HP Systems Insight Manager

Unified platform management

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How much resources do I need to drive my IT business?
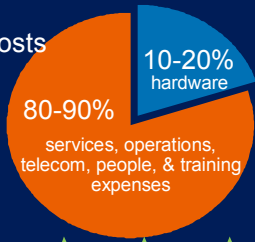
hp invent

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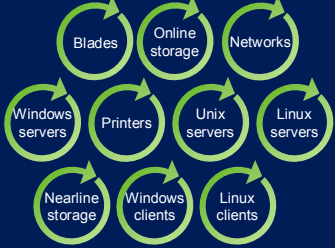# Resource Lifecycle Management
A large portion of IT costs

hp invent

IT Costs

10-20% hardware

80-90% services, operations, telecom, people, & training expenses

Blades

Online storage

Networks

Windows servers

Printers

Unix servers

Linux servers

Nearline storage

Windows clients

Linux clients

Where IT personnel time is spent now:

- Hunting for driver updates
- Feeding CDs to computers
- Flashing firmware
- Inventorying by hand
- Walking to machines
- Crawling behind racks
- Supporting inconsistent configs

- Researching performance issues
- Troubleshooting by trial and error
- Testing and retesting
- And more …
  - … per system type
  - … per vendor
  - … per OS

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Resource Lifecycle Management
A more integrated approach

Maintain — Plan — Provision — Inventory — Control — Monitor
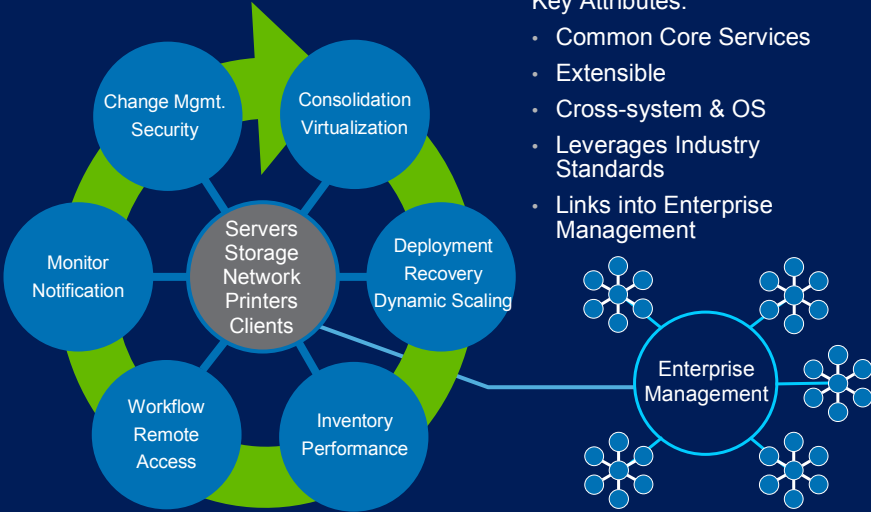
Resource Lifecycle Management

Where IT personnel time is spent after:

- Spans different hardware & operating environments
- Can manage all systems from his desk and travels less
- Inventory at touch of a button
- Systems automatically managed to a desired state

- Proactive notification of fault and performance issues before they have an impact
- Worries about application service level and not platform reliability
- Manages more per administrator
- Occasionally has a vacation

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Resource Lifecycle Management
Cross platform management model

Change Mgmt. Security

Consolidation Virtualization

Monitor Notification

Servers Storage Network Printers Clients

Deployment Recovery Dynamic Scaling

Workflow Remote Access

Inventory Performance

Enterprise Management

Key Attributes:
- Common Core Services
- Extensible
- Cross-system & OS
- Leverages Industry Standards
- Links into Enterprise Management

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HP Systems Insight Manager
With essentials & HP-UX value-add tools

Plug-in Essentials, HP-UX value-add, or custom tools

HP-UX Administration and workload management

Roles based security, OS security integration

Change Mgmt. Security

Consolidation Virtualization

Monitor Notification

Systems Insight Manager
Unix   Linux
Windows

Deployment Recovery Dynamic Scaling

Workflow Remote Access

Inventory Performance

Installs on HP-UX, Windows and Linux

Manages all HP server platforms

OpenView

Multi-OS and multi-platform support   Based on industry standards

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HP Systems Insight Manager
An integrated management approach

Enterprise management integration modules
•HP OpenView   • Tivoli   • CA   • BMC

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

Server Management	Storage Management	Client Management plug-in: Client Manager 6.0	Printer Management plug-in: Web JetAdmin 7.5 ☑	And more…

Plug-ins

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

www.hp.com/go/hpsim
Select Plug-ins

Breadth of hardware management

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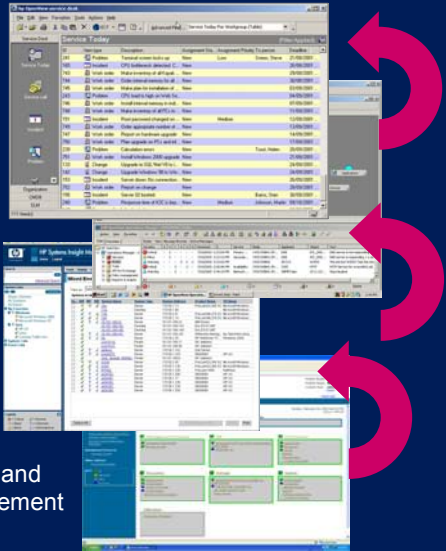
Integrated System-to-Service Level Management

real-time business agility — Service Centric Management

business efficiency — Enterprise Operations Management

business stability — Systems-Level Management

adaptive management — Single System Instrumentation and Element Management

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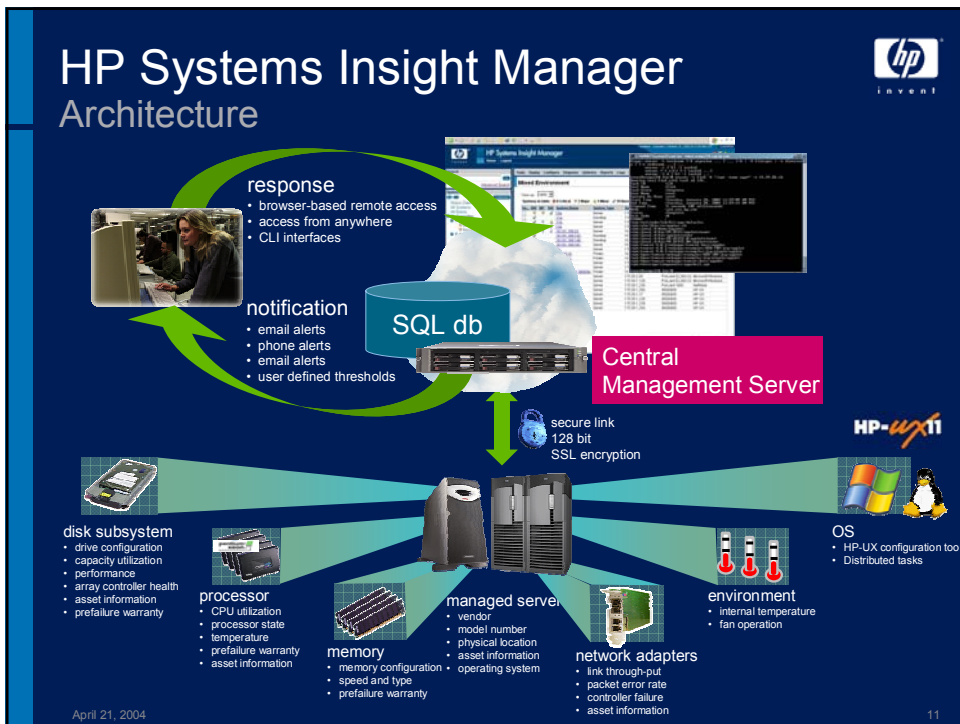# HP Systems Insight Manager
Compelling value for existing HP customers

Feature	Insight Manager 7		Servicecontrol Manager	
Central management server	New	Linux, HP-UX	New	Windows
Cross-platform management	New	HP-UX	New	Windows, NonStop, OpenVMS, Tru64, NetWare
Auto-discovery	✓		New	
Secure remote management	✓	Improved – SSH	✓	Improved – SSH
Role-based security	New		✓	
Distributed tasks	New		✓	
Inventory management	✓	Improved – snapshots	✓	System Inventory Manager – integrated
Fault management / notification	✓		New	
System software maintenance	✓		✓	Integrated
Command line	New		✓	
Extensibility	New		✓	

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HP Systems Insight Manager
Architecture

response
- browser-based remote access
- access from anywhere
- CLI interfaces

notification
- email alerts
- phone alerts
- email alerts
- user defined thresholds

SQL db

Central Management Server

secure link
128 bit
SSL encryption

HP-UX 11

disk subsystem
- drive configuration
- capacity utilization
- performance
- array controller health
- asset information
- prefailure warranty

processor
- CPU utilization
- processor state
- temperature
- prefailure warranty
- asset information

memory
- memory configuration
- speed and type
- prefailure warranty

managed server
- vendor
- model number
- physical location
- asset information
- operating system

network adapters
- link through-put
- packet error rate
- controller failure
- asset information

environment
- internal temperature
- fan operation

OS
- HP-UX configuration tools
- Distributed tasks

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System Instrumentation

- WBEM for inventory, monitoring and control
  - Pegasus CIMOM on HP-UX & Linux, WMI for Windows
  - Secure, supported through firewalls
  - Standard CIM classes plus extensions
  - Indications supported

- SSH Server for automated task execution

- Web GUI for single system support
  - System Management Homepage on managed servers
  - Embedded web servers on other devices

- SNMP for legacy support
  - Standard SNMP MIBs for identification & basic inventory
  - SNMP traps for events

- *DMI still supported for legacy IA-32 and HP-UX systems*

WBEM CIMOM

Provider

SSH Server

Web Server

SNMP Agent

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Cross-platform Management
Systems Management for HP-UX 11i

Central Point of Administration

Discovery, inventory, fault & remote management, role-based security, distributed tasks

- HP Systems Insight Manager

Software Deployment
- Ignite-UX
- Software Distributor-UX
- Update-UX
- Patch Assessment Tool
- Security Patch Check

Configuration Management
- Systems Administration Manager (SAM)
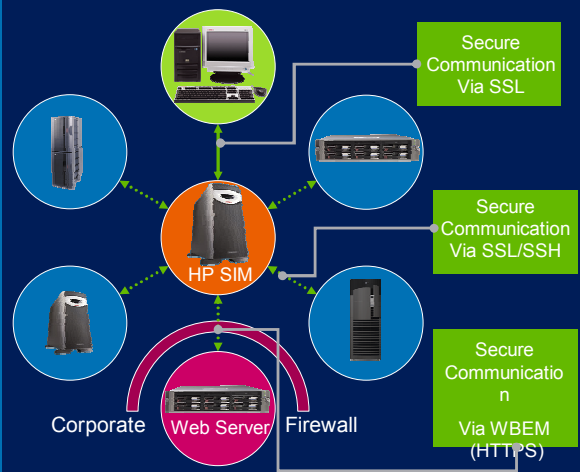- Partition Manager
- HP-UX Bastille
- HP-UX webmin-based Admin

Workload Management
- Process Resource Manager
- HP-UX Workload Manager
- GlancePlus Pak

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Secure systems management

Secure Communication Via SSL

Secure Communication Via SSL/SSH

Secure Communication Via WBEM (HTTPS)

HP SIM

Corporate   Web Server   Firewall

- Supports OS-based authentication on all platforms
- SSL/SSH encryption for data privacy
- Certificate-based trust ensures systems only accept commands from authorized users
- Extensive audit logging records who did what, when, on which systems
- WBEM/WMI – secure communications between HP Systems Insight Manager and managed devices, even through firewalls via HTTPS

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New Feature Breakdown - Role-based security

- Provides granular control over:

Who	Can Do What	On Which Systems
Lead Sys Admin	• Full access • Configure systems, users, access, jobs including root level, and security	•All systems
Regional Admin	• Access to system events and configuration utilities • Can run jobs • Can configure non-root tasks and jobs	• Access to servers in his region (no other systems visible)
Night Shift Operator Manufacturing Department	• Can monitor system events • Can run back up jobs (jobs have root access, not operator)	• Access to servers in manufacturing department (no other systems visible)

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New Feature Breakdown – Role-based security

- Role-based security =
  − Users – local or domain accounts managed through operating system

  − Toolboxes – grouping of tools associated with a user.

  − System Groups – groups of systems that may be managed by a user.

  − Associations – connection between a user, a toolbox, and a system group.

Association

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New Feature breakdown – distributed custom commands

hp invent

Example Usage Scenario: It is Friday afternoon at 6pm. You're about to head out for the weekend. Suddenly,
Mr. I. M. Skrooge tells you he wants those TPS reports finished first thing on Monday.

He claims you'll have to walk over to the datacenter (2 buildings over) and run the tps_maker script on all 42 Proliants 12 Red Hat Linux and 30 Windows 2000 systems) and the 3 HP-UX 11.23 Superdomes.
Have a nice weekend!

You're not worried. You can handle this. Last week you installed HP Systems Insight Manager and auto-discovered all of these systems.
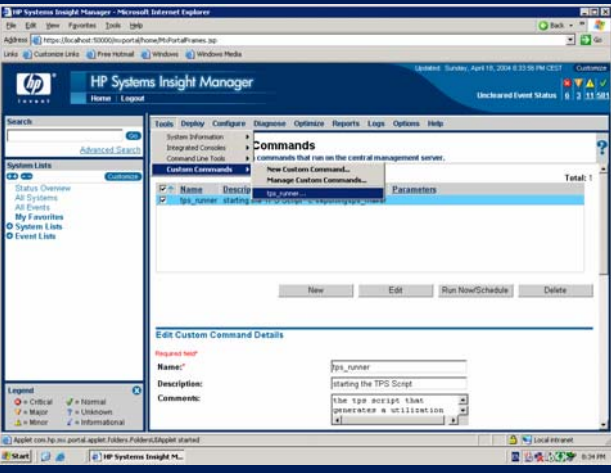
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New Feature breakdown – distributed custom commands

hp invent

- Make existing scripts, batch files, and applications available from SIM and run securely on remote nodes.

- Schedule execution of scripts at user-defined intervals.

- Collect all feedback in single log file (STOUT/STDERR)

- Leverage CMS security to control access to tools

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New Feature Breakdown – Tools and TDEF

Tool = a program that Nimbus can launch

- Single System Aware: tool executed on target node. Nimbus sends the tool information to each target node via SSH (e.g. OS command line tools)
- Multi System Aware: can interact with multiple target nodes. Nimbus sends the tool information to each target node via SSH (e.g. Ignite-UX, Software Distributor)
- Web Launch Aware: generally executed in a browser and specified by a URL. Web launch applications that do not share Nimbus certificates or have Java incompatibilities should be run in a separate frame.
- Custom Commands: executed on the CMS. Generally scripts, batch files, or executables that run on the CMS that can receive input in the form of environmental variables (= application launch for IM7 users)
- Automation Tools: executed on the CMS and perform some action such as discovery on the target nodes, *intended only for Nimbus internal use only*.

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Inventory collection and reporting

- Save device hardware asset inventory configurations
- Create custom reports of inventory details
- Flexible search simplifies location of specific devices
- Configuration snapshot – single and multi-system comparisons for consistency management and troubleshooting
- Extensive database support

Bundled Databases

Enterprise Databases

PostgreSQL

Oracle*

MSDE

SQL Server

*Future release

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Proactive fault management

- HP Systems Insight Manager automatically or manually discovers and identifies managed systems

- HP Systems Insight Manager detects problems before they result in server downtime.
  - Disks, CPU, memory, fans, IO, server environmentals
  - Serviceguard High Availability and MSCS Clusters

- HP Systems Insight Manager speeds failure diagnosis and resolution
  - Status drill down leads the way to failed components
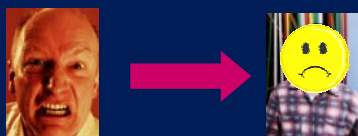 - Enables remote event notification and forwarding

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A tale of two servers

No business impact.

Exchange down for 1 hr!
3000 e-mails lost!

Windows Server 2003
Exchange
RAID5
Hourly snapshot to SAN
Daily back-up to tape

Windows Server 2003
Exchange
RAID5
Hourly snapshot to SAN
Daily back-up to tape

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Event monitoring and automated actions

Send Page

Send E-mail

Forward Alert

Launch Script

Database

Send important event information to the right place at the right time

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Version Control
Simplifying maintenance of ProLiant system software

VCRM

VCA VCA VCA

- Version Control Repository Manager
  - Catalogs components downloaded from HP website
  - Allows creation of custom system software baselines

- Version Control Agent
  - Catalogs software on the end node
  - Displays software status

- VCRM and VCA work together to create software status and update BIOS, drivers, and agents
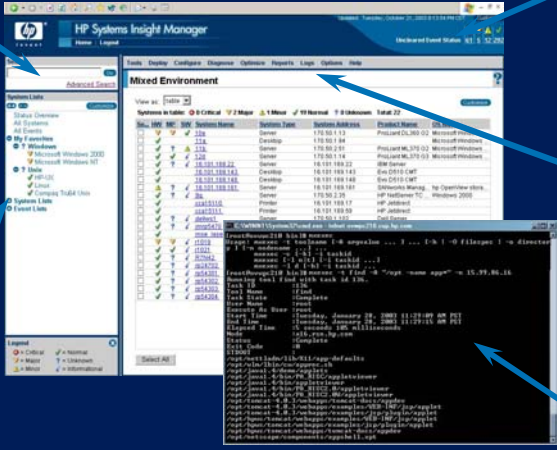
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Easy-to-use GUI and CLI

- Find your target devices with powerful search queries

- Manage devices by user defined groups

- Quickly identify the health and status of your environment to drive proper response to problems

- Easy access to actions and programs based on your role and systems you are responsible for

- Drive your actions and collect results from a fast and powerful command line interface

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Customizing HP SIM

- Distributed task facility and tool definitions facilitate integration of scripts, OS commands, and other tools into HP SIM.

- Integrated tools can take advantage of HP SIM scheduling and security.

- Remote tool execution conducted through secure SSH session.

- All tool output captured and displayed on task results page.

Schedule and execute custom scripts
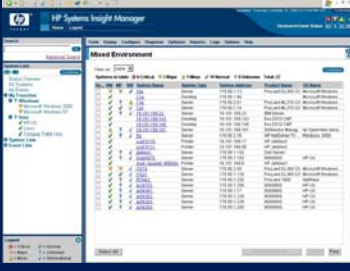
Schedule and launch OS commands

In-context launch of administration tools

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Management of non-HP devices

Basic features available for non-HP devices

- Fault management and tool launch
- Automatic discovery and identification
- Inventory management
- Tool Definitions
- Role-based security

For non-HP manufactured devices, HP Systems Insight Manager will provide a "basic" level of monitoring through industry standard protocols such as:

- SNMP
- WBEM/WMI

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OpenView Operations and HP SIM
Integration Roadmap

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
- Use HP Server Instrumentation for OV
- Event Forwarding at Agent & Server Level
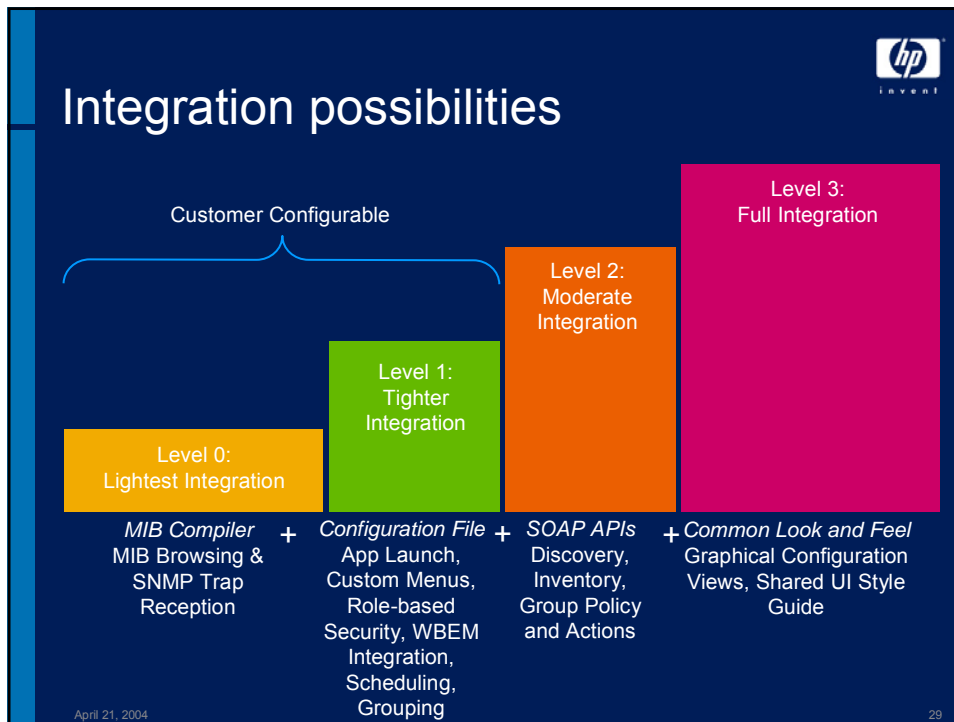- Monitoring of HP SIM Agent
- Launch of Console and System Homepage

Integration Phase 2
- In-Context Launch
- Enhancements in Event Forwarding

Integration Phase 3
- Cross App Launch
- Data and Event Sharing
- Agent Alignment

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Integration possibilities

Customer Configurable

Level 3:
Full Integration

Level 2:
Moderate
Integration

Level 1:
Tighter
Integration

Level 0:
Lightest Integration

MIB Compiler +
MIB Browsing &
SNMP Trap
Reception

Configuration File +
App Launch,
Custom Menus,
Role-based
Security, WBEM
Integration,
Scheduling,
Grouping

SOAP APIs +
Discovery,
Inventory,
Group Policy
and Actions

+ *Common Look and Feel*
Graphical Configuration
Views, Shared UI Style
Guide

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New additions to the plug-in family

- 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

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How do I get HP SIM?

- Web download from http://www.hp.com/go/hpsim
- ProLiant Essentials Foundation Pack
- Integrity Essentials Foundation Pack
- HP-UX Application Release & Operating Environment

It's free!

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What's new in HP SIM 4.1

- Product Capabilities
  - Performance Management Pack 3.0
  - IM7 and SCM transition utilities
  - Support for HP-UX 11i v2
  - Simplified deployment of Secure Shell (SSH)
  - HP Client Manager

- Solution Offerings
  - Scenario-based customer training
  - Installation and start-up care pack service
  - Assessment and roll-out statement of work service

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Performance Management Pack
usage scenarios

1 Preventing performance issues
- ☑ Server con-figuration analyses
- ☑ Pro-active notification
- ☑ Interactive analyses

2 Solving after-hours performance problems
- ☑ Data logging
- ☑ Playback tool

3 Extending useful life of server
- ☑ Identify exact component causing performance issues
- ☑ Explanation of issue

4 Justify server replacement
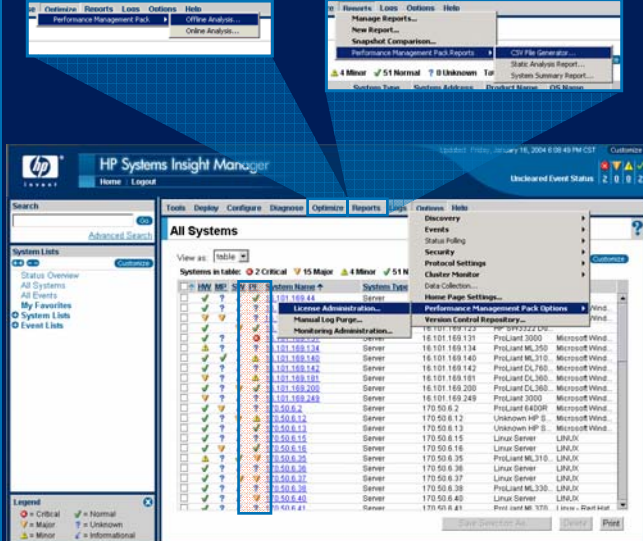- ☑ Inventory
- ☑ Data logging
- ☑ Summary reporting

5 Server consolidation
- ☑ Monitoring and logging for detailed analyses of candidate systems
- ☑ Monitoring after the fact to guard against incompatible workloads

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New features for PMP 3.0
HP Systems Insight Manager integration

- Initially limited to Windows both for the console server and for the monitored servers
- Use of PF column in HP SIM just like IM7
- Full use of the HP SIM menu bar
- All PMP tools now integrated in HP SIM menu infrastructure (no longer separate entries in Windows Start menu for e.g. off-line analysis and data management)
- Licenses bought for PMP2.x will work seamlessly for PMP 3.0

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New features for PMP 3.0
MSA500 & MSA1000 monitoring

- MSA500 & MSA1000 shared storage devices become visible in PMP, enabling analysis, drill down, and performance alerting

- This new functionality will require an additional license

- Example: 4 servers sharing 1 MSA1000 will require 5 licenses to have full server + storage analysis capability

- PMP 3.0 will provide "click through" from servers sharing storage, to the storage devices and vice-versa

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New features for PMP 3.0
MSA500 & MSA1000 monitoring

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HP SIM Migration Utilities

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

In-place upgrade

IM7/SCM   HP SIM

Server A

Remote migration

IM7 only   HP SIM

Server A   Server B

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