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Systems Marketing

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Contents

Compaq Systems Management Partnerships

This document discusses the Compaq Systems Management Partnerships, a definition of systems management, Compaq's systems management strategy, new Compaq systems management partners, and their integrated solutions.

COMPAQ

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EXECUTIVE SUMMARY

Many large corporations today are in the midst of a transition, using Business Process Reengineering (BPR) to define new processes to streamline business operations. These changes to their organizations and processes are affecting their computing environments, leading them to downsize their mainframe applications and deploy new applications to distributed client/server systems. As these distributed servers increasingly run more mission-critical applications, breakdowns and performance degradation can seriously impact the business goals of the enterprise. The need to ensure high performance and highly available computer systems, networks, and applications is driving demand for proactive management tools to control the distributed enterprise.

Companies deploying mission-critical applications to distributed systems require the same level of systems management that exists for companies deploying midrange and mainframe systems. In addition, they need the systems management functionality to deal with the challenges unique to a distributed environment. Systems management tools need to provide centralized systems management functionality to manage a broad range of technologies (hardware, operating systems, applications) from multiple vendors in a distributed environment.

Several factors are contributing to the increasing use of Compaq systems for mission-critical applications. First, powerful processors such as the Pentium Pro are providing performance that meets or exceeds midrange systems. Secondly, the increased sophistication of network operating systems and distributed applications have made them an alternative to traditional software solutions. In addition, Compaq is taking an important step in delivering an increased level of manageability for Compaq systems, through partnerships with leading systems management software vendors. These partnerships will provide customers with a broad range of functionality for centrally managing their Compaq systems using the enterprise tools of their choice. Taken together, these capabilities will enable Compaq to deliver midrange-level performance and manageability at a lower cost.

The goal of Compaq Systems Management Partnerships is to facilitate the optimum integration of Compaq systems event, performance, and configuration information with partners' systems management products. Through ongoing partnering, Compaq has integrated its management software with HP OpenView, Tivoli TME 10 NetView (formerly IBM NetView), Sun NetManager, Microsoft Systems Management Server, and Novell ManageWise. Now, a new series of partners including BMC Software, Boole & Babbage, Cabletron Systems, Seagate Enterprise Management Software, and Tivoli Systems will enable an expanded range of manageability for Compaq.

These new partnerships are initially focused on meeting customers' most pressing need: enterprise event management for Compaq systems. Event management ensures customers receive proactive notification of problems. Further integration with these and with additional partners will provide a broad range of additional systems management functionality for Compaq systems including other aspects of Real Time Management, Change Management, Production Control, Help Desk, and Security.

EVOLUTION OF THE CUSTOMER ORGANIZATION

Traditionally, companies have separated the management of their computing resources by hardware type: the data center managed the mainframe, the midrange group managed Unix systems, the WAN group managed the network, and the LAN group managed the workgroup.

Through BPR, companies have begun to form central groups by function as shown in Figure 1 which provide planning, systems integration, operations, and service for all computing environments and technologies. As this occurs, more companies are migrating to distributed client/server applications. The key impact of this shift is that it is causing the integrated operations management organizations to require different types of management tools that can manage a broad range of technologies from multiple vendors.
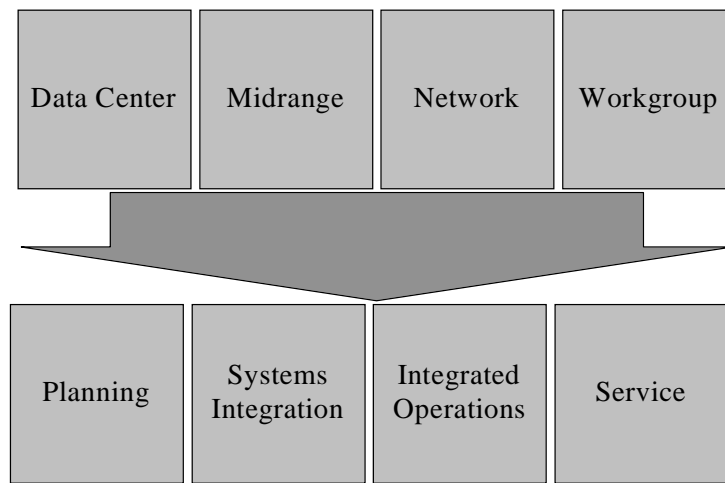

Figure 1 Evolution of Customer Organizations

The computing environments under these new organizations are managed from local, regional, and central locations. The regional emphasis varies in proportion to company size. Customer systems management requirements vary between the local, regional, and central environments. The goal of this arrangement is to resolve problems with the most efficient use of personnel resources. Events are identified and resolved as close to their source as possible, with only the most complex problems making their way to the central site.

SYSTEMS MANAGEMENT MODEL

One of the useful ways of viewing systems management is through the Meta Group model shown in Figure 2:

Help Desk	Real Time	Security
	Change	
	Production Control	
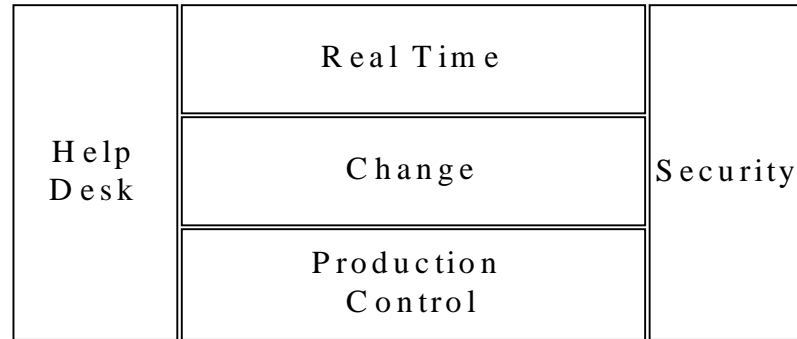
Source: Meta Group   *Figure 2 Systems Management Model*

Real-time Management

Real Time management ensures that the enterprise is running at its optimum level.

- Event management - Event management is the most critical systems management area. It provides event information to help resolve problems quickly, ensuring availability of mission-critical systems; in many cases, potential problems are resolved before they occur.

- Performance management - monitors key performance metrics in the network, the systems, the operating system, and the application, and takes appropriate actions to maintain a desired level of performance.

- Capacity planning - uses trends in performance of a system, and the future needs of a business, to recommend and schedule changes in resource capacity.

Change Management

Change management keeps track of the evolution of system configurations.

- Inventory management - keeps track of the constantly changing hardware components on a distributed network.

- Configuration management - maintains consistent software configurations across a distributed environment by checking configurations on the network for consistency.

- Electronic Software Distribution (ESD) distributes, installs, and maintains software on a network.

- Asset management - accounting of computing assets. It often uses information from inventory and configuration management tools to handle accounting aspects such as depreciation, contracts, chargeback and distribution of costs.

Production Control

Production Control ensures that a variety of program tasks are handled correctly.

- Storage Management - intelligent allocation of information upon different classes of storage media.

- Backup and Archival - recovery from failures and mistakes, and long-term storage of information.

- Job Scheduling - allocation of computing resources for specific tasks and the synchronizing of tasks that are dependent on the completion of previous tasks.

- Output Management - distribution of computer program output to different users in the enterprise. A major concern of output distribution is ensuring that users receive different views of information based on their business needs.

Help Desk

Help desk operations manage the resolution of problems by receiving alerts from other systems management applications, automatically opening trouble tickets, and communicating their status to administrators.

Security

Security management handles the user authorization and authentication of systems and networking resources.

COMPAQ SYSTEMS MANAGEMENT STRATEGY

Compaq is meeting the distributed systems management challenge by:

- ensuring that Compaq systems are the most manageable

- developing Compaq management applications to meet customers needs

- partnering to ensure broad manageability of Compaq systems

Compaq Manageability

Compaq designs extensive manageability into its products in areas such as pre-failure alerting, configuration management, and performance monitoring. This manageability is monitored by the Compaq Management Information Base (MIB), which provide over 1,000 parameters. This information is accessed by Compaq Insight Management Agents, which also provide approximately 65 alerts. Compaq Insight Management Agents monitor Compaq ProLiant and ProSignia servers running Novell NetWare, MS Windows NT, IBM OS/2, and SCO Unix environments, as well as Compaq DeskPro computers running MS Windows 95 and Windows NT. The event, configuration, and performance information provided by Compaq Insight Management Agents are available via the industry-standard SNMP protocol.

Compaq Management Tools

Compaq has led the industry in the effective integration and management of a large number of networked Compaq systems:

- SmartStart is an intelligent integration tool that simplifies the process of installing and configuring proven and reliable server platforms. SmartStart 3.0 delivers new Integration Management capabilities for efficient and consistent deployment and maintenance of distributed systems.

- Compaq Insight Manager is an in-depth hardware management tool that constantly monitors and analyzes critical information provided by Compaq Insight Management agents, providing detailed performance, configuration, and event management for all the Compaq systems on your network.

- Compaq Remote Insight is a robust remote management board that meets the needs of the distributed enterprise. It provides "virtual" on-site management capabilities, allowing administrators to perform the same management tasks remotely as they could do locally. Remote Insight manages systems through its own console or Compaq Insight Manager.

- Project Starship is a UNIX application that will provide event management capabilities for Compaq systems from RISC-based UNIX consoles running OpenView for HP-UX or NetView for AIX.

Partnerships

As organizations evolve to the new organizational model, customers need to centrally monitor their distributed enterprise environment. To do this, they want to use systems management applications that provide a broad range of functionality to manage products from a variety of vendors. Compaq already provides the means for customers to integrate Compaq Insight Management Agents into HP OpenView for HP-UX, Tivoli TME 10 NetView for AIX, Sun NetManager, Novell ManageWise, and Microsoft Systems Management Server. More information on Compaq integration with these products is available in Compaq TechNotes "Integrating Compaq Insight Manager with Enterprise Management Platforms", "Integrating Compaq Insight Manager with Systems Management Server", and "Integrating Compaq Insight Manager with ManageWise". These TechNotes are available in printed copy or on the Compaq home page (www.Compaq.com). The new Compaq Systems Management Partnerships will take integration a step further by integrating Compaq management information and events with additional partners' enterprise management tools.

COMPAQ SYSTEMS MANAGEMENT PARTNERSHIPS

Compaq Systems Management Partnerships provide comprehensive systems management functionality for Compaq systems by partnering with leading vendors in all areas of systems management. To ensure this comprehensive coverage, a range of activities are encompassed in the program including:

- Partner Assessment: choosing leading systems management vendors. Compaq is constantly analyzing the leaders in specific areas of systems management and carefully selecting partners.

- Product Integration: assisting partners in integrating Compaq Insight Management Agents into their applications. Compaq will work closely with these partners to assist them in optimum use and integration of Compaq enterprise MIB data and events from Compaq Insight Management Agents.

- Customer Solutions: working closely with partners to jointly present complete and optimum systems management solutions to customers.

- Quality Assurance: certifying the quality of partner integration with Compaq products.

This program benefits customers by providing:

- Flexibility to manage Compaq systems with their choice of enterprise management tools

- Investment protection in management software and training

- Increased system availability and performance through comprehensive enterprise systems management of mission-critical Compaq systems

- Lower costs of managing distributed computing through more proactive, efficient centralized management

Initial Emphasis

As previously stated, the most critical systems management area is event management. Downtime of mission-critical applications is extremely costly to the operation of a business. Operations personnel spend much of their time fighting fires to minimize downtime. Therefore, the initial emphasis of the partnership program is to recruit leading partners that can provide effective, proactive event management of Compaq products.

Future Directions

In the second phase of the program, Compaq will seek further integration with current and additional partners to provide change management in the areas of configuration, inventory management, and ESD, and real-time management in the areas of performance monitoring and capacity planning. The third phase of this program will add additional integration and partnerships in the areas of production control, security/user administration, and help desk operations.

Integration

Each systems management partner is integrating Compaq information optimally for their customers. In most cases, partners' applications receive Compaq events such as disk pre-failure and memory errors and either provide automated resolution or forward events to a central management console. Documentation for the integrated products will be provided by the partners. In addition, information on obtaining and installing Compaq Insight Management Agents and the details of each integration will be provided by Compaq upon release of partners' products.

Product Availability

Compaq Systems Management partners' products that integrate with Compaq information will be available from the partners through their sales channels. As of this publication date, integrated products are available to customers from BMC, Boole & Babbage, and Tivoli. Seagate and Cabletron are currently developing and testing their integrated applications. Specific availability and product version information is available directly from the partners.

Customer Support

A technical support alliance between Compaq and each of its partners will ensure expedient resolution to customer questions and problems. Each partner will provide support to customers for their specific products. Compaq will refer customer inquiries directly to the specific partner's customer support organization, but will assist the partners directly in resolving customers' Compaq-related issues.

PARTNERS AND PRODUCTS

Although Compaq is initially focused on the event management aspects of partners' products, these partners offer additional systems management functionality that relate to managing Compaq systems as shown in Table 1. This table does not show functionality that partners provide through additional partnerships.

	BMC	Boole & Babbage	Cabletron	Seagate	HP	IBM/ Tivoli	Novell	Microsoft	Compaq
Event	☑	☑	☑	☑	☑	☑	☑		☑
Performance	☑			☑		☑	☑	☑	☑
Capacity Planning	☑								☑
Inventory				☑	☑	☑	☑	☑	☑
Configuration				☑		☑	☑	☑	☑
ESD				☑		☑		☑	
Asset									
Storage		☑		☑		☑			
Backup/archival	☑	☑		☑		☑			
Output	☑			☑		☑			
Help Desk		☑							
Security						☑			

Table 1   Systems Management Functionality Grid

The following sections describe the Compaq Systems Management partners, their products, and integration with Compaq Insight Management Agents.

<u>BMC Software</u>

BMC Software is a worldwide developer and vendor of Cooperative Enterprise Management Solutions (CEMS) that automate application and data management across heterogeneous host-based and open systems environments. BMC pioneered the category of application management in open systems. BMC Software also partners with leading vendors throughout the computer industry to provide its customers with integrated enterprise-wide data, system, application and network management solutions. BMC Software has a 16-year history of industry-leading product development for large-scale computing environments. BMC Software is headquartered in

Houston, TX; more information about its products is available on the World Wide Web at www.bmc.com

PATROL

PATROL is a suite of products designed to help you proactively monitor and manage a wide range of databases, applications and operating systems. PATROL provides application management and monitoring capabilities with support for applications, databases and underlying resources across heterogeneous, multi-tier environments. PATROL uses distributed, console-independent agents and loadable libraries of expertise, called Knowledge Modules, to automatically discover the environment, continuously survey related systems, implement recovery actions and initiate alarms based on pre-set criteria. PATROL monitors industry-leading databases (CA-OpenIngres, DB2* for OS/2, Informix, Oracle, Rdb, Sybase, etc.) and applications (Lotus Notes, Oracle Financials, TUXEDO, etc.) as well as operating systems and in-house applications. PATROL integrates at the agent level with leading third-party management frameworks and help desk systems.

Integration (Compaq Insight Manager Knowledge Module)

BMC Software has developed a Knowledge Module specifically for Compaq Insight Management Agent data. The Knowledge Module will examine pertinent system parameters including CPU performance, disk utilization, and network activity. When thresholds are exceeded, alert messages are sent to the PATROL console or other supported console application. Specific corrective action can be taken at the managed node as appropriate. This data can be correlated with data from the applications being run on the system, like Oracle Financials or Lotus Notes, giving customers the ability to manage their entire server environment.

Boole & Babbage

Boole & Babbage provides software products that address the need for end-to-end availability management for distributed applications in multi-tier environments. The company specializes in Enterprise Automation solutions that optimize the availability of all computers, networks and applications in complex IT enterprises. Boole & Babbage products help customers gain proactive command and control of their IT operations by automating the tasks of monitoring, administering, diagnosing and correcting problems across the entire IT topology, from mainframe to desktop. With headquarters in San Jose, California, Boole & Babbage sells its products through direct channels in 26 countries and through a worldwide network of distributors and resellers. For more information, visit the Boole & Babbage web site at www.boole.com.

COMMAND/Post and Ensign

By presenting an integrated, consolidated view distributed applications, COMMAND/Post gives users a central command and control point for availability, fault management, and automated operation throughout the IT enterprise. COMMAND/Post correlates, refines and synthesizes availability and fault data generated by a wide range of computers, workstations, LANs, WANs and communications devices. Based on a highly scaleable architecture, COMMAND/Post is able to reach every manageable enterprise element even in the largest distributed environments. Through a combination of message and agent-based technology and tight interoperability with leading framework solutions, COMMAND/Post analyzes information and responds to alerts or other events located anywhere in the enterprise.

Ensign, the intelligent agent extension of COMMAND/Post, provides out-of-the-box management capabilities for distributed UNIX, Windows NT and NetWare environments. Ensign performs more than 50 pre-defined alarm monitoring functions, enabling customers to quickly gain control of client/server applications and systems and efficiently manage them. The distributed Ensign agents let central and local administrators monitor, administer, automate and manage multisite, multiplatform client/server systems from a distributed control console, providing a consistent interface across all platforms being managed. Ensign agents report detected trouble conditions and transport alerts to customer-defined destinations, such as pagers, e-mail, network management frameworks and COMMAND/Post.

Integration

Boole & Babbage COMMAND/Post and its Ensign agents add software applications surveillance, alarm detection and automated resolution -- at the workstation and control levels -- to the hardware-specific information collected and reported by Compaq Insight Management Agents. By deploying the Ensign agent, customers gain greater integration, consolidation and automation for enterprisewide event management of Windows NT applications resulting in greater availability, efficiency, and productivity.

Through integration with nodes with Compaq Insight Management Agents, Ensign agents capture important Windows NT application information, plus hardware and operating systems data, and provide a transport mechanism for event messages to a central department-level console such as Ensign, an enterprise-level console such as COMMAND/Post, or an SNMP manager such as HP OpenView or Tivoli TME 10 NetView for AIX. At the console level, Ensign performs event correlation and can enable drill down capabilities through optional product gateways

Cabletron

Cabletron Systems, with headquarters in Rochester, NH, is the recognized leader in providing high-performance intranetworking solutions, including, LAN and ATM switches and advanced network and systems management software. Under its Synthesis product framework, Cabletron markets products throughout the world for linking and managing enterprise-wide networks.

SPECTRUM

SPECTRUM Enterprise Manager is a scaleable management platform with distributed capabilities and a true client/server design. It's easily extensible Knowledge Base provides a modeled view of network and computer resources for efficient and automatic event correlation and more effective automated management. SPECTRUM proactively manages networks and systems, pinpoints and corrects problems, and informs network managers of status changes. It can create a model of every entity in the network, including cables, network devices, servers, topologies, desktop computers, and applications. SPECTRUM also has a breadth of over 240 applications to manage technologies such as network and systems operations, virtual networks, and the cable and telephony environments.

Integration

The integration between Compaq Insight Management Agents and Cabletron's SPECTRUM Enterprise Manager provides the user with the ability to manage any Compaq system on the network with Compaq Insight Management Agents installed. Using object-oriented intelligence, SPECTRUM automatically discovers and models Compaq systems and their relationships, and places them within a topology view of the entire network. Users are then able to graphically view the status of the network and obtain statistics on all its devices and applications.

SPECTRUM's integration with Compaq Insight Manager provides enhanced management of fault, performance and configuration data. Specifically, this will provide full MIB support for all RFC and enterprise MIBs that Compaq Insight Management Agents support. Complete support will also be provided for all traps generated by Compaq Insight Management Agents.

Seagate Enterprise Management Software (SEMS)

Seagate Software develops tools and applications in the area of data management, including information management, network and systems management and storage management. Its industry leading software solutions are developed as integral components of a total data management product strategy supporting all major operating environments. SEMS markets a suite of software products that manages the behavior of networks, systems and intranets. Products, including Seagate NerveCenter Pro, Seagate AssetManager, Seagate LANAlert, Seagate AshWin, Seagate Behavior Models, Seagate LAN Directory for Windows (SeagateWinLAND) and Seagate WinINSTALL are sold worldwide, directly, through VARs, system integrators, distributors and OEM partners.

NerveCenter Pro

NerveCenter Pro is an event correlation application which uses behavior models to correlate network conditions, identify critical problems, filter out superfluous events and take appropriate actions. Seagate NerveCenter Pro provides correlation across network devices, UNIX systems and Windows NT and NetWare servers. Events form multiple sources can now be correlated to pinpoint problems that previously required operator analysis. Seagate NerveCenter Pro also enables distributed management across the enterprise, allowing monitoring of remote sites whether or not they are locally managed.

Integration

Seagate EMS products provide strong complementary management capabilities in a Compaq business environment. In particular, a family of Seagate NerveCenter Pro behavior models is being developed specifically to monitor, correlate, and act on events generated from Compaq Insight Management Agents. In addition, Seagate LANAlert expert agents can run side-by-side with Compaq agents, providing hundreds of additional operating system performance parameters in both NT & NetWare environments.

Seagate NerveCenter Pro behavior models for Compaq Insight Manager extend HP OpenView Network Node Manager to manage the behavior of Compaq servers. Specifically, these behavior models monitor MIB parameters over time and identify specific subsystem failures by selectively polling & correlating additional MIB values (e.g., SCSI adapter, storage, ethernet). Through the power of Seagate NerveCenter Pro's cross-object correlation, these behavior models can detect complex failure dependencies.

Tivoli Systems

Tivoli Systems, an IBM company, provides an open, end-to-end management solution from mainframes to the desktop, spanning network and systems management. With headquarters in Austin, Texas, Tivoli distributes its products worldwide through a network of domestic and international sales offices, systems integrators, resellers and IBM sales channels. For more information about Tivoli Systems and its products, visit its World Wide Web site at http://www.tivoli.com.

TME 10

TME 10 (Tivoli Management Environment) lets you manage and control users, applications, systems and data across heterogeneous, multi-vendor client/server environments. TME 10 includes a powerful set of integrated applications including software distribution, event management, user administration, network management, inventory management, job scheduling, security and print management. TME 10 products involved in the initial integration with Compaq products include Tivoli/Sentry and Tivoli/Enterprise Console (T/EC).

Integration

Tivoli provides a high level of integration between Compaq Insight Management agents and TME 10. A collection of custom Sentry monitors has been developed specifically for Compaq servers. These monitors watch over 40 critical performance and system status parameters on each managed Compaq server. When a performance threshold is exceeded, an alert is generated which informs an administrator that a problem may be developing with a particular server. With this information, potential problems can be addressed before they reach a critical state.

The traps generated by each Compaq server are forwarded to the T/EC providing an administrator with the ability to centrally manage a Compaq environment. Traps are assigned severity levels to enable an administrator to filter events as they are received. Event correlation rules have been defined where appropriate to enable root-cause problem management and reveal potential

problems. A good example of event correlation is the ability to detect transient conditions. If a server is crossing back and forth over a threshold, it generates numerous traps. Event correlation suppresses the redundant events until the server exceeds the threshold for a sustained interval.

As management agents are updated, customers want to install the most current versions on their servers. The Tivoli integration with Compaq automates the process of distributing and installing these agents on Compaq systems in a customer's environment. This saves time and money and ensures that each server has a consistent configuration.

Insight Management Agents provide customers with detailed, real-time configuration information about Compaq servers.

SUMMARY

By establishing the Compaq Systems Management Partnerships, Compaq is taking an important step toward ensuring complete distributed enterprise manageability for Compaq systems. Starting with event management, Compaq Systems Management Partners are providing customers enhanced management solutions through integration of Compaq Insight Management Agents into their industry-leading applications. The integrated products give customers the flexibility to efficiently manage their Compaq systems in their distributed enterprise with the systems management applications of their choice.