Data Center Infrastructure Management
Creating The Efficient Converged Data Center

- How to manage IT and facilities infrastructure
- Advantage of a holistic approach
- Architectural requirements
- Trellis – a new concept and solution for DCIM

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Gap Between IT and Physical Layers

Virtualization

APPLICATION LAYER

IT LAYER

PHYSICAL LAYER
Traditional Approaches

Deliberate Design
Plan  Design  Deploy

Stable Operation
Operate  Maintain

APPLICATION LAYER

IT LAYER

IT Managed

PHYSICAL LAYER

Facilities Managed
“Data center power capacity includes buffers intended to absorb spikes in power use caused by peaks in resource utilization. These buffers are typically based on either nameplate or nominal server power consumption or power consumption measured at peak utilization with specific workloads.”

Source: Intel White Paper - Increasing Data Center Efficiency with Server Power Measurements
Barriers to Efficiency

Barriers to Higher Utilization

- Insufficient data to determine how to unlock stranded capacity
- Lack real-time visibility across the Application, IT and Physical layers
- Vendor solutions are focused on a traditional management framework
- Costs to create comprehensive visibility are labour intensive and hard to maintain

The data center has evolved from a static homogeneous environment to a complex heterogeneous eco-system

40-60% Stranded Capacity
Barriers to Efficiency

40% - 60%*

BUFFER CAPACITIES

(*Gartner)
Dynamic Infrastructure Optimization

MEETING DEMANDS OF THE BUSINESS REQUIRES RETHINKING DATA CENTERS FOR OPTIMIZED PERFORMANCE

FORRESTER:

“When asked how investment plans in 2009 have changed due to the recessionary climate, IT ops professionals rated “reducing facilities costs” as their top investment priority.”

GARTNER:

“Faced with the harsh realities of a difficult economic climate, data center managers need to focus on creating the most efficient operating environments in order to extend the life of existing data centers.”

IDC:

“In heterogeneous data centers, optimization is the key issue in the market. A holistic approach is required for sustainability.”
Results of Traditional Approaches

- 95% Experienced outages
- 107 minutes average downtime
- 505k cost per incident

80% believed the incidents were preventable

Source: Ponemon Institute, Calculating the Costs of Data Center Downtime, February 2011
Today’s DCIM Solutions
Today’s DCIM Solutions

DSView 4
- Remote management of IT (access & control)
- Universal Management Gateway
  - Next generation KVM/Serial/SPM in one appliance
  - Access and control for the data center
- ACS advanced Console Servers
- MPU KVM-over-IP Switches
- Open framework: scalability and standards support

Liebert SiteScan Web
- Quick equipment assessment and corrective action
- Trend reporting and capacity management
- Reduce risk of downtime and staffing requirements through centralized monitoring and control

Data Center Planner 4
- Plan and manage data center inventory
- Real power values, Spanish language support

Aperture
- Manage data center inventory and processes
- New functionality for capacity planning, dashboards and reporting

Rack Power Manager
- Monitor & manage real time data center power
- Dashboard, history, and trend views
THANK YOU!

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