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# HP OpenView OperationsCenter

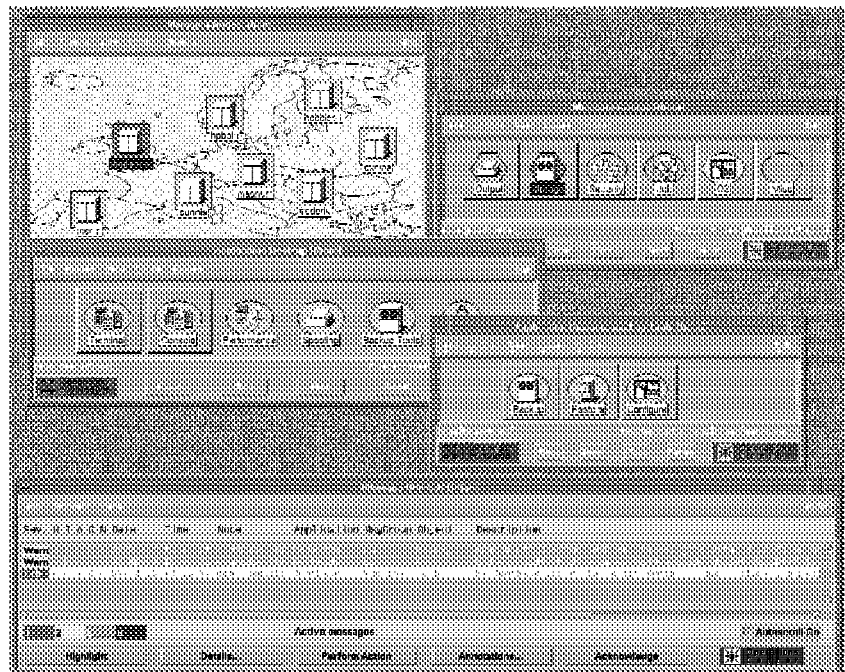
## Technical Data

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### The New Way of Managing Multivendor Distributed Systems

Managing multivendor distributed computing environments adds new dimensions to the responsibilities of IT organizations. Keeping these environments operating, providing the services end-users expect, and controlling the operational costs requires a new type of management solution. HP OpenView OperationsCenter increases the IT organization's effectiveness and productivity by increasing the uptime of the distributed systems and decreasing the time to resolve problems.

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HP OpenView OperationsCenter collects management information, messages and monitoring alerts from throughout the computing environment, then prepares, consolidates, and presents the information at the central management system. Once the management information is received, OperationsCenter can

immediately initiate corrective actions as well as provide guidance for further problem resolutions. All management information and records of associated actions are placed in a central repository for future analysis and audit.

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HP OpenView OperationsCenter's configuration flexibility meets the requirements of the IT organization and the needs of all its users. OperationsCenter can easily be tailored to fulfill every information requirement, and provide management capabilities specific for each user. Additionally, management activities addressed by OperationsCenter can quickly be expanded by integrating other management applications.

### Solution Concept

Each computing environment has a variety of management information sources. For optimal operation of the Information System this management information must be readily available.

However, the sources of management information are located throughout the organization and originate from numerous types of computer systems.

To keep operational costs and productivity of the operating staff on target, the solution required to manage these distributed systems with dissimilar information sources must provide:

- preparation and delivery of management information to a central location;
- presentation of only the relevant, significant information;

- execution of management tasks from the central location; and
- automation, problem resolution guidance and history analysis.

### Solution Implementation

HP OpenView OperationsCenter is a distributed client/server software solution. Its architecture adheres to the manager/agent concept.

Within a computing environment managed by OperationsCenter a specific system is selected as the central management system. The management system performs activities such as receiving and presenting management information, initiating actions and activating the agents.

All other systems in the environment, connected by either LAN or WAN to the management system, are managed nodes. The intelligent agent on the managed node collects and processes management information, forwards pertinent information to the management system, and executes actions.



### Collecting the Management Information

HP OpenView OperationsCenter provides extensive management information collection services. The agents gather management information originating from a variety of sources.

Important message sources are application and system logfiles as well as SNMP traps. The logfiles can be encapsulated to extract the complete content and the SNMP traps can be intercepted. Conversion routines can be used during the collection.

Another source is the system messages normally displayed on the system console. These console messages are intercepted by the OperationsCenter agent on each managed node, prepared and forwarded to the central management system.

In addition, management information generated by applications or custom programs and scripts can be sent directly to OperationsCenter through the documented message interface.

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## HP OpenView

OperationsCenter also collects monitoring information for basic system variables, such as CPU load or disk usage, by accessing the SNMP Management Information Base (MIB). This service can be extended to any SNMP variable and to custom variables provided by your own monitoring applications.

## Processing and Consolidating

### HP OpenView

OperationsCenter offers extensive message management. Messages collected at the managed nodes are automatically forwarded to the central management system acting as the central console.

To minimize network traffic and to avoid overloading the user with irrelevant messages, filter conditions can be specified at managed nodes and the management system. All messages, including suppressed messages, can be logged for future analysis. Each message can be assigned to a severity

class showing the relative importance of the event and helping the user to prioritize.

Messages generated by a specific source or by a similar managed element can be gathered, building a family or group of messages. For example, all messages from a backup or a spooler application can be grouped together.

### HP OpenView

OperationsCenter provides sophisticated status monitoring facilities so you can manage your systems more proactively. OperationsCenter can detect the development of potential problems by setting threshold values for the monitored variables. When a value is exceeded an alert is generated.

The configuration of threshold values and monitoring intervals is done at the central management system and automatically downloaded to the managed nodes. This process is completely independent from the managed node's location. Performed on the managed nodes, these

monitoring services reduce network traffic. Moreover, OperationsCenter monitors its own processes guaranteeing complete and continuous availability of services.

## Presenting the Information

### HP OpenView

OperationsCenter delivers excellent presentation services. The typical working environment for an OperationsCenter user consists of four windows: Managed Nodes, Message Groups, Message Browser, and Application Desktop.

### Managed Nodes Window

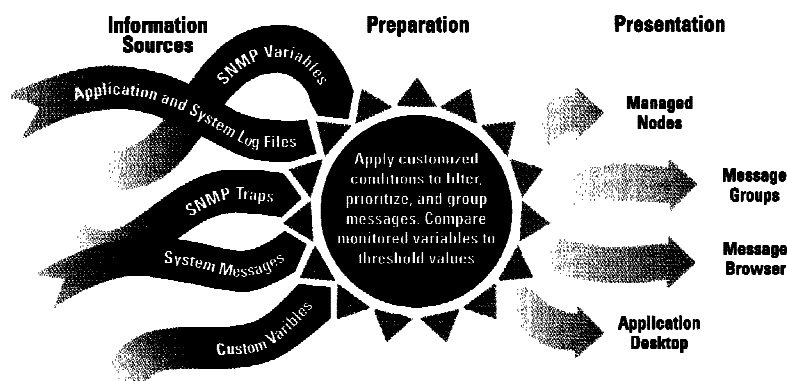
The Managed Nodes window displays nodes managed by OperationsCenter as icons on a graphical map.

### Message Groups Window

The Message Groups window shows icons representing the user-defined logical groups of messages and monitoring alerts.

### Message Browser Window

The Message Browser window presents all management information received at the management system. Additional details, including instructions for responding to messages and monitoring alerts are also available. View criteria – event generation time, source, severity – can be defined to customize the



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Message Browser. Users can open a History Message Browser to review processed messages and completed tasks, comparing active messages to proven resolution procedures.

### **Application Desktop Window**

The Application Desktop window displays icons for all applications and custom programs registered with OperationsCenter. Clicking on an icon activates the desired action.

This working environment can be configured to match the skills and responsibilities of the individual user in terms of management information supplied and capabilities granted. The result is a task-oriented working environment.

OperationsCenter's internal notification service makes users aware of critical events by changing the color of the affected icons according to the OpenView color coding scheme. In addition, external notification services such as a pager, warning light or telephone call initiation, can be activated through a command interface.

### **Acting on the Information**

HP OpenView OperationsCenter offers several mechanisms for responding to critical events. When an event occurs which demands a unique corrective action, OperationsCenter can be configured to immediately perform such actions. They can be activated from the management system as well as by the agents.

For other significant events OperationsCenter provides event-specific instructions to guide users during problem resolution.

All other events and management activities are handled within the Application Desktop window. From this window custom scripts, programs, and management applications can be started and console windows opened on managed nodes.



The console login takes place under control of OperationsCenter and can be configured to meet specific operating policies. If the network or remote system is down, a direct connection via a separate line to the physical console port of the managed node can be established.

For similar management tasks that have to be performed on multiple managed nodes, OperationsCenter provides a broadcast facility.

HP OpenView OperationsCenter allows you to track actions taken addressing a specific event. A built-in annotation facility and an interface to external trouble ticket systems are included. The records documenting the problem resolution provide an excellent base for changing and creating message help text, defining enhanced problem resolution instructions and developing more automatic actions.

### **Solution Customization**

Since every company has a different computing environment, a specific IT organization structure and its own unique management policies, HP OpenView OperationsCenter offers elaborate customization capabilities.

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OperationsCenter can be configured to collect messages and SNMP traps from any source as well as to monitor any variable of interest to you. Once the management information is collected all follow-on activities can be defined to suit your specific IT requirements.

#### HP OpenView

OperationsCenter also fully meets the needs of all different users. Many IT organizations define individual management responsibilities for each member of the operating staff. Using the Workspace Manager you can specify the managed nodes and message groups each user is responsible for. Only from these configured sources do messages and alerts appear in the Message Browser window.

The Workspace Manager also controls the management tasks each user can perform. Displayed in the Application Desktop window are only those icons representing applications and control programs which the user can access. Therefore, each user has his or her own task-oriented working environment. The Workspace Manager supports the configuration of many different yet concurrent user profiles.

#### HP OpenView

OperationsCenter provides secure operations. Each user has a password ensuring that only authorized persons have access. User profiles established by the Workspace Manager control the activities of each

user on management system and managed nodes. Control over all actions on the managed nodes is possible, because activities are initiated from the Application Desktop or Message Browser which are configured by the Workspace Manager.

### Designed to Meet Your Needs

#### HP OpenView

OperationsCenter allows you to consolidate a large number of management activities for systems distributed across the organization at a single central point. This helps reduce the cost of operations and provides the same level of management expertise for all systems in the management domain.

#### With HP OpenView

OperationsCenter you can devote more time to improving productivity and planning, and much less to routine tasks. Management information flowing to the central management system has a consistent format and is handled in a consistent manner,

although the information will originate from multivendor systems. System specialists are no longer required.

Filtering and priority setting capabilities – management by exception – let users focus on key management information and tasks. Detection of a critical event can trigger a pre-defined corrective action without involving the user; a major step towards self-managing systems.

#### HP OpenView

OperationsCenter improves the availability of your computing resources. Monitoring key system and application variables against threshold values gives early warning of developing problems.

For those problems that do surface, the users can be provided with instructions to achieve faster resolution. The user-friendly and intuitive working environment, with its intelligent guidance and context sensitive help, limits the chance for errors.



**Broad customization and configuration capabilities enable you to adapt OperationsCenter to the specific requirements of your organization.**

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Broad customization and configuration capabilities enable you to adapt OperationsCenter to the specific requirements of your organization, and not the other way around. You can even create individual user workspaces delivering only the relevant management information and giving access to management tasks according to company policy.

#### HP OpenView

OperationsCenter is an open solution offering powerful extension capabilities. You can integrate any management application or custom program, collect and display the management information they generate, and then access them by a simple click on an icon.

#### HP OpenView

OperationsCenter is implemented on top of the HP OpenView SNMP platform which allows you to quickly add other HP OpenView applications to address more management tasks.

### Product Requirements

#### Management System

HP 9000 Series 700 Workstation, HP 9000 Series 700 X-terminals as additional displays.

- HP 9000 Series 800 Business Server with front end HP 9000 Series 700 X-terminals.
- Color graphics display 1280 x 1024, 8 color planes recommended.

- Mouse
- RAM: 32 MB minimum, 64 MB recommended
- Disk: Additional 100 MB disk space for application code and configuration data.

HP-UX Version 9.0 (including X Window System and OSF/Motif)

- HP LAN/Link 9000
- HP ARPA Services 9000
- HP OpenView SNMP Platform 3.3 with Ingres Database.

#### Managed Nodes

HP 9000 Series 400/700/800, HP-UX 8.07 or later

- HP 3000 Series 900, MPE/iX 4.0 or later
- IBM RS6000, AIX 3.2
- Sun SPARC, SunOS 4.1.2/4.1.3 Solaris 2.1
- Disk: Additional 20 MB disk space
- LAN: appropriate LAN software including ARPA Services

#### Support Services

HP offers a comprehensive set of support services for your hardware and software. Contact your HP sales representative for more information.

#### Ordering Information

**B1960AA** – License-to-use HP OpenView OperationsCenter on Management System

**0AA** up to 50 managed users  
**UBD** up to 100 managed users  
**UBL** up to 200 managed users  
**UBM** up to 500 managed users

**UD7** up to 1000 managed users

**UP2** up to 2000 managed users

**UP4** up to 5000 managed users

(Managed users are ASCII-terminals, X-terminals, PCs and Workstations utilizing services on Managed Nodes.)

**B1961AA** – License-to-use HP OpenView OperationsCenter on Managed Node

**B1967AA** – HP OpenView OperationsCenter Media and Documentation for HP 9000 Series 700 Management System

**AAH** DDS/DAT cassette  
**AAU** CD-ROM certificate

**B1968AA** – HP OpenView OperationsCenter Media and Documentation for HP 9000 Series 800 Management System

**AAH** DDS/DAT cassette  
**AAU** CD-ROM certificate

(Media includes software for all supported Managed Node platforms.)

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