



## ***Enterprise IT Management Made Simple***

IBM ^ iSeries



### *i890 and OS/400 V5R2 Announcements*



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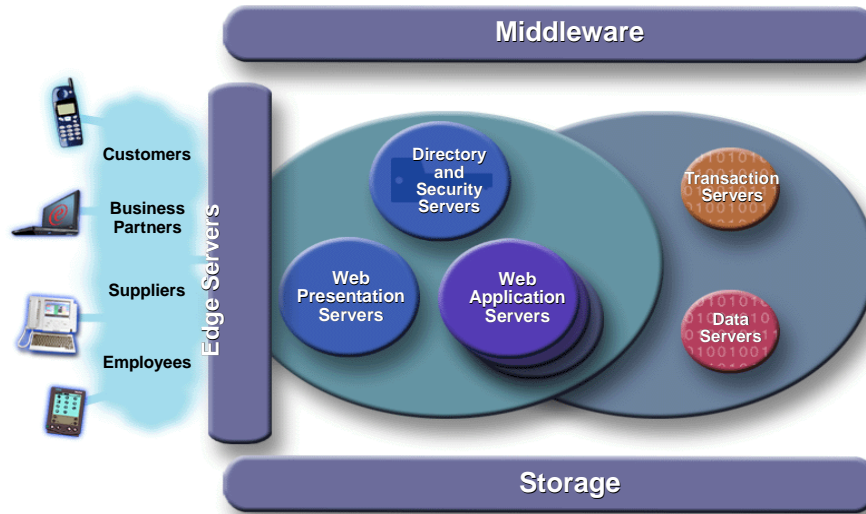
### ***iSeriesJ Announcement at A Glance***

- **i890 32-way with POWER4 provides unmatched iSeries growth**
- **Enterprise IT Management Made Simple with OS/400<sup>7</sup> V5R2**
- **Delivering outstanding flexibility for adding new workloads**



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## Enterprise IT Management Challenge



- Multiple platforms, optimized for specific workloads
- Complex management and skills requirements drive high costs



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## Innovative Technology



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## IBM @server POWER Processor Roadmap

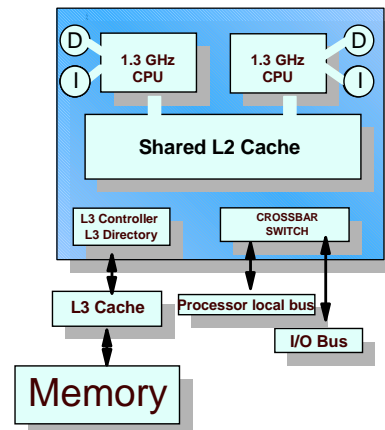


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## i890 with 32-way POWER4 Processor

### IBM POWER4 delivers unmatched iSeries growth on i890 32-way\*

- 37,400 CPW, up to 1.85 x growth over i840
- Processor features include Capacity Upgrade on Demand
- 1.3 GHz POWER4 microprocessors
  - 174 million transistors on a chip
- Up to 534 MB of L2/L3 cache
- Doubled memory and I/O capacity
  - Up to 256 GB memory
  - Up to 72 Terabytes disk
  - Up to 32 IXA




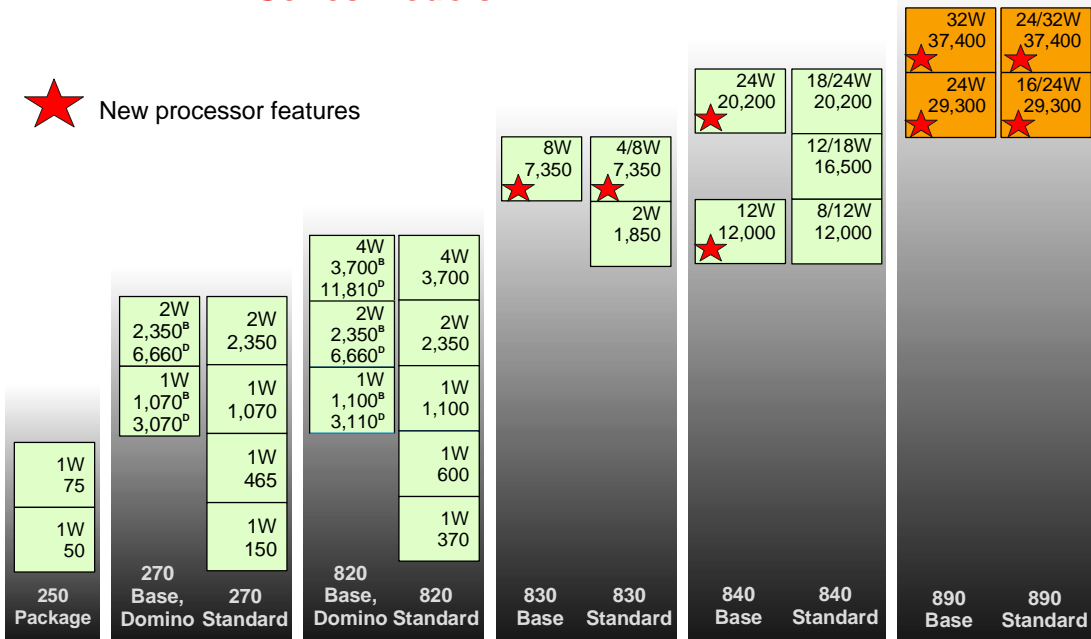
### Common IBM eServer processor roadmap for iSeries and pSeriesJ

\* Requires OS/400 V5R2



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 New processor features



**Notes:**  
 1. Processor Commercial Processor Workload (CPW) values are used. CPW is a relative measure of performance of iSeries processors. Performance in customer environments may vary. The value is measured on maximum configurations.  
 2. Model 830, 840 Base Processor Features and Model 830 4/8 way do not support V4R5.

# of Processors Processor CPW Domino MCU	Runs V5R1 or V5R2
# of Processors Processor CPW	Requires V5R2



## Flexible Storage Options with SAN Switch Fabric

Switch fabric expands options across multiple initiators and multiple targets

- Enabled by IBM 2109 switch

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

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

2 Gbps/sec SAN fabric support

- Existing iSeries Fibre Channel adapters can benefit from new high performance SAN fabric



## **OS/400 Version 5 Release 2**



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## **Enterprise IT Management Made Simple**

### **OS/400 V5R2 Highlights**

#### **Performance at your fingertips**

- Flexible Capacity Upgrade on Demand now standard on i830 4-way and above\*
- Dynamic logical partitioning for award-winning 64-bit Linux<sup>7</sup>
- Intuitive iSeries Navigator workload management tools

#### **Adaptive storage virtualization for high availability**

- Mainframe-class availability with switched disk cluster management
- Self-optimizing, multiple IBM DB2<sup>7</sup> UDB images for business unit consolidation
- Extensive Windows server management now supports Microsoft<sup>7</sup> Cluster Server

#### **Flexible, secure management of e-business infrastructure**

- Industry's first eLiza Enterprise Identity Mapping enables true single signon
- High performance Apache Web serving with secure sockets and caching accelerators
- Simple and pervasive operations with wireless-optimized Web-ready micro-drivers

\*Capacity Upgrade on Demand also available on i830 and i840 with V5R1



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## Performance at Your Fingertips



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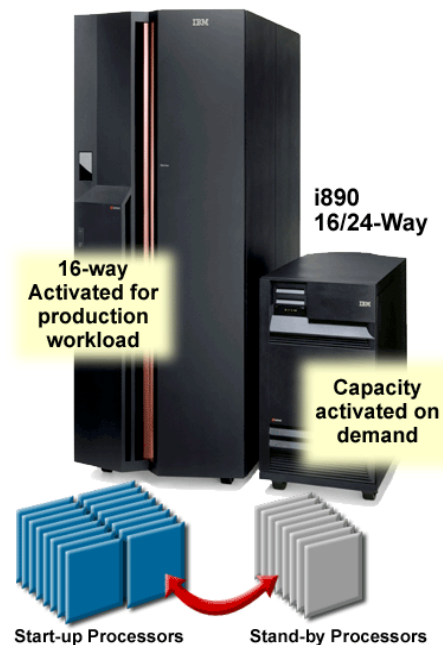
## iSeries Capacity Advantage

### Flexible capacity management without interrupting business

- 33% of i840 customers exploited Capacity Upgrade on Demand in 2001

### Capacity Upgrade on Demand solutions for i830\*, i840\* and i890

- Dynamic processor activation of stand-by capacity
- No system or application restart required



\*Available with V5R1 and V5R2



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## Mainframe Class Logical Partitioning

### V5R2 provides additional LPAR management with iSeries Navigator

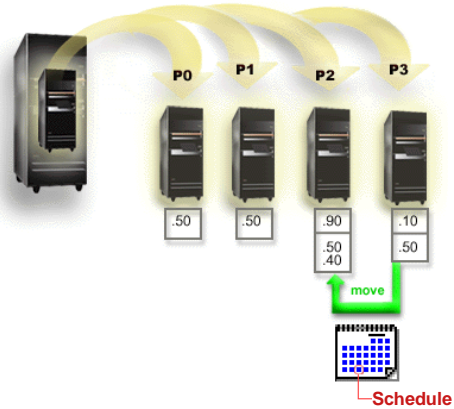
- Sophisticated, Windows-based graphical management tool
- Multi-partition management

### Reduce costs via mixed workload consolidation and IT resource optimization

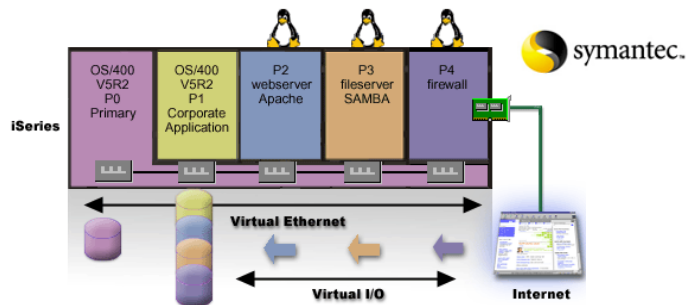
- 44% of i840 customers exploiting LPAR

### Sub-capacity pricing on n-way servers

- WebSphere™ Commerce Suite
- WebSphere Application Server



## Server Consolidation with Linux

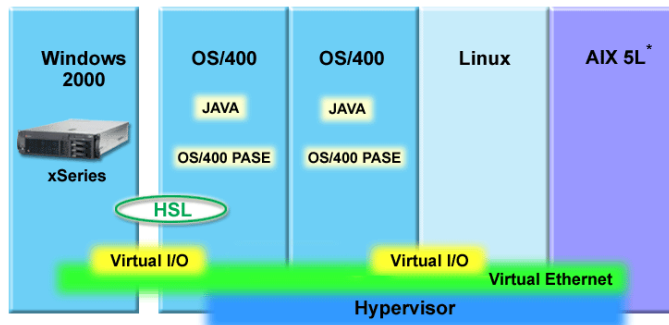


- Dynamic virtual processor allocation for Linux partitions
- iSeries Linux now supports 64-bit kernel
- Symantec Enterprise Firewall planned for iSeries
- IBM DB2 Universal Database and WebSphere Application Server\*

\*Statement of Direction: This presentation contains IBM plans and directions. Such plans are subject to change without notice.



# Enterprise IT Management Made Simple



\* Statement of Direction

Lowering e-infrastructure management costs across multiple environments

V5R2 OS/400 PASE now provides integrated runtime for AIX<sup>7</sup> 5L applications

Project eLiza will extend to future management of AIX 5L in iSeries partitions\*

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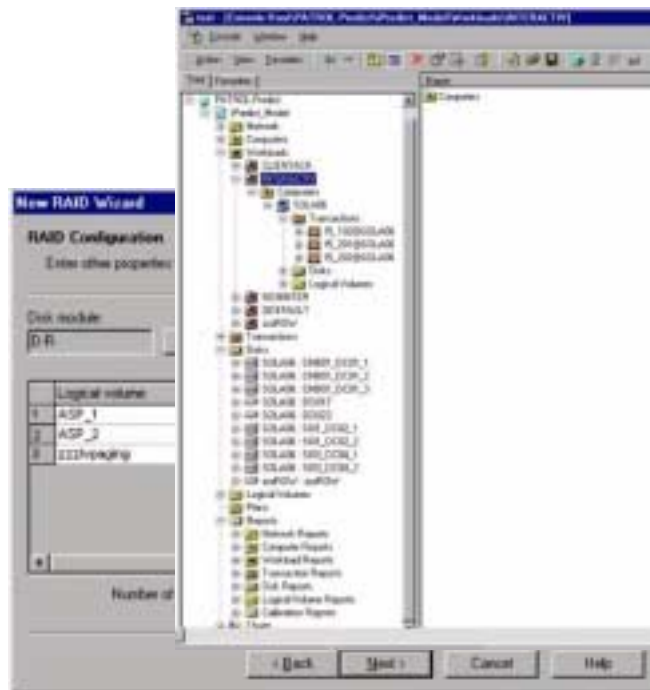
# BMC PATROL Predict for iSeries

PATROL Predict provides powerful graphical analysis tool for Capacity Planning

Collects, measures and projects future performance requirements

- Uses OS/400 data collection

Comprehensive graphical analysis, "what-if" modeling



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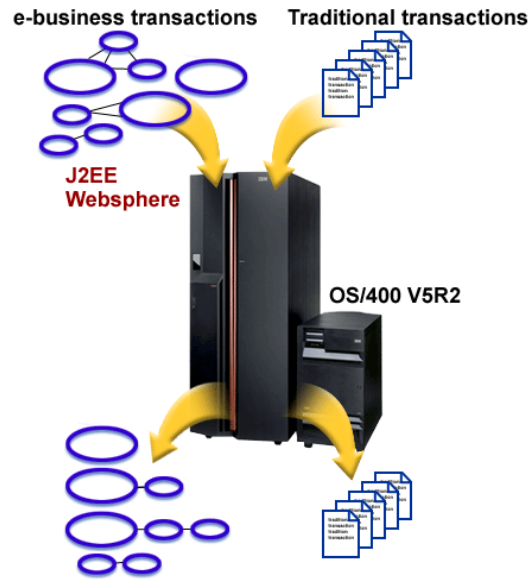
## Enterprise Class Adaptive e-transaction Services

**iSeries optimized for both traditional and e-business transactions**

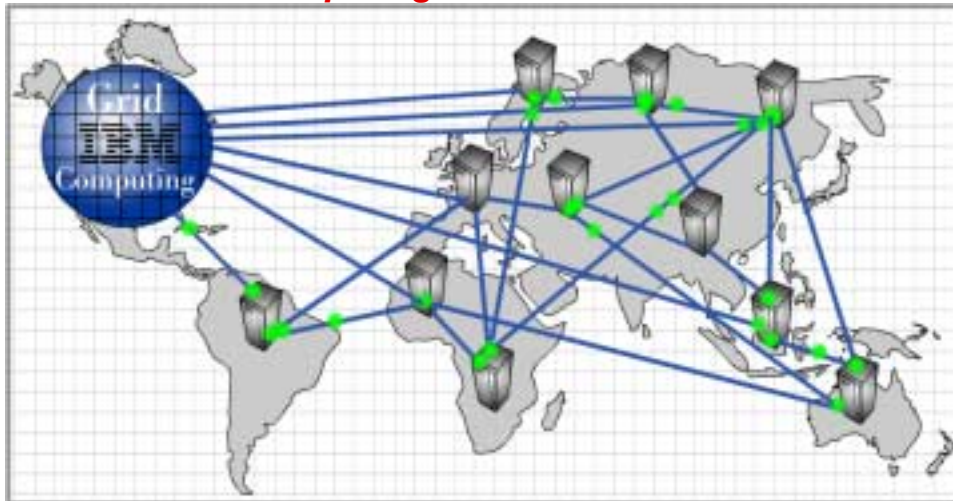
### Adaptive e-transaction Services

- Extends robust iSeries transaction services to e-business applications
- Transaction server automatically adapts to application requirements
- No programming changes required

**Further optimizes iSeries for highly scalable WebSphere and Java™ transaction performance**



## iSeries and Grid Computing



**Flexible, secure, standards-based access to shared computing resources**

**iSeries support signals growth of commercial grid applications**

**OS/400 V5R2 provides support for Globus Toolkit.J**

**Available with OS/400 PASE or Linux**



## ***OS/400 V5R2 iSeries Navigator***

### **Extensive automation for workload management**

- New file and B2B transaction monitors
- Systems and storage management
- Backup and media policies
- Network management, including support for IPv6

### **IBM DB2 UDB transaction management**

### **Switched disk cluster management**

### **Linux dynamic partition management**

### **Enterprise Identity Mapping security**



## ***Adaptive Storage Virtualization for High Availability***



## IBM DB2 UDB for iSeries

### Availability enhancements

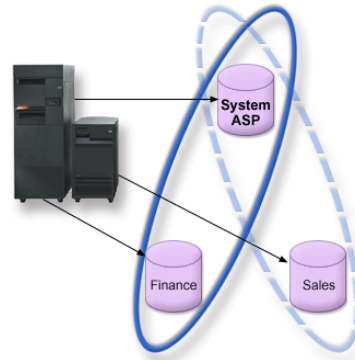
- Multiple independent name spaces
- Switched disk (IASP)

### Open standards support

- SQL enhancements
- Java Transaction API (JTA)
- X/Open Distributed Transaction Processing (XA-DTP)
- Enhanced DB2 UDB family compatibility

### iSeries Navigator Enhancements

- Self-optimizing automatic index advisor and statistics collection
- Graphical management for local DB2 UDB and global WebSphere transactions



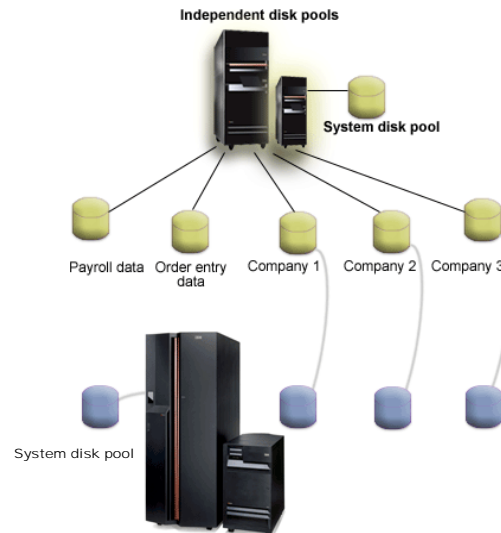
## Switched Disk for High Availability and Clustering

### Consolidate data with multiple name spaces within single server

- Multiple independent databases, system libraries, library names

### Support for switching database and other objects between servers

- Switch disk for scheduled maintenance and upgrades
- Improved availability for unscheduled outages



## Enterprise High Availability Management

Safeguard OS/400 software upgrades with virtual media installation

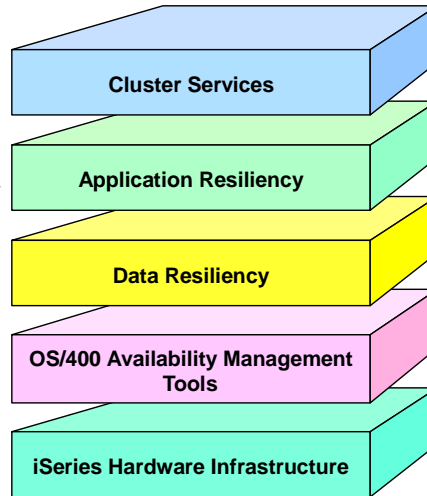
Simplified enterprise backup and media management with iSeries Navigator tools

Journal standby mode improves availability with faster restart of clustered system

Enhanced performance and recovery options for DB2 UDB access path protection

Reduced disk upgrade downtime through new disk migrate while active

Tivoli<sup>7</sup> Storage Manager V5



## Self-Configuring Disk Management

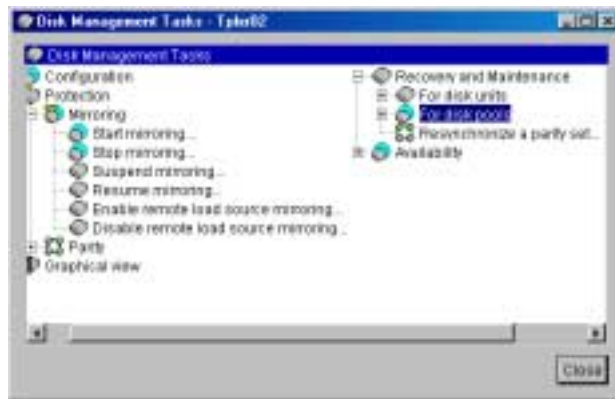
Create, manage and monitor storage virtualization on iSeries

Self-guided configuration wizards

Simplification of complex disk management tasks

- RAID-5 and Mirroring

SAN-like storage management for Windows Servers through IXA/IXS



## Windows Server Management

### Microsoft Cluster Service

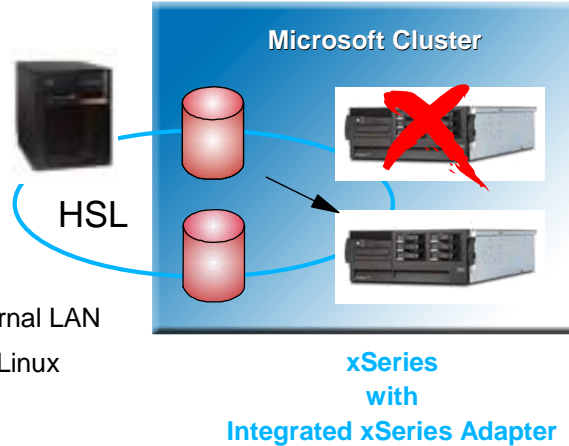
- Availability solution for planned and unplanned outages
- Dynamically switch storage spaces (disks) between Windows servers

### xSeries™ servers

- IXA now supports latest x360 and x440 servers

### Virtual Ethernet

- Higher performance for multi-tier apps and backup
- High-speed interconnect without external LAN
- Connects multiple Windows servers, Linux and OS/400 partitions



## Flexible, Secure Management of e-business Infrastructure



## Enterprise Identity Mapping



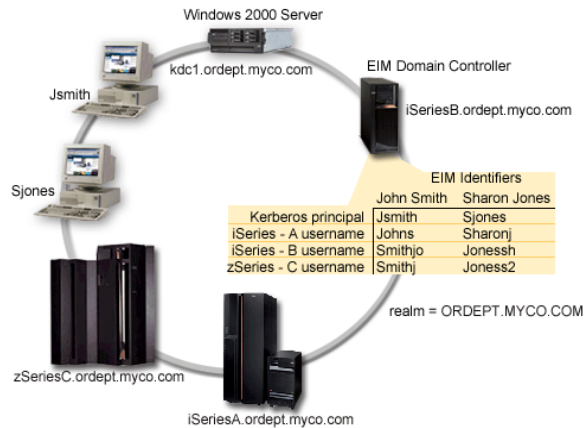
The industry's first Enterprise Identity Mapping implementation

Simplifies authentication process for users

Enables single signon

Reduces costs of user identity, password and network administration

Simplifies the development of multi-tier, multi-server applications



## Secure High Performance Apache Web Serving

### Web Caching Accelerator

- Provides high performance, high volume Apache Web serving
- More than doubles the capacity for Web serving
- Self-activating, easy to setup
- Exploits caching techniques developed by IBM Research

### Secure Sockets Accelerator

- Cryptography adapter delivers optimized performance for Internet security checking
- Secure Sockets Level (SSL) and Transport Layer Security (TLS) protocols
- Multiple accelerators per system enable ultra-high volume throughput

### IPv6 with self-configuring wizards

- Simple network configuration using latest industry standards

### Firewall-friendly VPN with UDP encapsulation

- Application-transparent security allow servers to remain behind firewall



## ***iSeries Desktop Solutions with iSeries Access Family***

### **iSeries Access for Web**

- Browser based access to iSeries resources
- Easily customizable front page
- Secure, central administration
- Includes 'My Personal Folder'

### **WebSphere Host Publisher 4.0**

- Rapid Web-enablement of 5250 applications
- Fully translated, including DBCS languages
- Runs on WebSphere Application Server 4.0
- Supported on OS/400 V5R1 and V5R2

### **iSeries Access for Windows**

- A leading Windows desktop connectivity alternative
- Enhanced to include new Personal Communications 5250 emulator - V5.5
- Supports Kerberos, the emerging industry preferred method to authenticate users



## ***Wireless-Web Ready Java 2 Micro Edition***

**Micro Edition drives growth of secure wireless Web access to enterprise data**

**Write customized wireless applications with power of iSeries**

### **IBM Toolbox for Java 2 Micro Edition**

- Micro Java classes and drivers optimized for pervasive device
- Includes JDBC Micro Edition for Java application access to iSeries database and applications

### **iSeries Access for Wireless**

- Integrated package of wireless middleware
- Includes iSeries Navigator features for wireless systems management



## WebSphere Development Studio for iSeries

WebSphere Development Studio will integrate the WebSphere Studio Workbench

WebSphere Studio Workbench is a superset of the open-source Eclipse Integrated Development Environment

- Open tooling infrastructure
- Integration platform for IBM and non-IBM tools



50,000 copies shipped since May 23, 2001

One-stop, integrated development environment

- Tools for everything from traditional to e-business development

Will be delivered as a no-charge upgrade with Software Subscription



## WebSphere Portal Server for iSeries\*

WebSphere software

Enables secure access to dynamic information, application and people

- Single point of entry incorporating industry-leading Personalization technologies

Provides an open framework for creating multiple portal solutions

- Business-to-Employee (B2E)
- Business-to-Business (B2B)
- Business-to-Commerce (B2C)
- Ideal for application portlets, syndicated content and collaboration



Enables access anytime, anywhere

\*General availability of WebSphere Portal Server 4.1 is planned for 4th quarter of 2002





## Domino<sup>7</sup> and Advanced Collaboration

### Domino 6

- Major release with continued focus on ease-of-use and TCO
- Extends client mobility advantage
- Provides enriched application environment
- Simplifies deployment and management



### Exploiting OS/400 V5R2 enterprise-class performance

- Highly scalable groupware options extended from i270 to i890
- Domino servers benefit from improved file system performance
- Domino Web serving integrated with OS/400 Digital Certificate Manager and SSL accelerator



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## iSeries e-Output

### InfoPrint Server for iSeries

- New PDF and e-mail capabilities

### InfoPrint Designer for iSeries

- Enhanced graphical output design

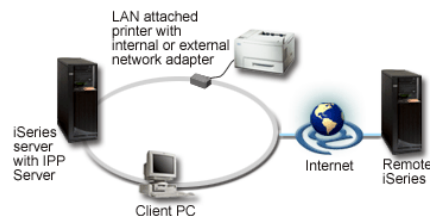


### e-Output server in OS/400

- PDF output distribution integrated with iSeries Access
- Standard API access to PDF and e-mail functions
- Internet Print Protocol (IPP)

### Infoprint 85 and 105 printers

- Supported with Print Services Facility for OS/400



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## Project eLiza

### OS/400 exploits IBM's blueprint for self-managing systems

- Self-protecting
  - Enterprise Identity Mapping
  - Digital signatures and intrusion detection
- Self-optimizing
  - Dynamic LPAR
  - Self-learning DB2 UDB Automatic Index Advisor
- Self-healing
  - Switched disk support for improved availability
  - Agent Building Learning Environment (ABLE) for problem management\*
- Self-configuring graphical wizards for managing
  - Performance and multiple workloads
  - Switched disk clusters and high availability
  - Security and network
  - Storage and system backups



\*NOTE: ABLE is a project out of IBM Research to reduce human intervention through using artificial intelligence when diagnosing hardware and software errors. ABLE will debut first with iSeries and OS/400 V5R2.



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## Enterprise IT Management Made Simple

Capacity Upgrade on Demand

**OS/400 V5R2**

WebSphere Development Studio

64-Bit Linux

32-way, 64-Bit POWER4 i890

Enterprise Identity Mapping

Adaptive e-transaction Server

**Innovative Technology**

**Application Flexibility**

Apache Web  
Caching Accelerator

Lotus Domino 6

Switched Disk Clustering

Virtual Ethernet

Microsoft<sup>®</sup> Cluster Service

iSeries Navigator

OS/400 PASE with AIX 5L

SAN Switch Fabric

Wireless-Web Micro Edition

Secure Sockets Accelerator

**New Tools for e-business**

LPAR Sub-capacity Pricing

Project eLiza

WebSphere Portal Server

Multiple DB2<sup>™</sup> UDB Namespaces



iSeries Access for Web

DB2 UDB Open SQL Standards



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Advanced Function Printing	ClusterProven	Host Publisher	MQSeries Integrator	PCOM	VisualAge for Java
AFP	CODE/400	HTTP Server for AS/400	Net.Commerce	PowerPC	VisualAge for RPG
AIX	DataGuide	IBM	Net.Data	PowerPC AS	WebSphere
AnyNet	DB2	IBM Logo	Netfinity	Print Service Facility	WebSphere Advanced Edition
Application Development	DB2 Extenders	IBM Network Station	NetView	pSeries	WebSphere Commerce Suite
APPN	DB2 UDB for AS/400	Information Warehouse	NUMA-Q	PSF	WebSphere Development Tools for AS/400
AS/400	DB2 Universal	Integrated Language Environment	OfficeVision	S/390	WebSphere Standard Edition
AS/400e	e-business logo	Intelligent Printer Data Stream	OS/2	SanFrancisco	Workpad
AT	e(logo) Server	IPDS	Operating System/400	Screen Publisher	xSeries
BrioQuery	Enterprise Storage Server	iSeries	OS/400	SmoothStart	

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