



IBM Systems and Technology Group

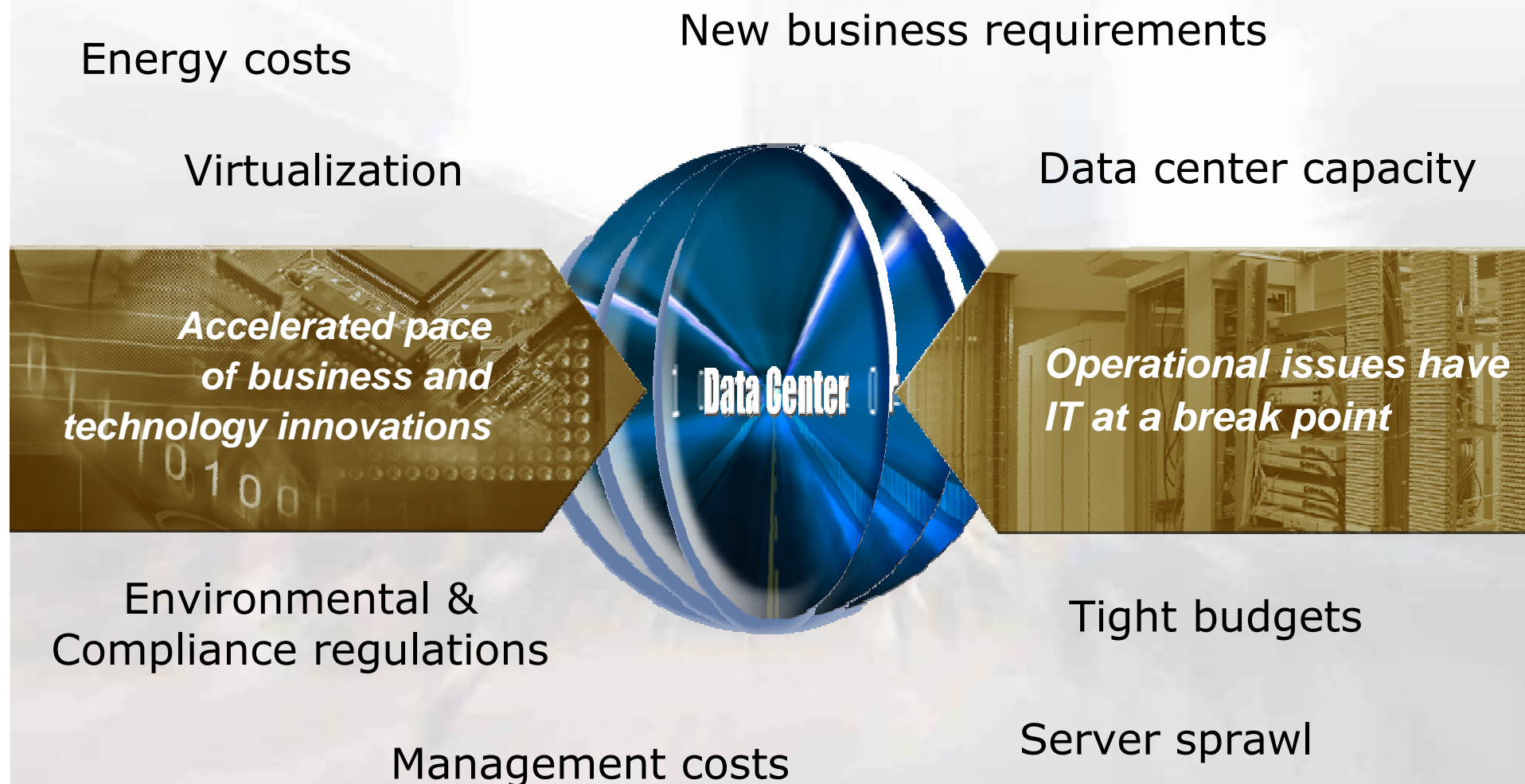
IBM® Systems Director 6.1 Overview

A Client Presentation






Agenda

- Current market or industry situation
- Needs and challenges
- How IBM addresses needs and challenges
- Offering description
- Upward integration with Enterprise Systems Management
- IBM Systems Director and Tivoli Positioning
- Summary
- Additional information
- Technical backup

Growth of virtualization drives new management requirements



CEO's see dramatic change ahead for The New Enterprise

		2008 CEO Directions	CIO Implications
	HUNGRY FOR CHANGE	83% expect substantial change in the next three years	Flexible, adaptable, extendible systems to support business model changes
	INNOVATIVE BEYOND CUSTOMER IMAGINATION	76% see opportunity in more informed and collaborative customers	Collaboration & social networking to improve idea/information sharing
	GLOBALLY INTEGRATED	75% are actively entering new markets	Embrace emerging technologies
	DISRUPTIVE BY NATURE	69% are planning some type of business model innovation over the next three years	Manage increasing risk
	GENUINE, NOT JUST GENEROUS	69% believe rising customer expectations of corporate social responsibility will positively impact their business	Deliver on Green IT

*These challenges are at the **core** of every IT infrastructure, and they are directly linked to how physical and virtual systems and storage are managed as an integrated platform*



**Costs &
Service
Delivery**

Rising operational costs of systems and networking

Explosion in volume of data and information

Difficulty in deploying new applications and services



**Business
Resiliency
& Security**

Security of your assets and your clients' information

Landslide of compliance requirements and government mandates

Systems and applications need to be available

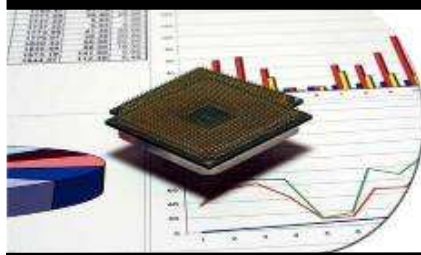


**Energy
Efficiency**

Rising energy costs and rising energy demand

Power and thermal issues inhibit operations

Environmental compliance and social responsibility



**Changing
application
models**

Unpredictable workload characteristics

Manage fast growth of "smart" objects and data volumes

Need maximum flexibility for real time interaction

IBM provides an integrated solution to help simplify IT operations – IBM® Systems Director 6.1

IBM® Systems Director – at the core of an IT management strategy – can reduce the costs of IT service delivery, improve business resiliency and security, and help meet energy usage requirements



Reducing complexity with integrated platform and enterprise service management



Deploying and managing virtual servers to control data center space

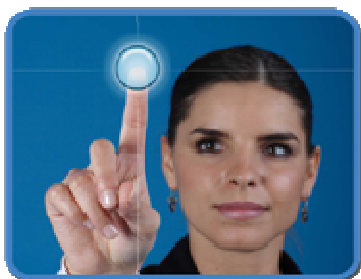


Managing energy usage helps meet “green” initiatives and cost objectives

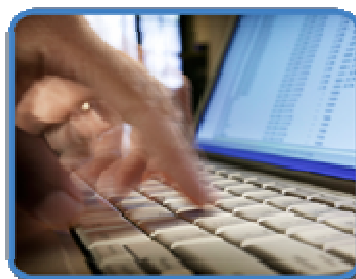
IBM® Systems Director 6.1

Next generation platform management for multi-system environment

- **Common toolset**
- **Modular, industry standards-based approach**
- **Leverages investments in IBM platform management**
- **Integrates with IBM service management offerings from IBM Tivoli®**
- **Supports IBM and third-party extensions**
- **Unifies Platform Management**



**Simplified management
of physical and virtual
infrastructure**



**Rapid deployment and
optimization of IT
resources**



**Reduction in
time-consuming
management tasks**

IBM® Systems Director 6.1 strategy

Virtualize more, manage less

- **Unifies Platform Management for IBM Systems providing a consistent look-and-feel with common and familiar management tasks**
- **Allows many systems to be easily managed together addressing the administration and management challenges being introduced by server scale-out**
- **Integrates IBM's best-of-bread virtualization capabilities to provide new and radically improved ways to simplify the management of physical and virtual platform resources**
- **Developed as a modular and extensible solution to advance the core systems management capabilities with additional plug-ins**
- **Enables integration of IBM Systems into data center management tools from Tivoli and other 3rd parties**



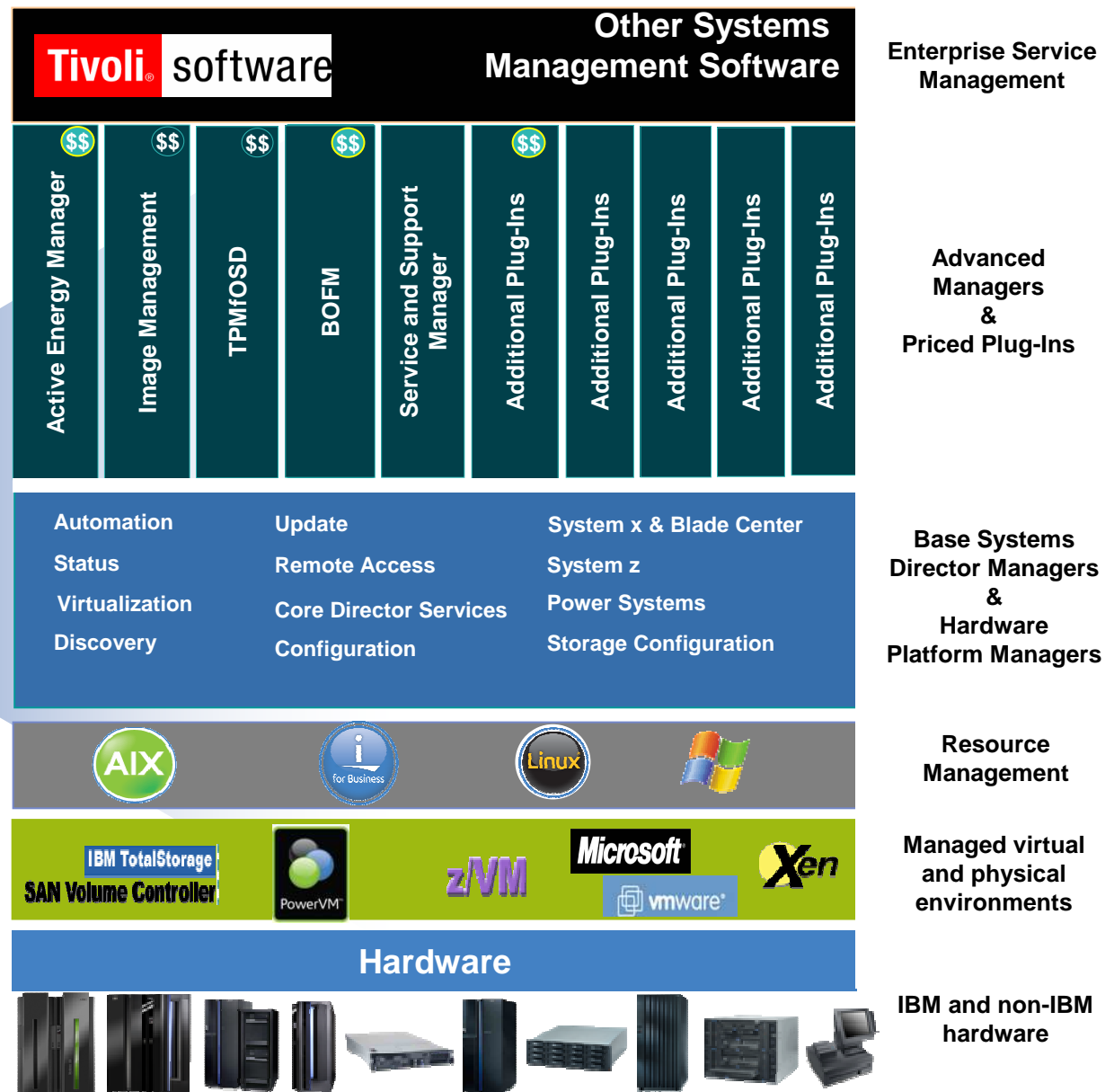
Systems Director helps to . . .

- Find and identify systems on the network
- Determine if systems are working properly
- Configure and deploy new systems
- Optimize systems for peak performance
- Keep system firmware and drivers up to date
- Manage Energy
- Improve System Availability
- Manage multiple systems as a single entity
- Reduce virtualization complexity

Benefits of IBM® Systems Director 6.1

- Simplifies operations by offering monitoring and automated event management capabilities
- Simplifies IT management of multiple industry leading hypervisors through the use of a single tool
- Reduces the complexity of virtualization through understanding the relationship of virtual to physical servers
- Reduces the time for analyzing unavailable systems by providing a topology graph views to simplify troubleshooting
- Protects IT investments by utilizing an open, standards-based design that facilitates the management of IBM and select non-IBM systems
- Seamlessly integrates with enterprise management products
- Improves IT efficiency by easily integrating with single system platform management products
- Reduces IT costs and enhances IT staff productivity by providing one easy to use interface for management of virtual and physical systems
- Reduces systems maintenance window churn by supporting currency for physical and virtual servers and operating systems
- Reduces human error by providing automated support of VMware's VMotion

IBM offers end-to-end management



IBM® Systems Director 6.1

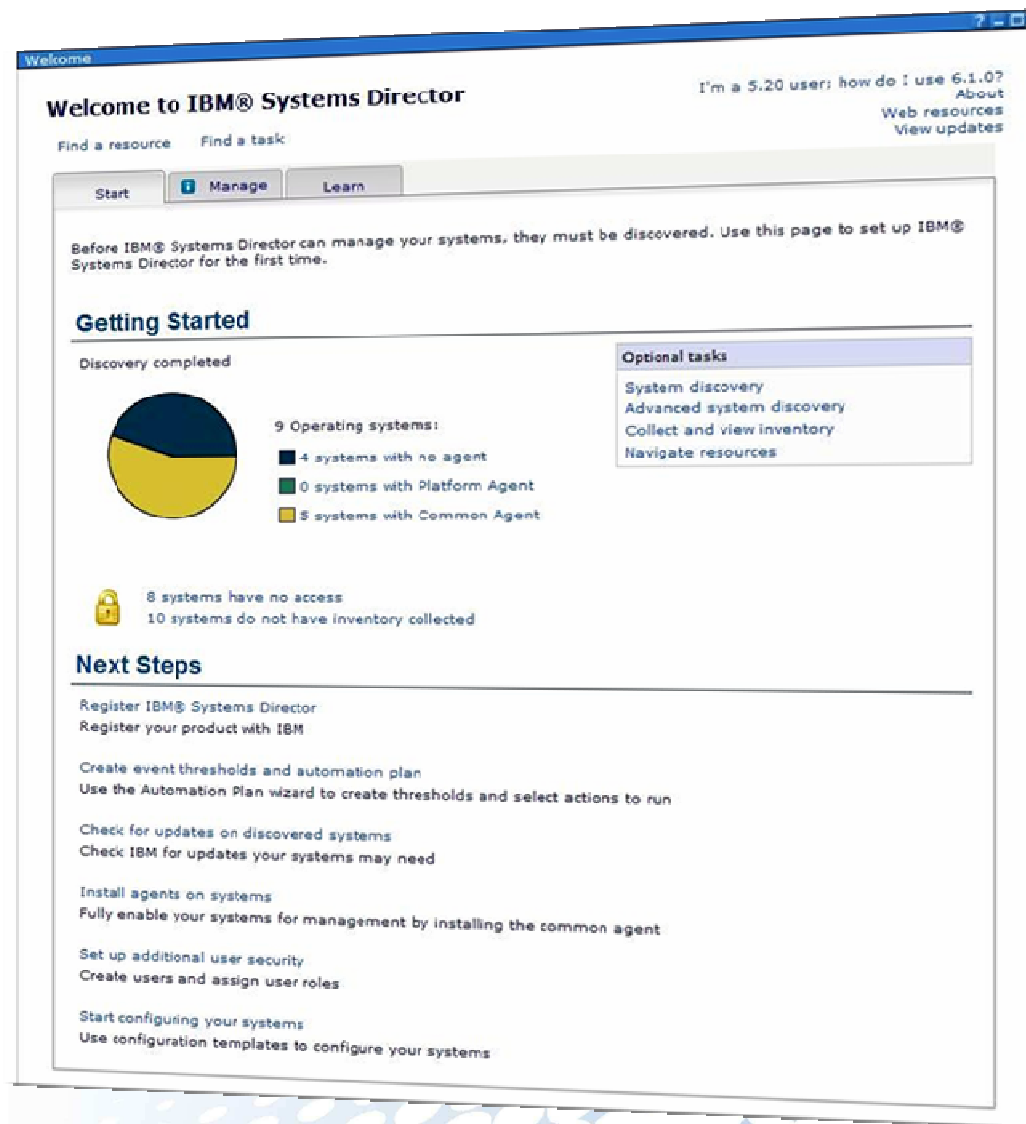
Next generation of IBM Director that delivers

- **Simplified deployment, installation and update process**
- **Single point of control from a consistent Web-based user interface**
- **Easy-to-learn new tasks with intuitive wizards, tutorials and integrated help**
- **Topology graph views to simplify troubleshooting across server, storage and network resources**
- **Streamlined lifecycle management of a virtual environment across multiple platforms**
- **Increased platform support through the addition of single system platform-level management functionality for AIX and IBM I**
- **Increased platform support through leveraged industry standards**
- **Support for embedded agents included with a platform or deployed by other systems management tools**
- **A consistent access point to integrate and extend platform management throughout the infrastructure**
- **IBM intends to provide a Systems Director migration tool, in 4Q08, to facilitate customer migrations from IBM Director 5.20.x**



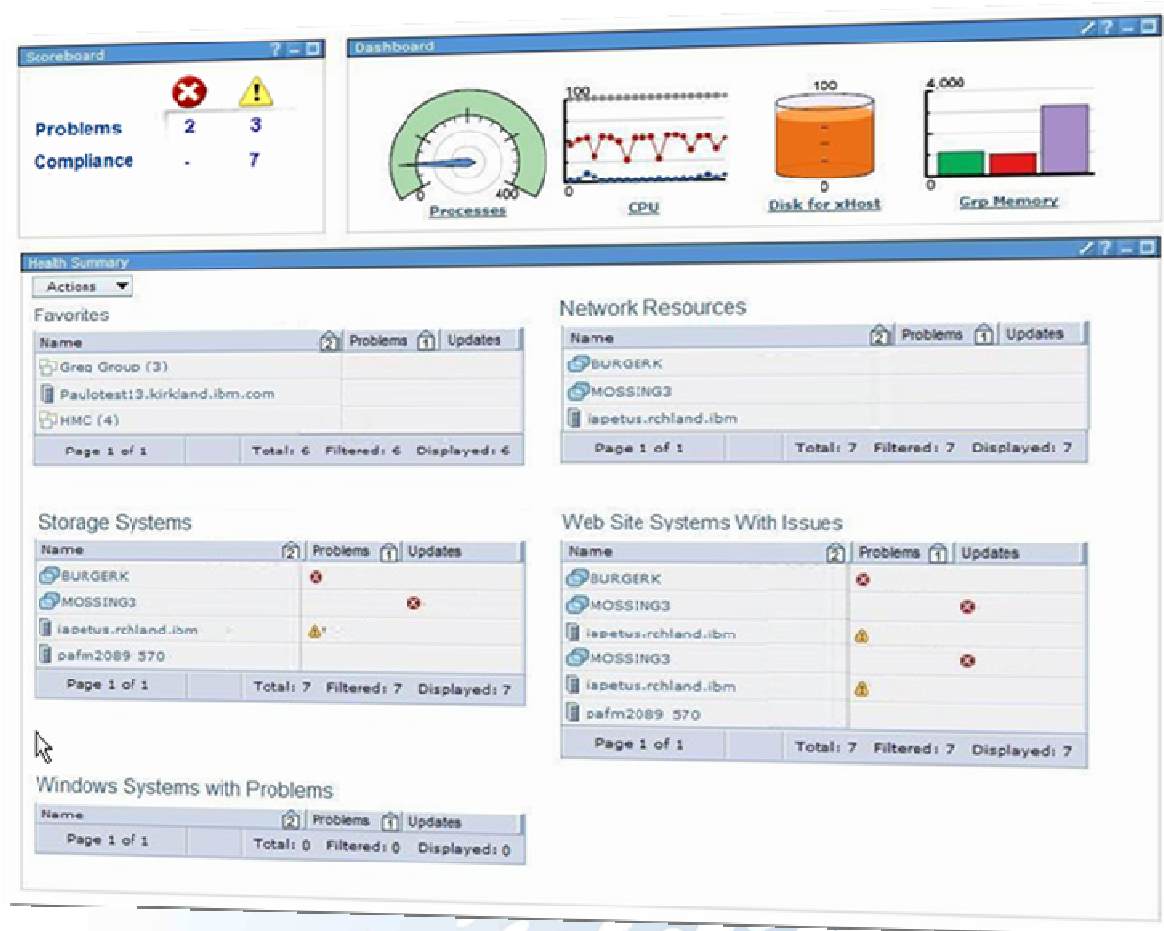
IBM® Systems Director 6.1 for integrated platform management

- Simplify platform management across server and storage infrastructure
- Management of physical and virtual resources
- Intuitive graphical interface
- Upward integration to enterprise service management



Focus on health, status, automation

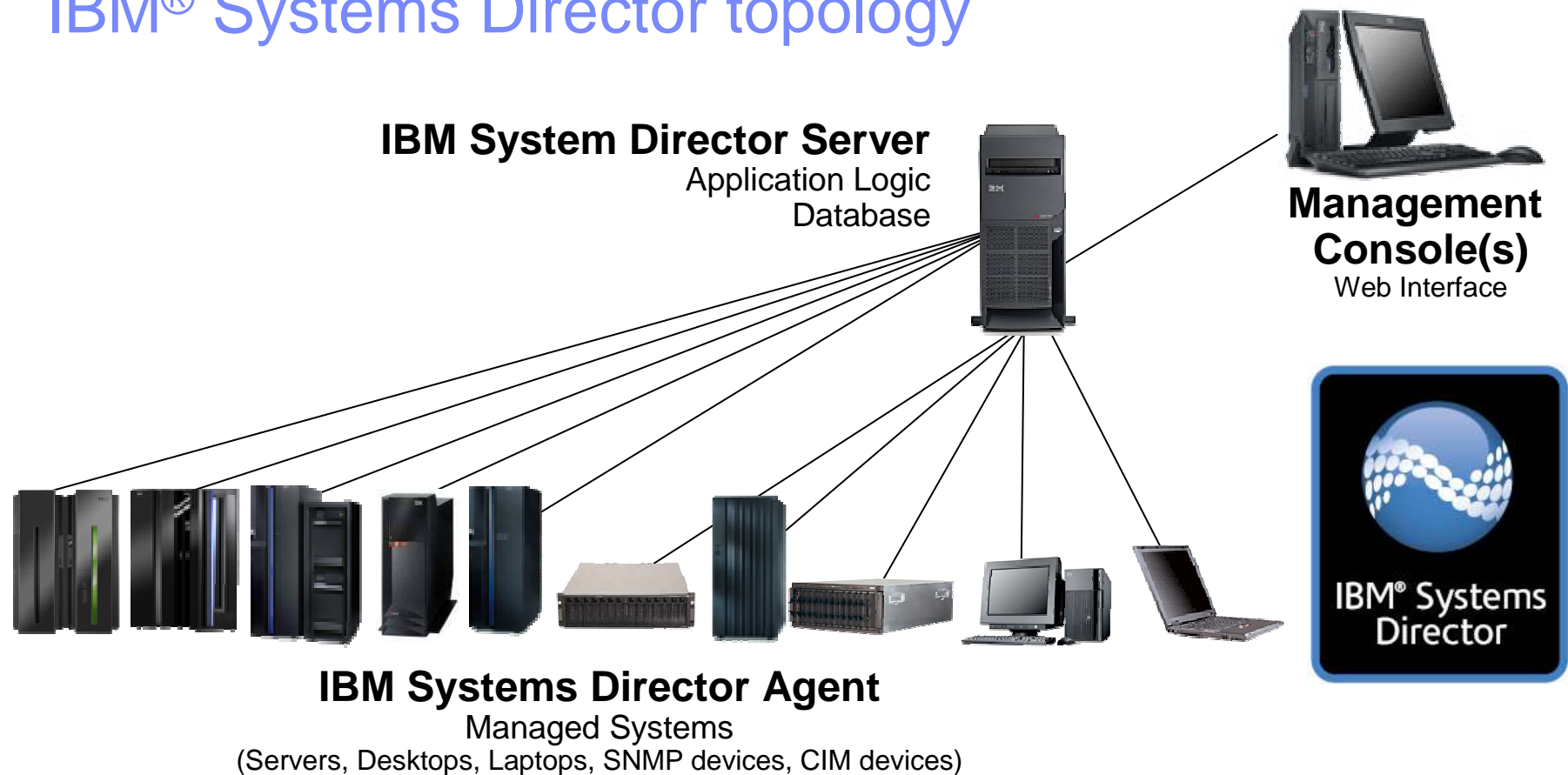
- **Health summary**
 - Favorite systems
 - Critical monitors
 - Group thumbnails
- **Monitoring**
 - Monitor critical resources
 - Thresholds
 - Events
- **Automation Plans**
 - Notify
 - Run commands
 - Trigger tasks



IBM® Systems Director 6.1 provides server monitoring and control free of charge

- **IBM Systems Director provides the foundation for managing servers**
 - Discovery and asset inventory
 - Monitoring and event alerting
 - Resource optimization
 - Simplified deployment, installation and update process
 - Upward integration to enterprise service management
- **Monitor and alert on defined thresholds for CPU and memory utilization and for network and file system metrics**
- **Ensure Hardware Management Console and Virtual I/O Server are operational**
- **Automate actions based on defined events and monitoring thresholds to reduce administrative workload**

IBM® Systems Director topology



- **Three-tiered architecture**
- **Thousands of managed nodes**
- **Upward Integration modules supporting**
 - Tivoli, Computer Associates, Hewlett Packard, Microsoft

IBM® Systems Director 'tiered' agent support

■ Common Agent

- Provides a single agent management system for status reporting and operations
 - Common authentication and credential management using a single agent manager
 - Single, shared incoming port (firewall friendly) for management
 - Increased availability using a watchdog to restart common agent, if needed
- Single agent runtime shared by IBM systems and Tivoli products like Tivoli Provisioning Manager reduces agent footprint, supports shared credentials and drives discovery, inventory and other common services
- Replaces the previous 5.x Level 2 Agent while providing Seamless integration of Platform Agent

■ Platform Agent

- Provides a subset of Common Agent functions used to communicate with and administer the managed system, including hardware alerts and status information
- Improved interoperability through open standards, rather than through proprietary technologies
- Firmware and driver updates and remote deployment

■ Agent-less Management

- Agent-less managed systems are best for environments that require very small footprints and are used for specific tasks, such as one-time inventory collection, firmware and driver updates and remote deployment.



IBM® Systems Director base

Foundation for platform lifecycle management

■ Consolidation of Platform Management Tools

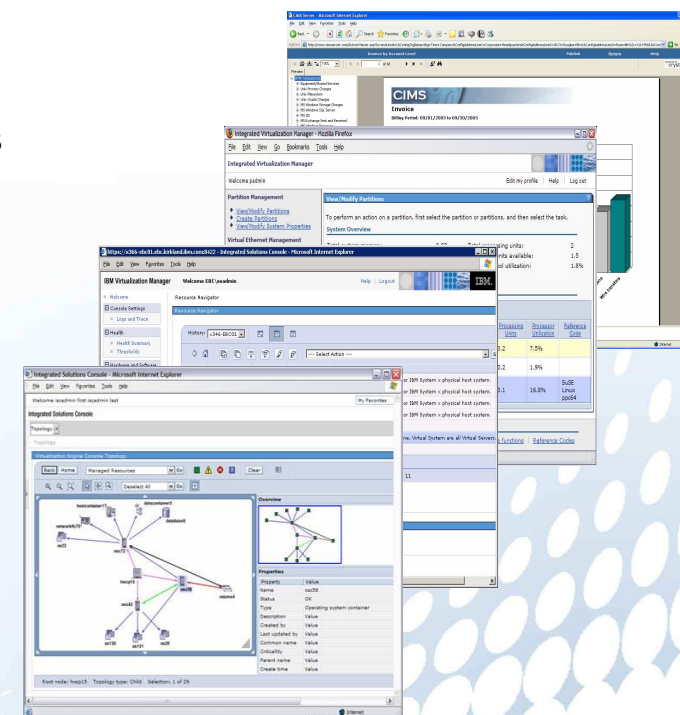
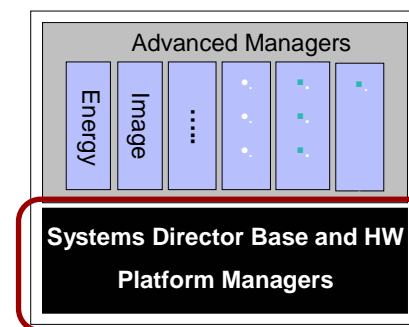
- Single consistent cross-platform management tool
- Simplified tasks via Web based interface
- Manage many systems from one console

■ Integrated Physical and Virtual Management

- Discovery and Inventory of physical and virtual resources
- Configuration and provisioning of platform resources
- Status, Health, and Monitoring of platform resources
- Visualization of server resource topologies
- Move virtual servers between systems without disruption to running workloads

■ Platform Update Management

- Simplified consistent cross-platform tools to acquire, distribute and install firmware and OS updates



No Charge Managers Included in Foundation

IBM® Systems Director plug-ins

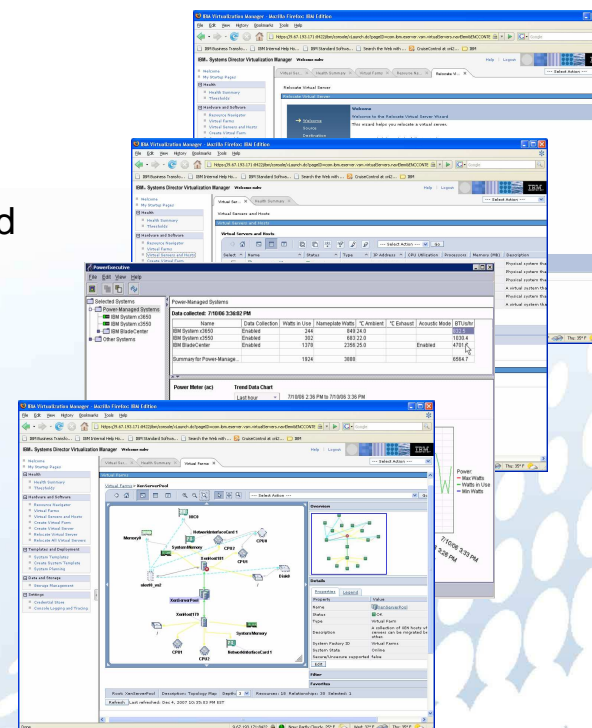
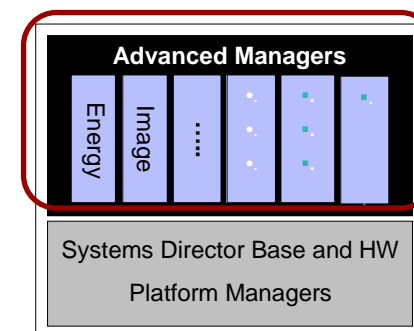
- **A plug-in to IBM® Systems Director is software that is downloaded and installed on top of the base**
- **Delivers key additional functionalities**
- **Retains a consistent user experience with the base offering by taking advantage of the common tasks and capabilities**
- **IBM intends to deliver plug-ins for IBM Systems Director 6.1**
 - an updated version of IBM® Systems Director Active Energy Manager as a plug-in to IBM Systems Director in 1Q09
 - provide a migration tool, in 1Q09, to facilitate customer migrations from IBM Director 5.20
 - provide a virtual server image management plug-in to IBM Systems Director in 2009

IBM® Systems Director 6.1:

Plug-Ins for advanced platform management

Enabling new and innovative ways to manage IBM Systems...

- **Virtual Server Image Manager:** Easily automate cloning, capturing, customizing and deployment of virtual system images radically simplifying the deployment of new systems
- **Active Energy Manager**
 - Monitor and measure server energy usage and activity
 - Control system power states and modes of operation
 - Provides aggregation of server energy management for ITM
- **Service and Support Manager** identifies and reports hardware-related problems, enabling IBM to provide proactive service that may result in higher system availability and performance.
- **BladeCenter Open Fabric Manager-Advanced upgrade** allows for the assignment and reassignment of Ethernet MAC and Fibre Channel WWN addresses used by the I/O ports on server blades in the IBM BladeCenter®
- **Workload Partition Manager:** Deliver consistent response times, automatically adjusting resources for utilization spikes
- **IBM Tivoli Provisioning Manager for Operating Systems Deployment** is a tool designed to provision an operating system via a library of disk images to any supported system on the network.



Priced Plug-Ins Not Included in Base

IBM® Systems Director is a centralized, cross-platform management solution for IBM Systems

- **Provides a full range of systems management functions**
 - Hardware and software inventory
 - Monitoring with automated responses
 - Software distribution
 - Remote hardware control and task execution
- **Easy-to-use, point-and-click graphical user interface**
- **Manages AIX®, Linux®, IBM i and Windows®**
 - Linux and Windows on compatible non-IBM hardware
- **SNMP Devices**
 - Network devices, Storage subsystems, Power Distribution Units...
- **Downloadable from ibm.com at no charge**
 - Physical media packs orderable for nominal charge
 - Web-based forum available for questions and assistance
 - Software maintenance available as a priced option



Upward integration

Systems Director can provide its rich hardware information into higher-level management packages

- **Tivoli Enterprise™**
 - TEC 3.8 & 3.9
 - ITM 5.1.x
 - Configuration Manager 4.2.x
 - Software Distribution
 - Provisioning Manager
 - Inventory
 - Security Operations Manager
 - Distributed Monitoring
- **Tivoli NetView® 7.1.x (Windows and Linux)**
- **Tivoli Netcool (Netcool/Omnibus, Netcool/Precision IP (via SNMP), Netcool/Monitoring, Netcool/ISM, Netcool/AEM (via SNMP))**
- **CA Unicenter NSM 3.1 and R11 (Windows)**
- **HP OpenView NNM 7.0.1 and 7.5.1 (Windows and Linux)**
- **HP OpenView Operations for windows 7.5x (Windows)**
- **Microsoft Systems Management Server, Microsoft System Center Operations Manager, and Microsoft Operations Manager 2005**

Tivoli. software

Microsoft

HP OpenView

ca



Tivoli and Systems Director



Integrated visibility, control & automation across heterogeneous business and technology assets

- ✓ *Align IT operations with the business*
- ✓ *Govern and control the business*
- ✓ *Optimize the business*



Detailed platform management of IBM systems

- ✓ *Consolidated management across systems*

Tell me what I have and if it's working

Let me install, configure and update

- ✓ *Integrated physical and virtual management*
- ✓ *Automated physical and virtual provisioning*

Successful operational management in these areas enables the delivery of critical business services transforming customers datacenters to realize the vision of the New Enterprise Data Center

IBM® Systems Director 6.1 value

- **Simplified management of physical and virtual resources to help meet time-to-market business commitments**
- **Better management of IT energy to reduce costs**
- **Improved availability to optimize business efficiency**
- **Reduce administrative cost by utilizing a single web based point-and-click graphical user interface while maintaining system firmware and driver currency**
- **Focus on health, status and automation of IT systems to increase business productivity**



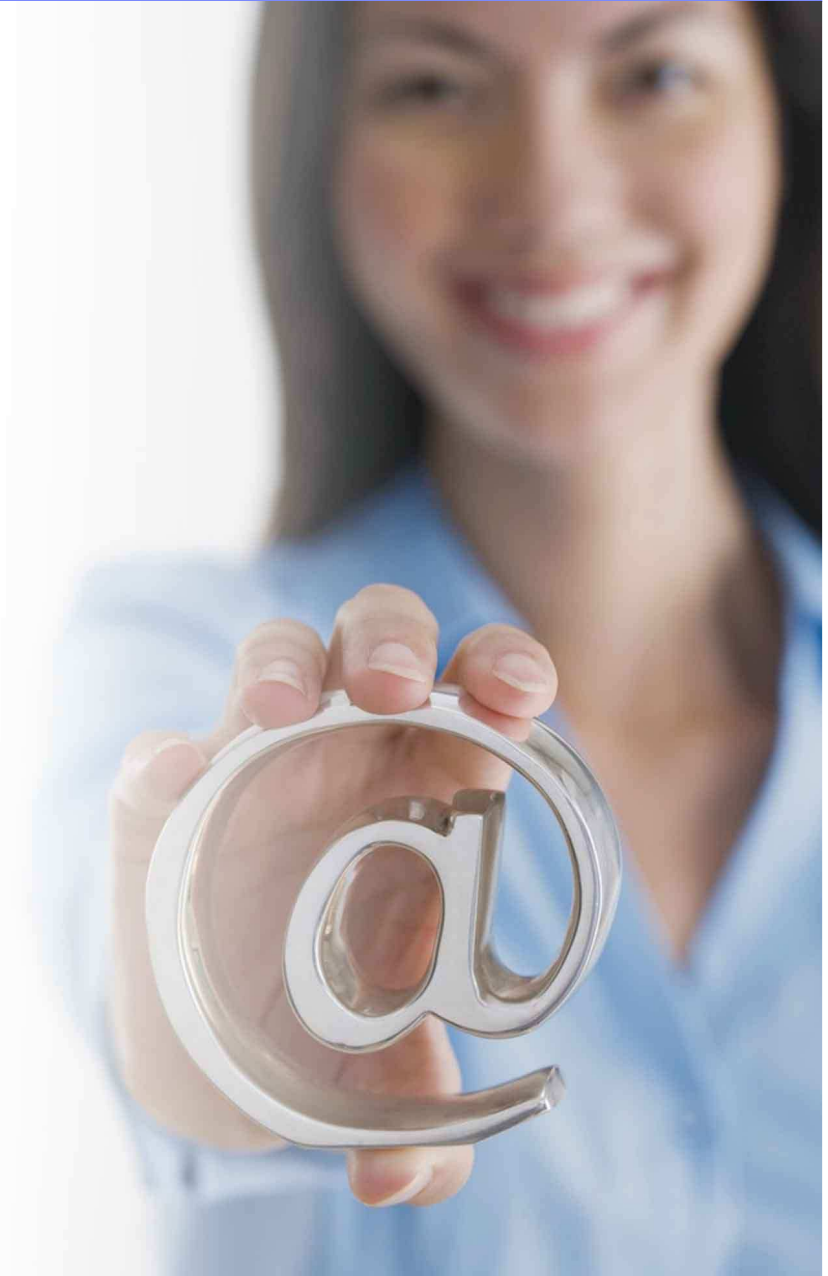
IBM® Systems Director 6.1 summary

- Integrates IBM's best-of-breed virtualization capabilities to provide new and radically improved ways to simplify the management of physical and virtual platform resources
- Unifies the monitoring and control of IBM systems, delivering a consistent look and feel for common management tasks
- Delivers multi-system support across IBM Power™, System x™, System z™, and IBM Systems Storage™ and non-IBM x86 systems
- Provides an extendable and modular foundation to advance the core systems management capabilities with additional plug-ins
- Enables seamless integration of IBM systems with the total infrastructure, and upward integration with enterprise service management solutions such as IBM Tivoli
- Delivers a consistent and unified platform management foundation that facilitates reduced training costs



For additional information

- **IBM Systems Director 6.1 Web Site**
 - <http://www.ibm.com/systems/management/director/about/index.html>
- **STG Lab Services**
 - <http://www-03.ibm.com/systems/services/labservices/>
- **IBM Systems Director Marketing**
 - Suzanne Battenfeld (suzanneb@us.ibm.com)



References

- **IBM Systems Director Download Site**
 - http://www14.software.ibm.com/webapp/iwm/web/reg/pick.do?source=dmp&lang=en_US
- **IBM Systems Director Documentation (education, tutorials, articles)**
 - <http://publis.boulder.ibm.com/infocenter/systems/director>
- **IBM Systems Director FORUM**
 - http://www.ibm.com/developerworks/forums/dw_forum.jsp?forum=759&cat=53
- **IBM Systems Director Extensions Download Site**
 - <http://www.ibm.com/systems/management/director/downloads.html>
- **IBM Hardware Systems Management Web Site**
 - <http://www.ibm.com/systems/management>



IBM® Systems Director 6.1 technical back-up



Overview of task mapping from 5.X TO 6.X

5.20.x Features	6.1 Plug-in	Systems Director Web Console Feature
Managed Object Discovery	Discovery Manager	Base System Discovery and Advanced System Discovery
Inventory Collection	Discovery Manager	View and Collect Inventory
Inventory Tasks	Discovery Manager	View and Collect Inventory
Inventory Monitors	Not Supported	Not Applicable
Groups, All Managed Objects	Discovery Manager	Navigate Resources > All Systems
Hardware Status	Status Manager	Integrated with Health Summary View Scoreboard Problems, Active Status
Event Log	Status Manager	Event Log
Resource Monitoring	Status Manager	Health Summary View, Dashboard, Monitors and Threshold UI with increased metrics
Monitor Threshold Plans	Status Manager	Groups with Thresholds
Process Tasks	Status Manager	Command Automation, Command Definitions
Process Manager	Status Manager	Manage Processes (from Monitors task), Health Summary, Dashboard Monitors and Threshold UI
Event Log Viewer	Status Manager	Event Log UI with enhanced sorting
SNMP Browser/Manage MIBs	Status Manager	SNMP Management
File Transfer	Remote Access Manager	Integrated into Remote Access
Windows Remote Control	Remote Access Manager	Integrated with Remote Access > Remote Control Remote Control Setup for VNC (Windows, Linux) and MS Remote Desktop (Windows)

Overview of task mapping from 5.X TO 6.X (cont.)

5.20.x Features	6.1 Plug-in	Systems Director Web Console Feature
Remote Session	Remote Access Manager	Integrated into Remote Access
System Account Configuration	Configuration Manager	Configuration Templates
SNMP Agent Configuration	Configuration Manager	Configuration Templates
Asset ID Configuration	Configuration Manager	Configuration Templates
BladeCenter Configuration Manager	Configuration Manager	Configuration Templates
Server Configuration Manager	Configuration Manager	Configuration Templates
OS Network Configuration	Configuration Manager	Configuration Templates
Event Action Plans	Automation Manager	Automation Plans Wizard, Event Actions, Event Filters UI Removed: ticker tape, event message actions
Scheduler	Automation Manager	Active and Scheduled Jobs
Update Manager	Update Manager	Includes product and additional platform updates Getting started, settings Install, Uninstall, Import, Export Updates Show needed and installed updates Change Compliance policies
Virtualization System Manager (VSM)	Virtualization Manager	Create Virtual Server, Virtual Servers and Hosts, Platform Managers and Members, Edit Virtual Resources, Topology Perspectives, Relocate Virtual Server

Overview of task mapping from 5.X TO 6.X (cont.)

5.20.x Features	6.1 Plug-in	Systems Director Web Console Feature
Relocation Manager	Virtualization Manager	Virtual Farms Create and manage Farms Relocation Plans
Standalone Storage Configuration Manager	Storage Manager	Storage Groups View and Manage Logical Volumes View and Apply Storage Templates Storage-Server Topology
Server Storage Provisioning Tool (SSPT)	Storage Manager	Configuration Manager Based
CIM Browser task	Not supported	Not applicable
MSCS Browser task and no discovery	Not supported	Not applicable
Rack Manager	Not supported	Not applicable
License Administrator task	Not supported	Not applicable
Software Distribution Redirector	Not supported	Not applicable
Edit Software Catalog	Supported via command line	Supported via command line
Capacity Manager extension	Tivoli based offering planned for 2009	Not applicable
System Availability Extension	Not supported	Not applicable
Software Distribution Extension	Tivoli based offering planned for 2009	Not applicable

Overview of task mapping from 5.X TO 6.X (cont.)

5.20.x Features	6.1 Plug-in	Systems Director Web Console Feature
ServeRAID™ Manager extension	Not supported	TIP: You can launch the ServeRAID Manager as an external application from the Systems Director Web interface; however, the application does not recognize Systems Director systems, groups or clusters
z/VM Center extension	Discovery Manager Status Manager Virtual Manager for Lifecycle management of virtual server and Virtual Image Manager planned for 2009	Discovery and Health integrated into base offering of Systems Director

IBM® Systems Director 6.1 Power Systems capabilities

- **Discovery and Inventory** of platform resources and connected storage which includes the collection of both hardware and software inventory. This includes System X (RSA/BMC) Servers, Windows, xLinux, HMC, CEC, LPAR, AIX, pLinux, HMC, Virtual I/O Server, FSP, and Virtual Networking components – bridges and VLANs
- **Visualize various POWER resource** topologies and relationship across physical server and virtual server (CEC, HMC, VIOS, LPAR, devices, AIX, pLinux and Virtual Networking components, virtual disks, logical volumes and associated volume groups.
- **Discovery and documentation of full system configuration** including physical and virtual IO resources and association/relationship (for configuration recovery – i.e. System plan).
- **Show Health and Status of Physical and Virtual Servers** including health of HMC and Virtual I/O Server. Show Alerts including hardware failures and system logs from Virtual I/O Server, HMC and the operating systems.
- **Base Monitoring** of OS Metrics including CPU and memory utilization, and file system metrics across hosts and virtual servers. Historical and OS events monitoring. View of **CPU utilization** metrics for environments that contain both shared and dedicated processors for both host and virtual servers.
- **Download, Manage, and apply recommended Updates** for AIX, pLinux, i50S, HMC and System Firmware
- **Deployment/Provisioning/Planning** – Ability to **configure new** systems or clone systems using system **plans deployment** of OS and Virtual I/O Server on a LPAR via HMC.
- **Base Virtualization Management** – Support key lifecycle LPAR and mobility (within single HMC domain) operations.
- **Consolidated Interface** – Integration of tasks for Key Power Resource Managers (HMC, IVM/VIOS, AIX and IBM i management consoles)
- **Comprehensive CLI interface** for discovery/Health/Update/Deployment, LPAR virtualization lifecycle and mobility, power control and management
- **Energy Management** – Monitoring, reporting, capping (both a server and group), and controlling energy consumption. Receive status and alerts. Energy Thresholding - Allow a user to set a power or temperature threshold, and be notified when it is reached (or allow an action to automatically be taken). Support for Facility providers. Full CLI support and Active Energy Manager Server on AIX.
- **Enterprise Integration and Manageability** – Out-of-the box management utilizing standard CIM profiles for AIX, pLinux, IBM i, HMC, and Virtual I/O Server resources

IBM® Systems Director 6.1 System x capabilities

- **Automatic Discovery and Inventory** of BladeCenter and System x server resources and connected storage which includes the collection of both hardware and software inventory. This includes blades, switches, servers, management modules, service processors, firmware levels, RSA II and AMM configuration settings, etc.
- **Visualize various System x resource** topologies and relationships. See virtual servers hosted by physical servers; see virtual networking components, virtual disks, logical volumes and volume groups used by virtual servers. Also view scalable systems and the partitions and nodes that comprise them.
- **Discovery and documentation of full system configuration** such as the physical components in a server and the physical resources assigned to virtual servers. Also discovery and documentation of BladeCenter chassis and components.
- **Show Health and Status of Physical and Virtual Servers**, blades, etc. Show Alerts including hardware failures and system logs surfaced from the BMC, RSA II, and AMM. Also provide the system health as reflected by diagnostic LEDs.
- **Base Monitoring** of OS Metrics including CPU and memory utilization, and file system metrics across hosts and virtual servers. Historical and OS events monitoring. View **CPU utilization** metrics for environments that contain both shared and dedicated processors for both host and virtual servers. View **Power utilization** metrics from chassis and modular servers.
- **Download, Manage, and Apply recommended Updates** for System x and BladeCenter firmware and drivers.
- **Deployment/Provisioning/Planning** – Ability to **configure new** systems or clone existing system images using system plans
- **Virtualization Management** – Support key lifecycle operations and mobility for VMware, Xen, and MSVS hypervisors. Support virtual network address management and blade failover for thousands of blades and chassis.
- **Consolidated Interface** – “One glass” for key System x Resource Managers – Update, Status, Inventory, Configuration
- **Comprehensive CLI interface** for Discovery/Health/Update/Deployment of System x resources. Lifecycle and mobility operations, power control and management
- **Energy Management** – Monitoring, reporting, capping, and controlling power consumption. Receive power status and alerts.
- **Enterprise Integration and Manageability** – Out-of-the box management utilizing standard CIM profiles for VMware 3i, Cell blade

IBM® Systems Director 6.1 System z capabilities

- **Discovery and Inventory** of platform resources which includes the collection of both virtual hardware and software inventory. This includes Linux and z/VM.
- **Visualize various z resource** topologies and relationship across the virtual servers managed by z/VM (Linux, virtual CPU, virtual Memory, Virtual Networking components, virtual disks)
- **Show Health and Status of Virtual Servers** - Show Alerts and system logs from the operating system.
- **Base Monitoring** of Linux OS Metrics including CPU, memory utilization and file system. Historical and OS events monitoring.
- **Download, Manage, and apply recommended Updates** for Linux
- **Base Virtualization Management** – Topology of virtual servers.
- **Consolidated Interface** – Manage System z resources consistently along with other platform resources from a intuitive user interface.
- **Comprehensive CLI interface** for discovery/Health/Update
- **Energy Management – Active Energy Manager** - Monitoring, reporting, capping (both a server and group), and controlling power consumption. Receive power status and alerts. Energy Thresholding - Allow a user to set a power or temperature threshold, and be notified when it is reached (or allow an action to automatically be taken). Full CLI for all key AEM functionality. Support of AEM Server on Linux on System z.
- **Enterprise Integration and Manageability** – Out-of-the box management utilizing CIM for Linux and z/VM

IBM® Systems Director 6.1 Storage capabilities

- **Discovery and Inventory** of server internal, BC-integrated, low-end and mid-range storage and SAN resources which includes the collection of both hardware and software inventory (for external storage and SAN components – limited to SMI-S/vendor provided inventory).
- **Visualize various server-storage resource** topologies and relationships. See physical server connectivity with storage including LUN attachment relationships.
- **Show Health and Status of RAID controllers and storage subsystems.** Show alerts and status for RAID controllers and storage subsystems.
- **Download, Manage, and Apply recommended Updates** for System x and BladeCenter x86 IRC RAID controllers.
- **Storage and Switch Configuration** for System x and BC x86 IRC and integrated RSSM RAID controllers and SAS switches.
- **Storage Provisioning** – Provision LUNs from low-end and mid-range storage to servers (CLI only).
- **Consolidated Interface** – “Single glass” for key system management functions: Discovery, Status, Storage Management
- **CLI interface** for Discovery/Health/Provisioning of storage resources.

IBM® Systems Director 6.1 foundation components

- **Discovery manager**

- Discovers the both virtual and physical systems in your network collects inventory data about hardware and software
- Visualizes relationships to other system in the network

- **Status manager**

- Monitors hardware status, power status, and update compliance status on discovered systems
- Create, view, and customize the resource and processes to monitor and generate notifications when a custom threshold is reached

- **Update manager**

- Acquires, distributes and installs required firmware, device drivers and operating system updates using predefined policies and workflows Updates to support hardware changes without an upgrade or migration of the installed product.
- This includes compliance status to indicate what managed systems may required critical updates. The IBM Systems Director product itself is now updated via Update Manager and allows customers to see which updates or which configurations have been applied to a system

- **Automation manager**

- Automatically performs predefined actions in response to events that occur in your environment using even automation plans

- **Configuration manager**

- Configures system parameters and hardware settings on systems, including BladeCenter chassis and its installed components automatically

IBM® Systems Director 6.1 foundation components (cont.)

- **Remote access manager**

- Provides a set of integrated tools that support remote access, including remote control tools (such as Virtual Network Computing (VNC), Remote Desktop (RDP), and web-based remote control for IBM BladeCenter® and RSA), hardware command line, remote command line, and file transfer tools.

- **Virtualization manager**

- Manage the lifecycle of your virtual resources (such as virtual servers and virtual farms) from a single interface for many of the different virtualization technologies from a single console in the industry.

- **IBM System Storage™ management**

- Provides core lifecycle management of your storage resources including discovery, status and configuration.

- **IBM BladeCenter and System x™ management**

- Provides full lifecycle management of your modular System x, IBM BladeCenter Chassis, and related resources including discovery, status, configuration, updates, and virtualization.

- **IBM Power systems management**

- Provides full lifecycle management of your Power systems and related resources including discovery, status, configuration, updates, and virtualization.

- **IBM System z™ management**

- Provides management of z/VM and Linux. Provides discovery for z/VM and virtual servers and discovery, inventory, status and updates for Linux.

What can IBM® Systems Director 6.1 manage

- **Blade and Modular resources that can be managed:**
 - BladeCenter, Blade servers (x, Power, Cell), I/O modules, Modular servers
 - VMware ESX, VMware 3i, MSVS, Xen
 - Windows, Linux, Netware
- **POWER System resources that can be managed:**
 - HMC, IVM, Virtual I/O Server, System i/p Servers (FSP)
 - AIX, POWER Linux, IBM i
- **Mainframe Systems resources that can be managed:**
 - Linux on zSeries
 - z/VM
- **HP, Dell, and other x86 servers**
- **SNMP-based devices**
 - Network, storage, power distribution units, etc.
- **CIM-based devices**
 - CIM = Common Information Model
- **Storage resources that can be managed:**
 - LSI (IRC), DS3000, DS4000, DS6000, RSSM
 - SAS Switch (NSSM, RSSM), Brocade FC Switch, Qlogic FC Switch



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