>						
SERVICE ==>	FILE	CICSPROD	CICS	5	FILE DISPLAY	
PARMS ==>	* OPEN					
SERVICE ==>	CAOSTAT	CICSP	CICS	3	SYSTEM STATUS	
PARMS ==>						
SERVICE ==>						
PARMS ==>						
SERVICE ==>						
PARMS ==>						
SERVICE ==>						
PARMS ==>						

MAINVIEW Products

The MAINVIEW product family includes the following products:

- CMF MONITOR
- MAINVIEW AutoOPERATOR
- MAINVIEW FOCAL POINT
- MAINVIEW for CICS
- MAINVIEW for DB2
- MAINVIEW for DBCTL
- MAINVIEW for IMS
- MAINVIEW for IP
- MAINVIEW for Linux – Servers
- MAINVIEW for OS/390
- MAINVIEW for UNIX System Services
- MAINVIEW for VTAM
- MAINVIEW for WebSphere Application Server
- MAINVIEW for WebSphere MQ
- MAINVIEW Storage Resource Manager (SRM)
- MAINVIEW SYSPROG Services
- MAINVIEW VistaPoint

In addition, several related products are available to enhance the capabilities of the MAINVIEW products.

This section provides an overview of each MAINVIEW product and some related products.

CMF MONITOR

The CMF MONITOR product is a tool for collecting and reporting system performance information. As an integral part of the BMC Software MAINVIEW family, CMF MONITOR incorporates a complete system of components that manage and evaluate the demands on an unlimited number of z/OS and OS/390 systems from a single point of control.

CMF MONITOR collects a broad range of data on a variety of system activities by using several components to collect the information that you need:

- The CMF MONITOR Online component uses the MAINVIEW window interface to display views of current and historical data, and a customizable window interface to display performance information. This component is a powerful tool where you control the appearance and content of each view. You can view different areas of system performance at once, and you can view historical and current data side by side. You can also customize each view online.

CMF MONITOR makes it easy to navigate through screens and system information. It uses hyperlinks that you can modify to control which view or command is initiated by a hyperlink. The comprehensive Help system suggests possible reasons for a problem and gives an explanation of the various data items that are displayed, including pop-up menus that describe fields, such as the average number of milliseconds that an I/O request was delayed.

- The CMF MONITOR Extractor component collects data for reports about your system's performance and writes the data to SMF or CMF data sets.
- The CMF MONITOR Analyzer component reads the records from SMF or CMF data sets and produces reports according to specified conditions.
- The CMFMON component provides real-time views of data and the ability to record that data to data sets.
- The Workload License Migration and Monitor Facility (WLMF) delivers critical and timely support to monitor and manage Workload License Charge (WLC), including an early warning system to alert you before workload capacity thresholds are met or exceeded. WLMF provides key planning information that is necessary to move your system to the WLC environment.

MAINVIEW AutoOPERATOR

MAINVIEW AutoOPERATOR is a fully integrated BMC Software product family (available in various options) that provides tools, techniques, and applications to improve both productivity and availability. Using MAINVIEW AutoOPERATOR products, many data center tasks can be automated through the use of rules, EXECs, timer facilities, and command interfaces.

MAINVIEW AutoOPERATOR also provides solutions to many problems that are common across data centers. Using these solutions, the user can accomplish many of the initial automation tasks quickly and efficiently after installing the MAINVIEW AutoOPERATOR product.

The MAINVIEW AutoOPERATOR product family is completely integrated, from installation through online usage and rules. For example, an MQSeries event rule can issue a CICS or MVS command, if the corresponding MAINVIEW AutoOPERATOR product is active. And new MAINVIEW AutoOPERATOR products can be added into an existing configuration without reinstalling the existing products.

MAINVIEW AutoOPERATOR functions on all processors that are capable of running supported versions of OS/390 and z/OS.

All MAINVIEW AutoOPERATOR product options provide

- simple, non-procedural rules interface to automate event handling
- ability to run advanced automation routines written in REXX
- alerts to e-mail, pagers, and SNMP managers by means of easy-to-use sample EXECs
- integration with the MAINVIEW monitor products and MAINVIEW Alarm Manager, as well as PATROL for SAP Solutions and PATROL Enterprise Manager

The following MAINVIEW AutoOPERATOR product options are available:

Option	Description
OS/390	<p>MAINVIEW AutoOPERATOR for OS/390 provides</p> <ul style="list-style-type: none"> ■ rule-based automation for system messages and commands ■ state management to ensure that important systems and subsystems are available when key applications need them ■ out-of-the-box automated solutions for the management of various environments, including several solutions for DB2 ■ automated access to 3270 display sessions with open systems procedural language ■ MVS and VTAM resource control through online applications ■ REXX interface to many MAINVIEW SYSPROG Services commands and MAINVIEW monitors ■ access to MAINVIEW for OS/390, MAINVIEW for UNIX System Services, and other MAINVIEW monitors through a MAINVIEW API
CICS	<p>MAINVIEW AutoOPERATOR for CICS provides</p> <ul style="list-style-type: none"> ■ rule-based automation of CICS events ■ online CICS SYSTEM STATUS application that provides <ul style="list-style-type: none"> - hyperlinks to MAINVIEW for CICS displays - ALERTs display for CICS operational exception messages ■ ability to create EXECs that can perform Master Console tasks and issue CICS CEMT service transactions or MAINVIEW AutoOPERATOR commands ■ automation of CICS Transient Data Queue (TDQ) messages ■ online CICS BROADCAST application that allows you to selectively send messages to a list of terminals ■ access to MAINVIEW for CICS and other MAINVIEW monitors through a MAINVIEW API

Option	Description
IMS	<p>MAINVIEW AutoOPERATOR for IMS provides</p> <ul style="list-style-type: none"> ■ rule-based automation of IMS events ■ IMS operations control through an interactive application that consolidates operations activity for IMS ■ IMS resource control through online menus and applications with simple line commands to control resources and activity ■ interactive interface to MAINVIEW for IMS applications and services ■ access to MAINVIEW for IMS and other MAINVIEW monitors through a MAINVIEW API
MQSeries	<p>MAINVIEW AutoOPERATOR for MQSeries provides</p> <ul style="list-style-type: none"> ■ rule processing of MQSeries system events ■ rule processing of user messages ■ EXEC interface where users can issue MQSeries commands and receive responses with a set of IMFEXEC statements created especially for MQSeries ■ various solutions, such as handling of messages on the Dead Letter Queue ■ access to MAINVIEW for WebSphere MQ and other MAINVIEW monitors through a MAINVIEW API

Option	Description
Access NV	<p>MAINVIEW AutoOPERATOR Access NV provides</p> <ul style="list-style-type: none"> ■ direct communication between the IBM NetView product and the BMC Software MAINVIEW AutoOPERATOR product ■ interaction and exchange between NetView and MAINVIEW AutoOPERATOR variables and automation procedures ■ AOAnywhere feature, which can be invoked from a NetView address space to provide paging, full alert access, and more within a sysplex ■ user-interface pipeline that is a NetView emulator <p>The emulator enables you to access all major NetView online functions from your MAINVIEW AutoOPERATOR terminal session, as though you were logged on to NetView.</p>
TapeSHARE	<p>MAINVIEW AutoOPERATOR TapeSHARE provides</p> <ul style="list-style-type: none"> ■ automation to the process of sharing or passing tape devices between system images ■ single TapeSHARE workstation panel that enables you to monitor and control tape-sharing activity for all system images in the TapeSHARE plex

MAINVIEW FOCAL POINT

The MAINVIEW FOCAL POINT product is an activity-monitoring tool that presents a high-level, collective view of the systems that you want to monitor. It can operate as a stand-alone application, monitoring a limited number of computer resources. It can also operate together with other MAINVIEW products and report their critical system information.

MAINVIEW FOCAL POINT offers a single view of the MAINVIEW enterprise system in one primary display for summarizing resource, workload, and operational data. Several secondary displays are also provided for displaying detail data and for customizing individual targets.

Using an automatic refresh capability, MAINVIEW FOCAL POINT provides real-time critical ALERTs and statistical data that can be used to resolve possible problems. The user-definable environment includes display characteristics, services, targets, monitors, and thresholds.

Key information is provided by other MAINVIEW products, and then summarized and displayed on the operator's terminal in the form of indicator fields. With the indicator fields color-coded by severity, the operator can identify targets that are outside of user-defined boundaries and can access any of the supported products' service screens for further analysis.

MAINVIEW for CICS

With its advanced automation and performance management tools, MAINVIEW for CICS enhances both traditional CICS and Parallel Sysplex environments. It provides improved availability, recoverability, and service throughout the enterprise.

MAINVIEW increases CICS productivity by providing

- summarized real-time overview of all CICS transactions running in a CICSplex, CICS workload, or CICS region
- advanced monitoring and automation of all your CICS systems with automatic detection of deadlocked transaction queues, short-on storage conditions, hung or offline connections, and changes in file status
- full-featured performance management tools that enable you to simultaneously purge or copy transactions across multiple regions with a single command
- auto maintenance that enables software upgrades and fixes to be applied to MAINVIEW for CICS without restarting target CICS systems

Auto maintenance provides functions that completely remove the MAINVIEW for CICS agents from a running CICS system and re-initializes the agents without affecting CICS itself.

- hierarchal view structure that enables you to quickly solve problems by moving from summary views to views that provide comprehensive details about transaction and system performance
- customizable history views that provide CICS statistical data and transaction performance data for user-defined periods of time
- powerful application trace capabilities that provide feedback on individual function calls
- delay analysis that provides statistical sampling of the reasons that tasks are suspended

Reasons are divided into 27 groups, such as DB2 waits, which are further categorized by resource type and resource. Delay analysis collects data on the number of tasks waiting for each resource at each sample and provides numerous views to interpret the results.

- customizable statistics for CICS-defined dump codes

- single system image that enables simultaneous management of multiple CICS regions
- TCP/IP, Java, and JVM monitoring
- multi-window environment with point-and-shoot navigation

An out-of-the-box solution, MAINVIEW for CICS is fully integrated with MAINVIEW AutoOPERATOR for CICS, MAINVIEW VistaPoint, and MAINVIEW Alarm Manager.

MAINVIEW for DB2

The MAINVIEW for DB2 product

- provides the most comprehensive, user-friendly set of monitoring tools available for DB2
- manages all DB2 implementations, from the simplest to the most complex DB2 configurations
- samples DB2 activities to catch degradation, issue early warnings, and drive automation to manage exceptions before they become problems
- manages any number of DB2 systems across multiple locations so that you can keep track of the complete DB2 environment or focus on a specific group—essential for data sharing

MAINVIEW for DB2 provides support for DB2 versions 6.1 and 7.1. It also supports IMS versions 6.1, 7.1, and 8.1, and CICS/TS version 2.2, as well as earlier supported releases of CICS.

This comprehensive set of monitoring tools includes the following features and benefits:

Feature	Benefits
real-time data from multiple systems in one display	<ul style="list-style-type: none"> ■ provides a single view for any group of DB2 systems ■ summarizes data from multiple systems in a single line ■ delivers multisystem support for data sharing and parallel query activity ■ enables views to span multiple Parallel Sysplexes
online interval history for analyzing performance and investigating problems	<ul style="list-style-type: none"> ■ supplies critical data about DB2, including current thread activity, DB2 status and statistics, buffer pool status and statistics, and lockout events ■ provides statistical data for the current time period and online historical data to allow comparison across time intervals ■ retrieves interval records by date, time, and duration

Feature	Benefits
real-time exception detection	<ul style="list-style-type: none"> ■ allows early warning of exception conditions with both resource and workload monitors that run continuously in the background ■ provides automatic reaction to exceptions when combined with the BMC Software MAINVIEW AutoOPERATOR product ■ logs all exception messages for audit purposes ■ consolidates exception messages from multiple products, including user-defined alarms from MAINVIEW Alarm Manager and MAINVIEW AutoOPERATOR alerts
expert help (with tuning wizards and DB2 topic index)	<ul style="list-style-type: none"> ■ guides users through the complexities of DB2 management ■ turns extensive information from MAINVIEW for DB2 into usable knowledge about the DB2 system ■ walks users through views related to specific areas of DB2 performance ■ provides timely pop-up panels and hyperlinks to critical tuning recommendations ■ helps solve problems before they affect productivity ■ provides quick access (by DB2 topic) to related product views without having to drill down through multiple levels
lock-contention analysis	<ul style="list-style-type: none"> ■ displays online lockout history to provide rapid analysis of data hot spots and application design problems ■ delivers critical information about lock contention that can significantly affect DB2 application performance ■ provides information on lock holders, lockout victims, and resources involved without the need for expensive lock traces ■ offers a unique summary by resource ■ drills down to specific pages and plans in order to identify data hot spots immediately ■ consolidates lock-contention information across a data-sharing group

Feature	Benefits
buffer pool and group buffer pool analysis	<ul style="list-style-type: none"> ■ provides status information to analyze current buffer pool use and thresholds, as well as complete DB2 statistics per buffer pool ■ offers group coupling facility status and activity ■ provides group buffer pool activity per member for data sharing
extended I/O analysis	<ul style="list-style-type: none"> ■ enables all page-set information (I/O counts, wait time, and buffer pool cache counts) to be viewed collectively and organized by database, object, page set, buffer pool, or volume
application analysis	<ul style="list-style-type: none"> ■ allows thread history to be displayed, selected, sorted, and summarized by identifier or time period ■ provides key accounting indicators that pinpoint where applications spend excessive time ■ shows the complete SQL performance picture at the detail trace level, including full SQL and EXPLAIN text for dynamic SQL ■ presents all DB2 event data—such as SQL statement statistics, index scans, sorts, I/O, and lock contention from thread creation to thread termination—in chronological order
full data-sharing support with single system image	<ul style="list-style-type: none"> ■ offers unique single system image capabilities for monitoring any data-sharing group as a single entity ■ provides a complete picture of data-sharing group activity, such as coupling facility measurements, inter-DB2 lock contention, group-buffer-pool-dependent page sets, total page-set I/O activity, and total group buffer pool activity ■ shows all components together as they are running for a sysplex-enabled parallel query, regardless of the DB2 subsystems involved

Feature	Benefits
batch reporting	<ul style="list-style-type: none">■ provides flexible reporting that meets user needs and handles high volumes of DB2 data with<ul style="list-style-type: none">— processing of DB2 accounting, statistics and audit records written either to SMF or to the MAINVIEW for DB2 – Data Collector trace data sets— - support for loading, summarizing, and managing performance data in DB2 tables— - detailed reports for specific uses, daily production runs, and queries from DB2 table data
DB2 catalog access	<ul style="list-style-type: none">■ provides hyperlinks to CATALOG MANAGER for DB2 to display data from DB2 catalog tables, with lists by object type providing drilldown to object detail data

MAINVIEW for DBCTL

The MAINVIEW for DBCTL product simplifies the management of DBCTL. The product is tightly integrated with MAINVIEW for CICS to provide a complete picture of the IT environment.

MAINVIEW for DBCTL provides one interface that can be used to manage traditional implementations as well as data-sharing environments. The product's flexibility and ease of use make it valuable for all levels of IT support, reducing the demands on technical personnel.

MAINVIEW for DBCTL

- performs constant surveillance of the DBCTL environment by continuously monitoring the use and availability of DBCTL resources and the activities of workloads
- provides full analysis capabilities to quickly determine the cause of poor performance or abnormal circumstances
- achieves rapid problem resolution with integrated action services
- provides detailed performance and transaction history
- traces applications easily
- analyzes trends and recovers costs
- monitors interactions with other subsystems

MAINVIEW for IMS

IMS, the world's fastest and most popular database and transaction management system, has evolved into an open distributed client/server and object-oriented environment that encompasses Web technologies. Processing a common workload in this multisystem environment presents unique challenges in systems management and performance monitoring. Because the IMS environment has become increasingly complex, organizations need a solution to monitor and manage all IMS activity, regardless of the IMS configuration or the number of systems that are involved.

MAINVIEW for IMS Online

The MAINVIEW for IMS Online product offers an optimum solution for managing and monitoring IMS workloads. It helps organizations achieve their goals by ensuring the availability, performance, and throughput of mission-critical IMS business applications. It simplifies IMS management by providing the same interface for managing traditional implementations and sophisticated data-sharing groups, such as Parallel Sysplex. MAINVIEW for IMS Online also helps to identify and correct IMS system problems quickly and effectively.

MAINVIEW for IMS Online

- prevents costly IMS systems outages
- ensures that critical applications are available and performing at optimum levels
- identifies and resolves IMS problems before they impact end-user service levels
- provides reliable, comprehensive data monitoring to help prevent undetected performance bottlenecks
- monitors IMS performance to ensure that changes do not affect data access speed
- serves as a single solution for managing traditional and data-sharing environments
- provides abundant, detailed information about all IMS resources and activity
- integrates with the MAINVIEW products for OS/390, DB2, CICS, IP, VTAM, and WebSphere MQ by using a single interface

MAINVIEW for IMS Offline

The MAINVIEW for IMS Offline product offers extensive transaction-level reporting and analysis capabilities, providing a usage-based cost allocation method that organizations can use to recover costs.

MAINVIEW for IMS Offline combines IMS log records with the unique information that is created by the MAINVIEW for IMS Online Event Collector to generate comprehensive response time and resource utilization analysis reports.

MAINVIEW for IMS Offline

- provides information about the balance between volume of work and the capacity to process it
- provides reports to verify whether service level agreements are being met
- provides extensive reports about user and system activity and database performance
- provides reports for understanding long-term changes in overall behavioral patterns of IMS systems

MAINVIEW for IP

The MAINVIEW for IP product provides monitoring and management of TCP/IP stacks. MAINVIEW for IP

- collects application performance data from the TCP/IP stack to help you monitor and manage the availability, throughput, and tuning of your mission-critical network applications
- provides sample alert notifications of exceptions conditions and tools for problem diagnosis
- monitors your network usage (by host name or address type) and correlates network throughput with other events occurring on the system

MAINVIEW for IP requires OS/390 2.6 (or later) with the IBM TCP/IP stack.

NOTE



Other TCP/IP stacks are not supported.

MAINVIEW for IP includes the following features and benefits:

Feature	Benefits
actions	<ul style="list-style-type: none"> ■ enables you to initiate specific actions in a view, such as dropping a connection, pinging a device, performing a Traceroute, or performing a packet trace
activity	<ul style="list-style-type: none"> ■ provides information about the availability and activity of application and stack connections
configuration	<ul style="list-style-type: none"> ■ provides configuration for the PROFILE data set for each TCP/IP stack on your system ■ provides real time data about the programs that make up your system, subsystem, or network (TCP, UDP, IP, SMF, and port) ■ enables you to see configuration information without searching through several data sets
connections	<ul style="list-style-type: none"> ■ provides real time information about the devices that are connected to an application by domain name, IP address, and remote port number ■ provides statistics to help you assess application performance

Feature	Benefits
diagnostics	<ul style="list-style-type: none"> ■ provides information about a ping that you requested; pings help you determine network connectivity, destination host status, and network loading and speed ■ provides information about a Traceroute that you requested; Traceroutes help you pinpoint delays in your network ■ enables you to perform packet tracing to provide all the TCP/IP head and packet data that you need to help you diagnose a problem on your network ■ enables you to perform socket tracing to provide detailed information about a socket call, including all socket parameters and return codes
dynamic VIPA	<ul style="list-style-type: none"> ■ provides information about dynamic Virtual IP Addresses (DVIPA) ■ enables you to monitor DVIPAs on your OS/390 or z/OS host ■ provide details about DVIPA configuration, routing connection tables, and destination port tables ■ helps you identify the distribution of your TCP/IP resources that are attached to the OS/390 or z/OS TCP/IP stacks
FTP statistics	<ul style="list-style-type: none"> ■ provides file transfer protocol (FTP) information ■ collects statistics about your FTP connections ■ enables you to monitor traffic on your FTP servers ■ displays details about FTP files, IP addresses, user IDs, response times, transfer rates, progress, and diagnostic information
historical data	<ul style="list-style-type: none"> ■ provides information about previous performance (to compare with current performance)
interfaces	<ul style="list-style-type: none"> ■ provides information about network devices that are defined to the TCP/IP stack ■ provides information about network links so that you can see suspicious performance information and identify performance problems ■ provides information about Open Systems Adapter (OSA) devices, so that you can see OSA configuration information, utilization statistics, network device details, network link details, and Ethernet-like statistics
IP pacing	<ul style="list-style-type: none"> ■ enables you to delay (or “pace”) outbound data from any TCP/IP application to provide more processing time to business-critical applications and to display information about applications that have been paced

Feature	Benefits
IP resource links	<ul style="list-style-type: none"> ■ provides a hyperlink to a view in MAINVIEW for OS/390 that summarizes CPU utilization statistics ■ provides a hyperlink to a view in MAINVIEW for OS/390 that summarizes paging statistics, including the number of pages per second ■ provides a hyperlink to a view in MAINVIEW for UNIX System Services that summarizes resource usage for a specific UNIX System Services address space ■ provides a hyperlink to a menu in MAINVIEW for VTAM that provides Response Time Monitor (RTM) and throughput statistics for TN3270 resources, and provides information about the mapping of TN3270 resources to IP addresses, and the resolving of application associations ■ provides a hyperlink to a view in MAINVIEW for WebSphere Application Server that summarizes WebSphere Application Server performance statistics
routers	<ul style="list-style-type: none"> ■ enables you to specify every IP node that you want to monitor ■ enables you to add or change SNMP parameters dynamically ■ provides information about TCP, UDP, IP, system, interface router, OSPF, and CISCO router performance ■ provides information about network routes that are defined on a TCP/IP stack
service levels	<ul style="list-style-type: none"> ■ provides information about application availability ■ provides information about your Web servers ■ enables you to monitor service level events to help ensure that you are meeting your service level agreements ■ provides the network status of the local host and provides statistics about Fast Response Cache Accelerator
storage	<ul style="list-style-type: none"> ■ provides statistics about Communication Storage Manager (CSM) buffer pools ■ provides statistics about Virtual Telecommunications Access Method (VTAM) buffer pool statistics ■ provides statistics about Common Storage Area (CSA) usage and limit information

Feature	Benefits
threshold/alarm conditions	<ul style="list-style-type: none">■ provides sample alarms and threshold conditions that use color or highlighting to add visual indicators that instantly show when resources are reaching a critical state
traffic/response times	<ul style="list-style-type: none">■ provides information about the amount of data that is being sent and received, as well as connection detail■ provides information about host and network response times by station (IP address or domain name), port, subnet, or TN3270 session■ provides response-time statistics by job name, port, and connection to help you identify delays in your network■ provides throughput information about remote applications■ provides summary throughput information and response-time statistics for a network by class subnet

MAINVIEW for Linux – Servers

The MAINVIEW for Linux – Servers product is a system management application that provides services and functions to help you monitor and control your Linux servers and z/VM systems. Built on the MAINVIEW architecture, MAINVIEW for Linux – Servers uses a traditional MAINVIEW interface to provide access to Linux and z/VM data.

MAINVIEW for Linux – Servers

- provides real-time and historical information and statistics about Linux and z/VM system and application availability, performance, usage, and configuration
- summarizes information from the total Linux on zSeries environment that might be running hundreds or even thousands of images
- integrates with other MAINVIEW products for total zSeries platform management
- monitors system and process resource usage
- alerts support personnel of exception conditions through alarm management
- discovers Linux and z/VM systems automatically
- provides the ability to view network statistics
- enables you to customize the environment to provide logical or performance-scaled division of Linux images

System Requirements

MAINVIEW for Linux – Servers requires the following operating system and infrastructure software:

- OS/390 version 2.8 or later, or z/OS
- MAINVIEW Infrastructure (MVI) version 4.0 or later

MAINVIEW for Linux – Servers supports the following Linux distributions:

Linux on Intel	Linux on S/390 or zSeries
Red Hat Linux 7.2 for Intel (2.4.7)	Red Hat Linux 7.2 for S/390 (2.4.9)
SuSE Linux 7.0 for Intel (2.2.16) ^a	SuSE Linux Enterprise Server for S/390 (2.2.16)a
SuSE 7.3 for Intel (2.4.10)	SuSE Linux Enterprise Server 7.0 for S/390 (2.4.7)

^aIBM kernel patches for 2.2.16 are included in the code drop dated December 7, 2000. The code drop can be obtained from the IBM Web site.

The following authorization requirements are necessary to install MAINVIEW for Linux – Servers:

System	Authorization Requirement
load library on z/OS (OS/390) <ul style="list-style-type: none"> ■ hilevel.BBLINK ■ hilevel.PGMLIB 	APF authorization
Linux	logged on as root
MMLPAS on z/OS (OS/390)	RACF OMVS TCP/IP access
RTSERVER on z/OS (OS/390)	

The following environment is required to view z/VM data with MAINVIEW for Linux – Servers:

- z/VM 4.2 or later
- VM data server running on z/VM
- at least one Linux system running on z/VM

The Linux data server must be running on this Linux system.

- Real Time Monitor Function Level 4.1.0 (RTM)

RTM must be licensed from IBM and running in the z/VM system.

- VMARC utility

The VMARC utility is available for download from the IBM Web site.

MAINVIEW for OS/390

The MAINVIEW for OS/390 product provides the functional power to achieve performance objectives and increase productivity across the OS/390 and z/OS enterprise. An extensive array of online views offers OS/390 and z/OS systems performance management across an unlimited number of OS/390 and z/OS systems or Parallel Sysplex cluster environments.

MAINVIEW for OS/390 takes advantage of MAINVIEW plex-ready technology, making it possible to generate Parallel Sysplex-wide global alarms without the need to resort to costly, add-on, high-overhead, workstation-based solutions. MAINVIEW for OS/390, which is part of the MAINVIEW for Infrastructure Management solution,

- provides the only OS/390 and z/OS performance management product for both the Parallel Sysplex cluster and the stand-alone enterprise server environments
- offers business-critical application monitoring of service levels and workload objectives
- achieves performance control by using single system image to view the entire OS/390 and z/OS enterprise
- allows automatic detection of exception condition events to generate alerts
- offers integration with the MAINVIEW family of advanced management and automation solutions for OS/390 enterprises
- delivers critical and timely support to help plan the move to Workload License Charge (WLC)
- provides key metrics to monitor WLC, including the ability to issue an alert that the workload capacity threshold is being exceeded
- monitors key performance information about many areas, including
 - workload performance
 - job performance
 - system resource utilization
 - exception thresholds
- determines the causes of program looping or excessive I/O in runaway programs

MAINVIEW for UNIX System Services

The MAINVIEW for UNIX System Services product is designed to manage and monitor Unix applications running under OS/390 or z/OS. MAINVIEW for UNIX System Services allows users to observe applications and resources from the UNIX System Services perspective that traditional performance monitors are unable to see. MAINVIEW for UNIX System Services monitors

- processes
- threads
- file systems
- BPXPRM parameters
- user information

MAINVIEW for UNIX System Services, which is part of the MAINVIEW for Infrastructure Management solution,

- unravels complex OS/390 and z/OS UNIX System Services workloads and resources
- provides detailed information about and actions for UNIX System Services hierarchical file systems (including the new zFS)
- allows comparison of current performance values against predefined BPXPRM (UNIX System Services system parameters) settings to detect potential out-of-limit conditions
- tracks resource use and process activity as generated by a user or group of users
- enables a quick response to changing conditions by providing the ability to dynamically alter key UNIX System Services parameters

MAINVIEW for VTAM

The MAINVIEW for VTAM product provides information about availability tuning, throughput, and end-to-end response times as they relate to the Systems Network Architecture (SNA) communications protocol. MAINVIEW for VTAM

- helps administrators of OS/390 or z/OS environments measure response times at the transaction level and correlate network throughput with other events that are occurring on the system
- combines advanced automation capabilities with traditional ULTRAOPT™ response-time monitoring optimization
- offers improved availability, recoverability, and service for all users
- helps you determine how well your end users are being serviced

MAINVIEW for VTAM works with the ULTRAOPT product to increase network throughput, speed response times, and improve user productivity. These products can eliminate or delay the need for additional communications hardware and can also eliminate the need to install and maintain optimization products in each application.

The following prerequisites are required for MAINVIEW for VTAM:

- VTAM 4.3 or later
- ULTRAOPT

NOTE

A license is required for ULTRAOPT functionality, including optimization.



MAINVIEW for VTAM includes the following features and benefits:

Feature	Benefits
application connections	<ul style="list-style-type: none"> ■ provides information about the availability of an application ■ provides information about the acceptance of new sessions ■ provides statistics about application connections
NCP analysis	<ul style="list-style-type: none"> ■ provides network performance analyzer statistics for network control program resources such as NCP, SDLC lines, physical units, channel adapters, and NCP/Token-Ring interconnections

Feature	Benefits
storage	<ul style="list-style-type: none"> ■ provides statistics about storage allocation and Communication Storage Manager (CSM) buffer pools ■ provides statistics about Virtual Telecommunications Access Method (VTAM) buffer pools ■ provides statistics about Common Storage Area (CSA) usage and limit information
TN3270 statistics	<ul style="list-style-type: none"> ■ provides Response Time Monitor (RTM) and throughput statistics for TN3270 resources by LU name, domain name, and IP address ■ provides information about the mapping of TN3270 resources to IP addresses, and the resolving of application associations ■ bridges the gap between IP and SNA protocols with TN3270 information views
traffic/response times	<ul style="list-style-type: none"> ■ provides information about the amount of data that is being sent and received ■ helps you obtain optimization rates (if you have a license for the optimization product) ■ provides host and network response-time statistics by application ID, logical unit name, and transaction ID to help you identify delays in your network

MAINVIEW for WebSphere Application Server

The MAINVIEW for WebSphere Application Server product provides full-featured monitoring in an IBM WebSphere Application Server for z/OS and OS/390 environment.

Among the most compelling benefits of this product is its use in gathering and displaying information about IBM WebSphere Application Servers and J2EE/CORBA enclaves:

WAS/Enclave	Available Information
WebSphere Application Server (WAS) information	<ul style="list-style-type: none"> ■ system and application classpaths ■ Web applications and servlets that are registered with the WAS ■ virtual host and servlets that are associated with each Web application ■ servlet statistics, including <ul style="list-style-type: none"> - hit counts - elapsed times - classpath associations - request activity by cookie ■ heap analysis information ■ information about DB2 connections, including a hyperlink to MAINVIEW for DB2

WAS/Enclave	Available Information
WAS summary information	<ul style="list-style-type: none"> ■ servlet hits ■ servlet information, both by WebApp and by HTTP server ■ activity by cookie ■ WebApp information, both by virtual host and by HTTP server ■ WAS performance
J2EE/CORBA enclaves	<ul style="list-style-type: none"> ■ J2EE/CORBA server availability ■ information about currently active enclaves, such as enclave identification, CPU use, and various kinds of delays ■ information about executed (no longer active) enclaves, including the number of times that a variety of samples were taken while the enclave was active ■ class name and starting method of executed applications

As an additional benefit of MAINVIEW for WebSphere Application Server version 2.0.00 or later, you can use a BMC Software PATROL Console to view information about WebSphere Application Server instances that are running on z/OS or OS/390. Through this functionality, you can

- verify the presence and availability of HTTP servers
- see whether a WebSphere Application Server is running in an HTTP server
- view important servlet statistics

This functionality requires PATROL for WebSphere Application Server version 1.2.00 or later, which is available separately.

Another important feature of MAINVIEW for WebSphere Application Server is the ability to use the historical interval recorder. Standard MAINVIEW for WebSphere Application Server menu options provide access to information that was collected since midnight of the current calendar day. However, you can use the historical recorder functionality to inspect information that was collected during a specifiable number of previous days. Historical data can be recorded about the following areas:

- SNMP data for WebSphere
- access log and error log information
- thread information
- DB2 information
- heap storage information
- J2EE information
- J2EE WLM information
- J2EE enclave information

Finally, MAINVIEW for WebSphere Application Server continues to provide valuable information about the HTTP server, as well as information that is collected from the HTTP server log files:

- HTTP server statistics (from SNMP)
 - basic server ID and status information
 - throughput, detailed request, and detailed response information
 - cache information
- Log file analysis
 - information gathered within an hour of the current time
 - information gathered in the calendar day during an hour that you specify
 - most recent information collected about any of the log file categories
- HTTP server summary information (from log files)
 - traffic by client
 - access by client or by file
 - access or error statistics by hour
 - server errors

MAINVIEW for WebSphere MQ

The MAINVIEW for WebSphere MQ product ensures the health and availability of IBM WebSphere MQ running on the OS/390 and z/OS platforms.

MAINVIEW for WebSphere MQ delivers a single console from which the user can monitor the availability and performance of all MQ components regardless of their location on the mainframe. MAINVIEW for WebSphere MQ also hosts MAINVIEW for WebSphere MQ Integrator to include message broker management with MQ management. Customers may also perform enterprise broker domain management from MAINVIEW through integration with PATROL for WebSphere MQ Integrator.

MAINVIEW for WebSphere MQ provides

- various integrated views to monitor all WebSphere MQ components
- central management of WebSphere MQ resources with the ability to drill down to any connected component
- in-depth statistics to help diagnose problem cause

MAINVIEW for WebSphere MQ is a fast, powerful facility that improves the availability of applications that are using WebSphere MQ and maintains the integrity of WebSphere MQ resources. The operations staff can access queue managers, queues, channels, name lists, and clusters, and can easily obtain detailed and comprehensive information from the WebSphere MQ environment.

MAINVIEW for WebSphere MQ includes the following features and benefits:

Feature	Benefits
End-to-end enterprise solution	<ul style="list-style-type: none"> ■ displays all relevant WebSphere MQ information in a single view of the entire message-queuing network topology ■ manages all WebSphere MQ resources, including enterprise elements upon which WebSphere MQ applications rely ■ integrates with other MAINVIEW solutions to manage the surrounding infrastructure for impact to hardware and software, CICS, IMS, applications, databases, and Web technologies
Out-of-the-box solutions	<ul style="list-style-type: none"> ■ includes pre-built, out-of-the-box views and command support for many WebSphere MQ tasks ■ provides essential functions, such as dead-letter queue management and channel availability across the enterprise
Easy integration	<ul style="list-style-type: none"> ■ provides interoperability with existing frameworks, mid-level management consoles, and resident point-products such as trouble-ticketing packages

MAINVIEW for WebSphere MQ Integrator

MAINVIEW for WebSphere MQ Integrator helps you monitor and manage your WebSphere MQ Integrator (WMQI) broker domain. This licensed feature of MAINVIEW for WebSphere MQ monitors IBM WebSphere MQ Integrator for z/OS broker components that reside within the integrated environment.

With MAINVIEW for WebSphere MQ Integrator, you can easily start and stop traces for multiple brokers and broker resources from one location. MAINVIEW for WebSphere MQ Integrator also integrates with PATROL for WebSphere MQ Integrator to allow users to monitor distributed and mainframe broker components and activity from the MAINVIEW console.

MAINVIEW for WebSphere MQ Integrator requires the following products to run:

- WebSphere MQ Integrator for z/OS 2.1 or later
- MAINVIEW for WebSphere MQ 4.1 or later
- PATROL for WebSphere MQ Integrator 4.0 or later, if you are monitoring distributed systems components

MAINVIEW for WebSphere MQ Integrator includes the following features and benefits:

- flexible management options
 - offers a fully functional 3270 interface and a Web Browser interface from which to manage the entire WebSphere MQ environment
 - when coupled with PATROL for WebSphere MQ on distributed systems, acts as the central point of control for the entire WebSphere MQ broker domain
- provides a queue manager-based view of WMQI components

- discovers WMQI components automatically
- monitors OS/390, Unix, and Windows broker networks
- displays properties and real-time status of WMQI components and their resources, including message flow nodes and associated queues
- provides information about OS/390 broker and user name server address spaces
- allows you to change properties and to start and stop WMQI components and their resources
- allows you to start and stop traces and change trace attributes
- displays Windows application events

MAINVIEW Storage Resource Manager (SRM)

MAINVIEW Storage Resource Manager (SRM) is a suite of products that help you manage storage resources for the enterprise. MAINVIEW SRM gives storage administrators the ability to reduce storage costs by managing performance and space consumption for various storage resources and processes. These resources include RAID devices, and DFSMS and DFSMSHsm subsystems. MAINVIEW SRM is accessible through MAINVIEW Explorer, allowing storage managers to access information critical to managing application availability. Users can monitor historical trends, forecast future requirements and establish automation to detect, correct and prevent problems.

MAINVIEW SRM products

- ensure that critical business functions are online and ready
- monitor processes and devices in real time
- report on events and errors that have occurred
- automate processes to ensure availability
- ensure that performance levels are adequate to meet application demands
- provide the right type of storage availability with the right amount at the right time

Operating System Requirements

To use MAINVIEW SRM, you need one of the following minimum system configurations, which must be an IBM-supported release:

- OS/390 2.9 or later
- z/OS 1.1 or later
- MAINVIEW Infrastructure (MVI) 4.1.2 or later

Product Benefits

MAINVIEW SRM includes the following products and benefits:

Product	Key Benefits
Allocation	<ul style="list-style-type: none"> ■ maximizes staff and CPU time ■ saves DASD space ■ recovers wasted space ■ reduces schedule interruptions and reruns ■ helps ensure job completion during peak periods, such as year-end processing ■ minimizes help desk calls ■ automates labor-intensive, repetitive processes ■ supports DFSMS strategies with enhanced standards, development, and enforcement ■ extends DFSMS implementation with dynamic and flexible pooling and subpooling ■ provides powerful pooling for entire shops or subsets of data that cannot be managed by DFSMS ■ improves resource use with intelligent allocation ■ helps ensure that end-user service and performance expectations are met ■ reduces risks associated with ACS by simulating changes prior to production processing ■ standardizes coding and simplifies DFSMS implementation and change processes ■ enables faster and more accurate response to exceptions, changes, problems, and ad hoc requests ■ achieves SMS management objectives with fewer lines of code, better reports about the effects of storage management efforts, and fewer man-hours

Product	Key Benefits
Automation	<ul style="list-style-type: none">■ provides powerful storage automation for OS/390 environments■ centralizes management of OS/390 storage automation and exception processing■ supports automation for OS/390 sysplex and multi-LPAR environments■ eliminates the need to create and support complex scripting through the use of rule-based processing■ provides seamless integration with other BMC Software products■ consolidates a wide variety of storage events, including those related to DFSMS, DFSMSHsm, tape, RAID devices, and MAINVIEW SRM■ includes prepackaged, automated solutions for DFSMSHsm, pools, and volumes

Product	Key Benefits
Reporting	<ul style="list-style-type: none"> ■ enables proactive management of storage subsystem performance with accurate real-time and interval-based space information ■ provides accurate and real-time information through accounts, enabling realistic estimates of peak use for more effective capacity planning ■ optimizes deployment of RAID technologies with vendor-specific device support ■ resolves many problems automatically with unlimited, escalating corrective actions and self-monitoring, saving valuable staff resources ■ generates storage-related capacity and performance alarms that warn storage managers of pending problems ■ enables you to view storage occupancy from the perspective of logical groupings, such as departments or applications ■ enables you to establish and monitor a storage budget by application ■ ensures that your critical applications complete tasks successfully ■ enables aggressive migration policies while avoiding the risk of CPU thrashing by using a workday calendar ■ automatically interprets and processes error messages, dramatically reducing the response required by staff and increasing the effectiveness of DFSMShsm (HSM) processing ■ provides exception management without JCL changes ■ reduces capacity requirements for all levels of the hierarchy, including archive tapes

MAINVIEW SYSPROG Services

As a member of the MAINVIEW family of products (and included as part of MAINVIEW for OS/390), MAINVIEW SYSPROG Services addresses real-time performance issues and assists in the planning, structure, and fine-tuning of OS/390 and z/OS operating system configurations.

MAINVIEW SYSPROG Services is a real-time tool that helps your data center manage the day-to-day performance and operation of the OS/390 and z/OS environment by helping you to detect, diagnose, and correct problems as they occur. The synchronous services and Exception Monitor samplers of MAINVIEW SYSPROG Services provide the tools for online system management. Data center personnel can delegate tasks to MAINVIEW SYSPROG Services by storing a series of operational commands that can be executed automatically, thereby speeding up application problem solving and promoting a more cost-effective working environment.

MAINVIEW SYSPROG Services is easy to use and includes online Help and Tutorial facilities. It can rearrange workload priorities and expedite the completion of critical jobs. MAINVIEW SYSPROG Services, which provides systems programmers and operators with the most complete toolbox to manage critical workloads effectively within OS/390 and z/OS,

- locates system bottlenecks by displaying overall system performance
- provides early detection of potential performance problems through user-defined thresholds
- recovers system resources, modifies system characteristics, and changes job-execution parameters
- makes system changes without having to reinitialize the entire operating configuration

MAINVIEW VistaPoint

The MAINVIEW VistaPoint product is an application workload monitor, reporting transaction performance of user-defined MVS, CICS, DB2, or IMS workloads. MAINVIEW VistaPoint provides a set of views that report application and workload performance with differing levels of detail.

The performance of selected regions or subsystems is monitored by defining them as workloads with BMC Software performance tools for MVS, CICS, DB2, or IMS. These products work singularly or together with MAINVIEW VistaPoint to monitor their respective targets and provide workload transaction data.

Using MAINVIEW VistaPoint, workloads can be combined to form applications that offer a performance overview across products, regions, subsystems, and system images in a single view. By shifting to a supporting product, details about individual target performance are provided.

Views in MAINVIEW VistaPoint present the aggregate performance of workloads by the application of which they are a member. When they work with MAINVIEW VistaPoint, the MAINVIEW for CICS, MAINVIEW for DB2, and MAINVIEW for IMS Online products offer product-specific views that are integrated with MAINVIEW VistaPoint. Each product's views provide additional detail about the performance of their targets, depending on which monitors are active.

MAINVIEW VistaPoint reports performance according to whether a workload's transactions meet a service-level objective based on the following criteria:

- Transactions must complete processing within a predefined response-time goal that is set as the maximum for acceptable performance.
- A specified minimum percentage of the total reported transactions must complete processing within the response-time goal.

Related Products

In addition to the MAINVIEW products that are introduced in this book, BMC Software offers a comprehensive line of products for the monitoring and management of your enterprise operating system, subsystems, and applications.

Energizer[®] for CICS

The Energizer for CICS product matches the CICS system environment to the actual workload that is being processed in real time. It dynamically manages and tunes CICS system parameters and resources to address performance issues before they cause problems. In combination with MAINVIEW for CICS, Energizer for CICS provides comprehensive monitoring, management, and optimization of your CICS systems. Energizer for CICS complements MAINVIEW for CICS by

- automatically modifying some of the system parameters that MAINVIEW for CICS monitors
- optimizing CPU utilization, which can in turn be monitored by MAINVIEW for CICS for improved application performance

InTune

The InTune product is the most easy-to-use tool on the market for analyzing and tuning business applications that run under OS/390. InTune, combined with APC for InTune, creates a powerful automation solution for application quality management. InTune complements the MAINVIEW line of system monitoring and management products by allowing customers to tune applications and system resources to improve application performance.

MAINVIEW Batch Optimizer

The MAINVIEW Batch Optimizer product significantly compresses batch cycle time through the use of several technologies that accelerate the execution of batch jobs while making more efficient use of system resources. This process is accomplished without the labor-intensive task of rewriting programs or JCL. MAINVIEW Batch Optimizer dramatically reduces I/O overhead, dynamically executes multiple batch jobs and job steps in parallel, and automatically distributes, routes, and executes batch jobs and job steps in parallel across the sysplex.

BMC Software has extended these batch optimization technologies to include customers' mission-critical IMS and DB2 batch processing. MAINVIEW Batch Optimizer allows batch splitting, step parallelism, and workload management for IMS and DB2 job steps.

MAINVIEW for Performance Assurance®

With the mainframe's critical role in e-business applications, customers need to be able to quickly and accurately predict resource requirements in order to deliver expected service levels. The MAINVIEW for Performance Assurance solution provides the information and insights to enable IT to meet business demands in a cost-effective manner. MAINVIEW for Performance Assurance provides predictive analysis and performance reporting at the business application level, rather than the system level.

MAINVIEW for Performance Assurance includes the following products:

- MAINVIEW Predict
- MAINVIEW Visualizer
- MAINVIEW Application Analysis

System Explorer for z/OS

The System Explorer for z/OS product is the first member of the System Advisor family. This family of products is designed to provide an integrated set of product solutions that simplify the management of the S/390 and Z-series platform.

System Explorer provides a GUI-enabled environment for managing and manipulating data sets and jobs that are running on a z/OS or OS/390 system. System Explorer allows future System Advisor products to be displayed prominently in the user interface and enabled by the customer through the use of a context-sensitive menu selection.

MAINVIEW Solution Packages

MAINVIEW products are included in the following solution packages:

- MAINVIEW for CICS Transaction Server
- MAINVIEW for Infrastructure Management
- MAINVIEW for Network Management
- MAINVIEW for Web Enablement
- Server Management for Linux
- System Performance for CICS/DBCTL
- System Performance for DB2
- System Performance for IMS

MAINVIEW for CICS Transaction Server

CICS is the backbone supporting much of the world's OS/390 and z/OS applications. CICS is a critical resource to your business. The MAINVIEW for CICS Transaction Server solution ensures that your CICS regions are tuned and performing, optimizing performance for your end user. This solution optimizes CICS transactions, as well as monitoring and automating many CICS functions.

MAINVIEW for CICS Transaction Server includes the following products:

- Energizer for CICS
- MAINVIEW AutoOPERATOR for CICS
- MAINVIEW for CICS

MAINVIEW for Infrastructure Management

The MAINVIEW for Infrastructure Management solution ensures that your vital business applications, as well as the infrastructures that support them, are always available. MAINVIEW for Infrastructure Management provides OS/390 and z/OS performance management across an unlimited number of systems or Parallel Sysplex cluster environments. This solution supports Workload License Charges (WLC), which can help you monitor defined capacity and capacity usage.

MAINVIEW for Infrastructure Management includes the following products:

- CMF MONITOR
- MAINVIEW AutoOPERATOR for OS/390
- MAINVIEW for OS/390
- MAINVIEW for UNIX System Services

MAINVIEW for Network Management

The MAINVIEW for Network Management solution monitors the network performance of OS/390 and z/OS business-critical applications. MAINVIEW for Network Management specifically addresses the key areas of availability, tuning, and throughput relative to the respective communications protocols.

MAINVIEW for Network Management includes the following products:

- MAINVIEW for IP
- MAINVIEW for VTAM

MAINVIEW for Web Enablement

The MAINVIEW for Web Enablement solution monitors and manages new and emerging technologies that support e-business, including WebSphere, UNIX System Services, and TCP/IP. MAINVIEW for Web Enablement increases the availability and performance of e-business systems and applications by monitoring the network, Web server, and operating system.

MAINVIEW for Web Enablement includes the following products:

- MAINVIEW for IP
- MAINVIEW for UNIX System Services
- MAINVIEW for WebSphere Application Server

Server Management for Linux

Many businesses are exploiting the cost-effectiveness, stability, and scalability of running applications on Linux, the fastest-growing operating system in the industry today. The Server Management for Linux solution monitors and manages Linux by anticipating operating system failures and resource usage before applications are affected. Server Management for Linux can reduce both application downtime and the operational costs of a decentralized environment.

Server Management for Linux includes the following products:

- MAINVIEW for Linux – Servers
- PATROL for Linux Enterprise Server

System Performance for CICS/DBCTL

By offering a proactive approach to monitoring, managing, and automating DBCTL workloads, the System Performance for CICS/DBCTL solution removes the complexity that surrounds the management of DBCTL. This solution is tightly integrated with MAINVIEW for CICS to provide a complete picture of the IT environment.

System Performance for CICS/DBCTL includes the following products:

- MAINVIEW AutoOPERATOR
- MAINVIEW for DBCTL

System Performance for DB2

Meeting IT service level agreements (SLAs) is now more closely linked to the success of companies' core business objectives. Meeting those SLAs is almost impossible without a well-tuned DB2 subsystem. The System Performance for DB2 solution gives data professionals the products they need to optimize and manage current performance while planning for future growth and capacity.

System Performance for DB2 includes the following products:

- MAINVIEW for DB2
- OPERTUNE[®] for DB2
- Pool Advisor for DB2

System Performance for IMS

The System Performance for IMS solution offers a proactive approach to monitoring, managing, and automating IMS workloads. System Performance for IMS reduces the risk of costly outages by managing application service levels across all IMS environments, from traditional configurations to sophisticated Parallel Sysplex clusters.

System Performance for IMS includes the following products:

- MAINVIEW AutoOPERATOR for IMS
- MAINVIEW for IMS Offline
- MAINVIEW for IMS Online

About BMC Software

BMC Software, Inc. [NYSE:BMC], is a leading provider of enterprise management solutions that empower companies to manage their IT infrastructure from a business perspective. Delivering Business Service Management, BMC Software solutions span enterprise systems, applications, databases, and service management. Founded in 1980, BMC Software has offices worldwide and fiscal 2003 revenues of more than \$1.3 billion. For more information about BMC Software, visit www.bmc.com.

Maintenance and Support

BMC Software is committed to providing the best systems software products and product support in the industry. This commitment results in superior new products and enhancements to existing products and maintenance to meet our customers' needs for performance and value.

BMC Software Customer Support personnel provide fast, comprehensive answers to questions from users. They are experts on the BMC Software products that they support and the environments that these products enhance.

Because many BMC Software products are used on 24-hour, 7-day-a-week production systems, the BMC Software Customer Support staff is on call 24 hours a day, 7 days a week, 365 days a year.

BMC Software 30-Day-Plus Free Trial

BMC Software recognizes the special needs that data-processing organizations have when evaluating new software. To serve these needs, BMC Software offers a free trial of its products at your site.

The 30-Day-Plus Free Trial works as follows:

1. Install the BMC Software product on your test system and become familiar with its operation.
2. When you are ready, move the product to your production system and begin the trial period.
3. At the end of the trial period, contact your BMC Software sales representative to arrange for acquisition of the product. If the product does not meet your needs, return the program tape and product documentation to BMC Software.

NOTE



BMC Software trial tapes expire automatically after the trial period.

Please understand that all BMC Software tapes and documentation are for your company's exclusive use. By accepting this free trial, you acknowledge that the product is a trade secret of BMC Software.

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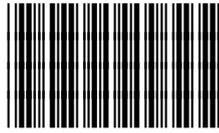
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