HP ProLiant, SIM

And

ProLiant Essentials Update

James Drover, HP
Master ASE: SAN Architect
Broad Server Line
New Technology

- ML150 G3: High-value solution for Small Business
- DL140 G3: General purpose solutions and HPC
- ML350 G5: Branch Office & Enterprise Minded SMBs
- DL360 G5: Concentrated Compute Power
- ML370 G5: Performance & Virtualization
- DL380 G5: Versatile, Dependable Workhorse
- ML570 G4: 4 processor expansion server
- DL580 G4: Enterprise class 4 socket server

HP BladeSystem
- c-Class: Automated and virtualized infrastructure
- p-Class: Optimized to simplify scale-out servers

Automated and virtualized infrastructure
Enterprise class 4 socket server
Optimized to simplify scale-out servers
HP ProLiant server family

Industry Standard tools for an Adaptive Enterprise

ProLiant Enablers

ProLiant Essentials

Universal Smart Array storage, rack and power

HP ProLiant DL
Density-optimized for rack mount environments

HP ProLiant ML
Maximum expansion for rack and tower environments

HP ProLiant BL
Maximum flexibility and control in blade server infrastructures
Blades + Rack & Tower

X86 market continues to expand in breadth and reach
• Blade reaching across the enterprise apps
• New DL, ML and BL servers target customers needs

HP ProLiant ML
Maximum expansion for rack and tower environments
ML370 /350 Performance & expansion for medium business
ML310 Designed for replicated sites
ML110 My 1st server

HP ProLiant DL
Density-optimized for rack mount environments
DL58X Application and DB workhorse
DL38X Corporate workhorse
DL360 1U Corp infrastructure
DL145 HPC node

HP BladeSystem c-Class
A best-run infrastructure - out of the box

HP BladeSystem p-Class
Maximum flexibility and control in blade server infrastructures
The ProLiant Infrastructure Advantage

Current state
High-cost IT islands

Future state
Low-cost pooled IT assets

Investing in Innovation for customers of all sizes

IT Systems & Services | Power & Cooling | Management | Security | Virtualization | Automation
The HP ProLiant Advantage

Balanced architecture, control and simplifying transitions

Balanced I/O and Memory
- SFF for more performance and less power
- Smart Array Universal Storage
- Max memory Footprint per U

Power & Cooling Innovations
- Power Calculator
- Power Regulator
- Multifunction NICs
  - TCP/IP offload • iSCSI • RDMA

Unified Management
- Systems Insight Manager + ProLiant Essentials
  - New P-to-ProLiant
  - HP unique
  - integrated Lights Out
  - New Insight Panel

Comprehensive HP
- Choice

HP unique
- HP unique
- HP unique
HP sustained innovation

Harness the power of standards
- First x86 server: SystemPro
- Price:performance servers
- Standards, best of breed

Space saving scale-out
- Embedded technologies
- Management by groups
- Remote deploy & manage

Services delivery era
- Consistent, universal
- Optimized for scale
- Optimized for change

Innovation
Adoption
Rack mountable
Pedestal
1989
2006
What really matters? Everything!

- Cooling solutions
- Infrastructure products
- Chip design
- System design
- Data center services
- Server & storage consolidation
- Industry standards
- Virtualization & automation technologies
- Power & cooling management
- Business continuity & availability

IT is now one conversation within your company.
HP Systems Insight Manager
Comprehensive fault, config. asset & secure multi-system Mgmt.

- Security
  - SIM DB
  - Completely managed server system environment

- Alert Notifications
  - Discovery filters
  - Blade visualization
  - Version control
  - Reports

- Response
  - Browser-based remote access

- Managed server
  - Disk subsystem
  - Processor
  - Environment
  - Memory
  - IO

- Power

Version control
HP Systems Insight Manager deployment

Top 5 reasons

1. Configuration & Fault management and pre-failure warnings
   - HP SIM is the only way to get Pre-Failure warranty coverage and automatic firmware/utility/driver acquisition and deployment

2. Asset management through detailed hardware reporting
   - Gathers data down to the individual socket and slot

3. Event notifications and automated actions
   - Notify concerned individuals and take action automatically*

4. Combined server and storage management
   - LUN usage and server attachment for HP and 3rd party storage

5. Service management
   - Downloads warranty and support contract details along with automatic transmission of services events to HP call center

*Includes HP Services
HP SIM and Insight Control:
Transparencyly manage virtual and physical environments

- Vulnerability Scan and Patch VMs and Host*
  - *VMware GSX and Microsoft Virtual Server
- Remote console access from HP SIM
- Link into OpenView Service level management
- Associate, monitor, control measure, move, and migrate virtual machines
- Deploy ESX, Linux or Windows to Host
- Monitor Performance of Server
- Migrate servers into VMs
Systems Insight Manager
Enabling storage management in HP

Storage inventory, reports and basic array capacity

Storage Capacity
- The System Page will be enhanced to show storage and basic capacity information

Reporting
- Inventory reports will be extended to include SAN-based storage devices
- Support for filtering
HP Systems Insight Manager
Version Control for maintenance of ProLiant systems

- Full integration with HP SIM
- Version Control Repository Manager
  - Catalogs system software packages downloaded from HP website
  - Allows creation of custom system software baselines
- Version Control Agent
  - Catalogs software on the end node
  - Displays software version status
- VCRM and VCA work together to create software status and update BIOS, drivers, and agents
ProLiant fits easily into existing management ecosystems

- HP ProLiant best-managed through HP Systems Insight Manager and Insight Control
- Fits well within any management environment through support for industry standards.

Support for Standards:
- SNMP, SMASH, WBEM

Integration Modules for leading platforms

OpenView Management
Microsoft Management
Computer Associates
Tivoli Enterprise

Scripting/CLI
Spotlight on HP SIM 5.1
Moving from problem notification to diagnosis and resolution

- Downloads warranty and support contract details
- Creates individual servers or group reports
- Receive expiration alerts
- Automatic transmission of services events to HP call center
- Case creation and status updates in HP SIM
- Spare parts details and repair information
- Replacement part details and schematics
- Self-repair videos
HP SIM 5.1 warranty and contracts reporting
Making life a little easier for IT Staff

You can get single system support agreement details from HP web site

Manually track support agreement details using a spreadsheet

Or…. let HP SIM do all the work for you
- Automatically retrieve Warranty & Support contracts details
- Provides single system view & multiple system custom reports
- Notifies IT Staff 90, 60 and 30 days before expiration
HP SIM 5.1
Remote monitoring

Problem resolution before the customer realizes there is a failure

Blade fails

HP SIM instantly records the event

HP SIM sends a page with the event
View the event details from anywhere through secure browser connection

- A new case is instantly opened
- Response center starts troubleshooting problem
- Case status is automatically updated in HP SIM

HP engineers come onsite to carry out repairs

HP engineers resolve problems remotely

Message in HP SIM with links to self repair details

Possible outcomes depending on Warranty or Support Contract
HP SIM 5.1
HP expertise on demand for upgrades and hardware repair

“Do it yourself” just became easier

- Quickly understand the problem, find the part and how to replace it
- Get parts replacement details, schematics and pictures
- View Self Repair Streaming Videos

- Requires connection to HP through Services Essentials Remote Support Pack to automatically populate warranty data
- Does not require a support contract

HP ProLiant Essentials & Insight Control
HP ProLiant Essentials

Remote/Power management
- Integrated Lights-Out Adv\(^1\), or Select Packs
- Lights-Out 100i Adv. or Select Packs
- Insight Power Manager

Provisioning
- Server Migration Pack - Physical to ProLiant Edition
- Rapid Deployment Pack\(^2\)

Security
- Intelligent Networking Packs
- Vulnerability & Patch Management\(^2\)

Virtualization
- Virtual Machine Management\(^3\)
- Server Migration Pack\(^3\)

Performance management
- Workload Management Pack
- Performance Management Pack\(^2\)
- Accelerated iSCSI Pack
- RDMA Packs

Management suites
1 iLO Power Management Pack
1&2 Insight Control Environment
2 Insight Control BladeSystem
3 ProLiant Essentials Virtualization Management Software

Foundation Pack (includes HP Systems Insight Manager)

HP Systems Insight Manager and HP OpenView integration
Insight Control: Unified Infrastructure Management tuned ProLiant & BladeSystem

Always-on management built-in to your ProLiant and BladeSystem hardware

HP SIM & ProLiant Essentials to manage your ProLiant, BladeSystem, and third-party environment

Delivered in simple integrated packages with streamlined licensing
HP Insight Control management suites

Key point product opportunities

- Virtualization Management Software
- Server Migration Pack – Physical to ProLiant Edition
- Intelligent Networking Packs (Microsoft Windows or Linux Editions)
- Insight Power Manager

*Note: Insight Control Environment for BladeSystem is planned to add iLO Select Pack and Insight Power Manager in March 2007*)
HP iLO Power Management Pack

ProLiant power management – even from remote location

HP Systems Insight Manager 5.1
- Central management services
- Unified server and storage mgmt

Always available remote administration

Power Measurement & Regulation

Embedded standard remote management

Natural upgrade from iLO Advanced Pack or iLO Select Pack purchase – integrate installation and licensing of Systems Insight Manager 5.1, iLO Advanced Pack and Insight Power Manager
HP Insight Power Manager

Value proposition and usage

• Customer Value Proposition
  – Monitors actual power consumption & thermal output and enables scalable policy-based power management
  – Reduces server power & cooling overhead across the datacenter helping to increase facility compute capacity

• Customer usage scenario:
  – Historical data collection of days, weeks, months, years and may be reported with graphing of key power consumption and thermal output data
  – Leverages iLO processor – no agent setup required; functional as part of separate management network or alongside production traffic
  – Dashboard views summarizes key data in graphs of Multi-server or single-server views that can used to configure ROM based Power Regulator settings

Insight Power Manager is a stand alone upgrade license only for supported HP ProLiant servers (2P 300 G5 series and c-Class BL servers with iLO 2) with existing iLO Advanced Pack or iLO Select Pack license installed - May also be sold as one of multiple components within iLO Power Management Pack or Insight Control Environment management suite
HP Insight Control Environment
Everything for ProLiant management

HP Systems Insight Manager 5.1
• Central management services
• Unified server and storage mgmt

- Always available remote administration
- Power Measurement & Regulation
- Rapid server and OS deployment
- Proactive performance management and bottleneck analysis

- Embedded standard remote management
- Consolidated vulnerability & patch management
HP Insight Control Data Center Edition
Integrated installation & licensing with centralized control

HP Systems Insight Manager 5.1
• Central management services
• Unified server and storage mgmt

Consolidated vulnerability & patch management

Basic SAN storage management
Total Raw Capacity of Device: 3.49 TB
Percentage Carved for LUNs: 60% (2.08 TB)

BladeSystem Integrated Management

Rapid server and OS deployment

Embedded standard blade edition
remote management

Proactive performance management & bottleneck analysis

Consolidated vulnerability & patch management
HP Insight Control Linux Edition
The best choice for scale-out Linux on BladeSystem

HP Insight Control Linux Edition
Central management services

Installation and OS deployment

Event monitoring & alert notification

Embedded standard blade edition
remote management

Task Management

Always available remote administration
Summary

- Despite hardware ease of use advances, management remains the largest cost of running your data center
- HP Unified Infrastructure Management reduces management complexity by providing a single pane of glass and integrated set of infrastructure management products
- HP Systems Insight Manager combined with the ProLiant Essentials will increase your administrator productivity and reduce your data center management costs
- The cost of managing ongoing operations continues to rise, and you don’t have the luxury of expanding headcount or budgets
- HP provides best run server infrastructure through unified infrastructure management and insight control ➔ total control, maximum flexibility, tangible savings for your ProLiant and BladeSystem infrastructure
- HP makes it easy to purchase, install, and integrate that software that you need for your environment
- HP support and maintenance services ensure that your management infrastructure runs at its best