HP Systems Management

HP WORLD 2004
Solutions and Technology Conference & Expo

From Hardware Resources to Business Processes

Andrew Eastaugh

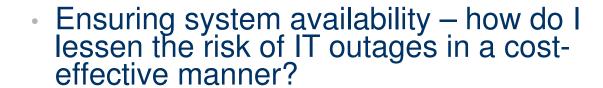Product Manager, Software Global Business Unit
Hewlett-Packard

The IT Manager's Challenges

- Ensuring system availability – how do I lessen the risk of IT outages in a cost-effective manner?

- Making efficient use of people – how do I enable people to focus on solving business problems instead of maintaining existing infrastructure?
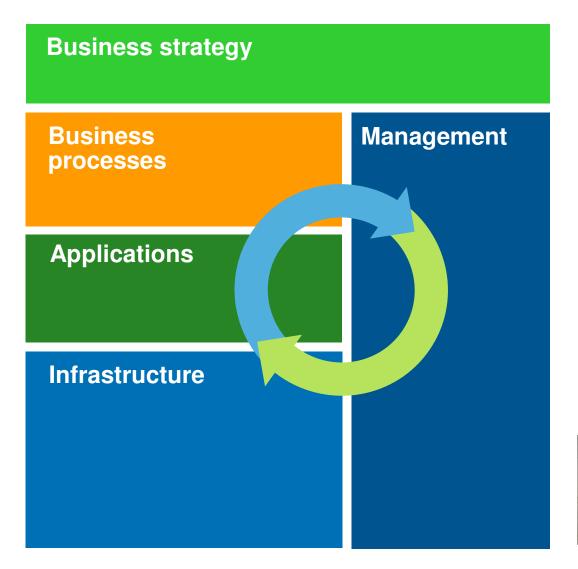
- Maximizing Return on IT assets – how do I ensure that I am getting every dollar of value from my servers, applications, network, etc?

- Responding quickly to change – how do I apply resources to the most important IT services and change allocations as necessary?

HP Adaptive Enterprise

Business strategy

Business processes

Applications

Infrastructure

Management

Management for the Adaptive Enterprise

Integrate people, process and technology to automate the dynamic link between business and IT.

How to get started
A step-wise approach to the Adaptive Enterprise

Business

Management and Control

Resources and Operations Services

Stable

- Build firm foundation for IT infrastructure
- Manage asset lifecycles
- Ensure healthy resource management: Servers, storage, network, PCs, printers, software

Efficient

- Formalize and automate IT processes
- Link IT with the business
- Communicate, measure and deliver services
- Align resources and IT processes
- Establish work flows and process owners with right skills, roles, metrics

Adaptive

- Prioritize IT actions by business impact
- Manage end-to-end business interactions
- Adopt a business-oriented service management culture
- Optimize utilization and performance of business processes and applications
- Virtualized complete data centers

Discrete partitioned   Integrated clustered   Virtualized federated

Utilization

Management for the Adaptive Enterprise Today

assess → advise → act

Manage Business Processes
- Business Process Insight
- Identity Management

Manage IT Services
- **Service Desk**
- Service Information Portal
- **Operations for Windows**
- Reporter
- Internet Services
- Transaction Analyzer

real-time business agility (business aware)

business efficiency (service centric)

business stability (operations centric)

Manage the Infrastructure
- **Operations for Windows**
- **Operations for Unix**
- **Network Node Manager**
- Performance Insight
- Data Protector
- **Systems Insight Manager**
- Storage Area Manager
- Self-healing solutions
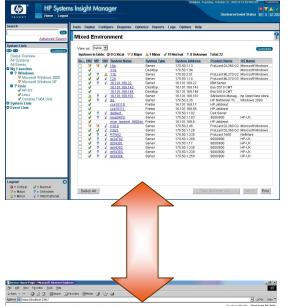
Hardware Resource Management

Key HP software elements

Systems Insight Manager

- Cross–platform lifecycle mgmt for multiple hardware resources
- Servers, clients, printers, networked devices etc
- Monitoring, reporting, change, deployment, inventory & more

System Management Homepage

- Web-based view for ProLiant and Integrity servers
- Aggregated health & configuration data instrumented by :
  - Insight Management Agents
  - Version Control Agents
  - Insight Online Diagnostics
  - Array Configuration Utility
  - Remote Insight

HP Systems Insight Manager
A cornerstone of Adaptive Enterprise

Assess/
Patch

Recover

Inventory

Deploy

Monitor

Virtualize
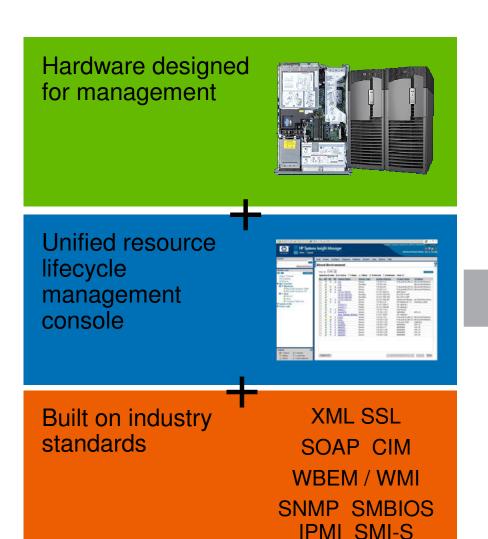
ProLiant Fault Management

Yesterday   **Today**

Infrastructure Lifecycle Management
across all hardware resources

HP Systems Insight Manager
A stable foundation

Hardware designed
for management

+

Unified resource
lifecycle
management
console

+

Built on industry
standards

XML SSL
SOAP CIM
WBEM / WMI
SNMP SMBIOS
IPMI SMI-S

HP Systems Insight Manager

More stability and efficiency
through common and
comprehensive management
across hardware platforms
and key operating systems

More control and flexibility
through modular, extensible,
and standard-based
management platform
adaptable to your environment

More IT alignment
around processes NOT just
hardware platforms

HP Systems Insight Manager
An integrated management approach

Enterprise management integration modules

•HP OpenView • Microsoft • CA • BMC • Tivoli

HP Systems Insight Manager core resource management services
Discovery, inventory, fault & remote management, role-based security, distributed tasks, …

Server Management

Plug-ins	
Workload Mgmt	Security Mgmt
Deployment	Cluster Mgmt
Performance Mgmt	System-specific Admin
Partition Mgmt	3rd Party/ Home grown

Storage management: CommandView	Client Management plug-in: Client Manager	Printer Management plug-in: Web JetAdmin	And more…

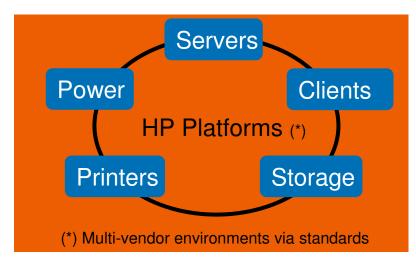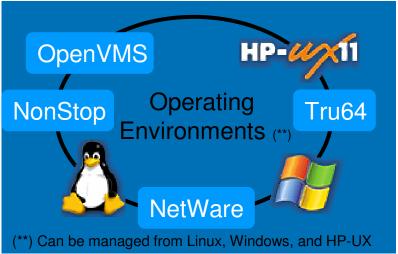**Breadth of hardware management**

 HP-ux11

HP Systems Insight Manager
More stability and efficiency

Common management for

Servers
Power
Clients
HP Platforms (*)
Printers
Storage

(*) Multi-vendor environments via standards

OpenVMS
HP-ux11
NonStop
Operating Environments (**)
Tru64
NetWare

(**) Can be managed from Linux, Windows, and HP-UX

Comprehensive core services and extensibility:

- Cross-platform management

- Browser-based and command line consoles

- Role-based security and secure remote management (SSH / SSL)

- Tool definitions integrate custom scripts, OS commands and other applications

- HP software version control and maintenance

- In-depth inventory and configuration management

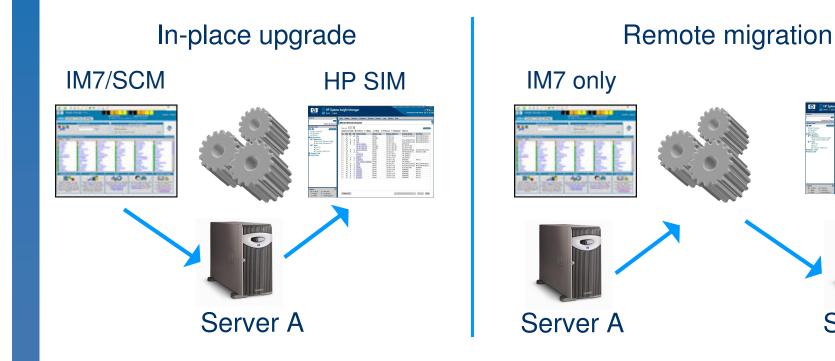- Manages HP and non-HP devices

Migration Utilities
Available with HP SIM 4.1

Flexible upgrade to HP Systems Insight Manager from Insight Manager 7 and HP Servicecontrol Manager

In-place upgrade	Remote migration
IM7/SCM HP SIM	IM7 only HP SIM

Server A

Server A

Server B

New Additions to the Plug-in Family
Supported with HP SIM 4.1

- Performance Mgmt. Pack

New

- HP Client Manager

New

- Installs with HP SIM and five available licenses

- Provides comprehensive hardware bottleneck analysis.

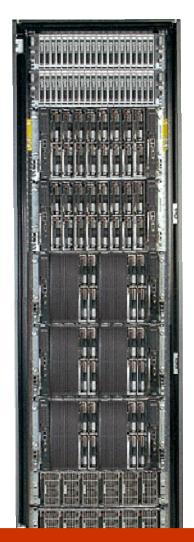- Now supports MSA series storage in addition to ProLiants

- Delivers comprehensive fault, inventory, and configuration management of HP clients

- Can be extended to deliver client image deployment and patch management

Leading Adaptive Enterprise Scale-out Architecture with Blade Systems

- <u>Simple</u> – simple to rack, cable, configure, and deploy

- <u>Automated</u> – hands-off provisioning, recovery, and scaling

- <u>Virtualized</u> – hardware and software resources seamlessly deployed, moved, allocated and de-allocated to optimize IT service delivery

- <u>Industry standard</u> – based on cost-effective, industry standard building blocks as opposed to costly proprietary architectures
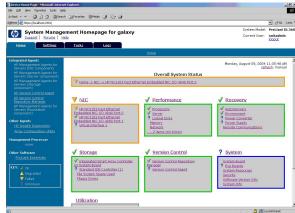
Management software is key to a successful blade strategy

HP System Management Homepage v2.0
Overview

- **Consolidated web-based interface for single system management information**
  - Hardware fault & status monitoring
  - Performance data & thresholds
  - Diagnostics & configuration tracking
  - Software version control

- **Enhanced security & streamlined operations**
  - OS–based / SSL–secure authentication for Windows and Linux platforms
  - Reduced complexity & resource requirements via common HTTP access for HP management plug-ins (e.g. Insight Agents, Version Control, Array Configuration Utility)
  - Simplified process for security & plug-in updates
  - Greater access control via NIC binding & user configuration features

- **Supports Mozilla & Internet Explorer browsers**

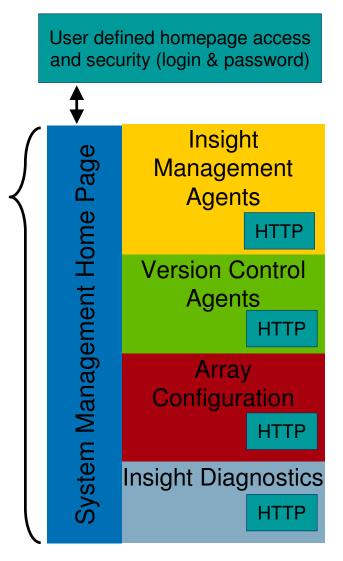- **Single click access from HP Systems Insight Manager & enterprise management solutions**

System Management Homepage
Original Architecture in v1.0

User defined homepage access and security (login & password)

System Management Home Page

Insight Management Agents — HTTP

Version Control Agents — HTTP

Array Configuration — HTTP

Insight Diagnostics — HTTP

- Insight Management Agents, Version Control Agents, ACU, and Insight Diagnostics all plug into the System Management Home Page

- Separate user-defined login and password

- Each plug-in associated with its own local HTTP server for web-based access

- System Management Homepage aggregates status and provides launching point to all agent plug-ins

Systems Management Homepage v2.0
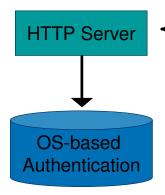## Next Generation Architecture

- Similar presentation with important architectural changes

- Single HTTP server for all plug-ins
  - Reduced memory footprint
  - Improved security and control
  - Simplified application of SSL patches

- OS-based authentication uses customers' existing security policies

- Bind with specific IP address / NICs
  - Improved control of management-focused traffic (e.g. SNMP) & control corporate access

- More secure operations and simplified installation for single and group configurations

HTTP Server

OS-based Authentication

System Management Home Page
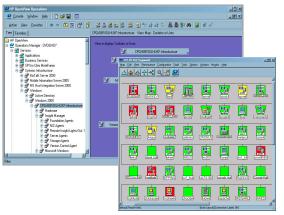
Insight Management Agents

Version Control Agents

Array Configuration

Insight Diagnostics

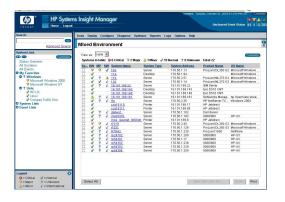# OpenView and Systems Insight Manager
Working better together

- ## HP OpenView products
  - Maximize availability & performance of IT services
  - Manage all levels of the IT service solution stack: hardware, networks, applications
  - Delivers heterogeneous, vendor-independent mgmt.
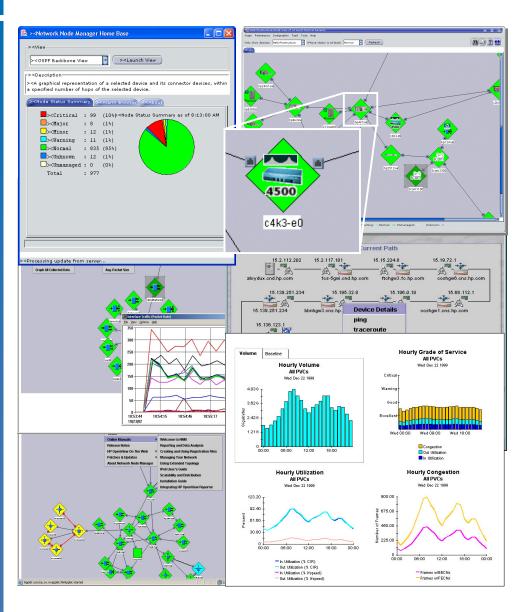 - Deployed at enterprise level

Augment OpenView with detailed HP hardware infrastructure mgmt.

- ## HP Systems Insight Manager
  - Maximize availability of platform hardware
  - Reduce hardware lifecycle costs
  - Best at managing HP hardware
  - Deployed at departmental and site level

OpenView Network Management

Network Node Manager Starter Edition
- Discovery, mapping, monitoring
- Event detection and correlation
- Report generation & integrations

Network Node Manager Advanced Edition
- Network Node Manager Starter Edition

   +

- Layer 2 discovery, mapping, monitoring
- Event detection and correlation
- VLAN/WAN management
- Detailed status/performance information about static and dynamic network paths
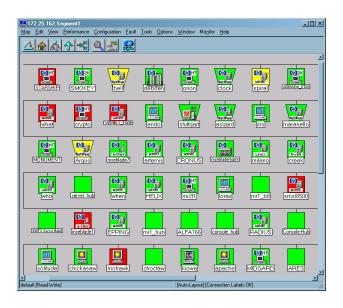
Performance Insight
- Best-of-breed network performance management that enables problem prevention, resource optimization and SLA compliance

Insight Manager and OpenView
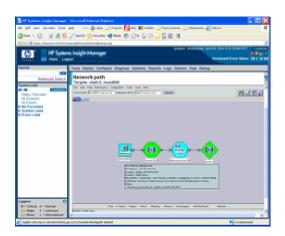## Network node manager

- Insight Manager integration with OpenView NNM for Windows, HP-UX and Solaris

- Builds upon Insight Management Agent technology

- Discovers and clearly identifies HP servers, clients and remote lights-out management solutions on the NNM topology map

- At-a-glance hardware health status

- Comprehensive hardware and event interpretation via broad SNMP instrumentation

- Detailed system status and configuration information via embedded links to the HP System Management Homepage and HP Systems Insight Manager

- Integration is free to download from HP.com

Insight Manager and OpenView
Viewing NNM through HPSIM

Network Neighbors

- Identify if server outage is hardware or network related

Network Path

- Identify network path between two devices.

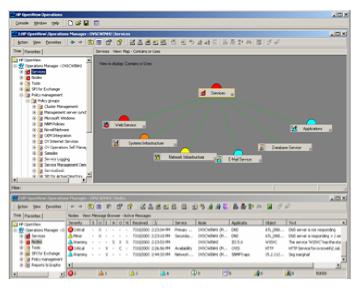- Quickly locate network communications problems

- In-context launch of Network Node Manager web views from within HP Systems Insight Manager

- Accomplished through Tool Definition File

- Tool Definition

  – Extends HP SIM menus

  – Provides launch filters

  – Passes context to integrated application

OpenView Operations
The core of HP OpenView's management solution
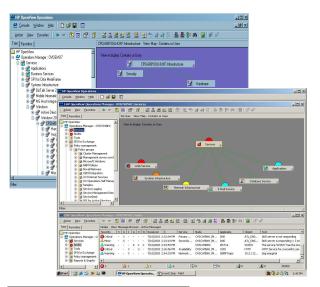

Winner – Best of Show in the management category at Tech Ed 2003
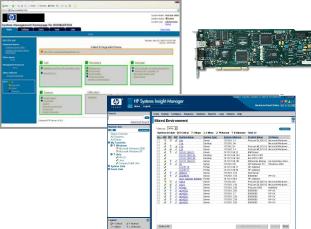
- Centralized point of control for systems, applications and services

- Service management perspective

- Sophisticated Windows, UNIX and Linux event and performance management from Windows

- Out-of-box tools for deep diagnosis and corrective actions

- Historical reporting & real-time graphs

- Automated actions, service discovery and policy deployment

- A true operations – user roles, versioning

- Scalable: 10-1000+ servers

- Minimal impact: secure, reliable, low overhead

Insight Manager and OpenView
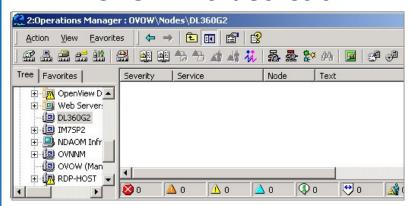## Operations for Windows and UNIX integration

- Insight Manager Smart Plug-in shipped with:
  - OVOW – Windows OSSPI, OVOW 7.1 and higher
  - OVOU – Windows OSSPI 2004.2 SPI CD
- Auto-discovery of ProLiant Servers running Insight Management Agents
- Monitors availability of Insight Management Agents and HP SIM services
- Automates hardware event correlation
- Extensive instrumentation of Windows operating systems, applications and HP ProLiant hardware using Smart Plug-Ins
- Integrated hardware management using HPSIM tools and event forwarding features from OVO
- Embedded links to HP System Management Homepage, Remote Insight technology and HP Systems Insight Manager
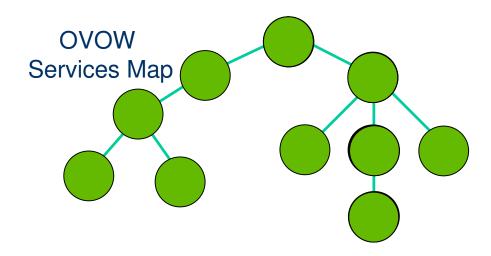
Insight Manager and OpenView Integration
Automated event and status correlation

OVOW Event Console

OVOW Services Map

Hard Drive Fails

- Events generated (Insight)
  - Physical drive failure (critical)
  - Logical drive failure (major)
- OV agent writes events to OVOW event console
- Most critical status shown on OVOW map

Faulty Drive Replaced

- Events generated (Insight)
  - Logical drive rebuild (minor)
- OVOW event console automatically updated
  - Critical & major events closed
- New status automatically reflected on OVOW map

Drive Rebuild Complete
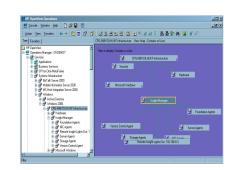
- Events generated (Insight)
  - Logical drive OK
- OVOW event console automatically updated
  - All related drive failure events closed
- New status automatically reflected on OVOW map

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Insight Manager and OpenView
Integration solutions

OVOW

OVOU

OVSD

Future Proposal

NNM

- HP SIM policies delivered with standard WinOS SPIs
- Hardware status & events
- Embedded links to HPSIM; Remote Insight SMH

- Automated end-to end trouble ticketing, inventory, fault mgmt
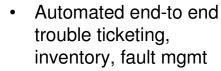- Efficient, proactive systems fault and maintenance operations

- HP developed plug-in
- System ID & classification
- Hardware status & events
- Embedded links to HPSIM; Remote Insight; SMH
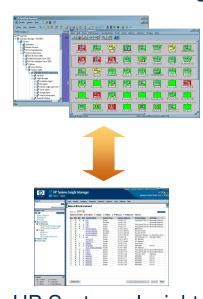- Free download from hp.com

OpenView and HP SIM
Integration direction

HP OpenView Operations and
Network Node Mgr

HP OpenView Operations, NNM, and other
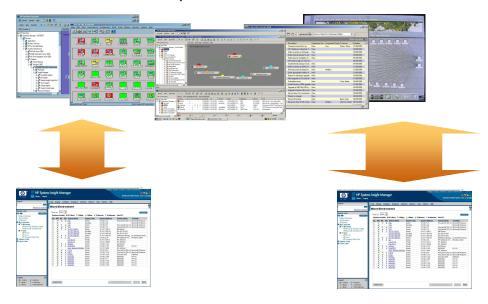HP OpenView Products

HP Systems Insight
Manager

Future HP Systems Insight Manager Releases

Initial Integration (Q403)

• Agent-based integration
• Leverage HP Hardware Instrumentation
• Discovery, status, events exposed in OV
• Launch HP SIM / System Management Homepage from within OV

Integration Phase 2 (2Q04)

• In-Context Launch of HP SIM from OV (NNM, OVOW)
• Insight event correlation and Improved details within OV
• HP SIM / Rilo-iLO within OV

Integration Phase 3

• Mgmt console level integration
• Embedded HP hardware mgmt shipped with OV products
• Data and event sharing
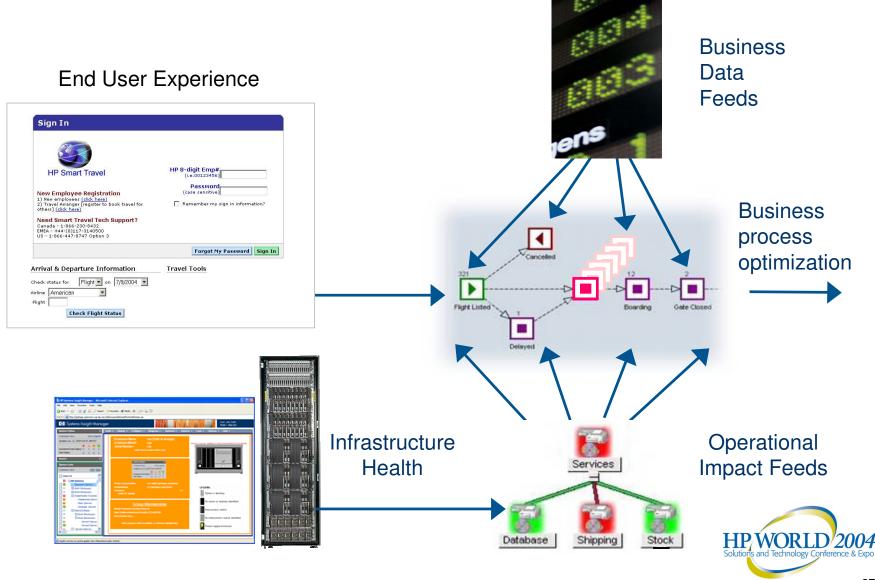• Mgmt console cross linkage and automation

HP Future Highlights

- **HP Systems Insight Manager**
  - OS-based authentication across system management tools
  - WMI / WBEM management across HP hardware platforms
    - Asset & inventory management
    - Event notification
    - Provide a viable alternative to SNMP

- **Increasing Extensibility and Value Add**
  - Integrated service management
  - Virtual Server Management
  - Security Vulnerability and Patch Management (*Demo on HP Booth*)
  - Enhanced Blade Server Management (dynamic scaling & recovery)

- **OpenView**
  - More seamless integration and increased interoperability between OpenView and Systems Insight Manager
  - Virtual system management

- **Common Agent Alignment**

HP Manages the Dynamic Link Between Business and IT

End User Experience

Business Data Feeds

Business process optimization

Infrastructure Health

Operational Impact Feeds

Related Sessions at HP World

Session   **Topic**

3996   Windows Management: OpenView and Insight Manager

3750   Advanced Techniques for Managing Windows using HP SIM
3751   "
3752   "

3753   Upgrading from Insight Manager to Systems Insight Manager

Any Questions ?

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