



IBM eServerJ iSeriesJ

Enterprise Datacenter Management with iSeries and OS/400 Version 5

Our Goal: Self-Managing Operational Interfaces

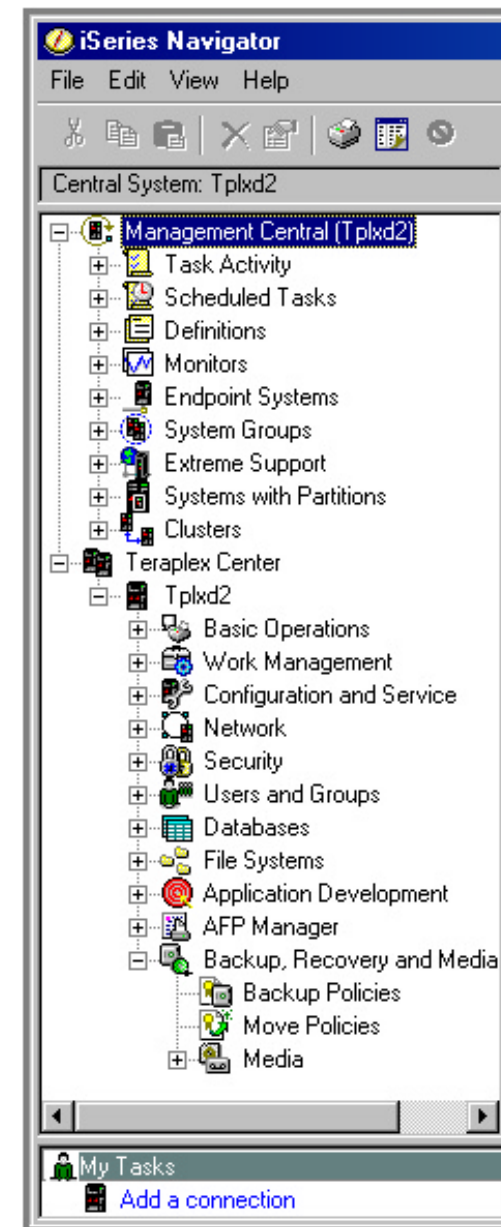
The screenshot displays the IBM Performance Tools for iSeries interface. The main window shows a tree view of the system hierarchy, including Management Central (Tplx01), Task Activity, Scheduled Tasks, Definitions, Monitors, Endpoint Systems, System Groups, Extreme Support, Systems with Partitions, Clusters, Regatta, and Tplx01. The Tplx01 node is expanded, showing sub-nodes like Basic Operations, Work Management, Configuration and Service, Network, Security, Users and Groups, Databases, File Systems, Application Development, AFP Manager, and Backup, Recovery and Media Services. A table on the right lists the partitions:

Name	Description
Tplx01	Primary Partition
Tplx02	Secondary Partition
Tplx03	Secondary Partition
Tplx04	Secondary Partition 3

Multiple overlapping windows are visible in the background, showing various performance metrics and configuration options. A light blue box on the right contains the text: "Multiple navigation paths replaced with a single Interface".

Version 5 Highlights

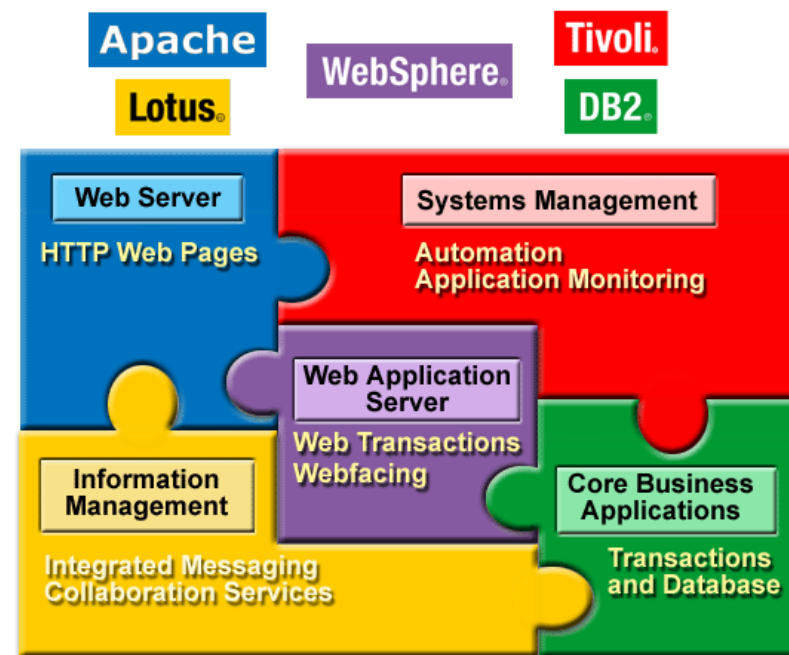
- Work Management and Performance Monitors
- Dynamic LPAR configuration and Management
- On / Off Capacity Upgrade on Demand
- Database Navigator
- Graphical Storage Virtualization
- Simple Cluster Configuration
- Integrated xSeries™ Management



2003: Enterprise Edition Software Integration

- IBM e-business software
 - ▶ Choice of WebSphere Application Server
 - ▶ Lotus Sametime
 - ▶ QuickPlace
 - ▶ DB2 Query Mgr and SQL Toolkit
 - ▶ DB2 SMP
 - ▶ DataPropagator for iSeries
 - ▶ DB2 Extenders -- XML and Text

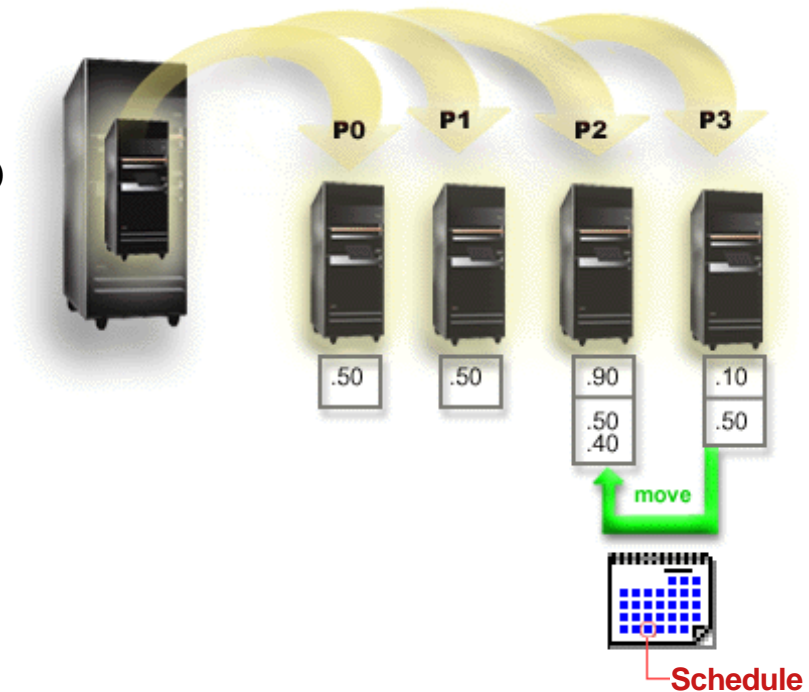
- IBM Datacenter Management Tools
 - ▶ Performance Tools
 - ▶ HA Cluster Resources
 - ▶ Media and Storage Extensions
 - ▶ Backup Recovery and Media Services
 - ▶ Tivoli Monitoring -- PAC for Web
 - ▶ Tivoli Storage Manager Extended Edition



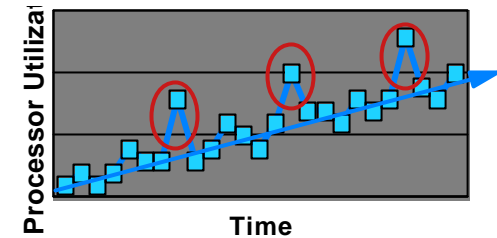
NOTE: Edition content shown here are for i825, i870, i890.

Mainframe Class Logical Partitioning

- Dynamic Logical Partitions
 - ▶ Up to 32 OS/400 and Linux LPARs
 - ▶ Up to 10 partitions on a Uni-processor
 - ▶ Dynamic processor, memory, interactive, I/O movement
- iSeries Navigator management
- Virtual Ethernet
- LPAR validation tool for configuration
- Over 10,000 active LPARs deployed
- Sub-capacity n-way software pricing
 - ▶ WebSphere Commerce Suite and WebSphere Application Server



On / Off Capacity Upgrade on Demand

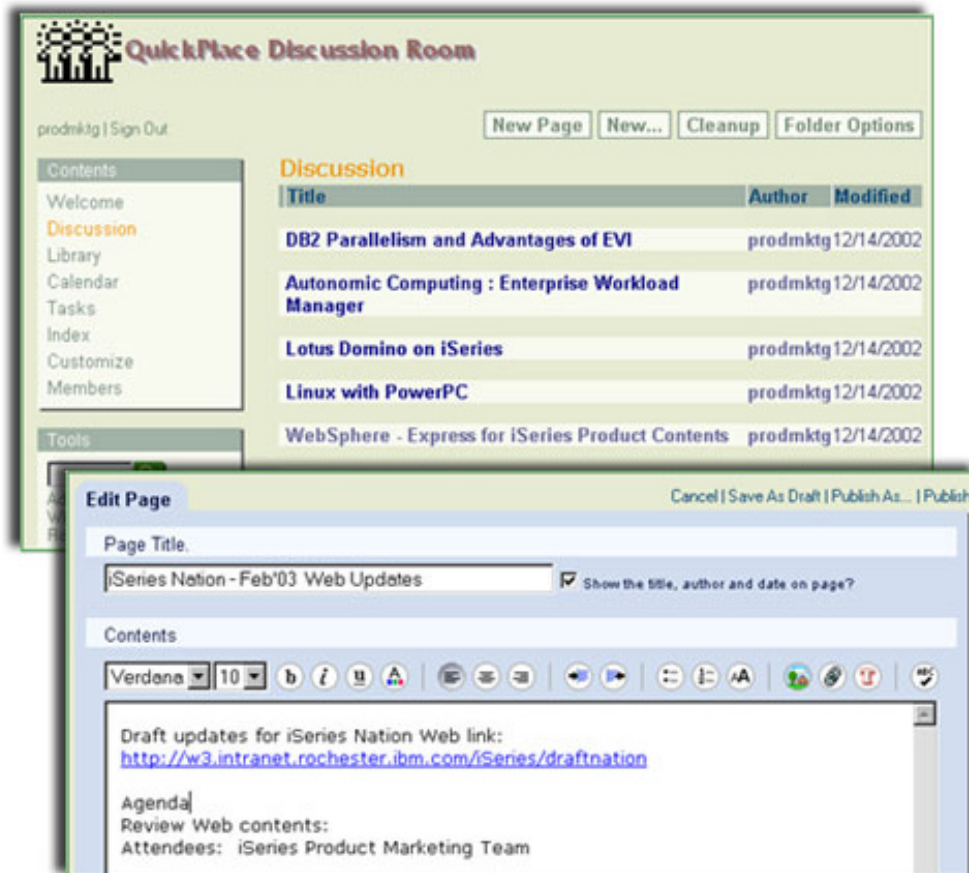


- Available on i825, i870 and i890
 - ▶ Introducing CUoD temporary ... turn it on / off
 - ▶ Simplified administration and ordering
 - CUoD data (VPD) is no longer needed to fulfill orders for permanent activations

- Simple and easy to use as 1 - 2 - 3
 - ▶ permanent capacity for planned growth
 - Order an amount of permanent capacity (POD Activation Features)
 - ▶ temporary capacity for immediate activation and business peaks
 - Up to 14 processor days included with i825, i870 and i890
 - Steps
 1. Enable your server for temporary capacity (TCOD Enablement Feature)
 2. Use temporary capacity when you need it ... it's immediate
 3. Pay for the temporary capacity you use at the end of each quarter (TCOD Billing Features)

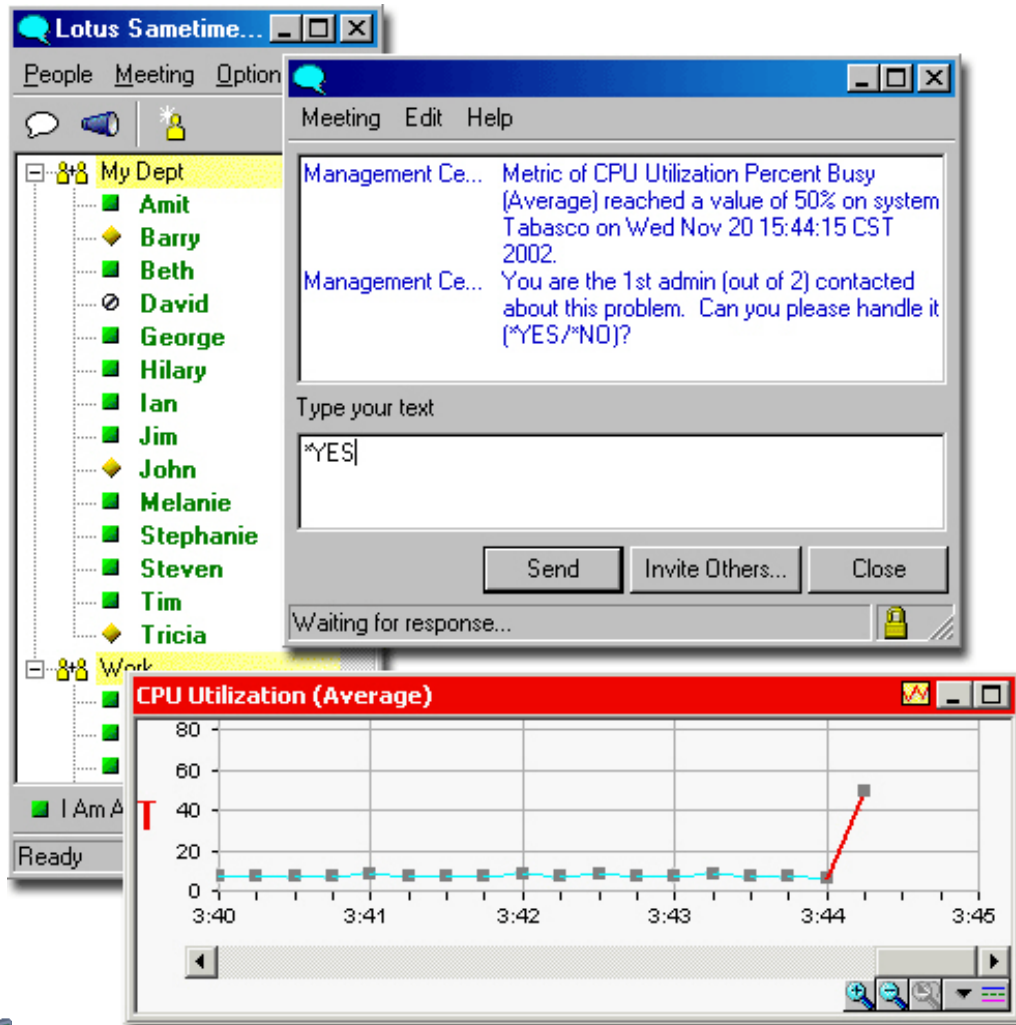
* refers to new Model 890 processor features 890-2497 and 890-2498

IBM Lotus QuickPlace™ & Sametime



- Real-time instant messaging to get answers and make decisions
- Web-based team workspaces to store collective knowledge and manage projects
- Online Web conferences to share information with colleagues, suppliers and customers
- Awareness to quickly locate available skills and resources
- Integration with Notes, Microsoft Outlook®, and WebSphere

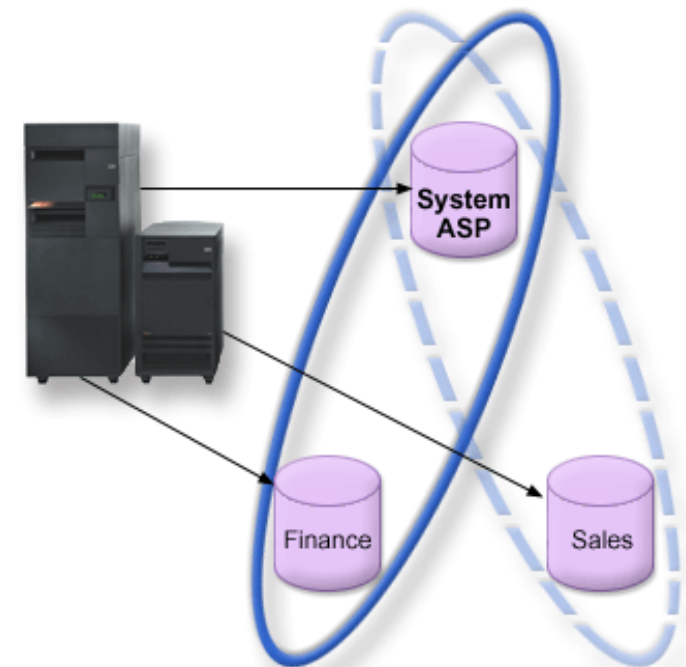
Lotus Sametime & iSeries Navigator



- Integrates OS/400 monitoring with Sametime instant messaging
- Improved operator productivity with instant message response to system events
- Assures response with autonomic event delegation through hierarchy of designated operators

iSeries Database Management with IASP

- Multiple name spaces to achieve data consolidation, data management
 - ▶ Each IASP (disk pool) is a database
 - ▶ Create duplicate library names within same system
- Flexible implementation
 - ▶ Cluster architecture for switching data
 - ▶ Standalone IASP for taking data off-line for usage later
- High availability management
 - ▶ Data available through second system during primary system outages
 - ▶ Data management granularity (save and restore)
 - ▶ Better problem isolation, reclaim storage by IASP



Automatic Index Advisor

- Extensive graphical management of integrated UDB DB2 on iSeries
- Easily add and remove indexes, triggers, key constraints, referential constraints, check constraints and stored procedures
- SQL Performance Monitor and Index Advisor
- Generate and run SQL scripts

Statistics and Index Advisor - Asystem

Statistics Advisor | Index Advisor

The following indexes are being recommended for creation:

Create	Table Name	Library	Index Type	Columns
<input checked="" type="checkbox"/>	ACT3	CORPDATA	Binary Radix	ACTKWD

Examples

```
SELECT AL4.SUPPLIER, AL2.YEAR, AL5.MON
FROM STAR1G.ITEM_FACT AL2, STAR1G.SL
WHERE (AL4.SUPPKEY=AL2.SUPPKEY AND
AND AL2.RETURNFLAG=? AND AL2.YEAR=?
AL2.YEAR, AL5.MONTHNAME ORDER BY 4 C
```

Visual Explain Representation

- Dynamic Bitmap
- Temporary Index
- Table Scan, Parallel
- Nested Loop Join
- Sort
- Index Scan - Key Positioning, Parallel
- Index Grouping

Messages

OK Help ?




Enterprise Identity Mapping

- Managing the Requirements for Single Sign-on
 - ▶ Reduces threat of password theft
 - ▶ Reduces user identity management across the network
 - ▶ Simplifies authentication process for users

- Environments supported
 - ▶ iSeries Access
 - ▶ Telnet Server
 - ▶ iSeries NetServer
 - ▶ QFileSrv.400
 - ▶ DRDA

Enterprise Identity Mapping Configuration Wizard - Welcome




Welcome to the Enterprise Identity Mapping (EIM) Configuration Wizard. This wizard will help you to configure your system to participate in an EIM domain. You can configure your system to join an existing domain or you can create and configure a new EIM domain with your Directory server as the domain controller.

How do you want to configure EIM on your system?

Join an existing domain
 Create and join a new domain

Click Cancel at any time to cancel the wizard.

Network Authentication Service Configuration - Welcome



Welcome to the Network Authentication Service (Kerberos) configuration wizard. Kerberos is designed to provide strong authentication for client/server applications by using secret-key cryptography. This wizard will take you through the steps needed to configure Kerberos and allow you to utilize Network Authentication Service on your system.

- [-] Network
 - [+] TCP/IP Configuration
 - [+] Remote Access Services
 - [+] Servers
 - [+] IP Policies
 - [+] Windows Administration
 - [-] Enterprise Identity Mapping
 - [-] Configuration
 - [-] Domain Management
 - [-] Internet
 - [-] IBM Network Stations
- [-] Security
 - [-] Authorization Lists
 - [-] Policies
 - [-] Network Authentication Service
 - [-] Realms



Self-Optimizing Disk Management

- Create, manage and monitor storage virtualization on iSeries
 - ▶ Secured access
 - ▶ Configuration, protection, availability, recovery and maintenance
- Manage Windows and Linux storage virtualization
- Self-guided wizards

Disk Unit	Status	Capacity	Free Space	Reserved
Dd001	Active	13.2 GB	11.8 GB	1.0 MB
Dd002	Active	15.4 GB	13.8 GB	1.0 MB
Dd003	Active	17.5 GB	15.8 GB	1.0 MB
Dd004	Active	15.4 GB	13.8 GB	1.0 MB
Dd005	Active	13.2 GB	11.8 GB	1.0 MB



Backup Recovery and Media Services for iSeries

- Self guided easy to use graphical wizards iSeries Navigator plug-in for
 - ▶ Backup policies
 - ▶ Media Library
 - ▶ Media Move Policies
- Lotus Notes server point-in-time recovery
- Supports
 - ▶ TCP/IP support for BRMS network
 - ▶ Independent disk pools
 - ▶ Shutdown and restart of IXS/IXA
- Easy to learn, quick deployment



Tivoli Storage Manager Extended Edition

- Delivers integrated data protection for client backup and archive
- Centralized management, comprehensive policy based automation
- Complements Backup Recovery and Media Services for iSeries
- Included with i825, i870, i890 Enterprise Package
 - ▶ License for server and 5 clients

BACKUP

Backup and Restore copies of data that are frequently updated.



Backup

Copies files to server storage to prevent loss of data.



Restore

Restores saved files from server storage.

ARCHIVE

Archive and Retrieve copies of data that are preserved for a specific period of time.



Archive

Creates an archive copy in long-term storage.

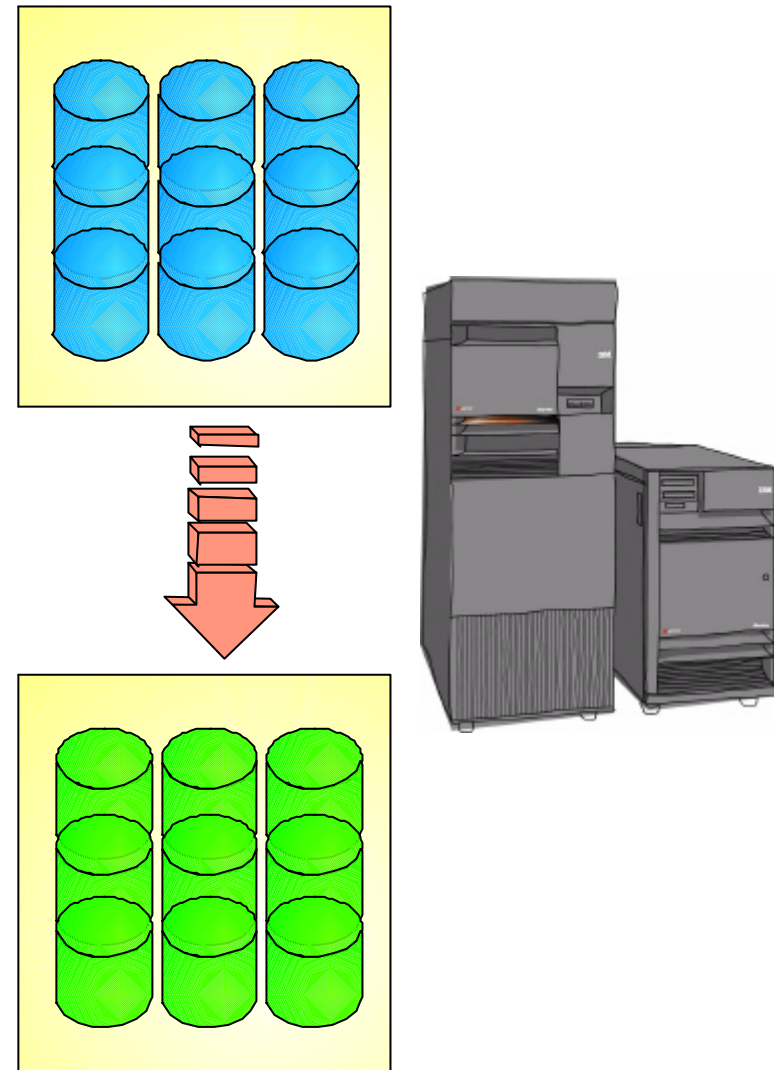


Retrieve

Retrieves an archive copy from long-term storage.

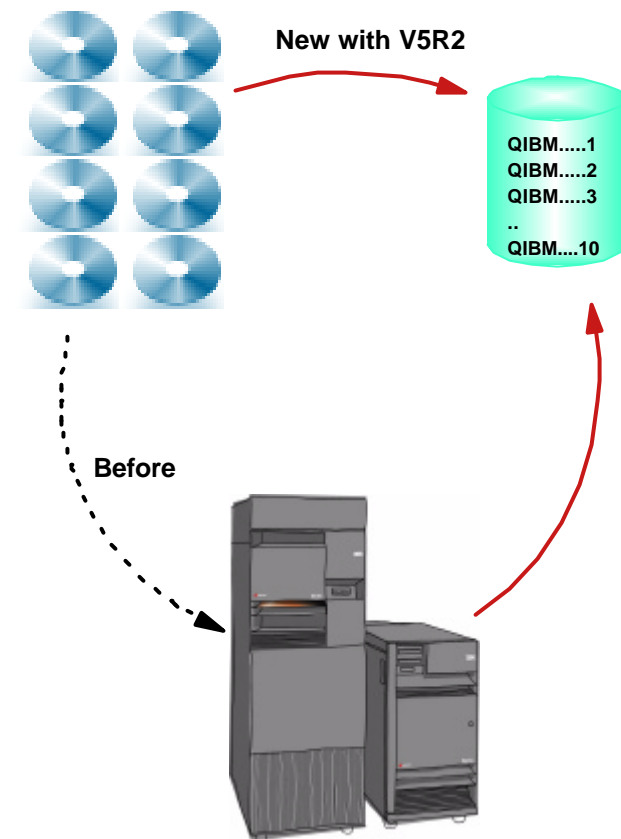
Disk Migration While Active

- Concurrent data migration
 - ▶ Enabled through Start ASP Balance (STRASPBAL) command
 - ▶ Majority of data migrated to new disks during normal production
- Significantly reduces downtime
 - ▶ Restricted system state only required to remove disks from ASP configuration
- Enables easier transition to new disk technology
 - ▶ Plan ahead for migration project
 - ▶ Install OS/400 V5R2
 - ▶ Add new disk units
 - ▶ Mark disk units to be removed
 - ▶ Activate data migration



Virtual Media Install

- Automate OS/400 and LP release load through virtual media
 - ▶ Isolate media errors, and user intervention
 - ▶ Improves system availability
- Enabled with OS/400 V5R2
 - ▶ Extended to support V5R1 through PTFs
- Easy configuration steps
 - ▶ Create a virtual image catalog device
 - ▶ Build image catalog to transfer IBM software from distribution media to a user defined IFS directory
 - ▶ Restart system to load from virtual device
 - ▶ Point licensed program installation or PWRDWNSYS command to IFS path



High Performance Direct Attach Storage Options

- Achieve up to 3X throughput improvements with enhanced PCI-X I/O options
- Improve performance with IBM's 3 disk optimized RAID-5
- New 35GB and 70GB 15K RPM disk drives
- New PCI-X I/O towers with rack mount options



New PCI-X Ultra RAID Disk Controllers	Write-Cache (Max)	Min / Max drives per RAID set
High performance - 2757	757 MB	3 / 18
Low cost alternative for SME servers - 2782	40 MB	3 / 12

iSeries and SAN Options with V5R2

Switch fabric expands options across multiple initiators and multiple targets

- Enabled by IBM 2109 switch

Multiple SAN targets can be connected through a single iSeries fibre channel adapter

- Optimizes number of fibre channel adapters
- Zoning recommended for performance

FC adapter for Linux partition

Switched disk support

