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# What's new in AIX

*Sponsored by the*  
**AIX Virtual User Group**



*THE NEW POWER EQUATION*

## A quick recap

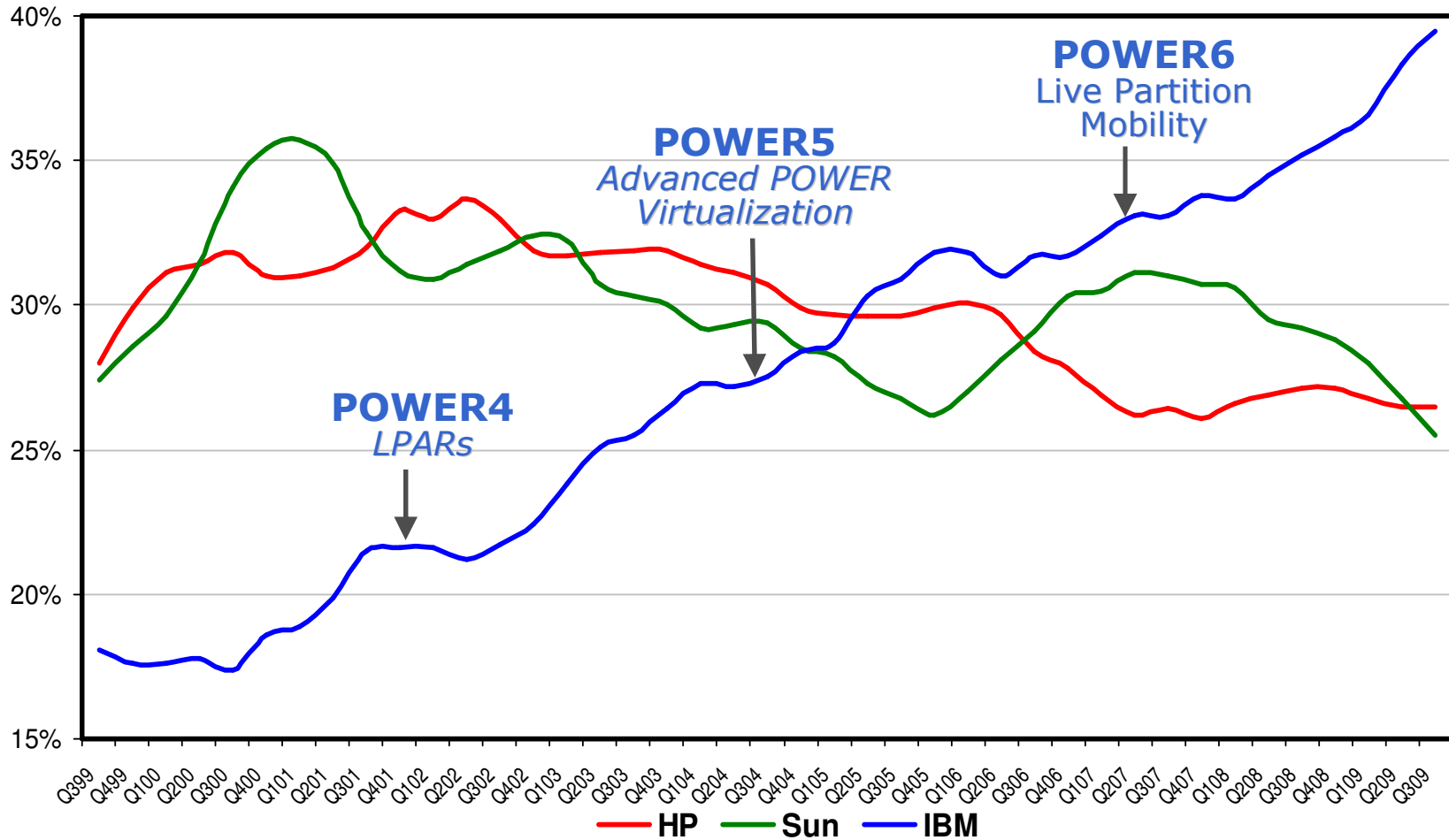
- Last year:
  - *Introduced AIX Enterprise Edition*
  - *AIX 6.1 Technology Level 2*
  - *PowerVM Enhancements*
    - *NPIV, Fiber Channel tape*
- So far this year:
  - *AIX 6.1 Technology Level 3*
  - *Active Memory Sharing*
  - *POWER7 Statement of Direction*
  - *IBM Smart Analytics System*
  - *IBM DB2 pureScale*
  - *AIX 6.1 Technology Level 4*



# IBM extends leads in UNIX server revenue share

10-year view according to IDC

UNIX Server Rolling Four Quarter Average Revenue Share



Source: IDC Quarterly Server Tracker Q309 release, December 2009

Plans subject to change

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THE NEW POWER EQUATION

# AIX Evolution



AIX/6000



**AIX V2 & V3**  
**Establishment in the market:**

- RISC Support
- UNIX credibility
- Open Sys. Stds..
- Dynamic Kernel
- JFS and LVM
- SMIT

**AIX V3.2.5**  
**Maturity:**

- Stability
- Quality

**AIX V4.1/4.2**  
**SMP Scalability:**

- POWERPC spt.
- 4-8 way SMP
- Kernel Threads
- Client/Server pkg
- NFS V3
- CDE
- UNIX95 branded
- NIM
- > 2GB filesystems
- HACMP Clustering
- POSIX 1003.1, 1003.2, XPG4
- Runtime Linking
- Java 1.1.2

**AIX V4.3**  
**Higher levels of scalability:**

- 24-way SMP
- 64-bit HW support
- 96 GB memory
- UNIX98 branded
- TCP/IP V6
- IPsec
- Web Sys. Mgr.
- LDAP Dir. Server.
- Workload Mgr
- Java JDT/JIT
- Direct I/O
- Alt. Disk Install
- Exp/Bonus CDs

**AIX 5L V5.1/5.2**  
**Flexible Resource Management:**

- POWER4+ spt.
- Dynamic LPAR
- Dynamic CUoD
- New 64bit kernel
- 512GB mem
- JFS2
- 16 TB filesystems
- UNIX03 branded
- Concurrent I/O
- MultiPath I/O
- Flex LDAP Client
- XSSO PAM spt

**AIX 5L V5.3**  
**Advanced Virtualization:**

- POWER5 support
- 64-way SMP
- SMT
- MicroPartitions™
- Virt I/O Server
- Partition Load Mgr
- NFS Version 4
- Adv. Accounting
- Scaleable VG
- JFS2 Shrink
- SUMA
- SW RAS features
- POSIX Realtime

**AIX V6**  
**Enterprise RAS:**

- POWER6 support
- Workload Partitions
- Application Mobility
- Continuous Avail.
- Storage Keys
- Dynamic tracing
- Software FFDC
- Recovery Rtns
- Concurrent MX
- Trusted AIX
- RBAC
- Encrypting JFS2
- AIX Security Expert
- Director Console

*Open Systems Workstations*  
 Uni-processor

*Distributed Client-Server*  
 4-8 way SMP

*Network Centric Computing*  
 24-way SMP

*e-Business Computing*  
 32-way SMP

*On Demand Business*  
 64/128-way SMT

*New Enterprise Data Center*

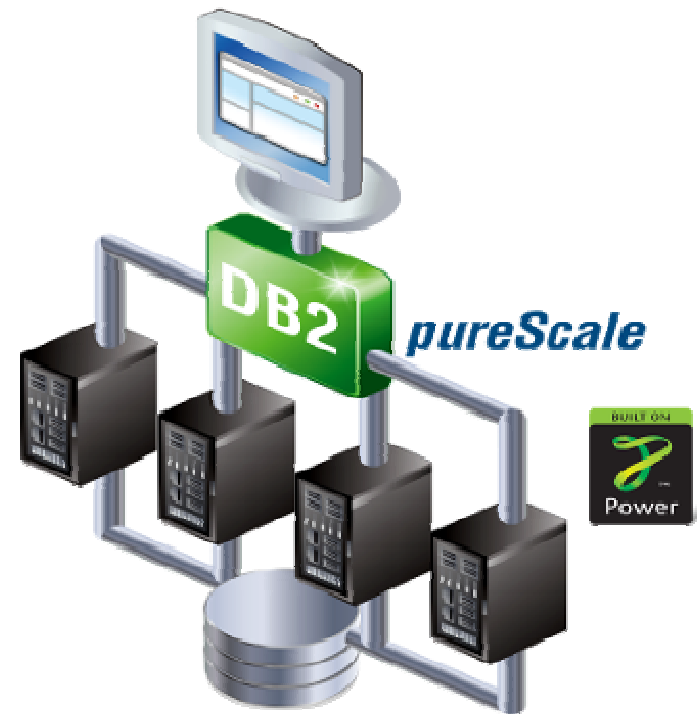
Plans subject to change

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*THE NEW POWER EQUATION*

## DB2 pureScale

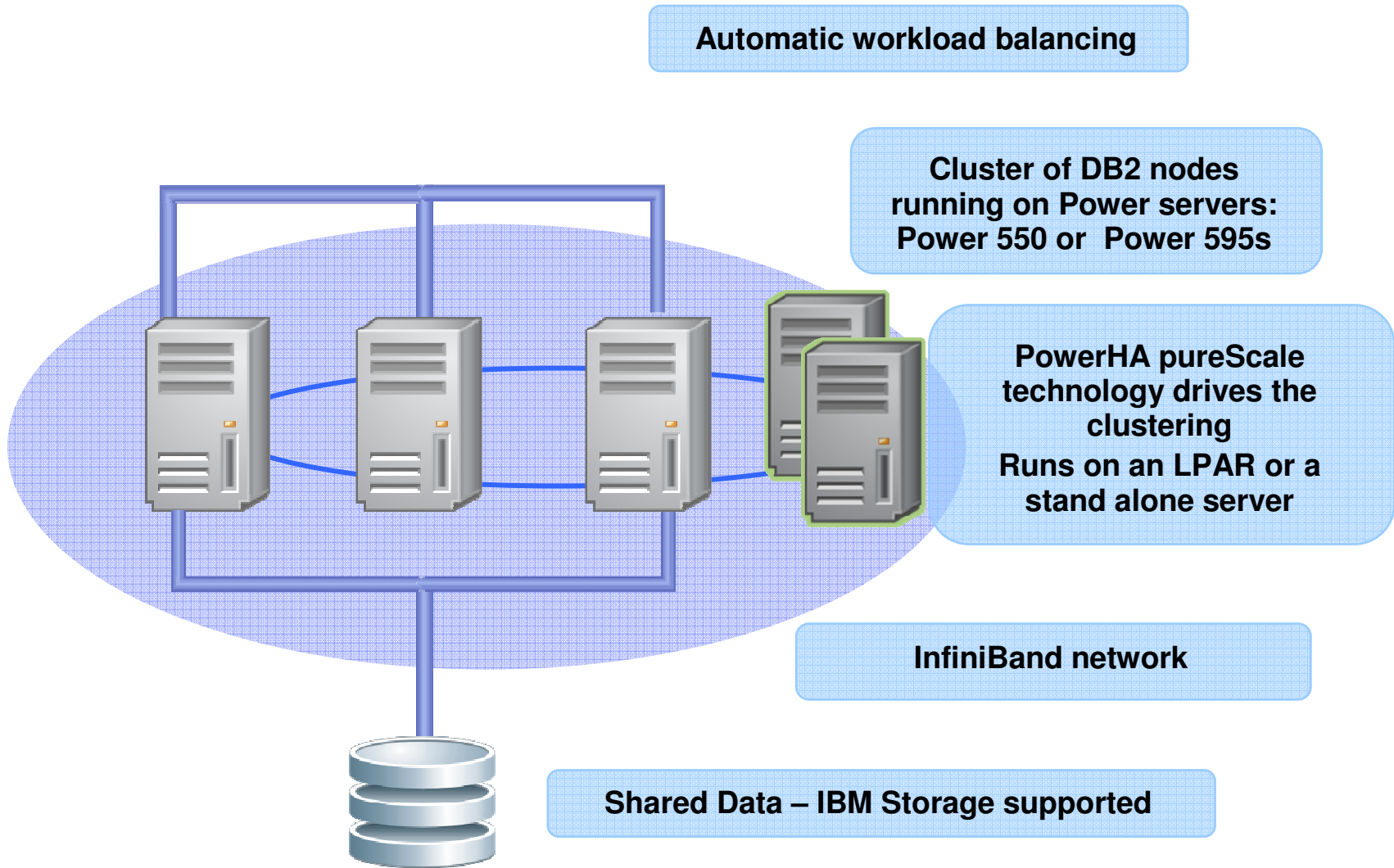
- Unlimited Capacity
  - Buy only what you need, add capacity as your needs grow
- Application Transparency
  - Avoid the risk and cost of application changes
- Continuous Availability
  - Deliver uninterrupted access to your data with consistent performance



Leverages the architecture of z/OS:  
the Gold Standard of reliability and scalability

Built on Power Systems and AIX

# DB2 pureScale Architecture

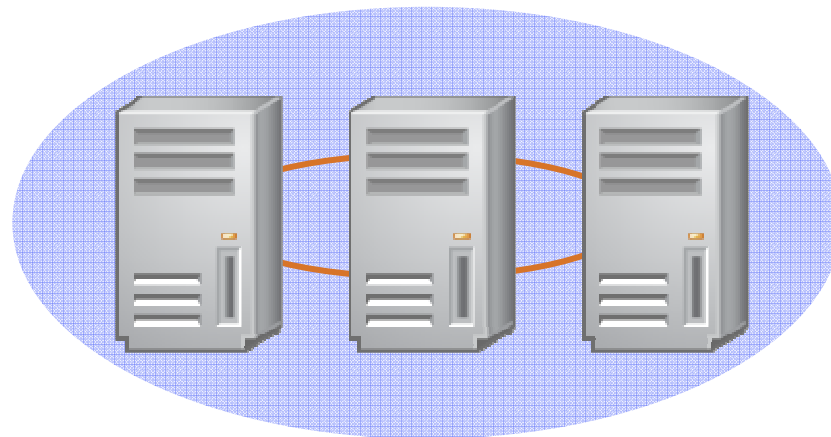


## Unlimited Capacity: Scale with the Business Needs

- DB2 pureScale has been designed to grow to whatever capacity your system requires
- **Flexible licensing** designed for minimizing costs of peak times
- **Only pay for capacity when you use it:** even for a single day

### Issue:

All year, except for 2 days, environment requires 3 servers of capacity



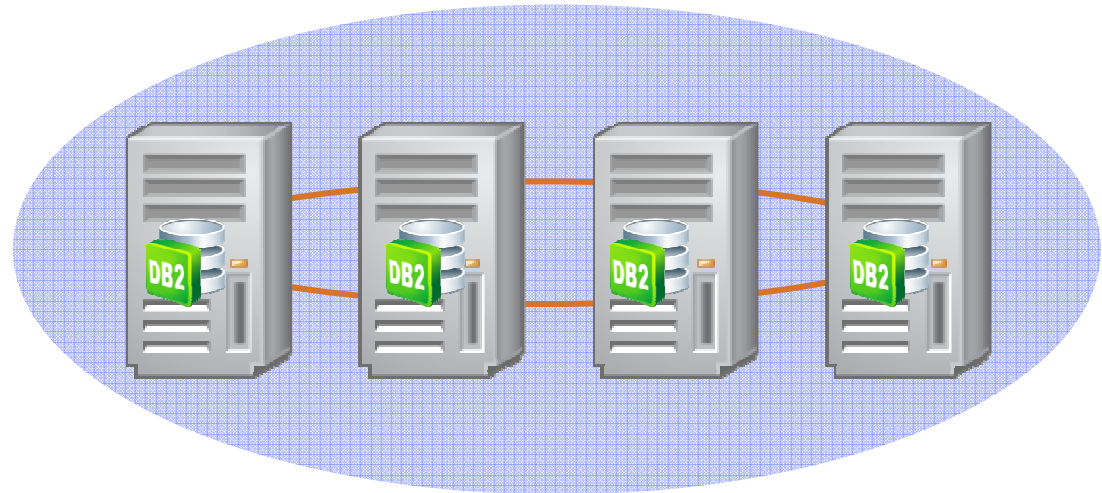
Flexible DB2 licensing drives extra demand for spare Power servers

## Unlimited Capacity: Scale with the Business Needs

- DB2 pureScale has been designed to grow to whatever capacity your system requires
- Flexible licensing designed for minimizing costs of peak times
- Only pay for capacity when you use it: even for a single day

### Solution:

Use DB2 pureScale and add another server for those two days, and only pay software license fees for the days you use it.



**DB2 pureScale helps CIOs handle business critical peak periods & save costs**

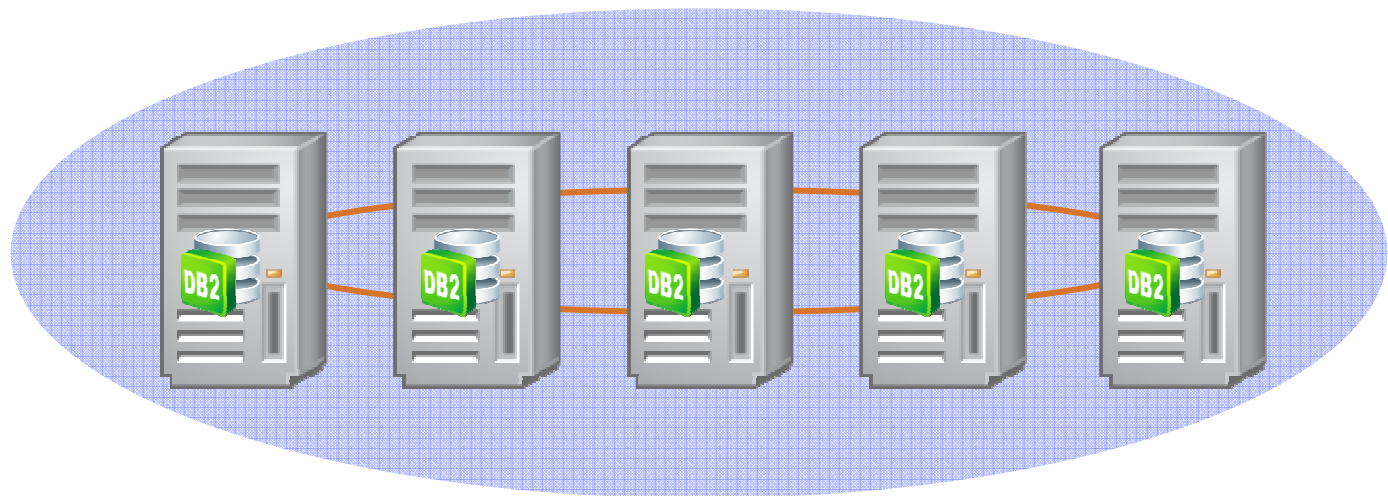


## Unlimited Capacity: Scale with the Business Needs

- DB2 pureScale has been designed to grow to whatever capacity your system requires
- Flexible licensing designed for minimizing costs of peak times
- Only pay for capacity when you use it: even for a single day

### Need more?

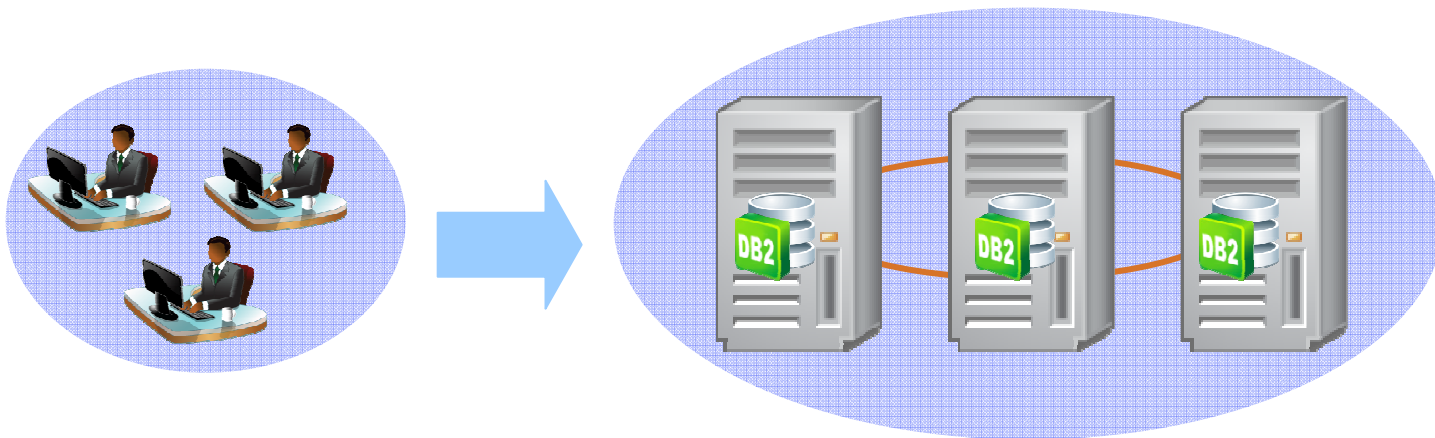
Just deploy another server and then turn off DB2 when you're done.



Over 100+ node architecture validation has been run by IBM

## Application Transparency

- Avoid the risk and cost of application changes
- Take advantage of extra capacity instantly
  - No need to modify your application code
  - No need to re-tune your infrastructure



DBAs can add capacity without re-tuning or re-testing

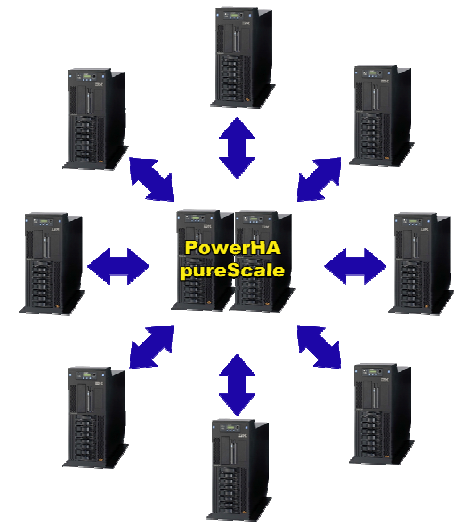
# PowerHA pureScale Technology

## Enables Efficient and Continuous Operations



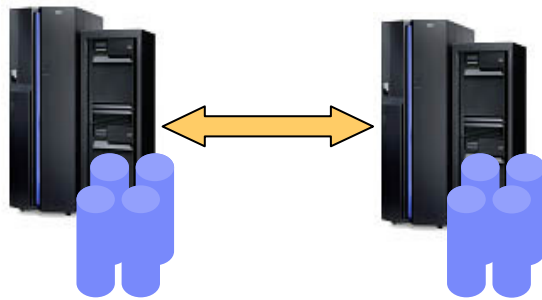
*DB2 pureScale includes PowerHA pureScale technology to...*

- Reduce system overhead by minimizing inter-node communications
  - Centralized database locking and caching minimizes inter-node communications - maximizing productive use of computing power
- Reduce cost of systems communication with direct memory access
  - Remote Direct Memory Accesses virtually eliminates processor context switching for IP network communications within the system
- Maintain business continuity by minimizing impact of node failure
  - Data and lock status are immediately accessible to all nodes, ensuring consistent application performance



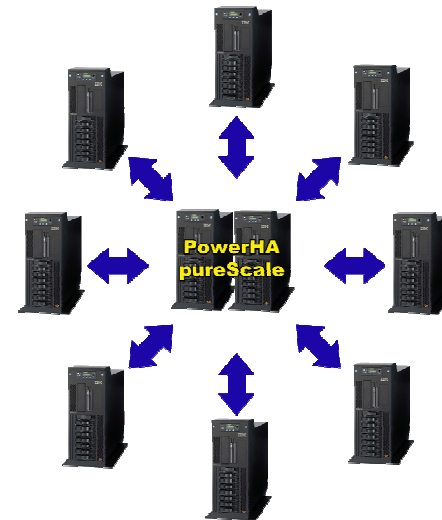
# PowerHA Technologies

*Power Systems Availability Solutions*



## PowerHA SystemMirror

- **Active/Standby HA/DR Clustering**
  - Data Center high availability
  - Multi site capability for disaster recovery
- PowerHA SystemMirror for AIX (formerly known as HA/CMP)
- PowerHA SystemMirror for IBM i



## PowerHA pureScale

- **Cluster Management/Interconnect Technology**
  - Low latency high performance data transfer
  - Distributed cluster coordination
  - Centralized locking
- Included with DB2 pureScale



## AIX / PowerVM updates for May 2009

### AIX 6 Technology Level 3

- Workload Partition SAN support
  - *Workload Partitions will be able to own SAN devices which will allow WPAR administrators to directly manage their own storage. This will provided the opportunity to reduce administrative effort and increase flexibility.*
  
- Probevue support for C++
  - *Extends the code development and debugging capabilities of the probevue dynamic tracing facility to applications written in C++*
  
- IBM Systems Director Agent included on AIX Base installation media
  - *Installed by default starting with AIX 6 TL3 and AIX 5.3 TL10*
  
- Active Memory Sharing support
  - *New capability of PowerVM Enterprise*

## PowerVM enhancements – 4Q09

- **NPIV for Blade**
  - Extend NPIV capabilities to the Blade platform.
  - Requires VIOS 2.1.2 (ie 10/09) u
  - Requires the 10/09 AIX TL11 for 5.3 and TL4 for 6.1)
- **NPIV: dynamic re-bind**
  - General enhancements to NPIV, including the ability to dynamically rebind a virtual fibre channel adapter to a different physical adapter without an outage (ie may want to load-balance or evacuate an physical HBA to apply maintenance).
- **Fibre Channel over Ethernet**
  - Fibre Channel over Converged Ethernet (or commonly referred to as FC over Ethernet). AIX will provide a native 10GB solution, and VIOS will facilitate sharing of this adapter.
- **LPAR Mobility Phase 2**
  - VIOS will preserve slots and device names across Live Partition Mobility operation
- **VIOS Usability**
  - Lightweight backup is a new VIOS option to save off just the customized data (such as device mappings, other pertinent ODM info) in a XML file.
  - P2V includes improved procedures for server consolidation (documentation and support statements) and retargeting physical SAN devices to VIOS and using the data in place (avoiding backup/restore of data).
- **Director Enhancements**
  - Director end-to-end device mappings, Improved virtual device provisioning

## AIX 6 Technology Level 4 – October 2009

- AIX Enterprise Edition
  - *New capabilities for reporting, capacity planning, WPAR Management*
- WPAR Enhancements
  - *Live Application Mobility for WPARs with SAN devices*
  - *Root Volumes for WPARs*
  - *Workload Partitions Manager V2.1*
- Manageability Enhancements
  - *AIX Runtime Expert*
  - *Enhanced AIX Concurrent Maintenance*
  - *Multiple System topas support*
  - *topas compatibility with Performance Management for Power Systems*
  - *ssh on base AIX media (ssl was included in May 2009)*
  - *probevue support for Java*
- Security
  - *IBM Compliance Expert Express Edition (New product)*
  - *Cryptographic framework*
  - *Encrypting filesystem keys and Trusted Execution profiles in LDAP*
- PowerHA 6.1 SystemMirror for AIX

# AIX Enterprise Edition – October 2009

*The Tivoli components are also available as part of Management Edition for AIX*

- IBM Tivoli Monitoring
  - *Out of box reports*
  - *Easier installation*
  - *Automatic best practices configuration*
  - *Tivoli Common Reporting for enhanced reporting across products*
- Tivoli Performance Analyzer (integrated into ITM)
  - *Extends ITM data to predictive trending to manage performance over time*
  - *Forecast resource trends to focus monitoring on emerging problems.*
  - *Leverages the long-term historical and real time data in Tivoli Data Warehouse*
- Workload Partitions Manager V2.1
  - *Support for Live Application Mobility with SAN devices*
  - *IBM Systems Director based*
- Tivoli Application Dependency Discovery Manager
  - *Improved support for Workload partitions*
  - *Data feed from ITM for instant status changes and discovery of new LPARs*





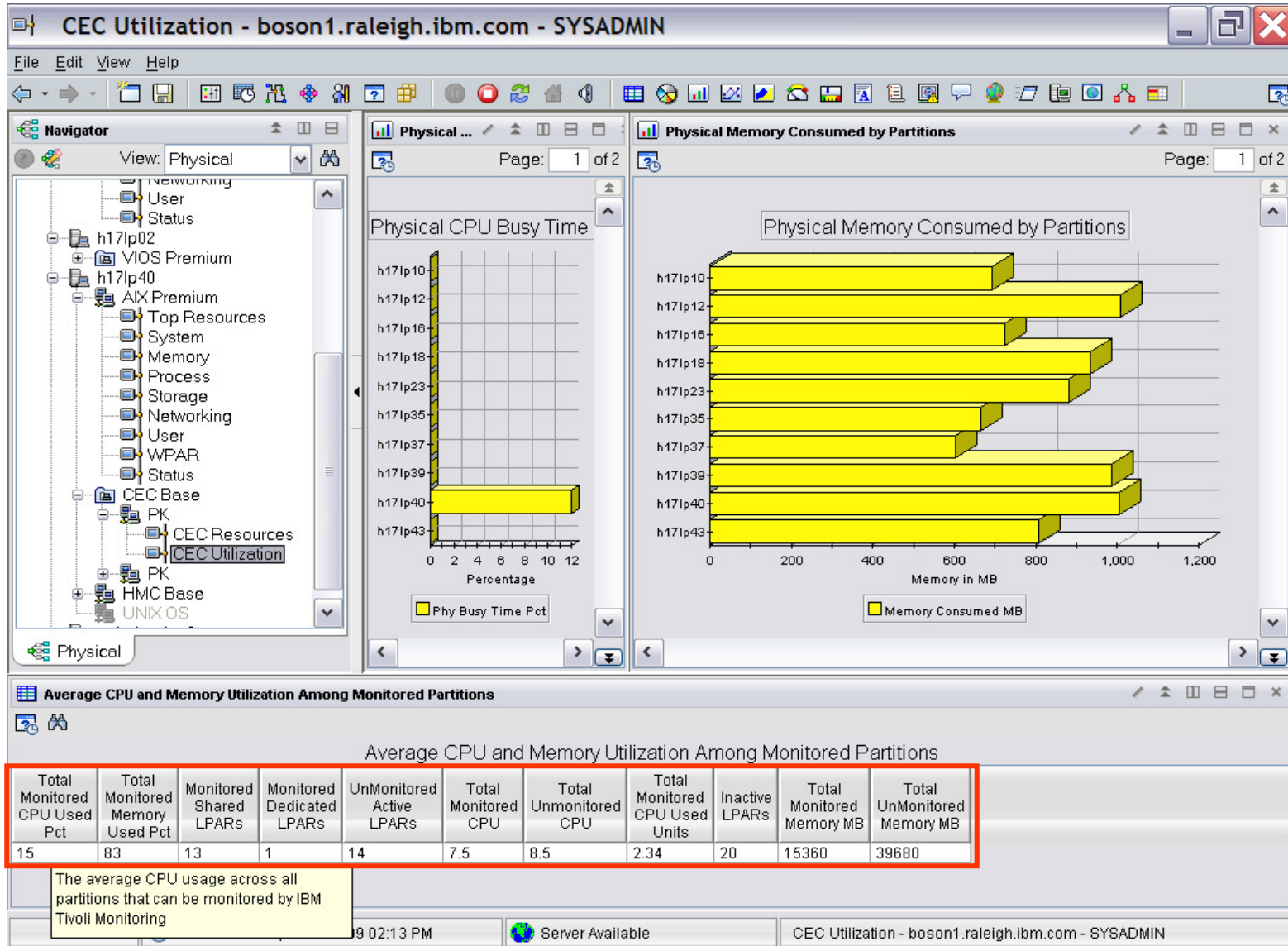
# WPAR Supplementary Workspace

The screenshot displays the 'WPAR Summary' application window. On the left is a tree view showing the system hierarchy. In the center, there are two charts: 'LPAR CPU Utilization by WPARs' and 'LPAR Memory Utilization by WPARs'. At the bottom, a table lists WPAR details, and a context menu is open over the 'h17wpar4' entry.

WPAR Name	Type	State	Admin Operation	Hostname	Autostart	Shares	usr	Dir	IP Address	RC Is Active
h17wpar4	Custom	Active		h17wpar4	No	No				Yes
syswpar1				syswpar1	No	No				Yes
syswpar2				syswpar2	No	No				Yes

NOTE: Right button click on Link icon to access menu of supplemental WPAR WSs

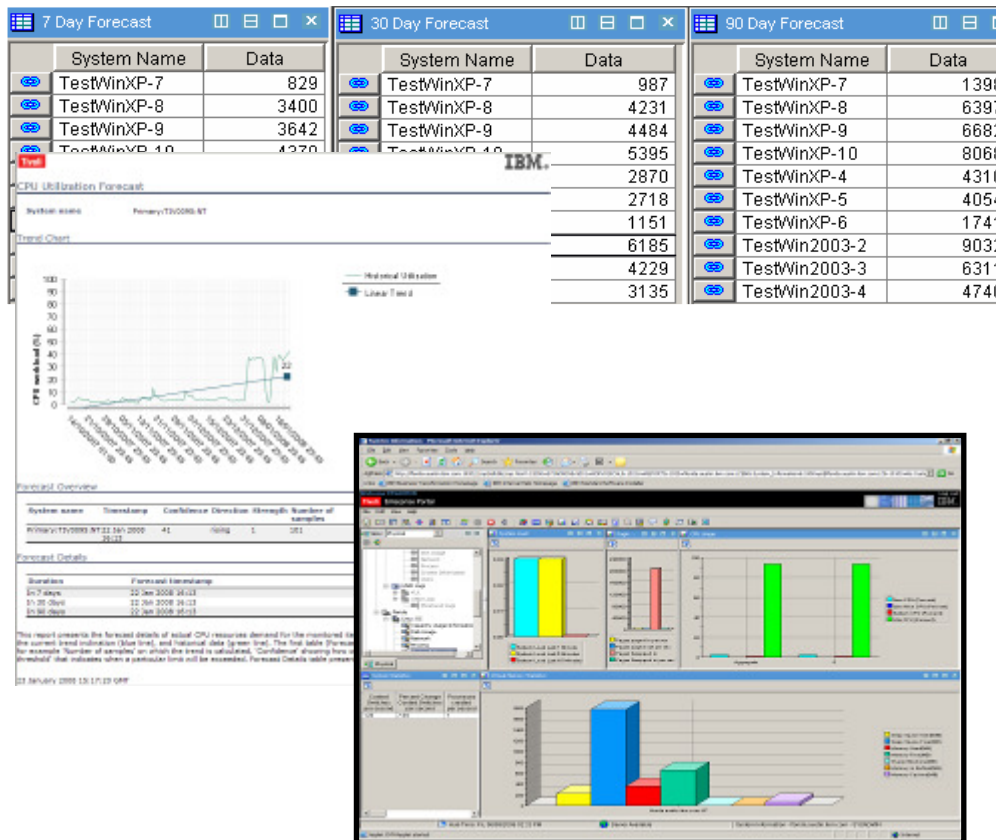
# Overall Frame Utilization



# Advanced Performance Analytics

## What It Does

- Provide capacity monitoring through the data collected by Tivoli Monitoring
- Automates Performance analysis and reporting
- Enables prediction of application bottlenecks and creation of alerts for potential service threats.



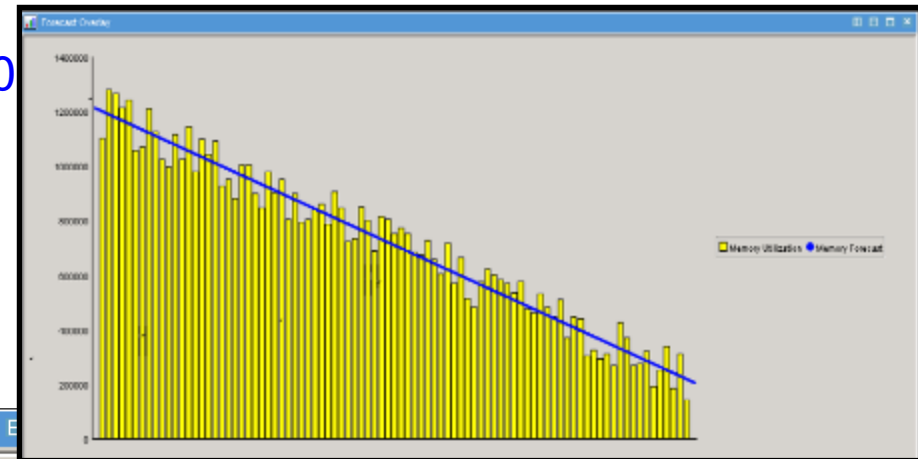
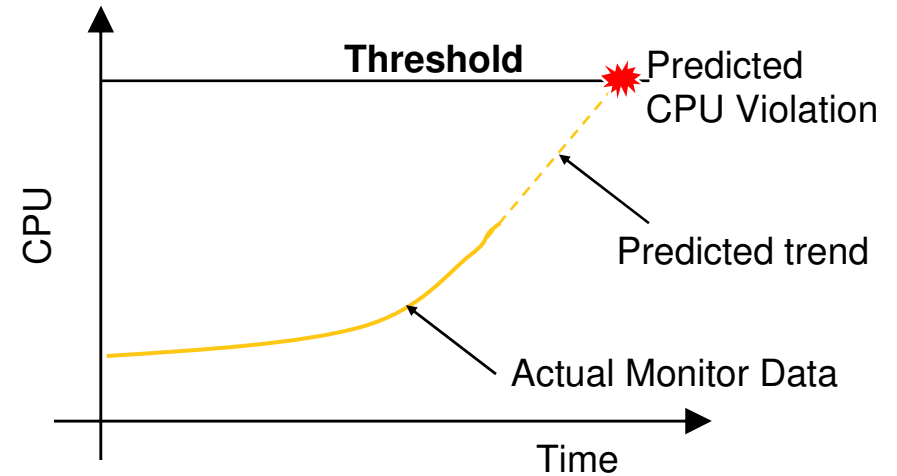
- Use existing ITM agents and data that are stored in the Tivoli Data Warehouse
- Create new metrics based on combining existing data
- Predictive trending and forecast reports
- Pre-configured reports

## Scenarios

“What will my resources look like tomorrow, next week and next month?”  
 “What IT resources should I worry about?”  
 “Will I have enough capacity to get me through Monday?”

# Predictive Trending

- Predictive trending on key performance indicators
  - Linear trending model
  - Configurable
  - Simple, open and predictable
- New Tivoli Monitoring attributes for use in charts and situations
  - Trend strength, trend direction
  - Time to threshold, value in 7 days, 30 days and 90 days
- Use trend information in situations
  - “I predict I have 2 weeks before I hit 95% Disk Utilization and I am 70% confident and its getting worse”



Forecast Status			
System Name	Confidence	Strength	Number Of Samples
TestWinXP-7	48	1	89
TestWinXP-8	83	3	89
TestWinXP-9	87	3	89
TestWinXP-10	90	3	89
TestWinXP-4	100	3	89
TestWinXP-5	89	3	89
TestWinXP-6	86	3	89
TestWin2003-2	82	3	89
TestWin2003-3	89	3	89
TestWin2003-4	73	3	89

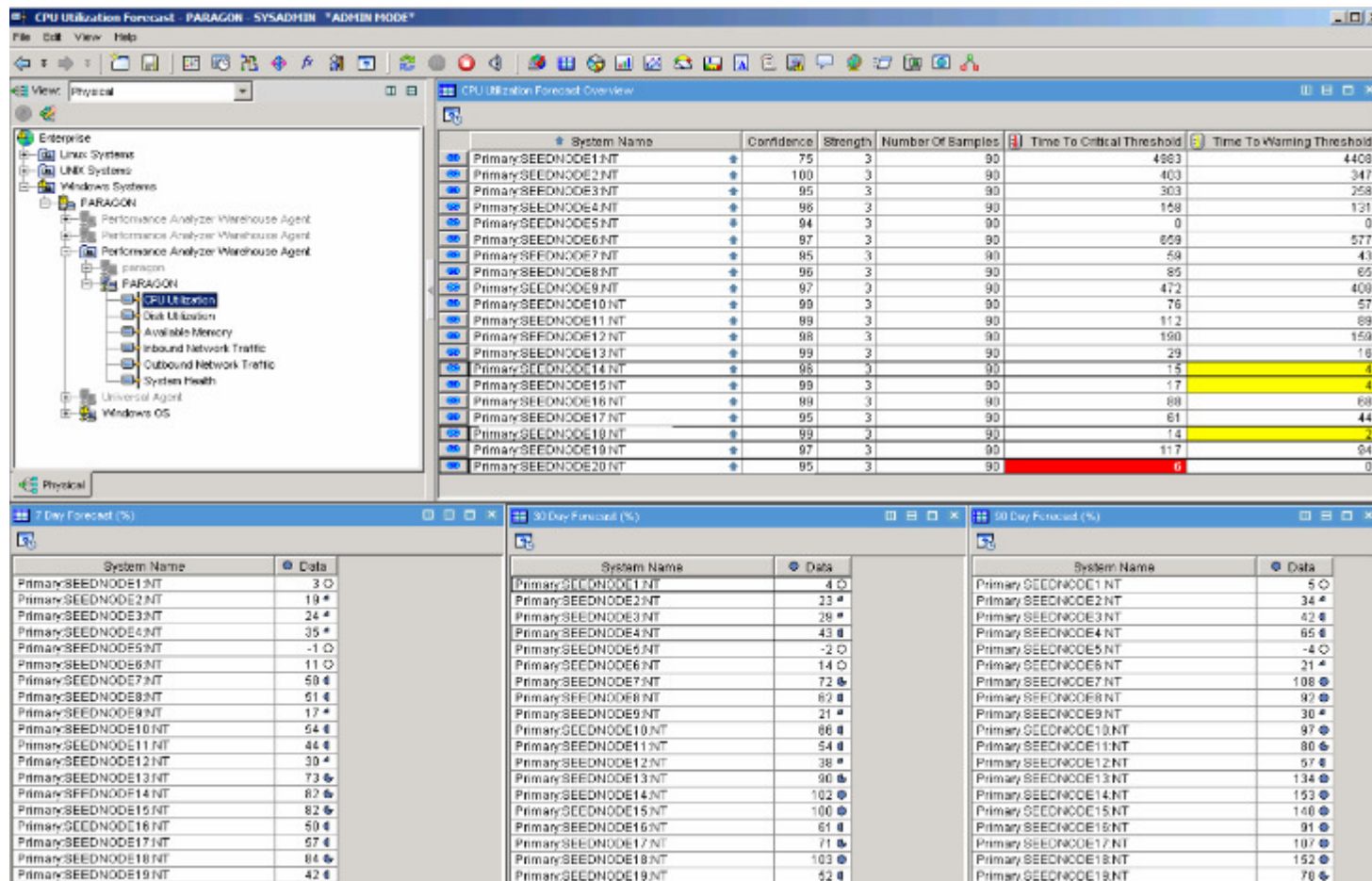
7 Day Forecast	
System Name	Data
TestWinXP-7	829
TestWinXP-8	3400
TestWinXP-9	3642
TestWinXP-10	4370
TestWinXP-4	2318
TestWinXP-5	2206
TestWinXP-6	925
TestWin2003-2	5094
TestWin2003-3	3430
TestWin2003-4	2519

System Name	Data
TestWinXP-7	987
TestWinXP-8	4231
TestWinXP-9	4484
TestWinXP-10	5395
TestWinXP-4	2870
TestWinXP-5	2718
TestWinXP-6	1151
TestWin2003-2	6185
TestWin2003-3	4229
TestWin2003-4	3135

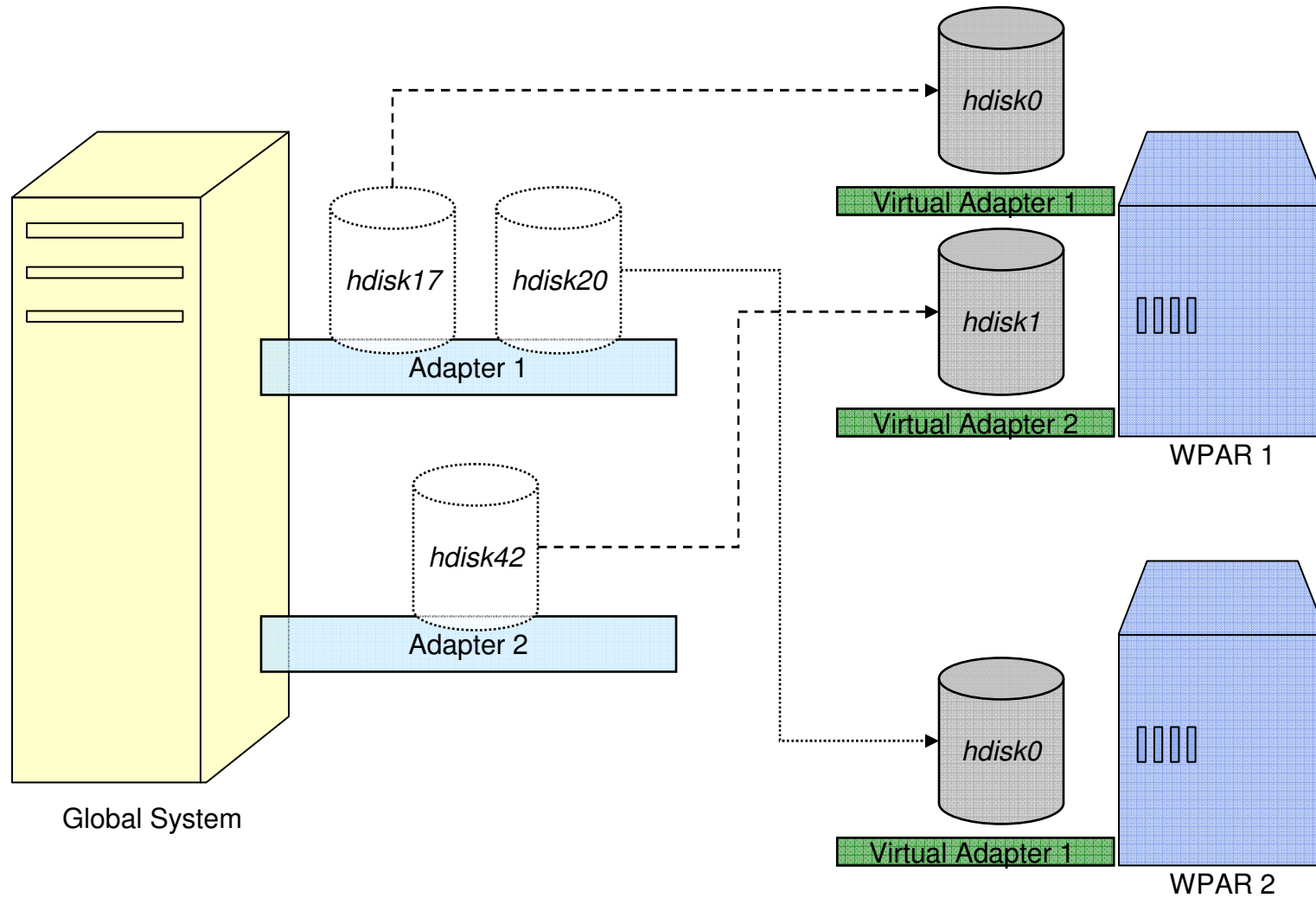
System Name	Data
TestWinXP-7	1398
TestWinXP-8	6397
TestWinXP-9	6682
TestWinXP-10	8068
TestWinXP-4	4310
TestWinXP-5	4054
TestWinXP-6	1741
TestWin2003-2	9032
TestWin2003-3	6311
TestWin2003-4	4740

# Using Trends in Forecast Reports

- Projected values across all resources
- Sort lists to identify future overloaded or under utilized servers



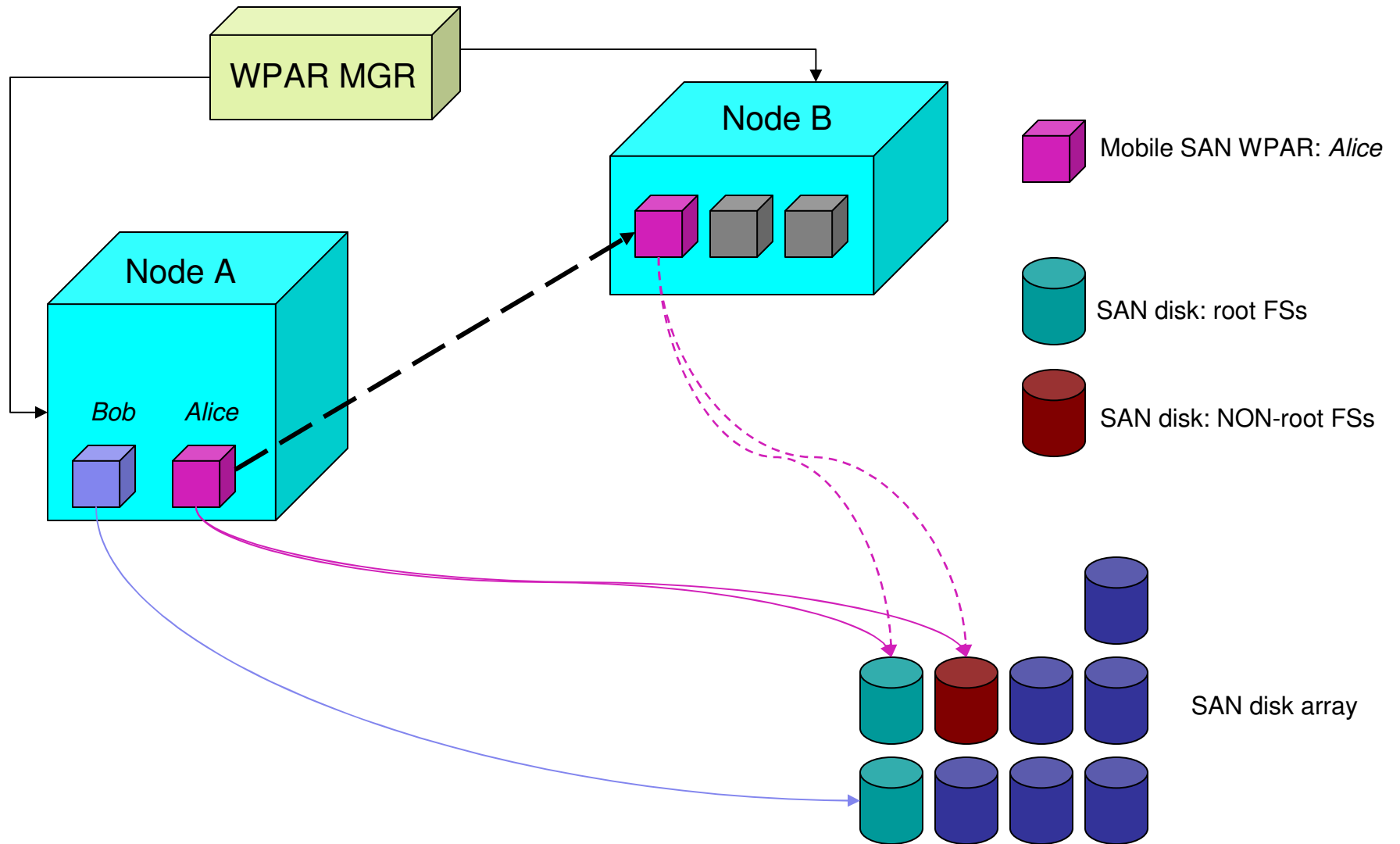
# WPAR with Storage Devices and RootVG support



## RootVG WPAR

- Looks more like the Global System
  - “rootvg” volume group
  - Classic LV names (i.e. hd4="/", hd2="/usr", etc.)
  - WPAR owns all the root file systems (/, /tmp, /var, etc.)
  - RootVG WPAR is the expected model
- How does it work?
  - Global administrator specifies “rootvg” at WPAR creation time
  - Global “scratch” file systems used to boot WPAR
    - Similar to how *ramfs* is used to boot Global
    - Boot window used (like a boot LV) to save ODM/device information from WPAR, used for startup/shutdown of WPAR.
- RootVG WPAR is mobility ready

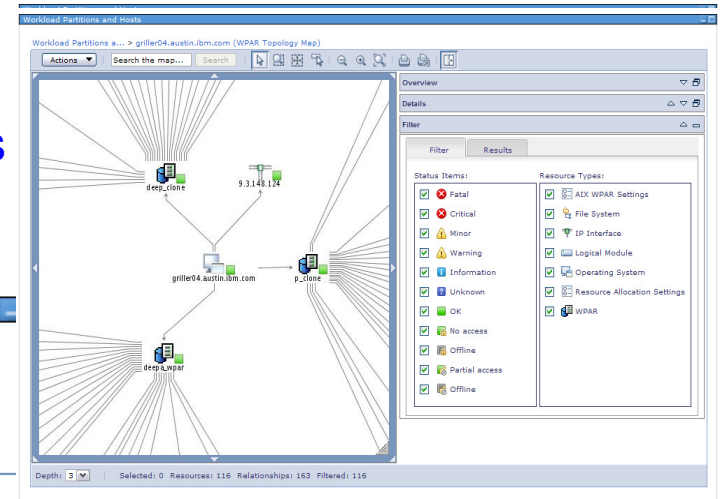
# WPAR Live Application Mobility with SAN Devices





# WPAR Manager V2.1

- Fully integrated as an IBM Systems Director plug-in
- Support for Live Application Mobility with SAN Devices
- Support for RootVG devices



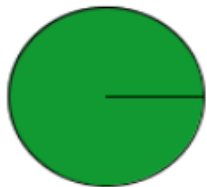
WPARSummary

## IBM PowerVM Workload Partitions Manager for AIX

Create, manage and relocate workload partitions (WPARs). Discover systems capable of supporting WPARs.

### Workload Partitions Resource Status

10 Workload partitions and their problem severity



- 0 Critical
- 0 Warning
- 0 Information
- 10 OK

**Common views**

- View WPAR capable sy
- View Power Systems S
- Health summary

### Manage Resources

10 Workload partitions (WPARs)  
 10 System WPARs  
 0 Application WPARs

**Common tasks**

- Create workload partiti
- Relocate workload part
- View workload partitior
- Application configuratic
- Set up WPAR Manager

Workload Partitions and Hosts (View Members)

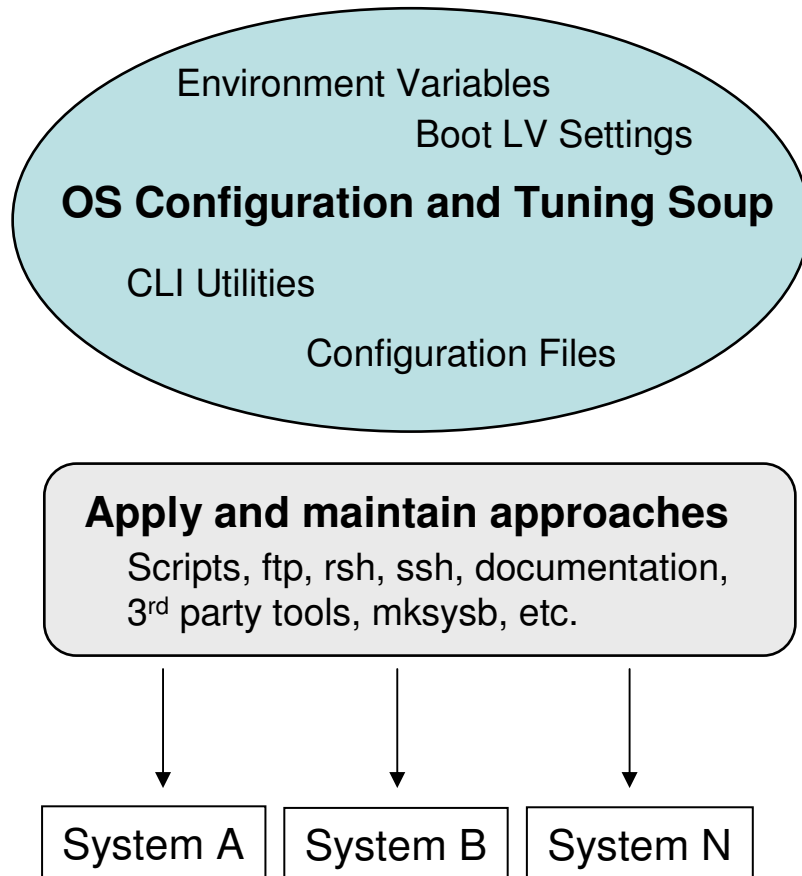
Select	Name	Access	CPU Utilization	Memory Utilization
<input type="checkbox"/>	griller04.austin.ibm.com	OK	...	...
<input type="checkbox"/>	deep_clone	OK	...	...
<input type="checkbox"/>	deepa_wpar	OK	...	...
<input type="checkbox"/>	p_clone	OK	...	...
<input type="checkbox"/>	griller07.austin.ibm.com	OK	...	...
<input type="checkbox"/>	lithium.austin.ibm.com	OK	...	...
<input type="checkbox"/>	better	OK	...	...
<input type="checkbox"/>	bet	OK	...	...
<input type="checkbox"/>	pressure	OK	...	...
<input type="checkbox"/>	syno1	Unknown	...	...
<input type="checkbox"/>	synonyms	Unknown	...	...
<input type="checkbox"/>	efs_exclude	Offline	...	...

Page 1 of 1 | Selected: 0 Total: 13 Filtered: 13

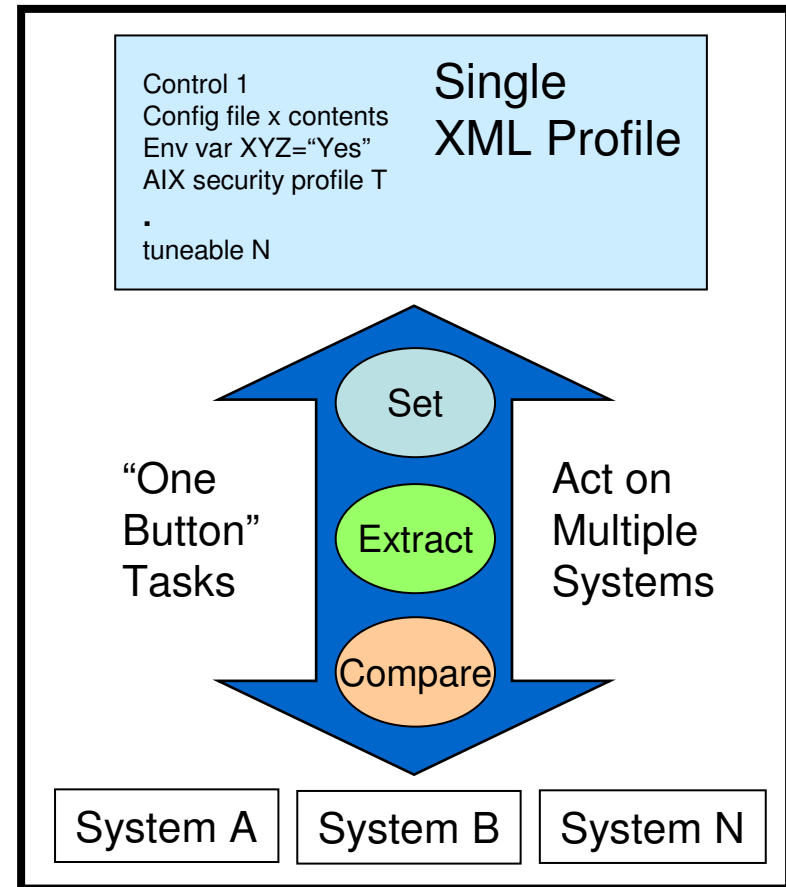
# AIX Runtime Expert:

*Providing simplified discovery, application, update, and verification of O/S runtime properties across one or more systems*

## Old Way



## New Way



*THE NEW POWER EQUATION*

Plans subject to change

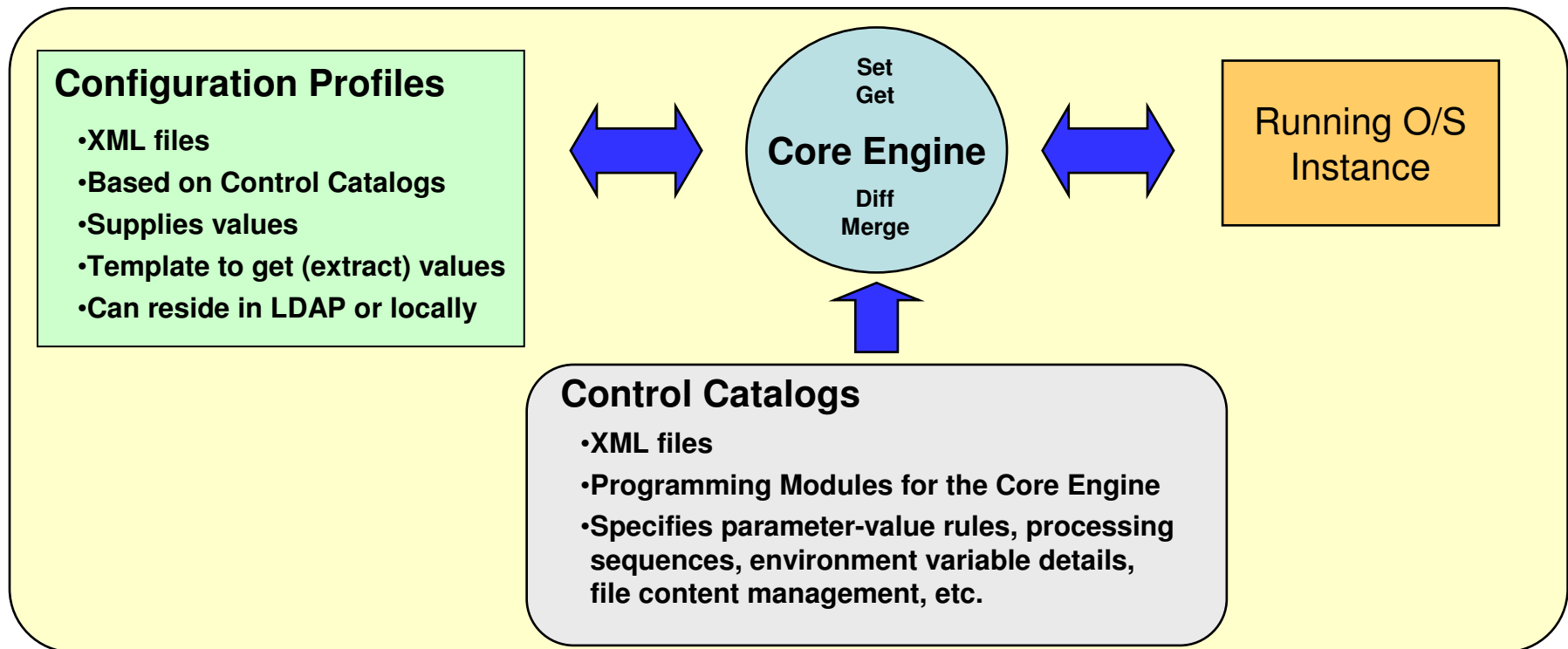
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# AIX Runtime Expert - Architecture

*Extensible architecture with a programmable core engine*

## Base Command Line Utilities

- artexget** – extract runtime attributes from a running system based on a provided configuration profile
- artexset** – set values on a system from a profile to take effect immediately or after system restart
- artexdiff** – compare values between a running system and a profile, or compare between two profiles
- artexmerge** – combine the contents of two or more profiles into a single profile
- artexlist** – list configuration profiles that exist on a system



# AIX Runtime Expert – Configuration Elements

acctctl	dumpctrl	nis	namerslv	tsd
aolog	errdaemon	probevue	nfs	trustchk
authzcfg	ewlm	tcp_nw	shconf	vmo
authent	ffdc	udp_nw	schedo	aix.secexpert
chcons	filter	ip_nw	privcmd	mkuser.defuser
Chdev.sys0	ioo	arp_nw	privdev	chuser
chlicense	krecovery	stream	privfile	login
chservices	lvmo	raso	smtctl	chsubserver
chsys	nfso	role	syscorepath	gen.param
class	mktcpip	ruser	traces	etc.env
sysdumpdev	file.data	trcctl	restricted	misc.other
		probeview		

Plans subject to change

## Concurrent Maintenance Enhancements

- LVM
  - *Can grow LUNs in rootvg.*
    - *For example, you can now grow the size of VIOS LUNs while keeping them online*
    - *Change the Logical Volume name while leaving the LV online*
  
- NFS
  - *Added support for remount on the NFS client. The following properties can now be changed without having to first unmount the NFS filesystem:*
    - cdirmax, acdirmin, acregmax, acregmin, actimeo, fastattr, grpuid, hard, intr, noac, nocto, nodev, nointr, nosuid, posix, retrans, ro, rsize, rw, secure, sec, soft, timeo, wsize, biods, extraattr, nodircache, prefer, otwattr, maxgroups, proto*

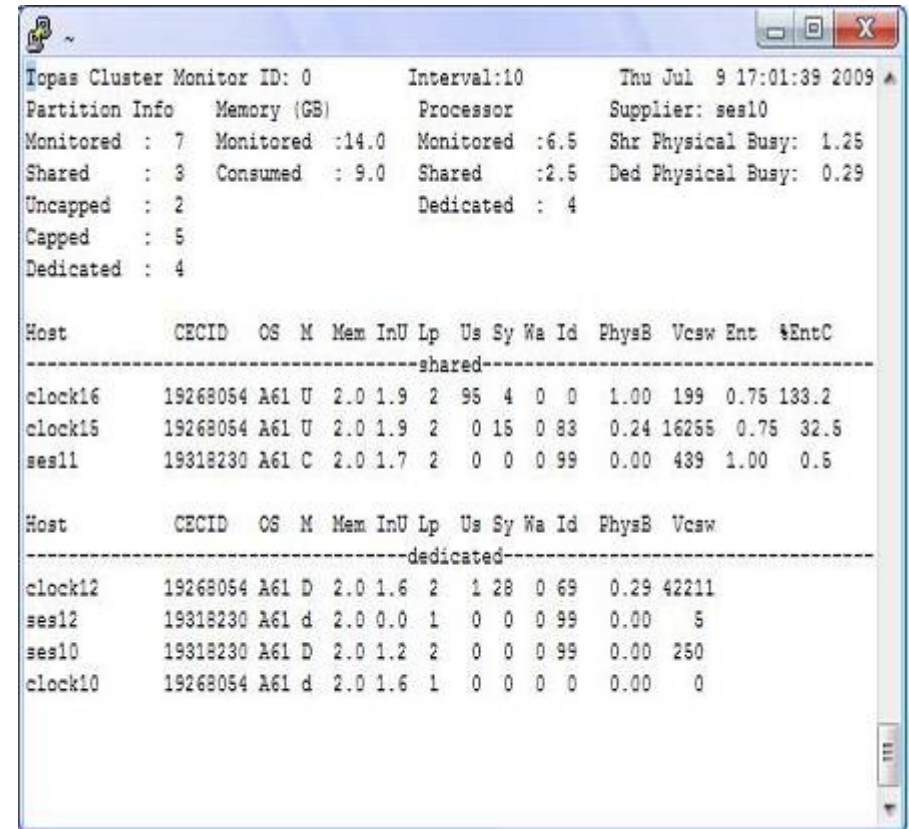
# Cluster Aware Performance Utilities

## ■ Benefits

- *Group resource utilization*
- *Monitor multiple partitions in a single screen*

## ■ Features

- *AIX topas utility is made cluster aware. Cluster aggregated utilization along with individual partition statistics are displayed*
  - *Recognizes PowerHA clusters automatically*
  - *User-defined group of hosts can be monitored as a cluster*
  - *Similar look & feel of CEC Monitor Panel*
- *AIX topasrec utility is made cluster aware*
  - *Records Utilization aggregated at Cluster Level along with individual partitions utilization*
- *AIX topasout utility is used to process the cluster recording file & generate reports*
  - *Reports that can be post processed by nmon analyzer*



Topas Cluster Monitor ID: 0 Interval:10 Thu Jul 9 17:01:39 2009

Partition Info Memory (GB) Processor Supplier: ses10

Monitored : 7 Monitored :14.0 Monitored :6.5 Shr Physical Busy: 1.25

Shared : 3 Consumed : 9.0 Shared :2.5 Ded Physical Busy: 0.29

Uncapped : 2 Dedicated : 4

Capped : 5

Dedicated : 4

Host	CECID	OS	M	Mem	InU	Lp	Us	Sy	Wa	Id	PhysB	Vcsw	Ent	EntC
-----shared-----														
clock16	19268054	A61	U	2.0	1.9	2	95	4	0	0	1.00	199	0.75	133.2
clock15	19268054	A61	U	2.0	1.9	2	0	15	0	83	0.24	16255	0.75	32.5
ses11	19318230	A61	C	2.0	1.7	2	0	0	0	99	0.00	439	1.00	0.5
-----dedicated-----														
clock12	19268054	A61	D	2.0	1.6	2	1	28	0	69	0.29	42211		
ses12	19318230	A61	d	2.0	0.0	1	0	0	0	99	0.00	5		
ses10	19318230	A61	D	2.0	1.2	2	0	0	0	99	0.00	250		
clock10	19268054	A61	d	2.0	1.6	1	0	0	0	0	0.00	0		

## What is “Compliance”?

- Businesses operate under many regulatory controls
  - Sarbanes-Oxley, Payment Card Industry, HIPPA, Department of Defense STIG
- Most regulatory controls have specific requirements around information technology
  - For example, password length, disabling remote shell, and enabling auditing
- The regulator standards are specified in lengthy, complex documents
  - 158 pages for the Department of Defense STIG for UNIX
  - 74 pages for Payment Card Industry DSS
  - 214 pages for CobiT

*In the context of Information Technology,*

**Compliance means implementing the recommendations for a particular standard and being able to prove that the recommended configuration is in effect**



## Compliance Challenges

Companies face increased pressure to achieve and maintain compliance – all with limited resources, time and budget.

- Analysts have estimated that North American companies are spending:
  - **\$29.9B on regulatory compliance**
  - **\$8.8B on technology solutions**
- Businesses are looking for compliance automation solutions that provide:
  - **Configuration in large scale enterprises**
  - **Single solution for consolidating and automating multiple compliance regulations and standards.**
  - **Audit reporting to satisfy disparate compliance organizations**

*Technology solutions provide automation to enable efficiency and improve IT governance*

*THE NEW POWER EQUATION*



- **43% of CFOs think that improving governance, controls and risk management is their top challenge.**

64% of CIOs feel that the most significant challenges facing IT organizations are security, compliance and data protection

*CFO Survey: Current state & future direction, IBM Business Consulting Services*

**IBM Service Management Market Needs Study, March 2006**



**Introducing:**

## **IBM Compliance Expert Express Edition**

***IBM Compliance Expert Express Edition is designed to simplify IT compliance***

- Features:
  - Easily set dozens of AIX security configuration settings to match compliance standards
  - Includes profiles with recommended system settings for:
    - The Payment Card Industry Data Security Standard Version 2
    - The US Department of Defense Security Technical Implementation Guide for UNIX
  - Simple command line interface minimizes training and administrative workload
  - Reports that show whether the system configuration matches the compliance standard
  - Support for AIX 6 and AIX V5.3 on current Technology Levels
- Potential Benefits:
  - Designed to simplify the effort of maintaining system configuration for compliance
  - Preconfigured profiles facilitate standardization and easy implementation and potentially reduce the amount of administrative effort to interpret standards
  - Compliance reports may be used to provide a basis for audit activity

**Note:** *Almost all compliance standards include procedural elements that are outside the scope of system configuration settings. The IBM Compliance Expert Express Edition can potentially simplify compliance efforts, but it cannot, by itself, enforce compliance.*

# PCI profile example content

## Payment Card Industry Data Security Standard V2

Rule	Description	PCI Guide
Crontab permissions	Verifies that root cron jobs are owned and writeable only by root.	Section 2.2.4
Disable fingerd in /etc/inetd.conf	Comments out the entry for fingerd daemon from /etc/inetd.conf	Section 1.1.5
Disable insecure commands	rlogin, tftp, rcp, rsh	Section 1.1.5b, Section 2.3
Disable X-Server access	Not useful. Runs xhost - to (temporarily) disable X-Server access for root	Section 2.2.4
Enable uucpd in /etc/inetd.conf	Comments out the entry for uucpd daemon in /etc/inetd.conf	Section 1.1.5
Guard host against port scans	shuns vulnerable ports for 5 mins to guard the host against port scans	Section 1.1.5(a,b) and Section 1.2.1(a,b)
Network Allowed Ports	Allows inbound/outbound traffic for only a range or set of ports, and denies all other port traffic	Section 1.2.1
Network option clean_partial_conns	Avoid SYN attacks clean_partial_conns=1	Section 1.3.6
Remove dot from non-root path	Remove current directory from \$PATH for non-root users in the files: ~/.profile, ~/.kshrc, ~/.cshrc, ~/.login	Section 2.2.4
Remove guest account	Remove guest account & files (/home/guest)	Section 2.2.4
Root Password Integrity Check	Check roots password against english dictionary	Section 8 Requirements
security.login.disable	Defines the number of unsuccessful login attempts allowed before the port is locked.	8.5.13 Limit repeated access attempts by locking out the user ID after not more than six attempts.
security.login.retries	Sets the number of failed login attempts to a non-root account before it is locked.	8.5.13 Limit repeated access attempts by locking out the user ID after not more than six attempts.
security.password.histsize	Specifies the number of previous passwords that user cannot reuse	Section 8.5.12 Do not allow an individual to submit a new password that is the same as any of the last 4 passwords he or she has used.
security.password.maxage	Specifies the maximum number of weeks before a password can be changed	Section 8.5.9 Change user passwords at least every 90 days.
security.validate.grpck	Verifies the correctness of group definitions. (grpck -y ALL; grpck -n ALL)	Section 8.2. In addition to assigning a unique ID, employ atleast one of the following methods to authenticate all users. Password or passphrase , Two-factor authentication
System Idle time in minutes	If the system has been idle for some time, require the user to re-enter the password to reactivate the terminal.	Section 8.5.15 If a session has been idle for more than 15 minutes, require the user to reenter the password to reactivate the terminal

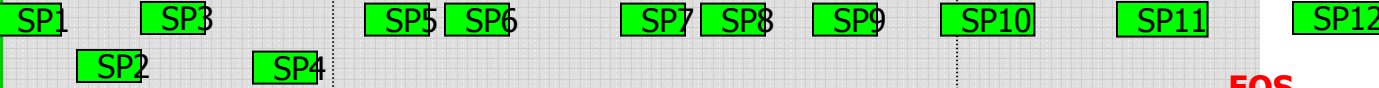
# AIX 5.3

We are here

2008

2009  
12/17

2010



TL6  
June

**EOS  
5/31/09**

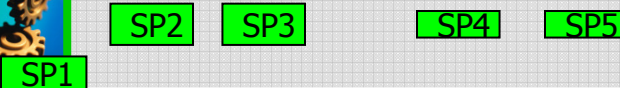


TL7  
Nov

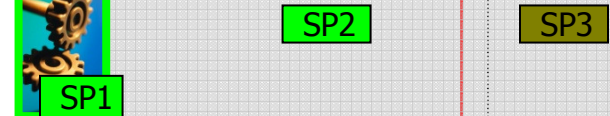
**EOS  
11/3/09**



TL8  
Apr



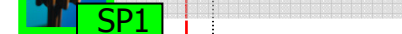
TL9  
5.3Q  
11/14



TL10  
5.3S  
5/15/09



Technology Levels



TL 11  
Oct 5.3V  
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- Service Packs
- Planned Service Packs

Plans subject to change

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We are here

# AIX 6

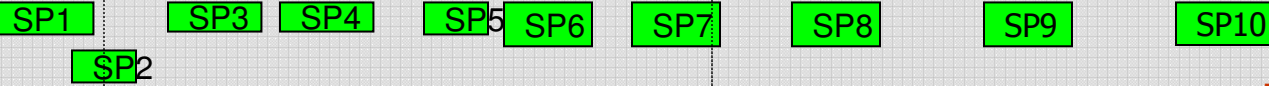
2008

2009

2010



TL 0  
Nov



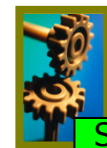
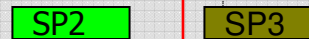
TL 1  
May



TL 2  
6.1D  
Nov



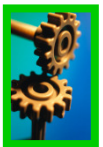
TL 3  
6.1F  
5/15



TL 4  
6.1H  
Oct



EOS  
11/30/09



Technology Levels

Service Packs

Planned Service Packs

Plans subject to change

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- ✓ Mainframe-inspired technologies
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6



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