



IBM eServer™ iSeries™

So What's In the Enterprise Edition..... And Why Should I Care?

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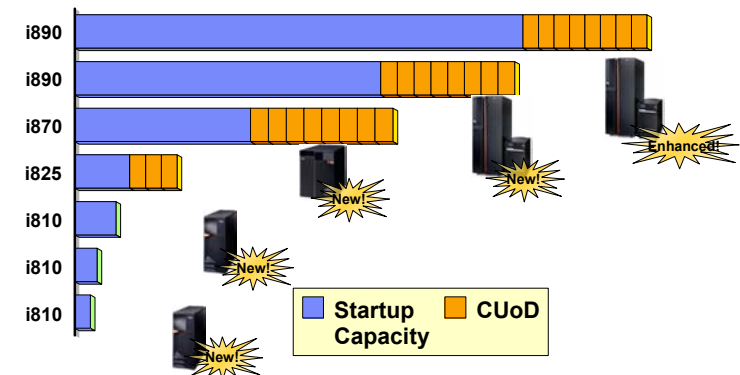
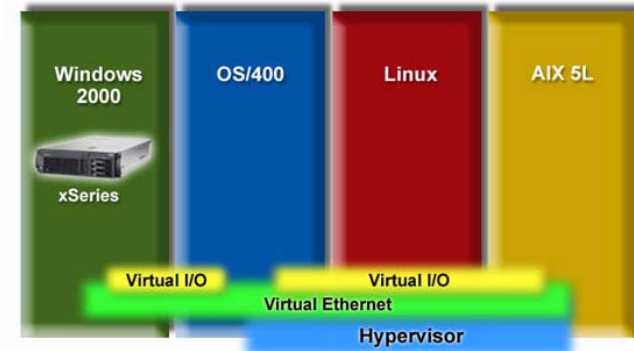
Agenda

- **What's in the Enterprise Edition?**
 - ▶ Overview of the Software and Hardware Included
 - ▶ Vouchers for Education and Services
 - ▶ What You Will Receive - Documentation and Media
 - ▶ How is Support and Maintenance handled
 - ▶ How to Register the Edition

- **Business Uses of the Enterprise Edition**
 - ▶ WebSphere
 - ▶ Sametime
 - ▶ QuickPlace
 - ▶ Tools for System Management and DB2
 - ▶ Linux
 - ▶ IXA/IXS

All of the Enterprise Editions Contain the Following:

- **Support for Multiple Operating Environments**
 - ▶ OS/400
 - ▶ Linux
 - ▶ Windows Integration Support
 - ▶ AIX 5L (Statement of Direction - 2004)
- **Support for Dynamic Logical Partitioning (LPAR)**
- **Support for 5250 OLTP (maximum CPW)**
 - ▶ Unlimited use of the available capacity on the servers for Interactive Workload
- **Support for Web Modernization**
 - ▶ Applications refaced with the IBM WebFacing Tool do not use Interactive Workload
- **Licensing for OS/400**
 - ▶ Licenses for OS/400 and software that is processor based are provided for each of the base or "start-up" processors for the server model
 - 810 (1 to 2)
 - 825 (3)
 - 870 (8)
 - 890 (16 with Feature Code 2497)
 - 890 (24 with Feature Code 2498)



Plus These Software Products...

Packaging Depends on the Model - 810, 825, 870, 890

Model 810

e-business software

- **WebSphere**
 - ▶ WAS V5 Express

Datacenter Mgmt Tools

- **Performance Tools**
- **DB2 Qry Mgr/SQL Dev Tool Kit**

Model 825

e-business software

- **WebSphere**
 - ▶ WAS V5 Express
 - ▶ WAS V5 Base
 - ▶ WAS V4 Single Server

■ **Sametime**

- ▶ 100 User Licenses

■ **QuickPlace**

- ▶ 100 Users Licenses

■ **DB2 Qry Mgr/SQL Dev**

■ **DB2 Extenders & SMP**

■ **DataPropagator**

Datacenter Mgmt Tools

■ **Tivoli**

- ▶ Monitoring for Web
- ▶ Tivoli Monitoring
- ▶ Storage Mgr EE
 - Server + 15 Clients

■ **BRMS & Media/Stg Ext**

■ **Performance Tools**

■ **HA Switchable Res.**

Model 870

e-business software

- **WebSphere**
 - ▶ WAS V5 Express
 - ▶ WAS V5 Base
 - ▶ WAS V4 Single Server

■ **Sametime**

- ▶ 100 User Licenses

■ **QuickPlace**

- ▶ 100 Users Licenses

■ **DB2 Qry Mgr/SQL Dev**

■ **DB2 Extenders & SMP**

■ **DataPropagator**

Datacenter Mgmt Tools

■ **Tivoli**

- ▶ Monitoring for Web
- ▶ Tivoli Monitoring
- ▶ Storage Mgr EE
 - Server + 40 Clients

■ **BRMS & Media/Stg Ext**

■ **Performance Tools**

■ **HA Switchable Res.**

Model 890 (FC 2497 and FC 2498)

e-business software

- **WebSphere**
 - ▶ WAS V5 Express
 - ▶ WAS V5 Base
 - ▶ WAS V4 Single Server

■ **Sametime**

- ▶ 100 User Licenses

■ **QuickPlace**

- ▶ 100 Users Licenses

■ **DB2 Qry Mgr/SQL Dev**

■ **DB2 Extenders & SMP**

■ **DataPropagator**

Datacenter Mgmt Tools

■ **Tivoli**

- ▶ Monitoring for Web
- ▶ Tivoli Monitoring
- ▶ Storage Mgr EE
 - Server Plus 80 - 120

■ **BRMS & Media/Stg Ext**

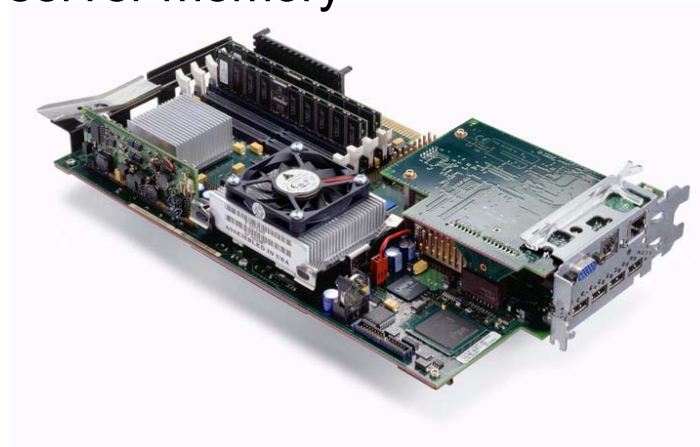
■ **Performance Tools**

■ **HA Switchable Res.**

And These Hardware Features!

■ Each Model comes with an Integrated xSeries Server Card (IXS)

- ▶ 1.6 GHz Intel® Xeon processor with 1 GB server memory
- ▶ Integrated 10/100 Mbps Ethernet Adapter
- ▶ Virtual disk resources
- ▶ Shares iSeries Tape, DVD, CD-ROM
- ▶ Windows 2000 Server® support



■ Models 870 & 890 come with an additional processor activated for Linux

- ▶ Processor Activation of one Model 870/890 stand-by processor will be activated for Linux
 - Linux distribution must be obtained separately
- ▶ If this processor is to be used by OS/400, one OS/400 processor license is required



Enterprise Editions Includes Education & Services

Helping customers take the first step

	Solution	Education	Services
WebSphere			
Linux			
Windows Integration			



i890



i870



i825

Included with the Enterprise Package on the i825, i870 and i890

- **Select one Getting Started service**
 - WebSphere / Linux / Window Integration
- **Receive IBM Learning Services education vouchers for selected courses**
 - Systems Management / WebSphere / Linux / Windows Integration / Tech Conference

How to Use the Vouchers for Education



Classroom training at a *steal*.

The education entitlement provides the customer with vouchers that can be used for admission to selected classes designed to help maximize the usefulness of the new systems

■ **IBM iSeries Model Education vouchers included**

- ▶ iSeries **825** Enterprise Edition **1** voucher included with each system
- ▶ iSeries **870** Enterprise Edition **3** vouchers included with each system
- ▶ iSeries **890** Enterprise Edition **5** vouchers included with each system

■ **Classes and conferences that qualify for the vouchers**

- ▶ Course Number AS24/S6229: [iSeries System Operator Workshop Version 5](#) (4 days)
- ▶ Course Number AS30/S6225: [Implementing Windows Server on iSeries](#) (2.5 days)
- ▶ Course Number AS36/S6226: [Linux on iSeries](#) (3 days)
- ▶ Course Number AS89/S6289: [Getting started with WebSphere on iSeries](#) (3 days)
- ▶ Course Number AS85/S6585: [Web Enabling 5250 Applications Using the IBM WebFacing Tool](#) (2 days)
- ▶ [IBM eServer iSeries Technical Conference](#) (US) (4.5 days)

How to Use the Vouchers for Services



- There are three special services engagements that are available as part of the Edition to help you "get started" in a leading edge applications with the Enterprise Editions!
 - ▶ **Getting Started with Linux for iSeries**
 - The service will establish the logical partition (LPAR) configuration for Linux and install the customer-acquired Linux distribution. Networking configuration will be implemented for the Linux partition and initial user profiles will be defined. The service will establish file serving for Linux using SAMBA, NFS, and FTP. The default web server will be established using Apache HTTP Server. At the conclusion of the engagement the customer will be provided a configuration summary of the Linux partition.
 - ▶ **Getting Started with WebSphere for iSeries**
 - The service will provide the initial installation and setup of WebSphere Application Server - Express for iSeries or WebSphere Application Server v5 for iSeries on a single iSeries server or logical partition. The service will install the selected WebSphere Application Server product, if not installed. The IBM HTTP Server (powered by Apache) V5R2M0 will be configured and integrated with the WebSphere Application Server. The WebSphere Application Server environment will be verified using pre-installed sample applications. For WebSphere Application Server - Express the IBM Telephone Directory will be installed and launched. At the conclusion of the engagement the customer will be provided with a summary of steps and configuration.
 - ▶ **Getting Started with Windows Integration for iSeries**
 - The service will install and cable an Integrated xSeries Server or the Direct Attached xSeries via Integrated xSeries Adapter, including High Speed Link and System Power Control Network cables. Installation of the customer-acquired Microsoft Windows Server Operating System on the xSeries Server will be included. The service will provide an overview on Storage Management concepts, Backup and Recovery, sharing of iSeries Tape and CD ROM devices, and High Availability. At the conclusion of the service engagement the customer will be provided a configuration summary of the Windows Installation.

What Documentation You Will Receive

Register for Software Maintenance & Technical Support

The Software Maintenance and technical support for the Lotus, Tivoli and WebSphere products included with your Edition requires registration. There is no additional charge. Registration is available on the Web at:

- <http://www.ibm.com/servers/eserver/series/hardware/editions>


(select Registration)

Register for IBM Education and Services Vouchers

These are limited time offers for customers who have purchased the 825, 870 and 890 Enterprise Edition. These entitlements are included with systems purchased and installed in the Americas, Europe, the Middle East and Africa. Registration must occur within the 120 days. To register and to find out more about the courses, conferences and on-site services included in your purchase visit the Web at:

<http://www.ibm.com/servers/eserver/series/hardware/editions>

(select Registration)



Cherchez pour acheter un novo IBM eServer iSeries
Se você recebeu um iSeries Modelo 800, 810, 825, 870 ou 890, deverá visitar e seguir a Web site para:

- Registrar-se para obter Suporte Técnico e Manutenção de Software
- Registrar-se para obter os benefícios de IBM Education e de Serviços

Para sua comodidade, foram incluídas no Web site informações que ajudarão na introdução aos produtos de software de edição.

www.ibm.com/eserver/series/hardware/editions

Thank you for your purchase of a new IBM eServer iSeries!
If you received an iSeries Model 800, 810, 825, 870 or 890, you **must** visit the following website to:

- Register for Software Maintenance and Technical Support
- Register for IBM Education and Services Vouchers.

These are **limited offers** and **require** registration within 120 days.

Included in the website for your convenience is information to help you get started with your edition software products.

www.ibm.com/eserver/series/hardware/editions

Nous vous remercions pour votre achat d'un IBM eServer iSeries.
Si vous avez reçu un iSeries modèle 800, 810, 825, 870 ou 890, vous devez vous rendre sur le site Web ci-après pour effectuer les opérations suivantes :

- S'inscrire pour le Maintenance Logiciel et le Support technique
- S'inscrire pour l'éducation et les services IBM Education et Services.

Ces offres sont limitées dans le temps et qui nécessitent une inscription dans les 120 jours.

Vous trouverez également sur ce site des informations qui vous aideront à commencer à utiliser les logiciels de votre édition.

www.ibm.com/eserver/series/hardware/editions

Die haben sich für den Kauf eines neuen IBM eServer iSeries entschieden - herzlichen Glückwunsch! Wenn Sie ein iSeries Modell 800, 810, 825, 870 oder 890 erhalten haben, sollten Sie die folgende Website besuchen, um:

- sich für Software Maintenance und technischen Support registrieren zu lassen.
- sich für IBM Education und Services-Voucher registrieren zu lassen.

Dies sind **zeitlich begrenzte Angebote**, für die eine **Registrierung** innerhalb von 120 Tagen erforderlich ist.

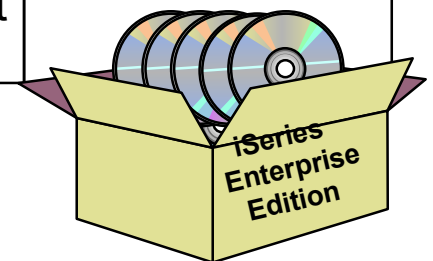
Auf der Website finden Sie weitere Informationen, die Ihnen das Einstieg in die Editionen Software-Produkte erleichtern.

www.ibm.com/eserver/series/hardware/editions

www.ibm.com/eserver/series/hardware/editions

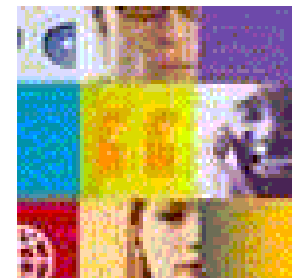
What Media You Will Receive

Feature of Enterprise Edition Shipment	Number of CDs
OS/400 - SLIC (1 CD) - OS/400 and Features (7 CDs) - License Keyed Solutions (2 CDs) - Bonus Programs (2 CDs)	12
Lotus Sametime (ships with a copy of Domino)	4
Lotus QuickPlace (ships with a copy of Domino)	4
Tivoli Monitoring for Web (14 CDs required for iSeries install) - The CDs for all platforms are included in the shipment - http://www-1.ibm.com/servers/eserver/iseries/hardware/editions/web_page	42
Tivoli Storage Manager	12
WebSphere (Express, WAS V4 Single Server & V5 Single Server)	10
Plus the additional CD-ROMs for other software ordered that is not included in the Enterprise Edition package	



How is Support and Maintenance Handled

- Support for traditional iSeries OS/400 features is handled through the new software maintenance coverage when you purchase or upgrade to the new iSeries models
- The Software Maintenance for the Lotus, Tivoli and WebSphere products is also included with your Edition,
 - ▶ Does not involve a separate or additional charge for the first 12 months starting at the installation of the new processor or the upgrade
 - ▶ Software Maintenance includes both software subscription and voice support for usage or technical issues
 - ▶ With Software Maintenance you will receive upgrades to the Lotus, Tivoli and WebSphere products
- **Registering for Support**
- North America and Japan - If you need help with your account, please contact the IBM Registration Help Desk at:
 - ▶ US and Canada - 1-888-426-4409
 - ▶ US and Canada - 1-416-383-3906



Registration of Edition

http://www-1.ibm.com/servers/eserver/series/hardware/editions/registration_bridge.html

Home | Products & services | Support & downloads | My account

→ Select a country

Servers > Midrange servers > Editions >

Editions registration

A smarter way to buy

Customers who purchase an iSeries 800 Standard or Advanced Edition or an iSeries 810, 825, 870, 890 Enterprise Edition are entitled to:

- Software maintenance for the Lotus, Tivoli and WebSphere products included in the Edition
- Education and services vouchers

Registration of your purchase will provide IBM with the necessary information to deliver these valuable entitlements to you.

[Continue](#)

Software maintenance - Lotus, Tivoli, WebSphere

The Software Maintenance for the Lotus, Tivoli and WebSphere products included with your Edition, does not involve a separate or additional charge. Software Maintenance includes both software subscription and voice support - so you're covered whether you need to upgrade or have a technical issue to resolve. With Software Maintenance for Lotus, Tivoli & WebSphere you will receive upgrades to the latest IBM software innovations for these products and world-class software support for such products as well. Lotus, Tivoli and WebSphere Software Maintenance helps you leverage your IBM investment.

Contact us

[Call me now](#)

→ Call 1-888-SHOP-IBM
Option 5, then 1

Request a quote

Send us specifications and we'll prepare a custom quote for you.

[Request a quote](#)

iSeries demo

[Launch the demo](#)
Requires the [Flash plugin](#).

→ [HTML version](#)

Additional info

[Enterprise editions FAQ \(289\)](#)

Register with IBM for Support to Obtain a Userid

<https://www-3.ibm.com/registration/selfreg>

→ Select a country


IBM Registration

Register

Change Profile

Change Password

Forgot Password

Help & FAQ 

Register

Please take a moment to complete this registration form.

The fields indicated with an asterisk * are required to complete this transaction; other fields are optional. If you don't wish to provide us with the required information, please use the back button on your browser to return to the previous page.

[Your privacy](#)

Authentication settings

Please select a user ID and password.

To learn what is acceptable as a user ID and password, see the [Guidelines for User IDs and Passwords](#) before making your selection

* User ID (minimum 3 chars.)	<input type="text" value="RobinCla"/>
* Password (minimum 6 chars.)	<input type="password" value="••••••"/>
* Verify password	<input type="password" value="••••••"/>

Create a userid and password

Please enter a challenge question that only you can answer. Then, enter the answer to the question. Occasionally, you may be asked to answer this question to confirm your identity. Enter a question that is simple to answer and is easy to remember.

* Challenge question	<input type="text"/>
* Answer to challenge question	<input type="text"/>

Userid Registration Continued....

* Country of residence	<input type="text" value="United States"/>
* Language preference for future communications	<input type="text" value="English, US"/>
* First name	<input type="text" value="Robin"/>
* Last name	<input type="text" value="Clark"/>
* e-mail address	<input type="text" value="rjclark@us.ibm.com"/>
* Daytime phone #	<input type="text" value="561-862-3827"/> Ext: <input type="text"/>

Specify
contact
information

Address information	
* Company name	<input type="text" value="XYZ Corporation"/>
* Street Address	<input type="text" value="123 Main Street"/> <small>Required in Canada and US</small>
* City	<input type="text" value="Fort Lauderdale"/> <small>Required in Canada and US</small>
State or Province	<input type="text" value="FL"/> (<input type="checkbox"/> abbreviated code) <small>Required in Canada and US</small>
Postal code	<input type="text" value="33331"/> <small>Required in Canada and US</small>
* Country	<input type="text" value="United States"/>

Specify
company
information

This data may be used to provide you with information from IBM or selected organizations worldwide about products, services, or activities that may be of interest to you.

- Please do not use my information collected here for future marketing communications beyond the scope of this transaction.
- Yes, you may also send me this information by e-mail.

Now Continue to Register Your Enterprise Edition

http://www-1.ibm.com/servers/eserver/series/hardware/editions/registration_bridge.html

Home | Products & services | Support & downloads | My account

→ Select a country

Registration

Registration

Additional information

Please attempt to complete all fields. The fields marked with an asterisk (*) are required to complete this transaction: other fields are optional. If you do not want to provide us with the required information, please use the back button on your browser to return to the previous page.

→ **Your privacy**

* Contact e-mail address:

IBM Business Partner firm name:

IBM Business Partner contact name:

IBM customer number (if known):

* Mach/Mod/Serial:

[\(How to get Mach/Mod/Serial\)](#)

Edition: Standard
 Advanced
 Enterprise

PassPort Advantage customer: Yes

Specify Business Partner and iSeries Serial Number

Specify Enterprise Edition

Enterprise Edition Registration Continued...

Specify Passport Information - Select Support for Enterprise Edition Software

The screenshot shows a registration form with two main sections highlighted by red boxes. The first section, titled 'Specify Passport Advantage Information', contains the following fields: 'Should we add this software to your PPA?' with radio buttons for 'Yes' and 'No'; 'PPA number (if known):' with a text input field; and 'Preferred language:' with a dropdown menu set to 'English, US'. The second section, titled 'Specify Vouchers usage for Education and Services', contains five rows of radio button options: 'IBM Education', 'IBM Services', 'Lotus software', 'Tivoli software', and 'WebSphere software', each with 'Yes' and 'No' options. Below these sections are links for 'Terms and conditions', a 'Submit' button, and a 'Reset' button. The footer contains links for 'About IBM', 'Privacy', 'Legal', and 'Contact'.

Specify Passport Advantage Information

Should we add this software to your PPA?: Yes No

PPA number (if known):

* Preferred language: ▼

Specify Vouchers usage for Education and Services

Would you like register for:

- * IBM Education: Yes No
- * IBM Services: Yes No
- * Lotus software: Yes No
- * Tivoli software: Yes No
- * WebSphere software: Yes No

[Terms and conditions](#)

[About IBM](#) | [Privacy](#) | [Legal](#) | [Contact](#)

Registration Continued...

Registration is Complete!

Midrange servers

- Small to Medium Enterprises
- Medium to Large Enterprises

Support

Services

Software

Solutions

Education

Library

Related links:

- [iSeries advertising](#)
- [iSeries Nation](#)
- [Special offers](#)
- [From HP to IBM eServer](#)

iSeries registration

Thank you for registering with [ibm.com](#).

Your registration enables you to take advantage of the one year Software Maintenance agreement for the Lotus, Tivoli and WebSphere products that were included with your purchase. This Software Maintenance includes both software subscription and technical support - so you're covered whether you need to upgrade or have a technical issue to resolve.

Your registration also includes IBM Education and Services vouchers to help you get the full value from your iSeries immediately. If you selected these options on the registration form, your request has been forwarded to the appropriate Education or Services support group for your country, they will contact you to arrange delivery of the vouchers. The IBM representative that contacts you will provide additional information, confirm your address, mail the education vouchers to you and provide you with the process for starting your services engagement.

Registration also provides membership in iSeries Nation, a community of passionate, enlightened iSeries customers and access to IBM Community Tools, a suite of peer-to-peer applications for community-based problem solving.

Thank You for registering your iSeries. Please feel free to visit the following locations for more information on IBM eServer iSeries - see the advantages it can bring to your business.

- [iSeries](#)
- [iSeries Nation](#)
- [Update your registration information](#)
- [IBM Community Tools](#)
- [IBM eServer Central](#)
- [Request a customized iSeries quote](#)
- [IBM.com home page](#)
- [xSeries](#)
- [pSeries](#)
- [zSeries](#)
- [TotalStorage](#)

Contact us

[Call me now](#)

→ Call 1-888-SHOP-IBM
Option 5, then 1

Request a quote

Send us specifications and we'll prepare a custom quote for you.

[Request a quote](#)

iSeries demo

[Launch the demo](#)
Requires the [flash plugin](#).

→ [HTML version](#)

Additional info

- [Enterprise editions FAQ \(269 KB\)](#)
- [Tivoli Storage Mgr. read me \(149 KB\)](#)
- [Tivoli Monitoring Web Infr. readme \(347 KB\)](#)

Remember!

- The software is YOURS for 12 months!
- This is a great chance to test drive state-of-the-art software for eBusiness enablement!
- Maintenance gives you access to the latest functionality!
- Call support for all your questions!
- Set up Proof-of-Concept projects with your power users!
- Bring your business to the WEB!





IBM eServer™ iSeries™

WebSphere Application Server

Robin Clark
iSeries East Region
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This publication may refer to products that are not currently
available in your country. IBM makes no commitment to
make available any products referred to herein.

WebSphere - Choices...Choices...Choices

825/870/890 Select From the Following Choices*:

- WebSphere Application Server V5 - Express
- WebSphere Application Server V5 (Base)
- WebSphere Application Server V4 Single Server Edition

■ WebSphere Application Server V5 - Express

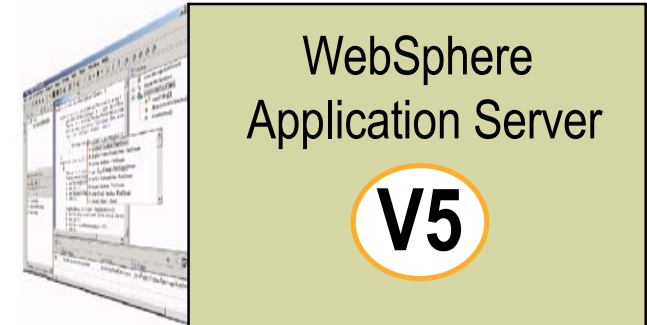
- ▶ Minimum Footprint - 300 CPW, 768 MB Memory
- ▶ Based on J2EE standards
- ▶ Support for EJBs not included

■ WebSphere Application Server V5 - Base

- ▶ Minimum Footprint - 1,000 CPW, 1 GB Memory
- ▶ Full support of J2EE standards as of V5 including EJBs
- ▶ No support for clustering or fail-over
- ▶ Terms and Conditions: One server instance, but can span multiple processors

■ WebSphere Application server V4 - Single Server Edition

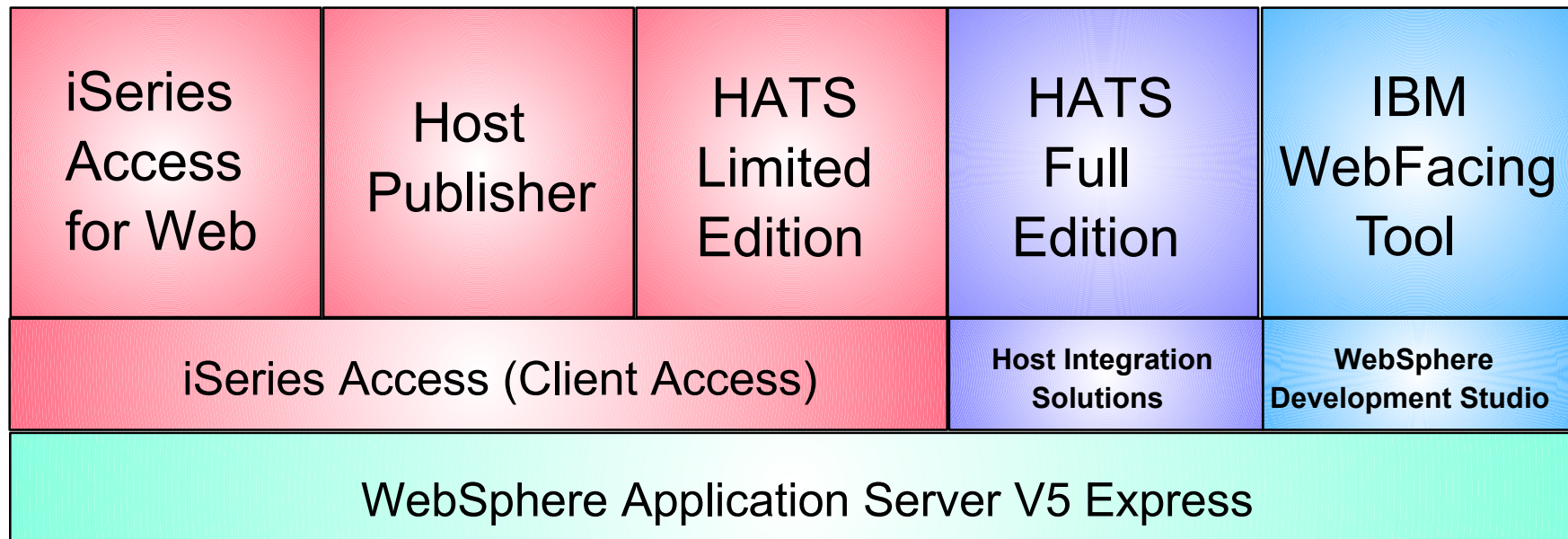
- ▶ Footprint - 1,000 CPW, 1 GB Memory
- ▶ Full support of J2EE standards as of V4 including EJBs
- ▶ No support for clustering or fail-over
- ▶ Select if compatibility is needed with V4 level of support
- ▶ Terms and Conditions: One server instance, but can span multiple processors



* 810 ships with WAS V5 Express

Application Refacing is the Hottest Topic!

Do you Realize You Can Use These Tools with Your Copy of WebSphere?



Tool	Packaging	Version
iSeries Access for Web	iSeries Access	V5R1, V5R2 (best function)
Host Publisher V4	iSeries Access	V5R1, V5R2
HATS Limited Edition	iSeries Access	V5R2 (June 2003)
HATS V4	Host Integration Solutions	V3.0
IBM WebFacing Tool	WebSphere Dev Studio	V5R1, V5R2 (best function)

iSeries Access for Web Packaging:

iSeries Access (Client Access) V5R1 and V5R2

Pros

- Easy to install and implement
- 5250 emulator allows for device naming
- All functions except 5250 run as non-interactive workload
- Allows access to a variety of iSeries resources
- Covered by iSeries Software Maintenance
- Supports Tomcat and a variety of browsers
- Non invasive - no source required
- More individual end user control

Cons

- All refaced screens must use the same "look and feel"
- 5250 emulator requires 5250 Interactive (OLTP) Workload
- Refaces 5250 screens only

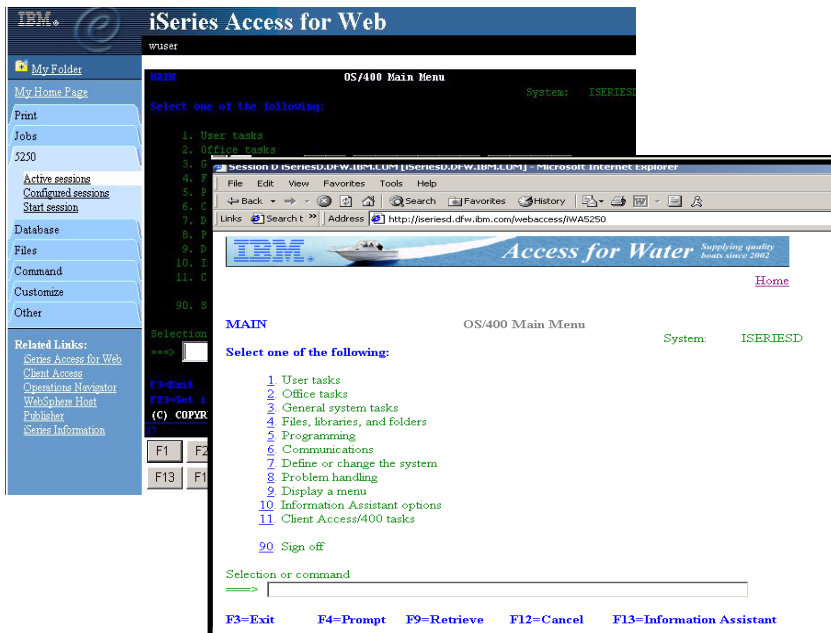
Best Use:

- End user access to iSeries functions through a browser
- Complements WebFacing, Host Publisher, HATS

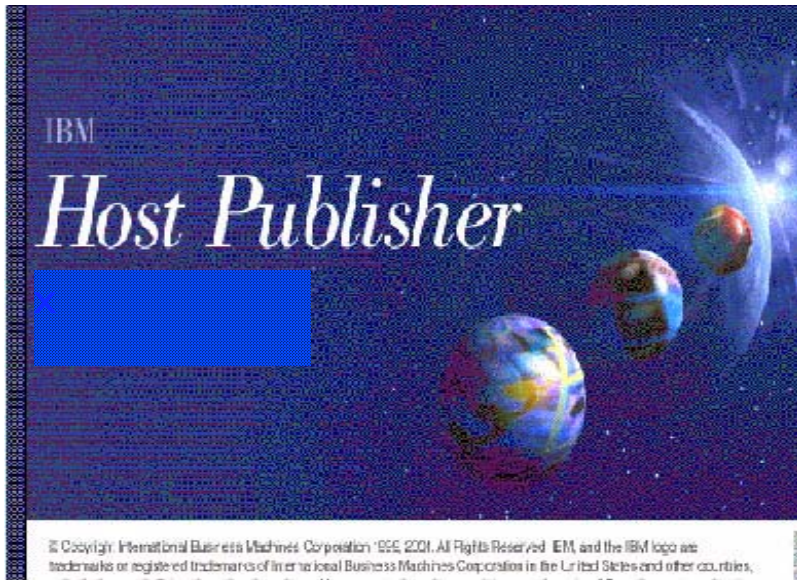
Demo iSeries Access for Web (All entries case sensitive)

- <http://iseriesd.dfw.ibm.com/webaccess/iWAHome>
- Use the following User ID and password to sign in:
- User ID of **WUSER**
- Password of **GUEST1**

DEMO



Host Publisher



Packaging:

iSeries Access (Client Access) V5R1 and V5R2

Pros

- Fairly easy to install and configure on server
- Programmable navigation through applications via scripts & macros
- Can merge / split applications
- Can consolidate many screens into one or break one into many
- 3270 and 5250 Interfaces
- Non invasive - no source required
- Covered by iSeries Software Maintenance

Cons

- Future is uncertain relative to HATS
- Studio requires education to use
- 5250 emulator requires 5250 Interactive (OLTP) Workload

Best Use:

- Can take an existing full-function, in-house application and present only selected paths to Web users

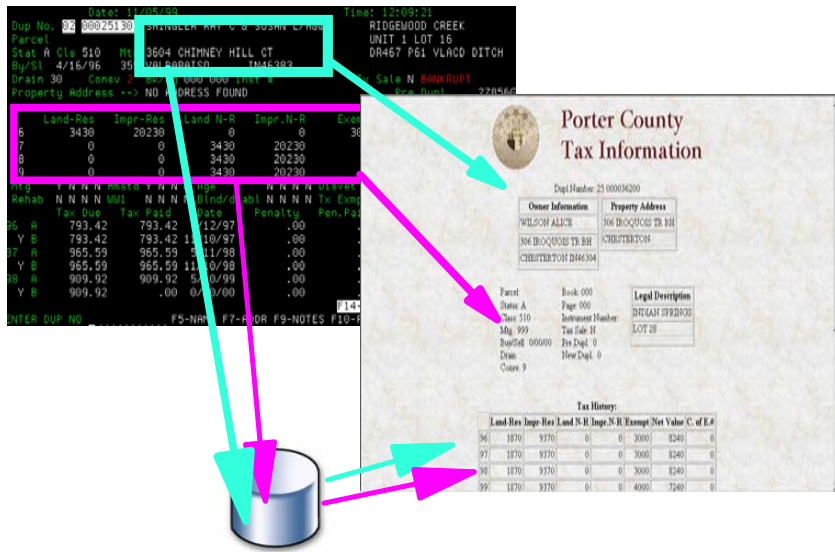
Demo WebSphere Host Publisher

- Beaver Creek Web Solutions Demo site

- Live site!

- <http://www.piner.com/>

DEMO



Host Access Transformation Server LE (HATS LE)

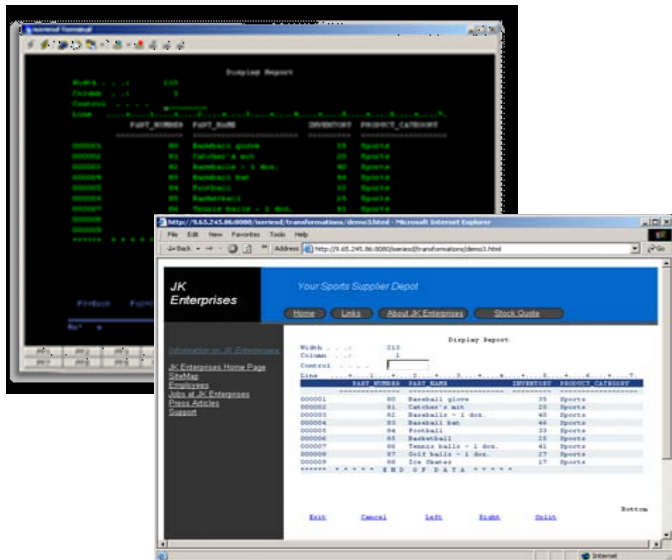
Powered by Eclipse™ technology
Windows®



WebSphere Welcome to IBM WebSphere Host Access Transformation Server (HATS)



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Packaging:

iSeries Access (Client Access) V5R2 - June 2003

Pros

- Easy to install and configure
- 5250 access only
- Provides a high level of GUI look and feel with no programming
- Covered by iSeries Software Maintenance

Cons

- Provides a choice of only one "look and feel" for all applications
- Requires 5250 Interactive (OLTP) Workload
- iSeries only - subset of the full HATS server

Best Use:

- End user 5250 access to iSeries through a browser

Host Access Transformation Server (HATS)

Powered by Eclipse™ technology
Windows®



WebSphere Welcome to IBM WebSphere Host Access Transformation Server (HATS)



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Packaging:

Host Integration Solution bundle

Pros

- Host screens are converted to GUIs on the fly, in real time, eliminating need to customize every screen
- Easy Web-to-host first step, Low skills requirement
- HATS can apply: an individual rule set to each host application
- Covered under SW Maintenance

Cons

- 5250 emulator requires 5250 Interactive (OLTP) Workload
- Cost per user - internal and external pricing

Best Use:

- Add customization by using Macros (Screen consolidation), Global variables, Tabbed folders, Graphs, Java Widgets (e.g. calendar, calculator)



Now you have everything you need for Refacing!

Think about how many ways you take advantaged of refaced applications...

Value: Replace fat-clients with browser access where appropriate

Reduces the complexity of desktop maintenance - fewer on-site updates/installations

Savings: Reduce the number of help desk/system analysts maintaining your environment

Allows easier, often less expensive, access from remote sites

Savings: Trade in expensive leased lines for Internet access

Value: Bring your business to the web for selected customers/vendors

Don't rewrite! Leverage existing applications by refacing them for browser access

Savings: Why write/buy new applications, use existing tools with WebSphere

Offer access to order status data for selected customers, roll-out as needed

Savings: Reduce calls to Customer Service Department, offer access 24/7

Allow access to specific inventory items by vendor

Savings: Just-in-time restocking can possibly reduce investment in inventory

Value: Reface existing 5250 based applications that "appear" old and tired

Tired of having new employees say....Gee I Have not seen a DOS screen in a long time...

Savings: Don't buy new Apps! Refresh the interface to reveal state-of-the-art applications



IBM eServer™ iSeries™

Lotus Sametime and QuickPlace

Robin Clark
iSeries East Region
rjclark@us.ibm.com

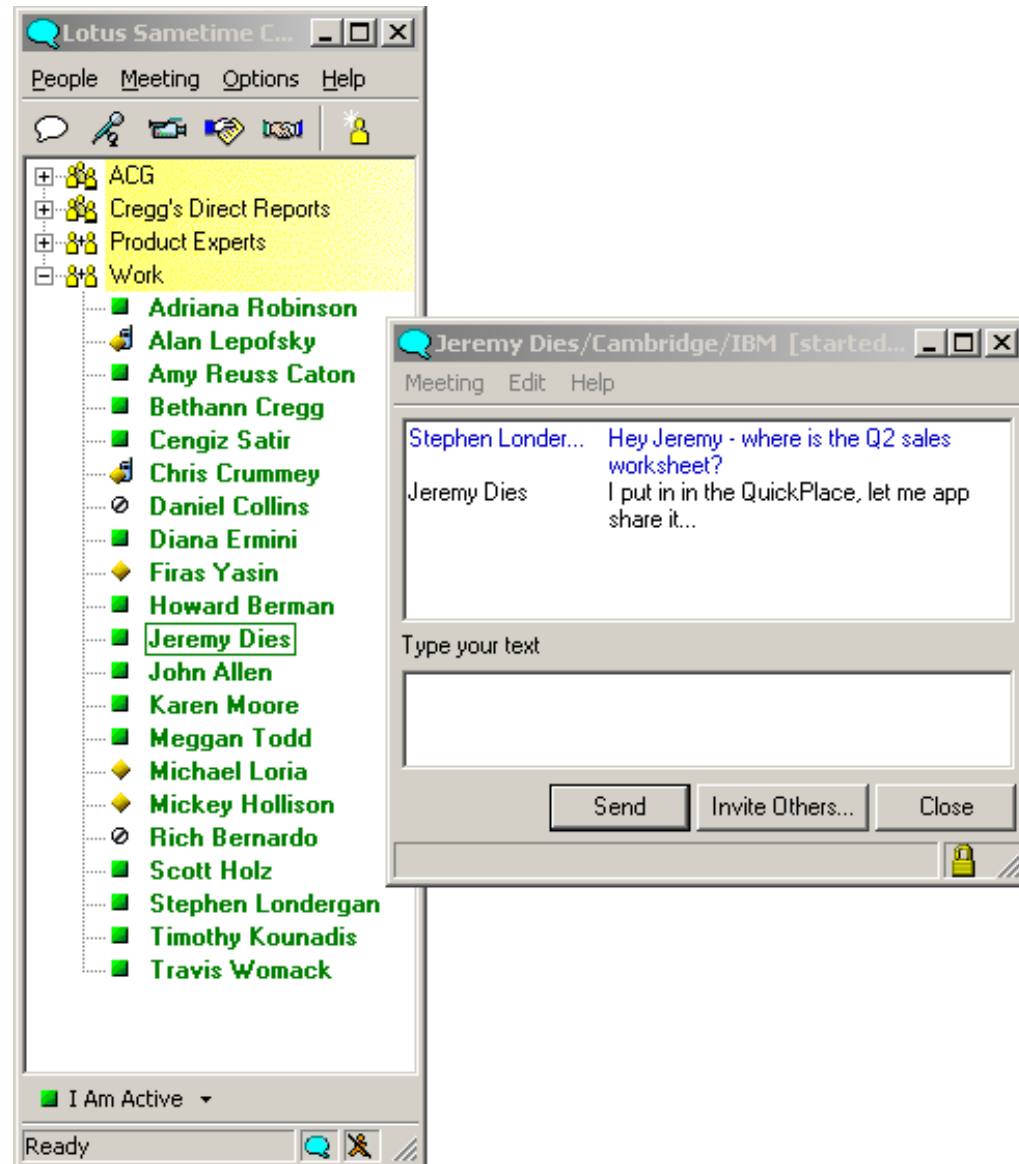
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Real Time Collaboration Has 3 Important Concepts...

#1 Awareness

#2 Conversation

#3 Web Conferences



Concept #2: Conversation

#1 Awareness

#2 Conversation

#3 Web Conferences

The screenshot shows a Microsoft Internet Explorer browser window displaying the Lotus Software Intranet. The address bar shows `http://w3.lotus.com/home10.nsf?OpenDatabase&login`. The page content includes a navigation menu on the left, a main content area with news items like "Scorecard: IBM's Performance" and "Lotus LearningSpace Speeds Learning at Sea Ray Boats", and a right sidebar with a search box and "Al's Place" links. A "Send Message" dialog box is open in the foreground, showing a conversation between Stephen Londergan and Steve Hopley. A red arrow points from a "Built-in Chat" text box to a list of names in the chat window.

Built-in Chat

Send Message
Meeting Edit

Stephen Londergan.. Hey Steve - quick question about the home page?
Steve Hopley Sure, what's up?

Type your text

Send Invite Others... Close

Real Time Collaboration Has 3 Important Concepts...

#1 Awareness

#2 Conversation

#3 Web Conferences

The screenshot displays a Sametime Meeting Room window titled "Sales Plan overview". The main content is a Microsoft Excel spreadsheet with the following data:

	Q1	Q2	Q3	Q4	Total
North	3,627	6,837	2,212	5,999	18,676
South	1,002	7,428	3,689	4,533	16,653
East	9,252	2,855	5,206	8,271	25,584
West	3,453	9,588	8,741	9,356	31,138
	17,334	26,709	19,848	28,159	92,050

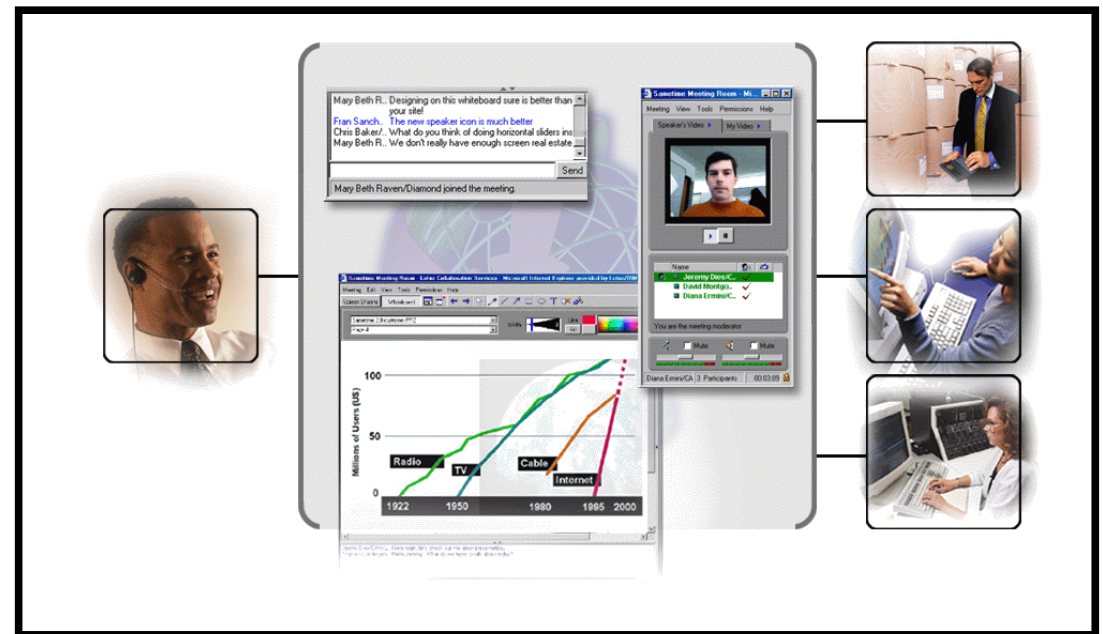
The interface also includes a video conference window on the right showing a participant, a chat window at the bottom with the following messages:

Jeremy Dies/Cambii. Hi, can you share your spreadsheet?
Stephen Londergan. sure
Stephen Londergan. hold on

The status bar at the bottom indicates "Ready", "0 2 Participants", and "00:10:06".

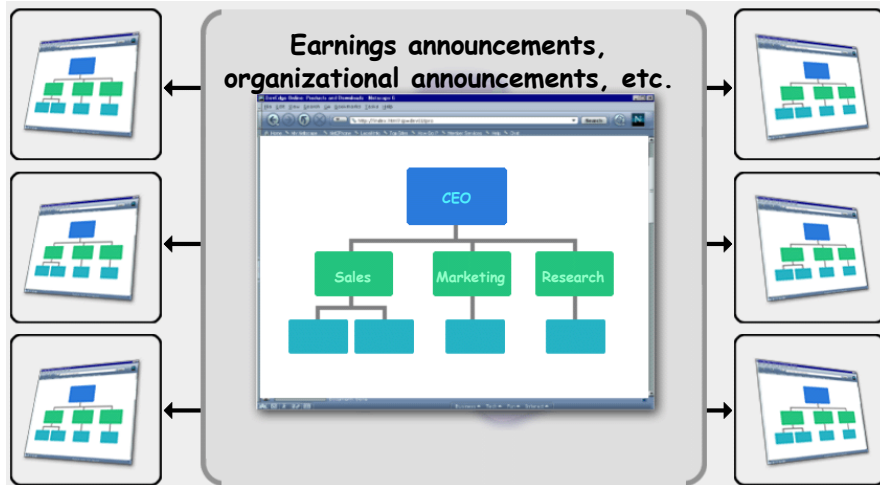
Concept #3: Web Conferencing

- **Real-time sharing of documents, files, and applications**
- **Shared Whiteboard - Appropriate for...**
 - ▶ Giving presentations
 - ▶ Online collaboration
 - ▶ Letting the other person drive: local applications can be remotely controlled
- **Different types of Web conferences for different purposes**
 - ▶ Collaboration meetings for smaller groups working on something
 - ▶ Moderated Presentation or Demo meetings for demonstrating products or presenting to larger groups
 - ▶ Broadcast meetings for few-to-many, large broadcasts



Many Ways to Use Sametime....

Broadcast and Train



Share Applications

Take your customer interactions beyond "chat" to improve customer service

Fund Name	Rate of Return	Shpe Ratio	Beta vs. S&P 500	Alpha vs. S&P 500	R Squared
Cash	5.14%	0.12%	0.00	0.00	0.00
Treasury Bills	153.63%	6.94%	2.25	3.37	72.06
Dow Jones Industrials	38.90%	-0.76	1.26	-39.62	0.26
Russell 2000 Index	22.79%	44.13%	0.40	2.40	-3.06
M.S.C.I. World Index	129.42%	33.46%	0.10	0.72	36.00

Access Expertise

connect with an expert who's online?

Build "awareness" into your website to make it easy to locate experts

Help via the Web

Customer service reps can be available 24/7...

Item #	Description	Qty	Cost (U.S.\$)
TA32430	Taupe Medium Men's Tweed Fleece Jacket	1	\$59.50

Business Reasons for Sametime

- Reducing travel expenses by conducting virtual meetings
- Reducing telecommunication costs
- Increase employee productivity
- Gaining more customers and reducing customer churn rates
- Decreasing time to market
- Increasing website functionality
- Expand training capabilities
- Reduce cost of service
- Reduce strains on server storage space

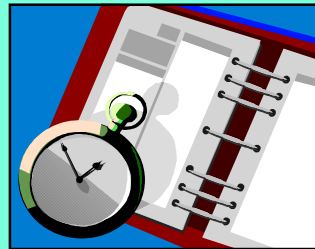


QuickPlace is for Team Collaboration

End Users
Love It!



Spreadsheets



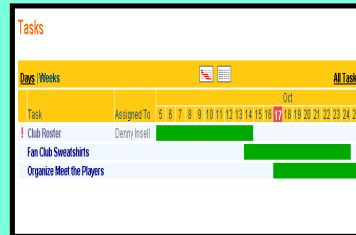
Calendar



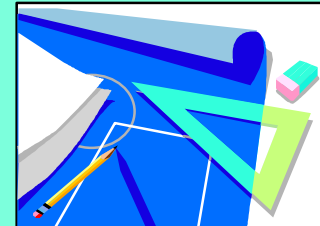
Documents



Presentations



Project Tasks



Drawings

Administrators
Love It!



Lotus QuickPlace:

- Is a secure, self-service Web tool for team collaboration;
- Enables instant user-based creation of a secure workspace(s) on the Web;
- Embraces integrated, in-place instant messaging; and
- Is structured for immediate participation within/beyond the Enterprise.

Create Pages with Point, Click or Type then PUBLISH!

Welcome - westonhospital - Microsoft Internet Explorer

Back Forward Stop Home Search Favorites Media Refresh Mail Print Send To Folder

File Edit View Favorites Tools Help

Address http://domino01.iseries.ibm.com/QuickPlace/westonhospital/Main.nsf/cf07bfcad7af887a0525670800167221/642980d4296fd0df85256d6d005aaea9/?EditDocument&Form=h_Page

Links Search the Web with Lycos IBM Business Transformation Homepage IBM Internal Help Homepage IBM Standard Software Installer

Weston Hospital

Robin Clark

Cancel Save As Draft **Publish As...** Publish

Page Title.
Welcome Show the title, author and date on page?

Contents

Verdana 14 **b** *i* u

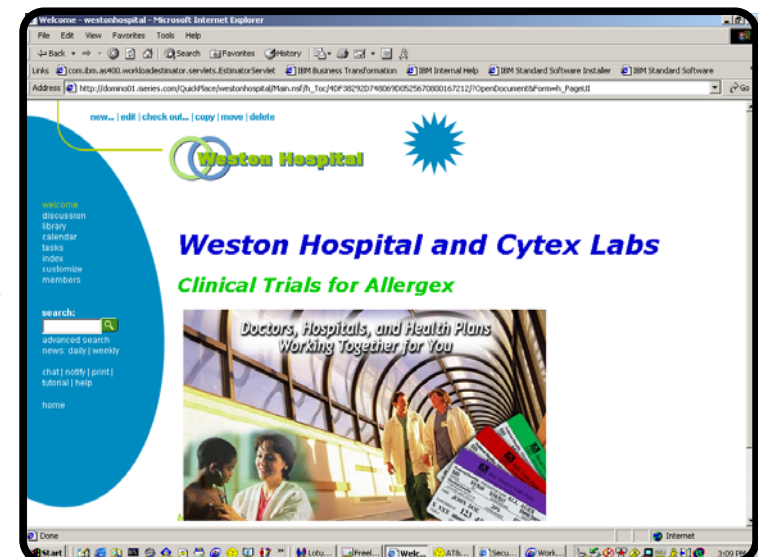
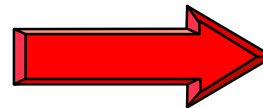
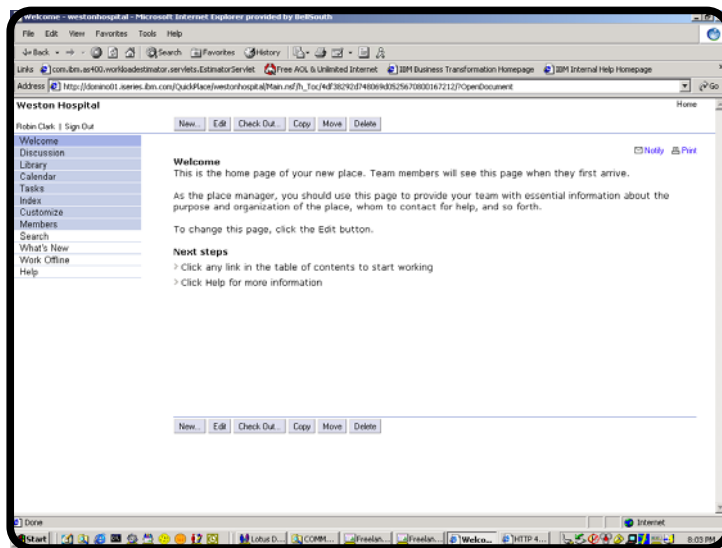
Weston Hospital
Cytex Allernix Clinical Trials ← **Typed**

← **Point and Click**

Customization of Your QuickPlace

The Design of your QuickPlace can be...

- Simple- Just use the Standard Theme
- Easy Changes - To QuickPlace Name and Logo
- Selection of Theme - Basic Themes or Theme that can be customized
- Very Sophisticated - Look and Feel of your Corporate Website



Add Content with MS Word, Excel, PowerPoint...

Microsoft Office Integration

DEMO

The screenshot shows two overlapping windows. The left window is a Microsoft Internet Explorer browser displaying a web page titled 'Edit Page - westonhospital'. The page features the 'Weston Hospital' logo and a 'Document Status' box indicating the document is 'Ready to publish'. Below the status box are buttons for 'CANCEL', 'SAVE AS DRAFT', 'PUBLISH AS...', and 'PUBLISH'. The right window is a file explorer titled 'QuickPlace Demo' showing a folder structure. A file named 'Clinical Trials -- DOU.doc' is highlighted with a red circle. A tooltip for this file shows its type as 'Microsoft Word Document', author as 'Robin Clark', title as 'Clinical Trials - Document of Understanding', and size as '31.5 KB'. A red arrow points from the highlighted file in the file explorer to the 'Word Document' icon in the web editor's status box.

"Round Trip" editing allows users full advantage of specific desktop application

Business Reasons for QuickPlace

- **Reduced travel costs**
- **Faster decision-making**
- **Business process cycle shortened by efficient collaboration**
- **Increased productivity**
- **Demonstrates immediate ROI**
- **Leverages existing infrastructure for reduced TCO**
- **Integrates with web applications**
- **Continue work on- or off-line**
- **Security**
- **Quick deployment, minimal upkeep**





IBM eServer™ iSeries™

Tools for Systems Management and DB2

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3 in 1 Benchmark

- Objective: strong proof point of iSeries mixed workload message
- Configuration: iSeries for Domino (810-2469) 2-way with 8GB memory and 30 x 18 GB disk
- Results: During 6 hour run under rigorous benchmark conditions in Rochester, the performance team ran these workloads simultaneously:

Workload	Number of users	Average CPU utilization	Average response time
NotesBench: R6iNotes	500	26.7%	0.234 seconds
Sametime Instant Messaging	500	5.2%*	0.197 seconds
Sametime eMeeting (Web conferencing)	5 users x 10 meetings / hour		
WebSphere: Trade2	750	19.8%	0.223 seconds
Java OLTP: jBOB	500	22.3%	0.300 seconds
TOTAL		74.0%	

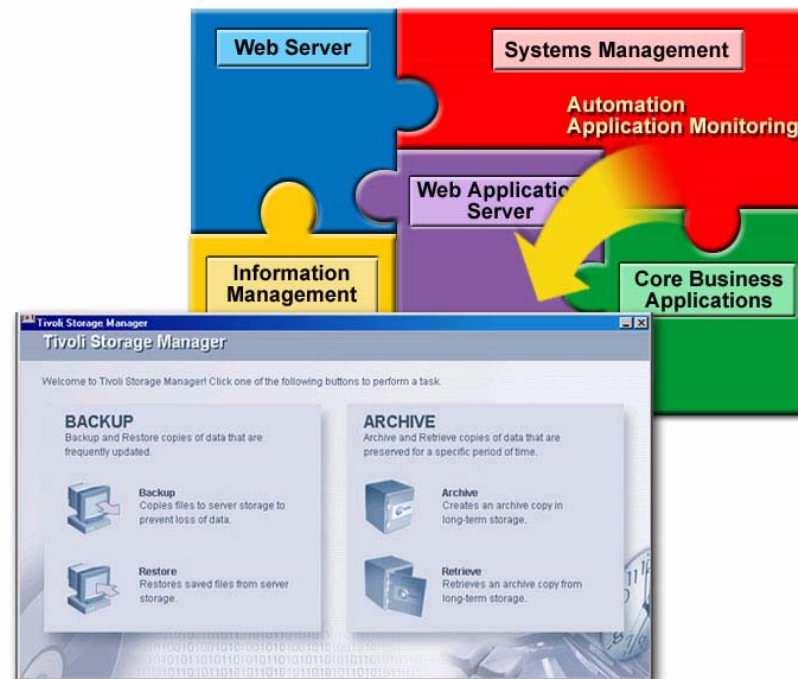
*Sametime IM + eMeetings together used 5.2%

Look for the Executive Summary at this URL:

<http://www.ibm.com/eserver/series/hardware/threeinone>

Tivoli Storage Manager

IBM Tivoli® Storage Manager Enterprise Edition



- Delivers integrated data protection for client backup and archive
- Centralized management, comprehensive policy based automation
- Complements Backup Recovery and Media Services for iSeries



Backup Archive GUI.Ink

DB2 UDB for iSeries

Ease of DB management

Typical DBA Tasks	DB2 UDB for iSeries
Manage DASD Space Allocation	Automated
Review Table Space Allocations & Extents	Automated
Review & Balance Indexes	Automated
Application Rebinding	Automated
Maintain Database Integrity	Automated
Update Database Statistics	Automated
Synchronized OS & DB User Security	Automated
Reload Data for Hardware & Software Upgrades	Automated
Load Data into Data Base	Parallel Data Import/Export
Build and Manage DB Backup & Recovery	iSeries Navigator
Create & Review Indexes for Tables	iSeries Navigator
Performance Analysis & Tuning (DB & System)	iSeries Navigator
Create and Maintain DB Schema	iSeries Navigator & 3rd Party Tools (ERwin, PowerDesigner)
Automated DB Performance Profiling	DBA Essentials
Advanced DB Performance Analysis & Tuning	iSeries Navigator DB Essentials
Data Replication & Consolidation	Multiple IBM & 3rd Party Products

Ease of DB management

- Self-configuring
 - No install/configuration of database necessary to start using it
 - Automatic data striping and disk balancing
 - Automatic object placement and additional storage allocation
 - Automatic configuration of database for distributed access
 - Automatic collection of database object relationships for analysis
 - Automatic start of database servers with TCP/IP startup
 - Automatic self-balancing indexes
 - National language defaults based on user defaults for character tagging, date/time formats, sorting, etc.

- Self-protecting
 - Object-based kernel
 - Digital signing of objects to prevent unauthorized access/updates
 - Kerberos
 - Resource management controlled by OS
 - 128-bit data encryption and SSL
 - C2 compliant object auditing
 - Automatic enforcement of query user limits
 - Automatic enforcement of user storage limits

iSeries Navigator

Environment: My Connections Rchasn: MJA2 Database: Rchasn

Name	Type	Description
QSQJRN	Journal	COLLECTION - created by SQL
QSQJRN0001	Receiver	COLLECTION - created by SQL
SYCHKCST	View	
SYSCOLUMNS	View	SQL catalog view
SYSCST	View	SQL catalog view
SYSCSTCOL	View	SQL catalog view
SYSCSTDEP	View	SQL catalog view
SYINDEXES	View	SQL catalog view
SYKEYCST	View	SQL catalog view
SYKEYS	View	SQL catalog view
SYSPACKAGE	View	SQL catalog view
SYREFCST	View	SQL catalog view
SYSTABLES	View	SQL catalog view
SYSTRIGCOL	View	
SYSTRIGDEP	View	
SYSTRIGGER	View	
SYSTRIGUPD	View	
SYVIEWDEP	View	SQL catalog view
SYVIEWS	View	SQL catalog view

My Tasks

Databases tasks

- Create new summary SQL perf
- Create new detailed SQL perf
- Run an SQL script
- Map your database

1 - 19 of 19 objects

-V5R1

- Generate SQL
- Database Navigator
- Show Locked Objects for a Job
- Show Open Files for a Job
- Script Enhancements (Java)

-V5R2

- [PRTSQLINF](#)
- [SQL Packages](#)
- [New Database Navigator](#)
- [Commitment control status](#)
- [Relational Database Directory](#)
- [Statistics](#)
- [Prompted SQL](#)
- [Additional lock status](#)

-Future Enhancements

- RDB Alias
- WRKPF CST support
- Reorganize enhancements
- Sequences
- BINARY and VARBINARY
- Partitioning support
- Object type folders
- Additional Java deployment



DB2 UDB & XML

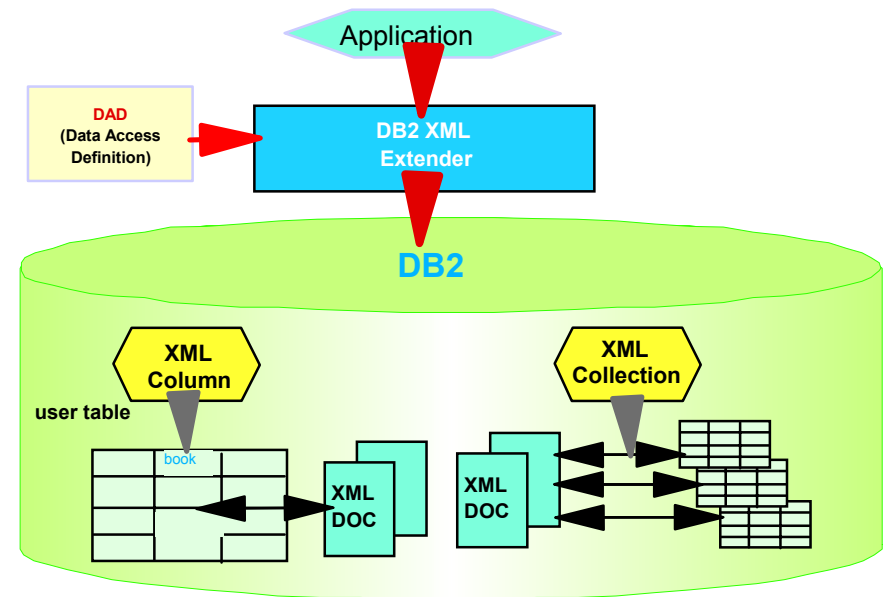
DB2 XML Extender - 5722-DE1

■ XML column

- Store and retrieve entire XML documents as DB2 column data
- XML data represented by XML column

■ XML collection

- Decompose XML document into a collection of relational tables
- Compose XML documents from a collection of relational tables



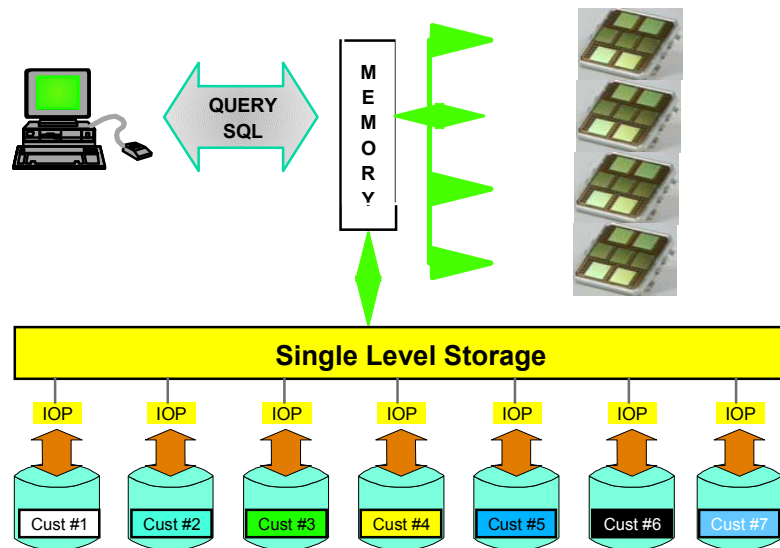
DB2 UDB and XML future enhancements

- Standard XML functions provided in the database engine
- XML query
- XML data type

UDB for iSeries Scalability

- Single table - 1 terabytes
- Single distributed table - 32 terabytes
- Single index 1 terabyte
- Single distributed index 32 terabytes
- Symmetric MultiProcessing (SMP)
- Massively Parallel Processing (MPP)
- Restore of 2.6 terabytes of data in one hour on a 24-way SMP model 840
- Parallel table scan of 1 terabyte table (4.1 billion rows) in under 11 minutes SMP model 890 32-way (less than 50% CPU utilized)

iSeries DB SMP Parallelism



- Shared everything parallelism
- Partitioning not necessary
- Parallel Methods
 - *Parallel table and index scan*
 - *Parallel hash join*
 - *Parallel hash group by*
 - *Parallel index build*
 - *Parallel data load*
 - *Parallel index ANDing/ORing of dynamic bit maps*
 - *Parallel index maintenance*
 - *Parallel Encoded Vector Index*
 - *Parallel I/O and parallel recovery*



IBM eServer™ iSeries™

iSeries Integrated xSeries Solutions for Windows 2000/2003 Server

Steven Fier
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iSeries Windows 2000 Server® Integration

■ Solutions

- ▶ Extend OS/400 applications with Windows™
- ▶ Consolidate Windows Servers

■ Approach

- ▶ Leverage xSeries hardware
- ▶ Use Standard Windows Server software
- ▶ Add value to Windows servers

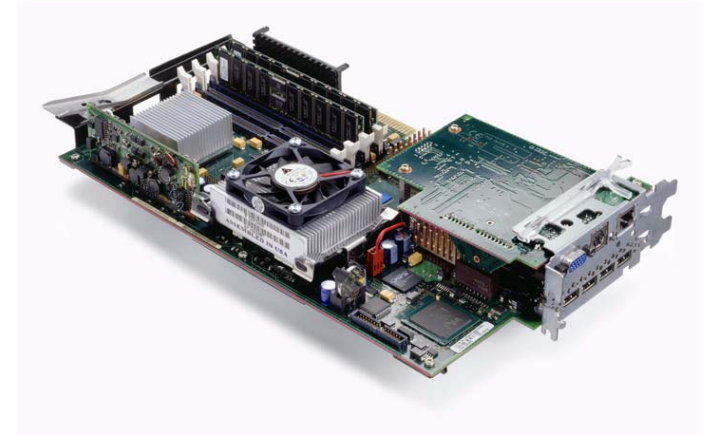
■ Choice of Offerings

- ▶ Server "under the covers" - Integrated xSeries Server
- ▶ Direct Attach xSeries Server - Integrated xSeries Adapter



Integrated xSeries Server

- Intel® 1.6 GHz Xeon™ Processor
- Integrated 10/100 Mbps Ethernet Adapter
- Virtual disk resources
- Shares iSeries Tape, DVD, CD-ROM
- iSeries Models 270, 8xx
- Windows 2000/2003 Server® support

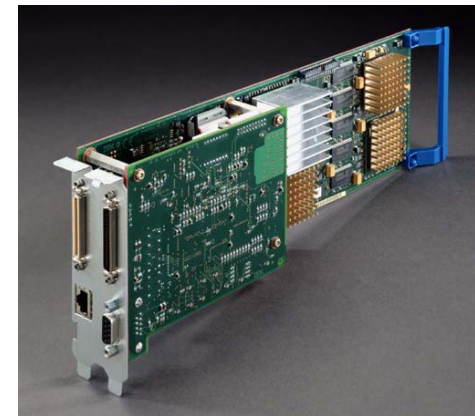


www.ibm.com/eserver/series/windowsintegration

Integrated xSeries Adapter

- **Attaches the latest 2, 4, 8-way xSeries Servers***
 - ▶ x235, x255, x360, x440
- **Virtual disk resources**
- **Shares iSeries Tape, DVD & CD-ROM**
- **iSeries Models 270, 8xx**
- **Windows 2000/2003 Server Support**

Enterprise **X**-Architecture™



www.ibm.com/eserver/series/windowsintegration
www.ibm.com/eserver/xseries

* Selected Open Bay models of x235, x255, x360, and x440

Integrated xSeries Adapter

PCI Card

- ▶ xSeries Server Proven Adapter
- ▶ 2 Slots
- ▶ 1 64 bit 66 MHz connection
- ▶ Slot location depends on model

Two HSL Connectors

- ▶ Uses same data interface as iSeries I/O tower

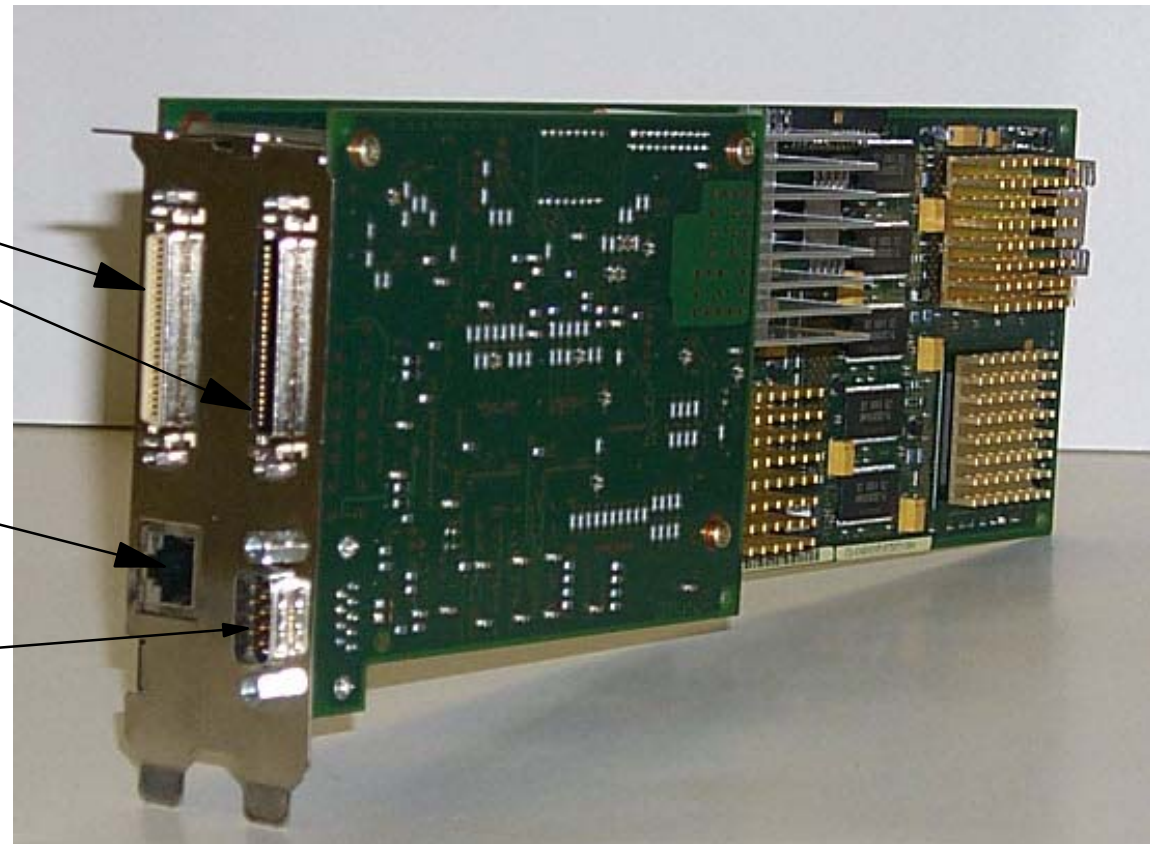
RS485 Connector

- ▶ Interface to xSeries Service Processor

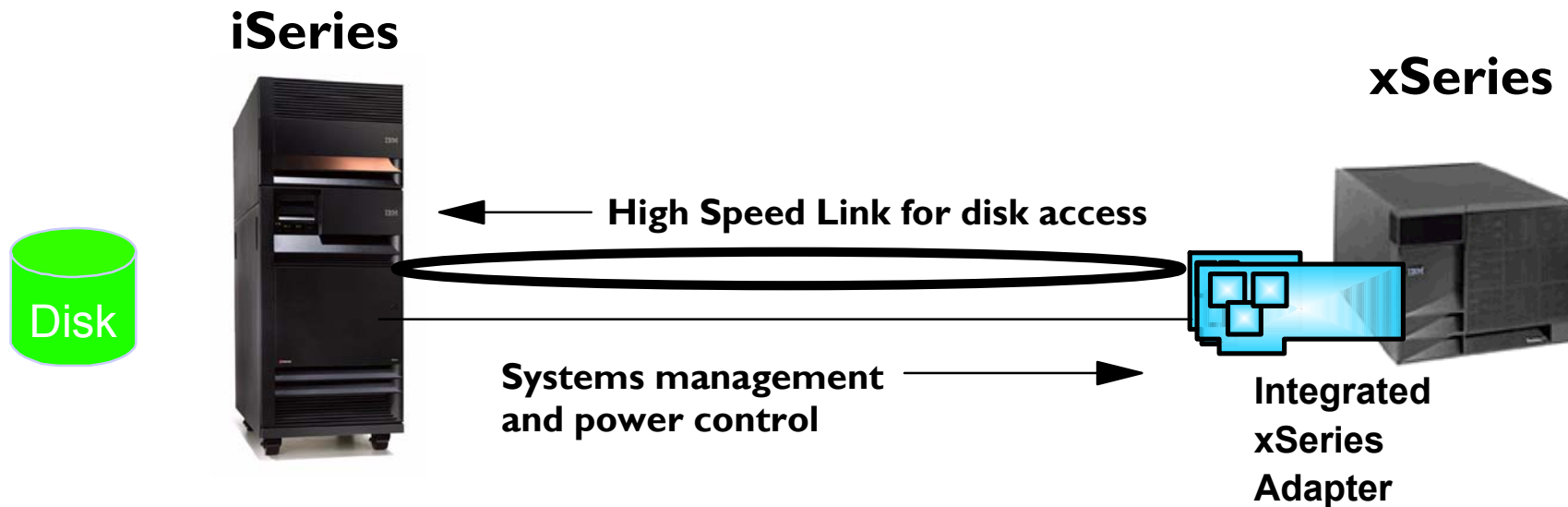
SPCN Connector

- ▶ Uses same system power and control interface as iSeries I/O tower

Integrated xSeries Adapter
Installed in xSeries



Integrated xSeries Adapter



IXA attaches n-way IBM xSeries servers to iSeries 8xx and 270

- ▶ *Supports x235, x255, x360, x440*

Retains features and value of Integrated xSeries Server

- ▶ *Uses OS/400 storage consolidation and systems management*
- ▶ *xSeries Server has processors, memory, ServerProven adapters but no disks*

Complementary Application Support

Server Consolidation

User Administration

Problem

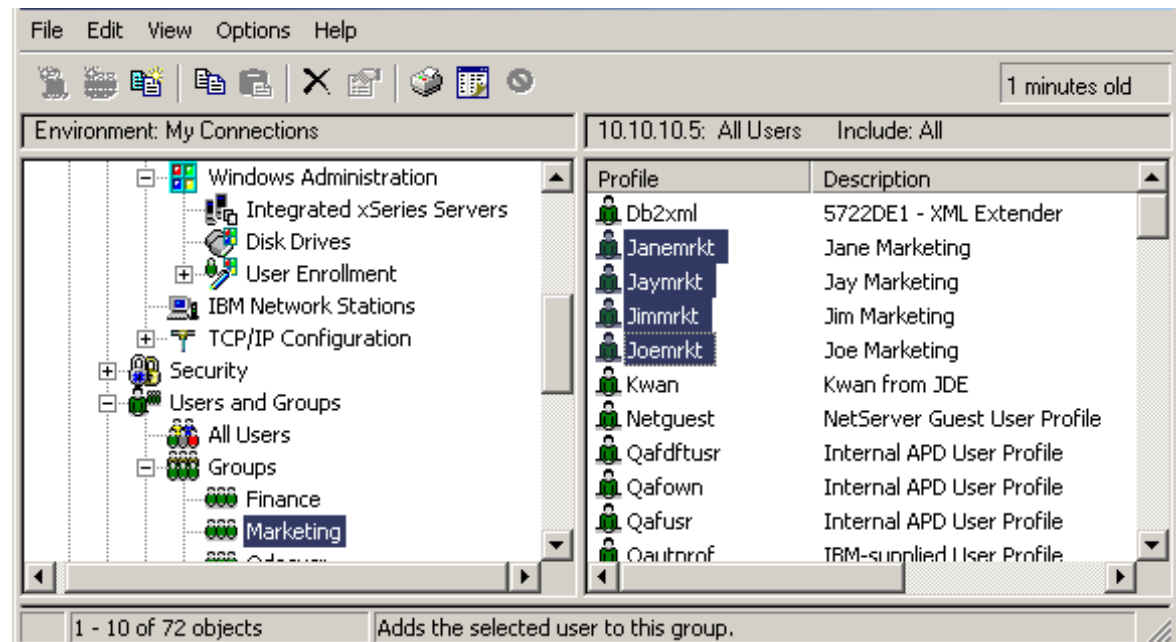
- ▶ Multiple system user management

iSeries Solution

- ▶ Adding OS/400 Users and Groups to Windows 2000 Server Domains and Synchronizing Passwords

Benefit

- ▶ Can reduce costs with integrated user management



Managing Remote Servers

The screenshot displays the AS/400 Operations Navigator interface. The main window is titled "AS/400 Operations Navigator" and has a menu bar with "File", "Edit", "View", "Options", and "Help". Below the menu bar is a toolbar with various icons and a "0 minutes old" timestamp. The interface is divided into several panes:

- Environment: My Connections:** A tree view showing a hierarchy of connections. The selected connection is "Rchasnth: Windows Administration".
- Left Pane (Tree View):**
 - Management Central (Rchasnth)
 - My Connections
 - Rchasntc
 - Rchasnth
 - Basic Operations
 - Work Management
 - Configuration and Service
 - Network
 - IP Policies
 - Remote Access Services
 - Servers
 - Windows Administration
 - Integrated Netfinity Servers
 - Disk Drives
 - User Enrollment

- Right Pane (Table View):** A table with columns "Name" and "Description". The table contains three rows:

Name	Description
Integrated Netfinity Servers	Manage Windows Integrated Netfinity Servers
Disk Drives	Manage Windows Disk Drives
User Enrollment	Manage Windows User Enrollment
- Bottom Pane (Tasks):** A list of tasks under the heading "Windows Administration tasks":
- Start all Windows servers
- Shut down all Windows servers
- Create a new disk drive for Windows servers
- Help for related tasks

At the bottom left, it indicates "1 - 3 of 3 objects".

iSeries operator can centrally:

- ▶ Monitor and reboot servers
- ▶ Add or distribute disk
- ▶ Distribute packages and commands
- ▶ Add users
- ▶ Manage iSeries device drivers

Management Central Pervasive

Manage Windows Servers from a Cell Phone or Personal Digital Assistant.

- ▶ View status of servers
- ▶ Startup/Shutdown servers
- ▶ Run Windows commands
- ▶ Monitor events



Management Central - Pervasive - Netsc... [X]

File Edit View Go Communicator Help

Back Forward Reload Home Search

Bookmarks Location: What's Related

Rchasnth
! Integrated Netfinity Servers
2/22/01 12:58:57 PM

! [Aaatest](#) : Shut down
! [Dctestb](#) : Shut down
! [Dctest1](#) : Shut down
! [Dwcnt](#) : Shut down
[Jam2000server](#) : Started
! [Jodyspc](#) : Shut down
! [Nlk](#) : Shut down
! [Sharpei](#) : Shut down
! [Tannwsd](#) : Shut down
! [Tannwsd1](#) : Shut down

Home [Go]

Home
Run Command...
Shut Down...
Restart...
Help

Management Central - Pervasive - Netsc... [X]

File Edit View Go Communicator Help

Back Forward Reload Home Search

Bookmarks Location: What's Related

Rchasnth
Jam2000server
2/22/01 1:00:21 PM

Network name: Jam2000
Status: Started
Description:
Domain: Workgroup
DNS domain name:
Connected users: 1
Processor util: 0%
Paging file util: 0%
Registry quota util: 28%

Home [Go]

Home
Run Command...
Shut Down...
Help

Virtual Networking

Problem

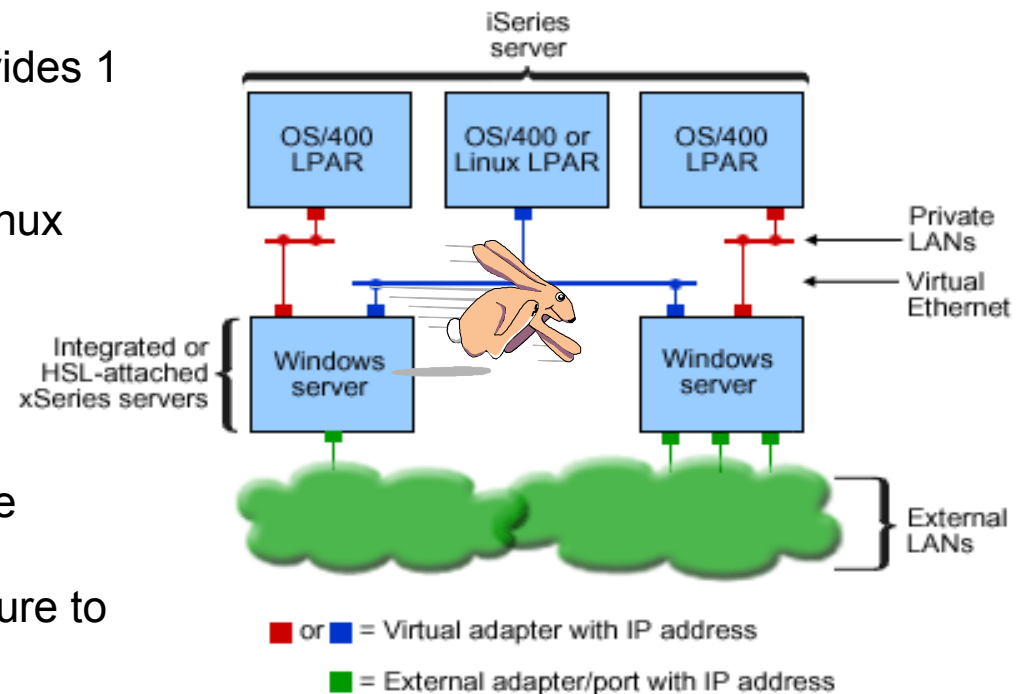
- ▶ Upgrading network infrastructure to support high-speed application communication is expensive in terms of time, resources and equipment

iSeries Solution

- ▶ Virtual Ethernet at OS/400 V5R2 provides 1 Gb Connections with no LAN Adapters/Switches
- ▶ Windows to Windows to OS/400 to Linux
- ▶ Up to 5 Connections per IXS / IXA

Benefit

- ▶ Extremely secure and reliable server communication over high-performance connections
- ▶ Can reduce network traffic and exposure to "sniffing"



RZAHQ016-3

Virtual Storage

Problem

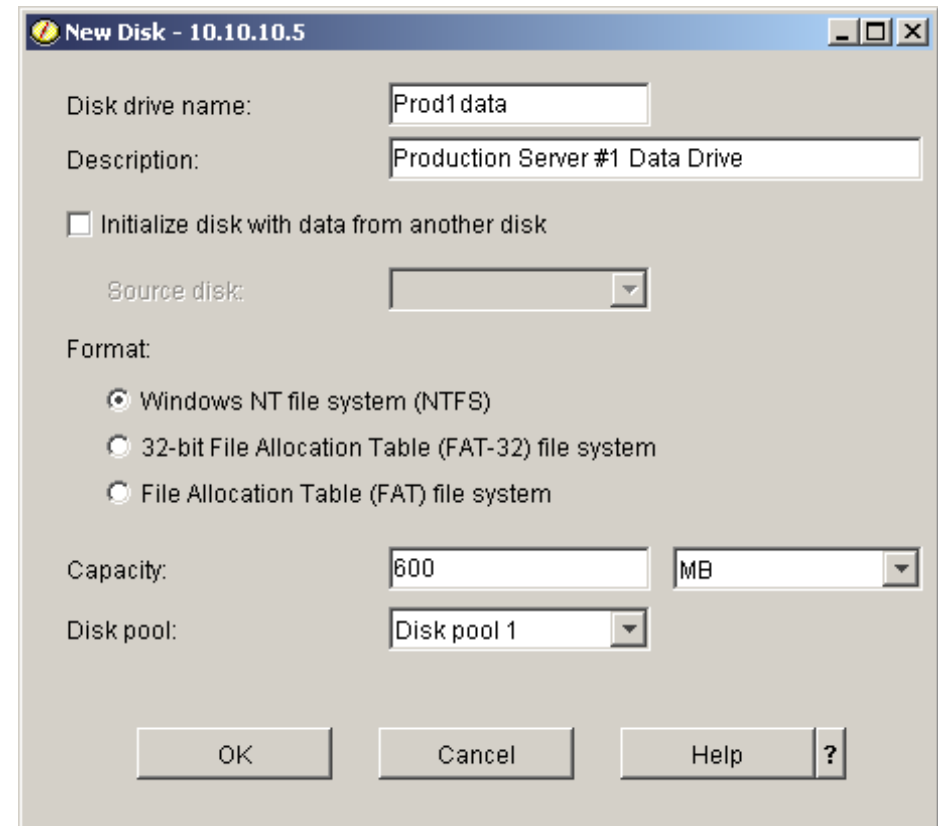
- ▶ Storage management across the server farm

iSeries Solution

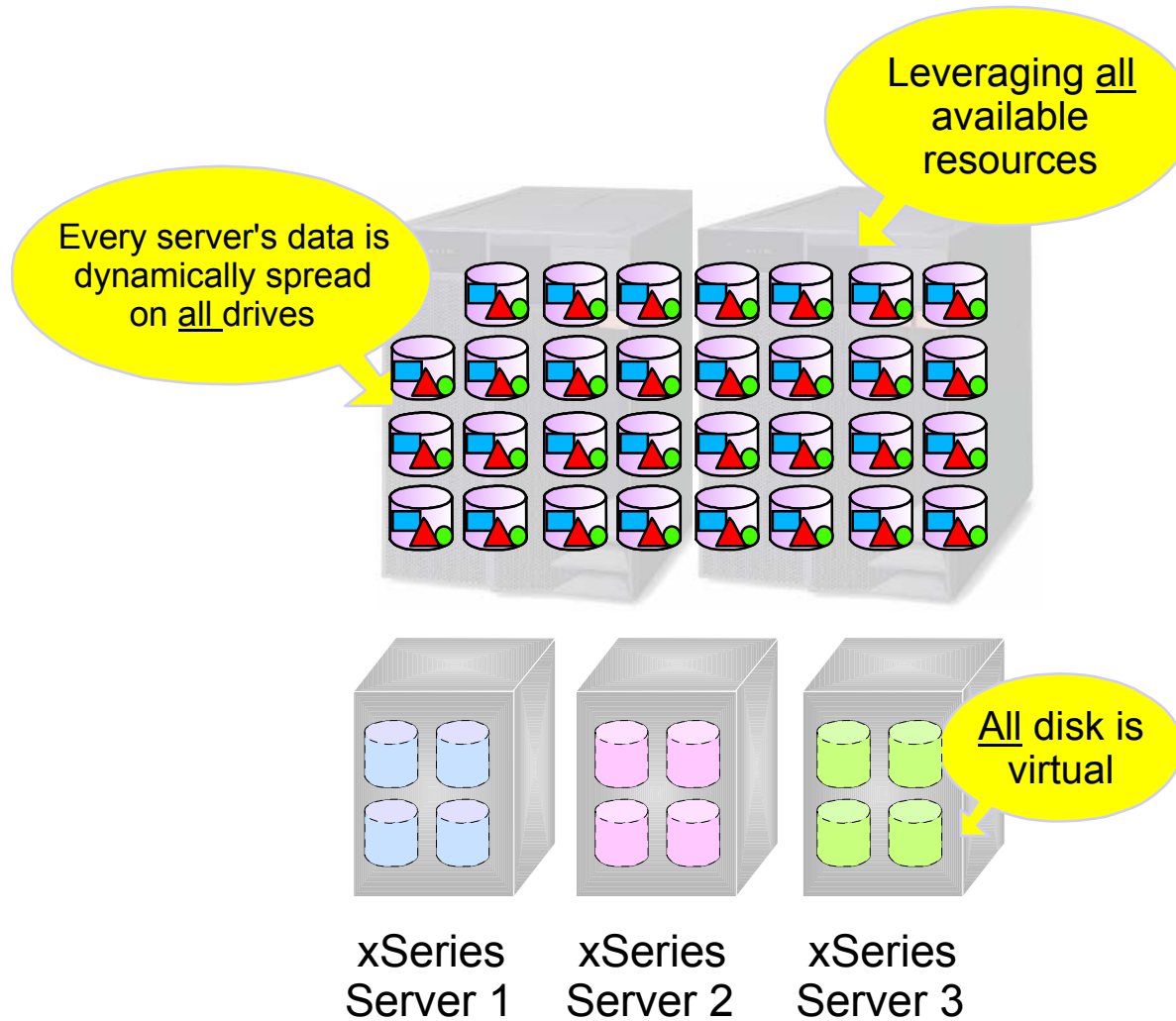
- ▶ Flexible Virtual Disks from 1 MB to 64 GB.
- ▶ Up to 2 TB per Windows server
- ▶ Hot add of iSeries Storage Space to Windows 2000 Server

Benefit

- ▶ Can reduce costs with flexible, centralized storage management



iSeries Virtual Storage Advantages



Integrated Backup

Problem

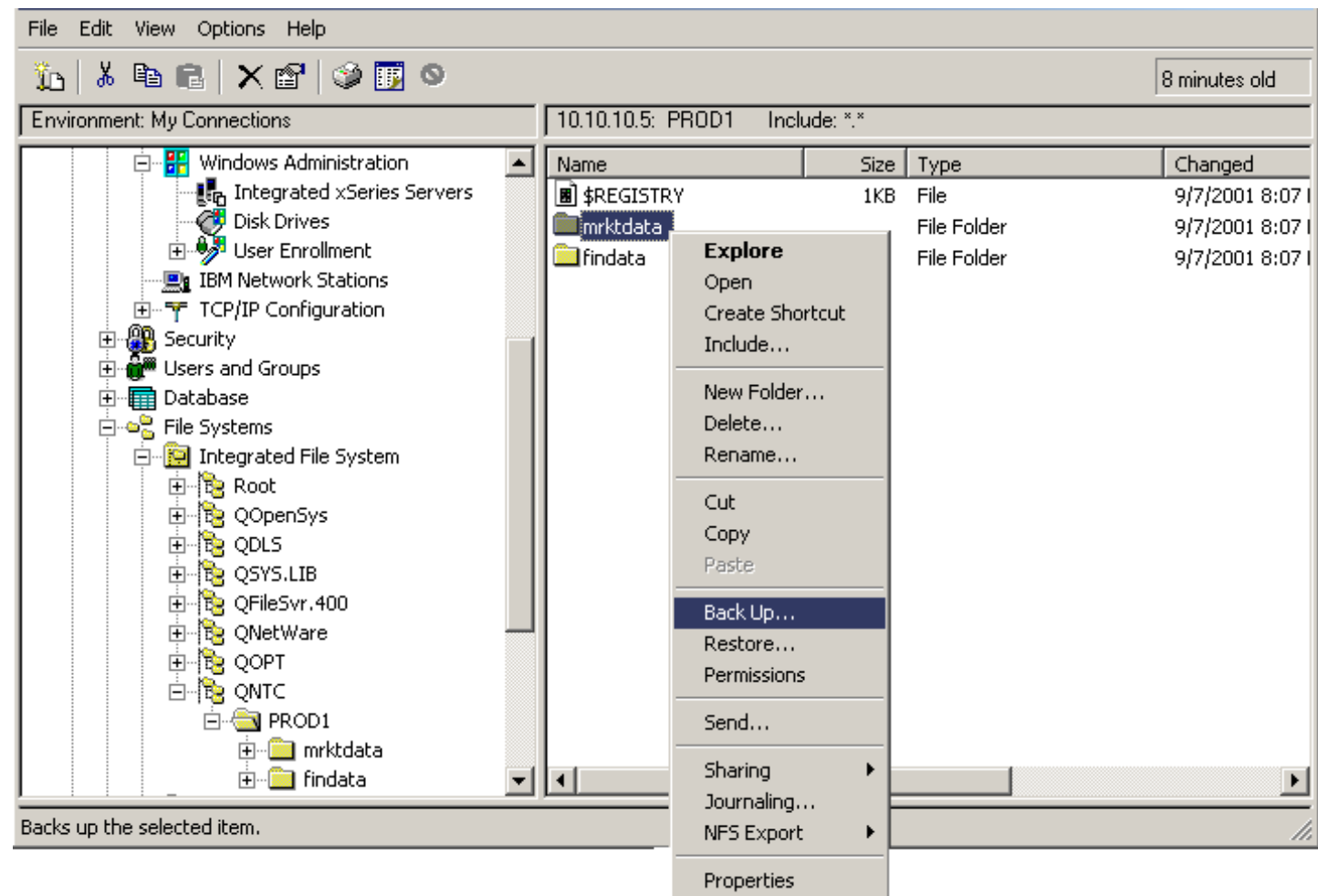
- ▶ Managing and automating heterogeneous backups

iSeries Solution

- ▶ Save OS/400 and Windows storage spaces to iSeries tape drives

Benefit

- ▶ Can reduce costs by leveraging iSeries resources and skills



Availability

Problem

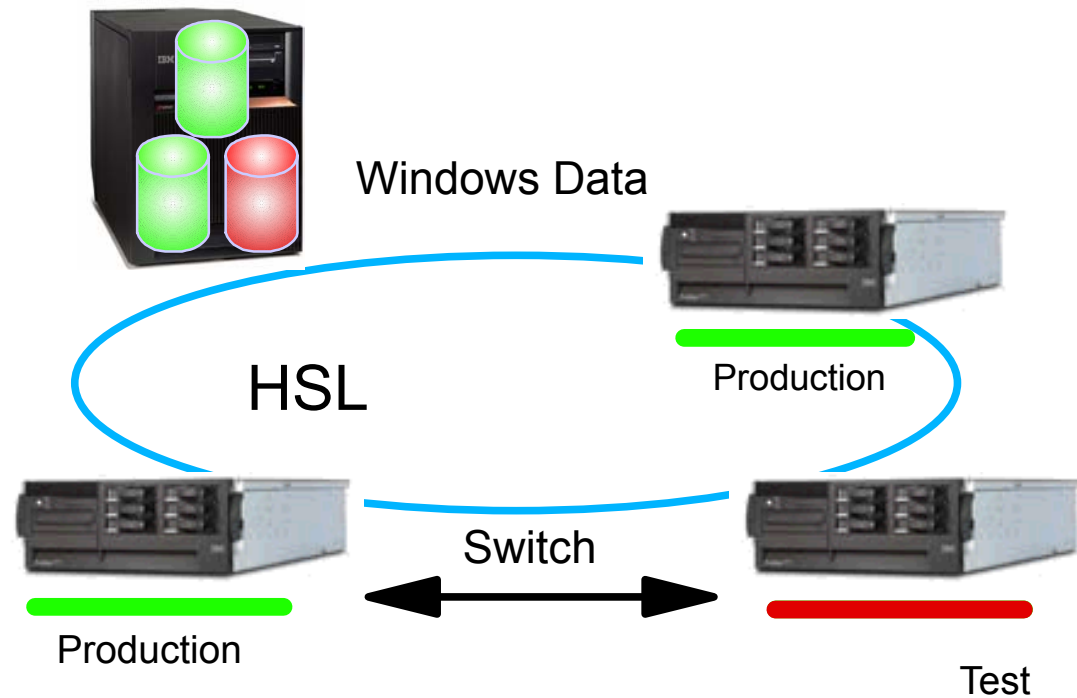
- ▶ Providing an effective and efficient availability solution

iSeries Solution

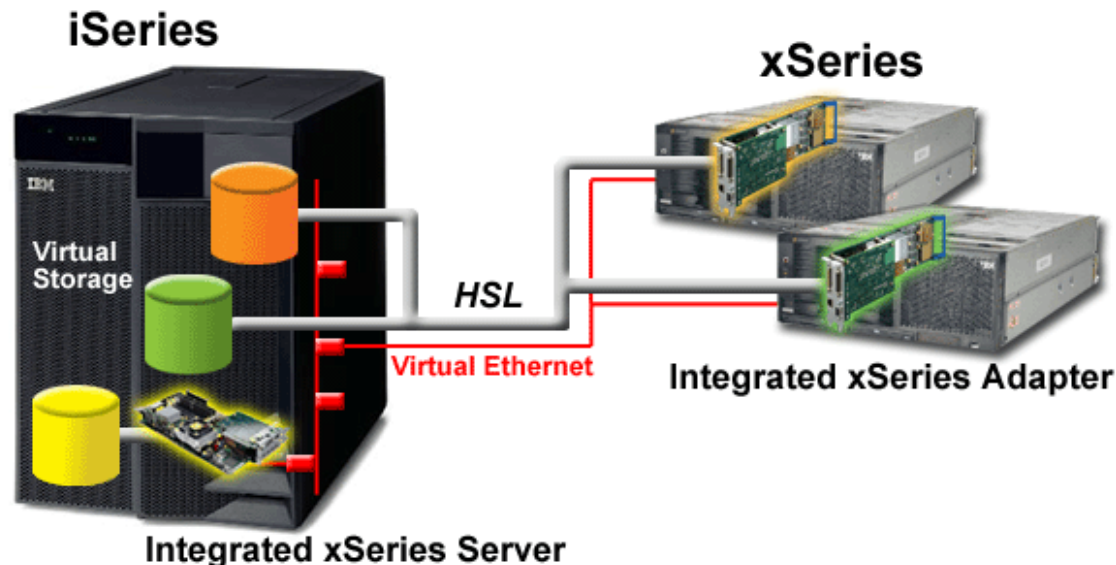
- ▶ Hot Spare allows one xSeries server to provide a backup to several production servers

Benefit

- ▶ Efficient availability solution for planned or unplanned server outages



iSeries Adds Value to Windows 2000/2003 Servers



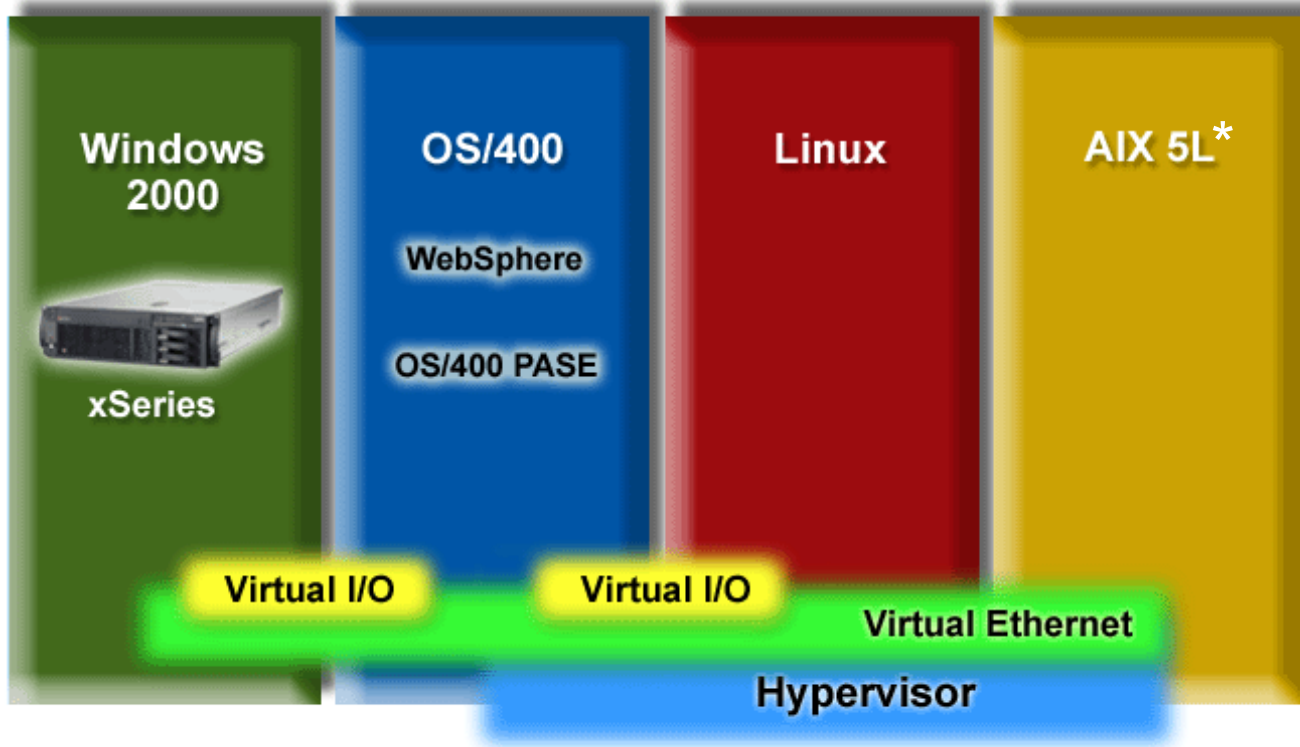
- Integrate server management and user administration
- Leverage investment in iSeries resources and operations
- Simplify server test and deployment using Virtual Storage Spaces
- Communicate securely over 1 Gbps Virtual Ethernet connections

Windows / Linux Server Consolidation on iSeries

3-Year ROI for Server Consolidation (per 100 users)		
		Years
Annual cost savings	\$	180,909
Net Present Value (NPV)	\$	302,052
Total investment	\$	141,227
ROI = NPV/Investment		213.9%
Payback = (Investment/ First year cash flow)		261 days
Discount Rate		12%

- **IDC analysis of six SMB customers who consolidated x86 (Intel) workloads on iSeries in the following ways:**
 - ▶ Deployed Windows on Integrated xSeries Servers/Adapters
 - ▶ Linux in logical partitions (LPARs)
- **“The iSeries solutions, including those that leveraged xSeries co-processors, reduced the combined downtime associated with Windows and Linux servers by more than 90% compared to x86 server environments running Windows and Linux.”**
- **The full report is available on the web:**
www.ibm.com/servers/eserver/series/const/idc_roi/
 - IDC White Paper July 2003: The ROI of Windows & Linux Server Consolidation on IBM eServer iSeries: Analysis and Case Studies in Small and Medium Businesses

iSeries Server Consolidation



iSeries offers application flexibility

iSeries innovative technology can lower cost of management

iSeries makes enterprise IT management simple

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

Customer Success Stories

- **Wesco Aircraft**
- **Huhtamaki**
- **IU Medical Group - Primary Care**
- **Banco do Brasil**
- **Coleman Cable**
- **Chick's Sporting Goods**
- **Marshall Erdman & Associates**
- **Associated Grocers of New England**
- **Sanistaal A/S**
- **Mediocredito Fondiario Centroitatia**
- **Munce's Superior, Inc.**

*www.ibm.com/eserver/series/windowsintegration
Click on "Case Studies"*

Huhtamaki



www.huhtamaki.com

“Before consolidating on the iSeries and xSeries we required at least three dedicated administrators to run our servers...now because of its ease of use, we need only two administrators to run the new system.”

Brendan Carlton
Systems Administrator,

Huhtamaki

“One of the things I enjoy most about the IBM iSeries and xSeries integration is that I have been able to take a painstaking process of building a brand new Wintel server from scratch and getting it deployed from approximately a three to four day procedure down to 20 minutes.”

Indiana University Medical Group

Background

- ▶ A practice of 100 faculty physicians at the Indiana University (IU) School of Medicine, IU Medical Group-Primary Care offers health care packages for corporations as well as services for individual patients.

Objectives

- ▶ Growing server demands
- ▶ Growing storage demands for data warehousing, file serving, e-mail and Web applications
- ▶ Consolidate 8 PC servers

Solution

- ▶ iSeries
- ▶ 4 Integrated xSeries Servers
- ▶ 2 xSeries attached to iSeries with IXA

Benefits

- ▶ Much faster backups - days to 1 hour
- ▶ Consolidated systems management
- ▶ Simplified adding capacity



IBM eServer™ iSeries™

Linux on iSeries

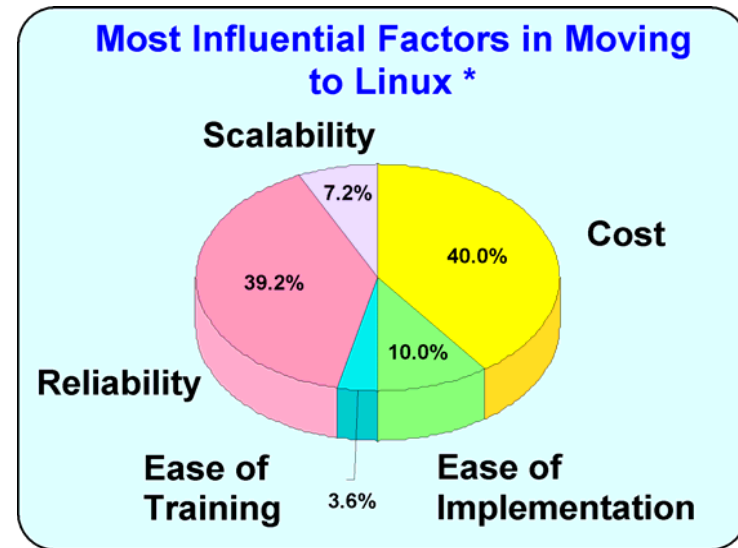
Darryl Johns
iSeries East Region
djohns@us.ibm.com

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Why Linux

Drivers of Linux Deployment

- Initial Price
- Reliability/Availability
- Issues with Microsoft Licensing
- Ongoing Cost of Operations
- Availability of Applications
- Open Source Model
- Linux features and functions
- Reduce dependence on Current OS vendors



*Source: TechRepublic survey, 2001

Cost of Computing - leveraging Linux to reduce your overhead

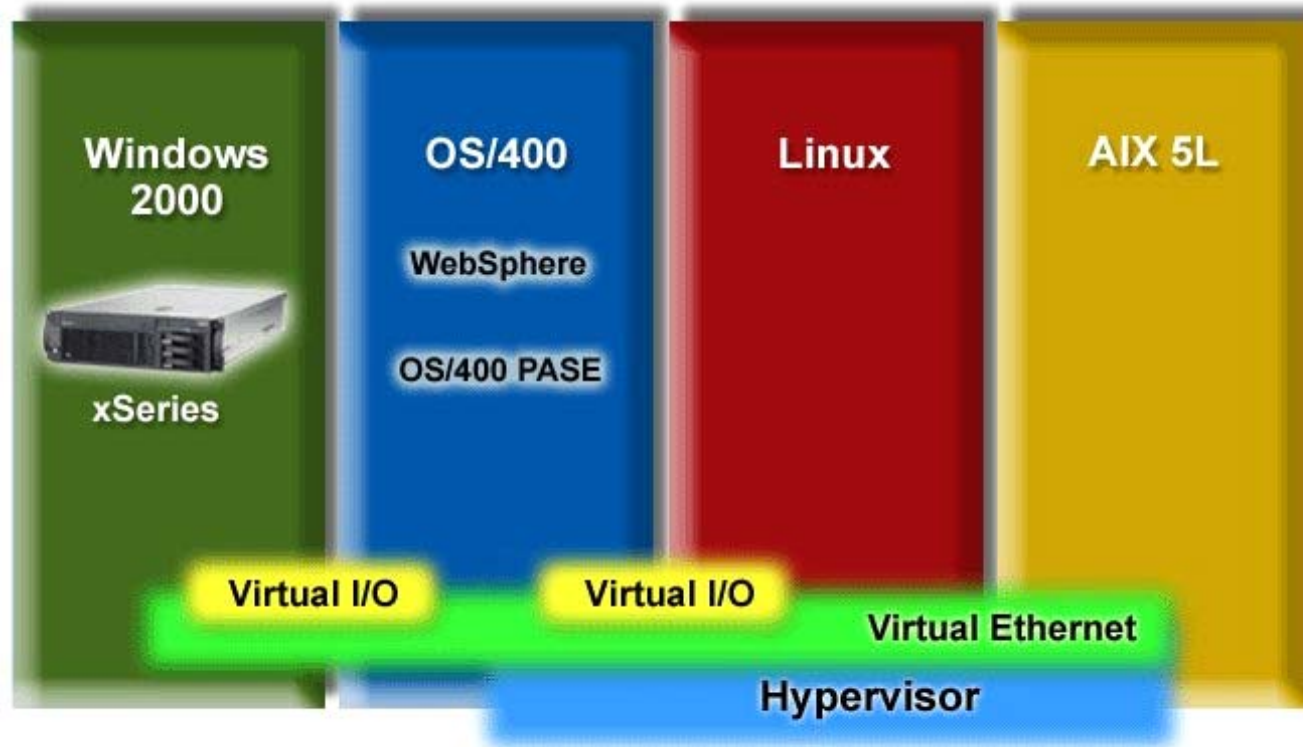
	Servers	Storage	Software: Middleware	Software: Applications	Business Innovation Services	Integrated Technology Services
Ratios	\$1	\$0.59	\$1.94	\$2.69	\$4.83	\$1.99

Source: Assessing the Marketplace for Linux, IDC, 2-4-03

IT Consolidation Drivers

- **Reduce costs and dramatically improve TCO**
- **Improve service levels, simplify systems management and enhance resources utilization**
- **Establish a foundation for future growth around new applications**
- **Enable data sharing, provides interoperability**
- **Increase business continuity and recoverability**

iSeries Server Convergence Strategy



Provide application flexibility to adapt to changing business needs

Deliver innovative technology to reduce operation costs

Simplify enterprise IT management

iSeries Logical Partitioning

■ Mainframe Class Partitioning

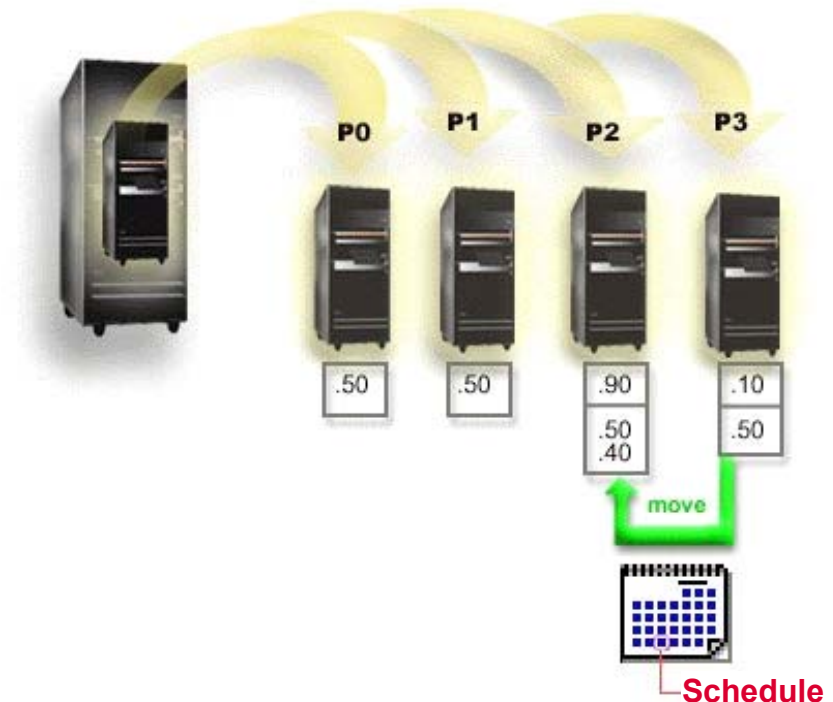
- ▶ Shared Processor
- ▶ Dynamic Resource Movement
- ▶ Virtual Ethernet
- ▶ Heterogenous OS Support
- ▶ Uni-processor partitioning
- ▶ Graphical management

■ Customer Benefits

- ▶ Quick consolidations
- ▶ Run multiple, yet independent workloads
- ▶ Maximize I/T investments
- ▶ Implement High Availability Solutions

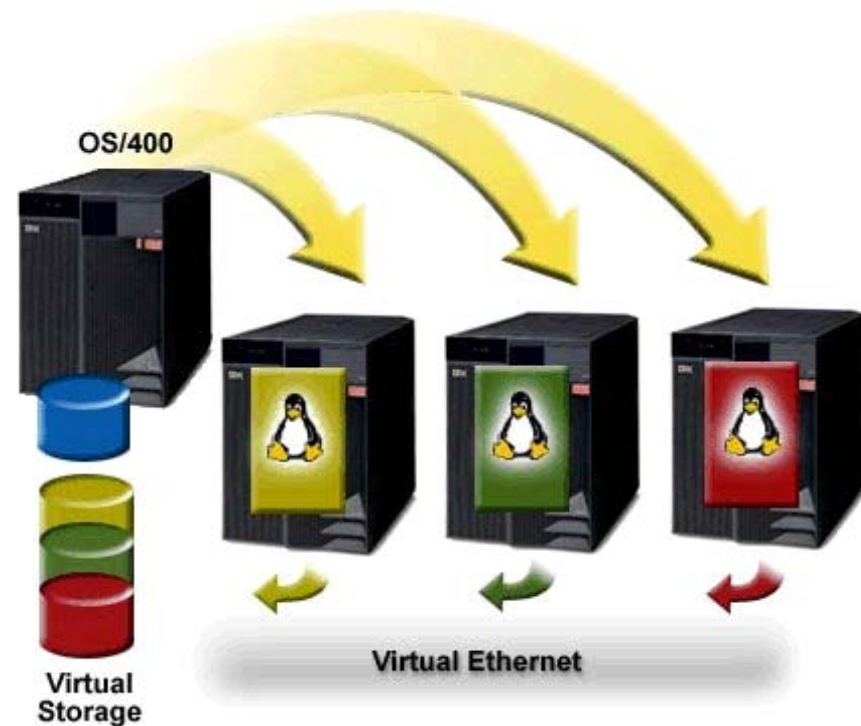
■ Success

- ▶ 3000+ LPAR Installations
 - 60% on 1-4 processor servers
- ▶ 48% of i840s use LPAR



Linux on iSeries Value Proposition

- **On Demand Virtualization**
 - ▶ Up to 10 partitions per processor
 - ▶ On Demand Capacity
 - ▶ Virtual Storage, Ethernet, I/O
 - ▶ Independant Resource Movement
- **Integration**
 - ▶ Linux and OS/400 Applications
 - ▶ Server Management
 - ▶ Consolidated Storage Management
- **64-bit powerPC**



✓ *Quick consolidations*



✓ *Maximize IT investment*

✓ *Run multiple, yet independent workloads*

✓ *Extend iSeries advantages to Linux*

Linux Software Savings: MS vs Linux

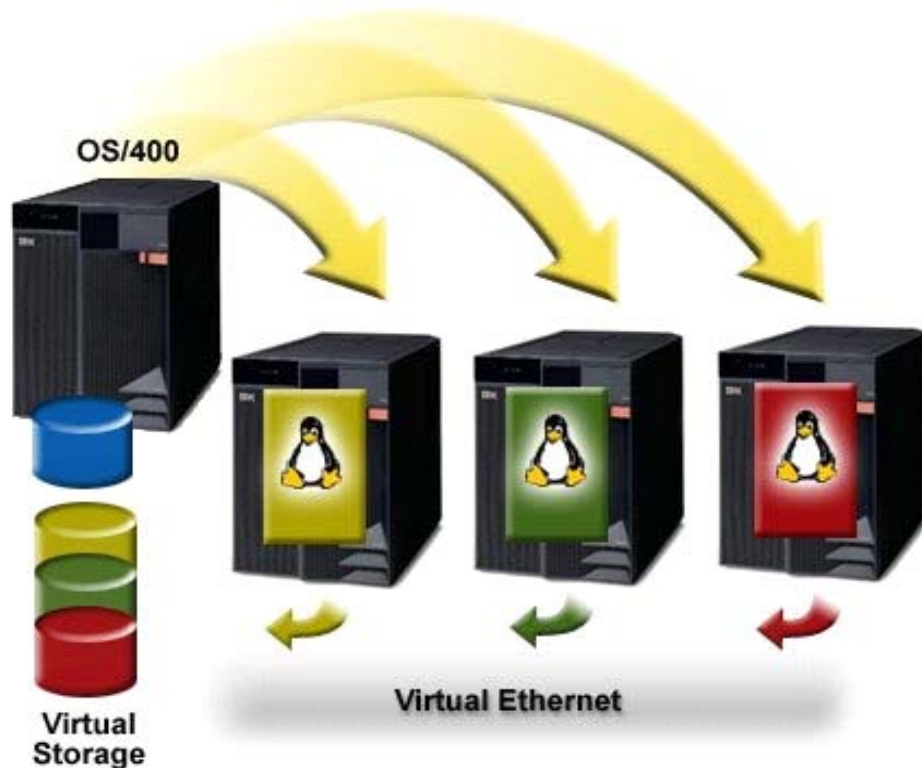
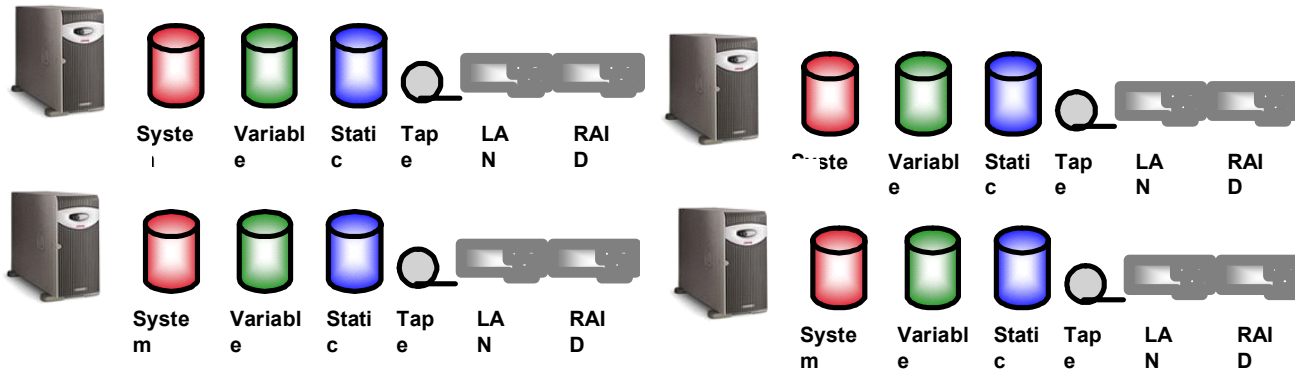
<p>MS Windows 2000 advanced Server (includes IIS HTTP server)</p>	<p>\$3,999</p>	<p>Comes w/ 25 Client Access License (CALs). Additional CALs are \$67 each.</p>		<p>SuSE ----- RedHat</p>	<p>•priced per CPU starting @\$1,269 ----- Standard \$3,250 ** Premium \$4,250</p>	<p>All Linux Distributions include - file&print - DNS - FTP - Apache - POP mail - etc WITH NO CALs</p>
<p>Microsoft Exchange Server 2000</p>	<p>\$1,299</p>	<p>Comes w/ 5 CALs. Additional CALs are \$67 each</p>		<p>Bynari</p>	<p>Insight Server & 250 User Pack - \$6,000 Insight Server & 1500 User Pack 31,500</p>	<p>Fully functional alternative to Exchange!!</p>
<p>Microsoft Office Standard</p>	<p>\$479</p>	<p>Priced per users</p>		<p>Open Office</p>	<p>no-charge download</p>	<p>Linux Desktop Office solution</p>

**RedHat has a 1Q03 promotion for \$1,050

http://www.cyber.com.au/cyber/about/linux_vs_windows_pricing_comparison.pdf

LPAR, Virtual I/O, and Shared Storage Spaces lowers TCO

Server Farm



Intel solutions

- ▶ LAN, RAID and TAPE device for each server
- ▶ memory, disk, and CPU is allocated to each server
- ▶ each server has to have its own backup and recovery solution
- ▶ Do you have a DR plan for this?

iSeries solutions

- ▶ Shared resources - Fewer disk drives, tape drives and LAN adapters can be used
- ▶ Reduce disk administration - iSeries Storage Management
- ▶ Improve performance with more disk arms
- ▶ Consolidated Backup of OS/400 and Linux **(now that's DR!!)**
- ▶ Resources can easily be moved to where they are needed

Linux and LPAR V5R2

▪ Shared Processor Support*

- ▶ Linux shares processors with other OS/400 and Linux partitions
 - Up to 10 partitions per processor
 - Minimum 0.10 processor in a partition

▪ Dynamic Resource Movement

- ▶ Shared Processor Units*
 - Minimum processor movement: 0.01
 - Moved to/from Linux or OS/400 V5R2 partitions
 - Immediate, scheduled, or under program control
- ▶ Virtual storage spaces
 - Added to Linux partitions

▪ Independent Resource Movement

- ▶ Processor, Memory, and I/O
- ▶ Dedicated Processors, Memory and I/O
 - Requires the Linux partition to be stopped and restarted
 - Minimum memory movement: 1 MB

OS/400 V5R2 Primary Partition

# of Processors in Server	Maximum # of Linux Partitions*
1	9
2	19
3	29
4 and up	31

* Shared processor is supported on iSeries servers with SStar and Power4 processors. Servers with IStar processors require a dedicated processor for Linux

Linux: What is New

Support for new servers

- ▶ Shared processor, Dynamic movement
- ▶ Virtual Storage and Ethernet
- ▶ Capacity Upgrade on Demand

Enhanced Direct I/O Support

- ▶ New 10/100/1000 Ethernet Adapter
- ▶ New Storage IOAs
- ▶ Raid 5 Support for Storage IOAs

Linux Processor Activation

- ▶ Included in Enterprise Package for i870 and i890
- ▶ Extra Processor Activation for Linux

Education Vouchers

- ▶ Included in Enterprise Package for i825, i870, i890
- ▶ Valid for iSeries on Linux Implementation (Course Code S6226)

Service Vouchers

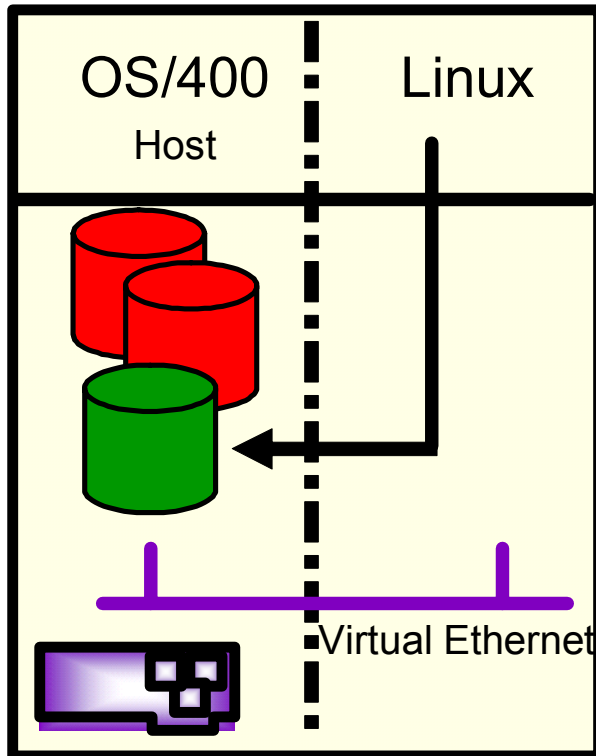
- ▶ Included in Enterprise Package for i825, i870, i890
- ▶ Valid for iSeries Linux Integration QuickStart

OS/400 V5R2 Primary Partition

	# of Processors	Max Number of Linux Partitions
i800	1	9
i810	1-2	9 -19
i825	3 -> 6	29 - 31
i870	8 ->12	31
i890	12 ->32	31

Linux I/O Flexibility

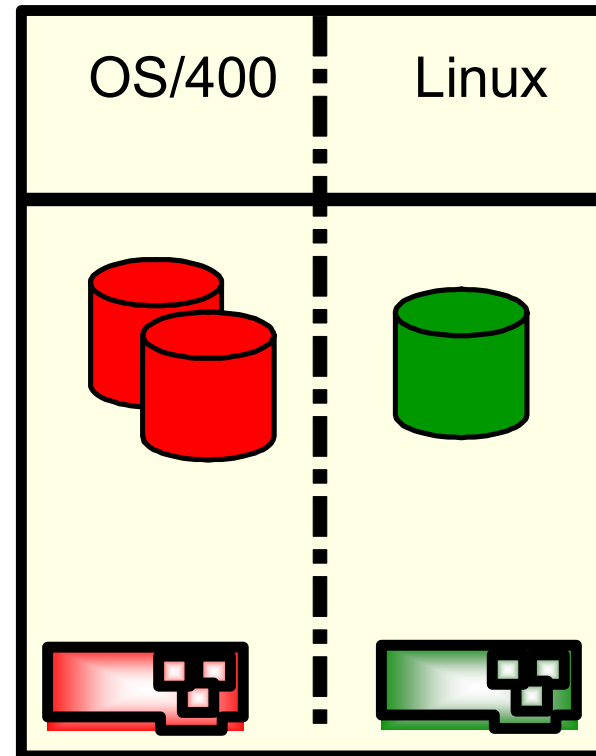
Virtual I/O



- ▶ SCSI Disk
- ▶ Fibre ESS
- ▶ Tape
- ▶ LAN
- ▶ CD, DVD

- Leverage iSeries resources
- OS/400 management

Direct I/O

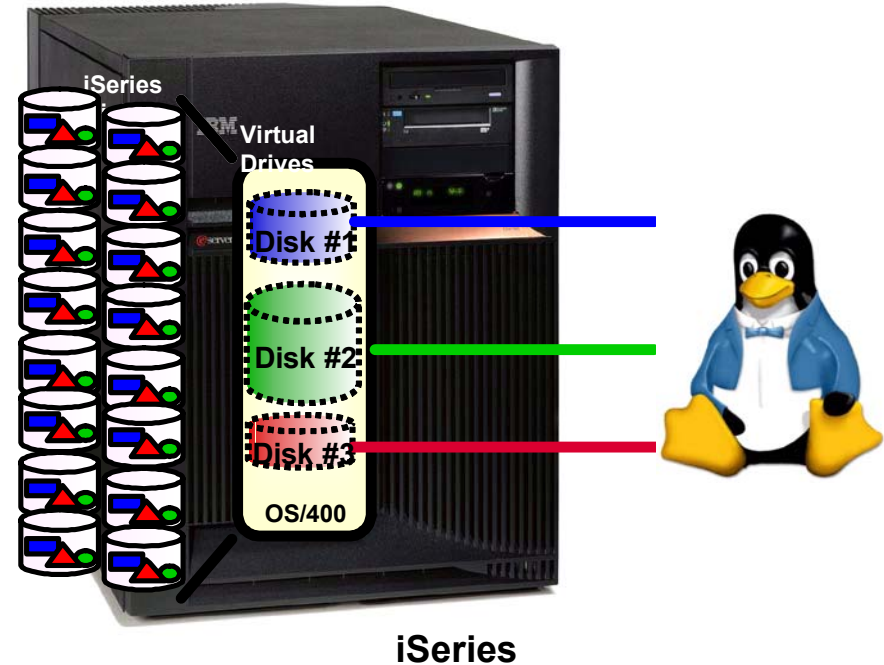


- ▶ SCSI Disk
- ▶ Fibre ESS
- ▶ Tape
- ▶ LAN
- ▶ WAN
- ▶ CD, DVD

- Dedicated resources
- Linux management

Storage Virtualization

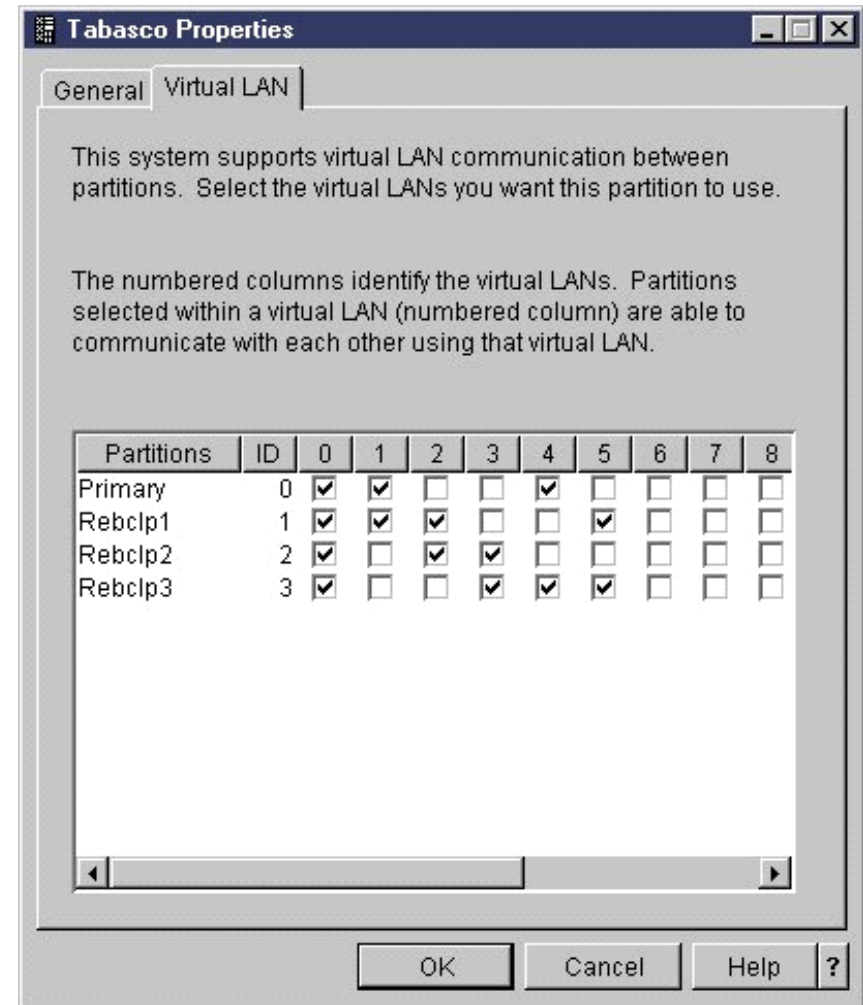
- **Storage spaces created from OS/400**
 - ▶ 1 MB to 64 GB each
 - ▶ Up to 20 per Linux partition
- **Dynamically added to Linux**
 - ▶ Requires V5R2 Primary and Host
- **Shared Storage**
 - ▶ Storage spaces can be read from multiple partitions



- **Enables Linux to Leverage Advanced iSeries Storage Architecture**
 - ▶ Data automatically spread and protected
 - ▶ More disk arms for better performance
 - ▶ Consolidated Backup of OS/400 and Linux
 - ▶ Flexible Storage Management
 - ▶ Easy setup of multiple Linux environments

Virtual Ethernet

- For fast, secure, reliable application communication between partitions
- Up to 16 high speed TCP/IP connections between partitions
 - ▶ Emulates 1 Gb Ethernet Adapters
 - ▶ Selective communications paths between partitions
 - ▶ Utilizes iSeries memory bus
 - ▶ No additional hardware required
- Supports communications between
 - ▶ OS/400 to OS/400
 - ▶ Linux to OS/400
 - ▶ Linux to Linux
 - ▶ Linux to Windows
- Included with OS/400 V5R1 and V5R2



Linux Partition Management

- **V5R2 iSeries Navigator**
 - ▶ **Create Partition Wizard**
 - ▶ **Create, Delete Partitions**
 - ▶ **Move Processor Resources**

Hardware	Current	Pending
Linuxad (4)	New	
Dedicated Processors	0	
Shared Pool Processors		0.50
Memory	0 MB	1000 MB

Move Processing Power

Move from logical partition "Primary (0)"

	Current	After Move	Amount to Move	
Shared processor pool:	1.70	1.40	0.30	processing units
Interactive performance:	50	50	0	percent
Virtual processors:	3	3		

Move to Logical partition: **Rchlinux (2)**

	Current	After Move	
Shared processor pool:	0.25	0.55	processing units
Interactive performance:	0	0	percent
Virtual processors:	1	1	

Buttons: OK, Schedule..., Cancel, Help, ?



iSeries Access for Web

Access to OS/400 Services from a Linux Client

iSeries Access for Web



Access to
5250
Applications
from a Linux
Client



Linux Distributors

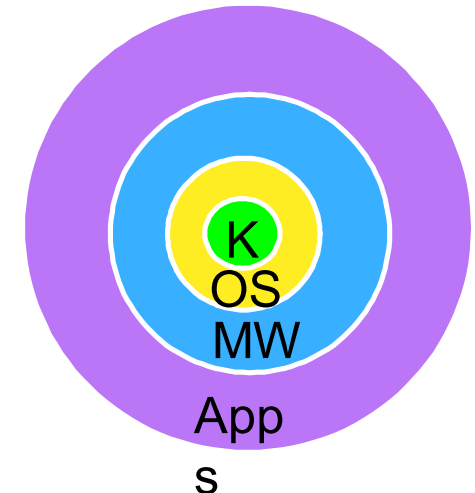
- ▶ Use PowerPC Linux kernel
- ▶ Add 100s of Operating System, Middleware, and Application components
- ▶ Add iSeries integration features
- ▶ Create Installation Documentation

Functions included in Typical Distribution

Functions	Key Middleware and Applications
Web Serving	Apache, Tomcat
Mail Server	SMTP(postfix), POP3, IMAP, Sendmail MTA
Print Server	Samba
File Server	Samba, NFS
Proxy Server	Squid
Security	NetFilter firewall, VPN, OpenSSL
Name server	DNS, DHCP, WINS, FTP
Directory	OpenLDAP
Database	MySQL, Postgres
Languages	C, C++, PHP, Pearl
Desktop	KDE, Gnome

The things that most people are using Linux for come with the distribution

Distribution



Kernel +
Operating System +
Middleware +
Applications =
Distribution

Linux Distributions for iSeries

SuSE

- ▶ **SuSE Linux Enterprise Server 8**
 - 64-bit kernel, 64 and 32-bit applications
 - Available December, 2002
- ▶ **SuSE Linux Enterprise Server 7**
 - 64-bit kernel, 32-bit applications
 - Available January, 2002



Turbolinux

- ▶ **Turbolinux Enterprise Server 8 for iSeries**
 - 64-bit kernel, 64 and 32-bit applications
 - Planned Available March 2003
- ▶ **Turbolinux Server 7 for iSeries**
 - 64-bit kernel, 32-bit applications
 - Available, April 2002



Red Hat

- ▶ **Red Hat Linux 7.1 for iSeries (64-bit)**
 - 64-bit kernel, 32-bit applications
 - Available, December 2002
- ▶ **Red Hat Linux 7.1 for iSeries**
 - 32-bit kernel
 - Available February 2002



Linux Distribution Pricing

■ SuSE SLES 8

▶ Subscription based on iSeries Model per year

–Media - 4 CDs

- 3 United Linux, 1 SuSE

–Annual Support

- SuSE Support via email
 - ◆ Installation, usage, problem reporting
- Updates and Fixes through SuSE Maintenance Web

■ Red Hat Linux 7.1 (64-bit)

▶ Subscription per server per year

–Standard \$5,250

- Red Hat Support (12x5), 4 hour response
 - ◆ Installation, Usage, Problem Reporting
- Errata, bug fixes and updates through Red Hat Network

–Premium \$6,950

- Red Hat Support (24x7), 1 hour response
- Errata, bug fixes and updates through Red Hat Network

■ Turbolinux TLES 8

▶ To be announced

iSeries Model	SLES 8 List Price
i800, i810, i270	\$1109 per system (\$149 for media kit and \$960 for maintenance)
i825, i820	\$1349 list price per 4 CPU block (\$149 for media kit and \$1200 for maintenance)
i870, i890, i830, i840	\$2309 list price per 4 CPU block (\$149 for mdeia kit and \$2160 for maintenance)

IBM Middleware

■ Java™

▶ IBM Developer Kit for Linux, Java 2 Technology Edition

- 1.3.1 Available for download at <http://www6.software.ibm.com/dl/dklx130/dklx130-p>
- Certified for Red Hat 7.1 for iSeries (64-bit) and SLES 8

▶ iSeries Toolbox for Java provides access to DB2 UDB and OS/400 Services

■ DB2 UDB for Linux

- ▶ Technology Preview started 1st quarter 2002
- ▶ Statement of Direction April 29, 2002
- ▶ Beta of DB2 UDB 8 January, 2003

■ WebSphere Application Server for Linux

- ▶ Technology Preview started 1st quarter 2002
- ▶ Statement of Direction April 29, 2002



Application Sources

- **Linux Distributions**

- ▶ **Contain popular Open Source Applications**

- Apache, Samba, Sendmail MTA, Netfiler

- **Open Source Applications**

- ▶ **Download and compile for PowerPC**

- Tomcat for Java Servlets and Java Server Pages <http://java.sun.com/products/jsp/tomcat/>

- OpenOffice - Productivity Suite www.openoffice.org

- **PowerPC Linux applications**

- ▶ **Will run out of the box**

- ▶ **iSeries, pSeries, Apple PowerBook,,,**

- **Intel Linux applications**

- ▶ **Need to be compiled for PowerPC**

- **ISVs**

- ▶ **PartnerWorld is working with ISVs to enhance iSeries application portfolio**

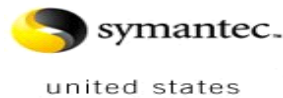
Key Solutions

Included with Distributions

- ▶ Samba - file server
- ▶ Apache - web server
- ▶ Squid - proxy server
- ▶ DNS/DHCP
- ▶ MySQL - database
- ▶ ...

Open Source

- ▶ Tomcat - web application server
- ▶ OpenOffice - office suite
- ▶ Netfilter - firewall



More<http://www-1.ibm.com/servers/eserver/series/linux/apps.html>

ISVs

Industry Solutions

- ▶ eOne - Commerce
- ▶ Assimilation Technologies - Transportation Scheduling
- ▶ MAPICS - ERP
- ▶ Dimensional Insight - BI
- ▶ abas - ERP
- ▶ ACCPAC
- ▶ MeritTrax - Food Industry Supply Chain

ISV Infrastructure Solutions

- ▶ Symantec - Enterprise Firewall
- ▶ Bynari - mail server
- ▶ Dimensional Insight - BI
- ▶ Vision Solutions - HA
- ▶ Lakeview Technologies - HA



Linux on iSeries Solutions

Consolidation

- ▶ Replace Windows or Linux **Infrastructure** servers
 - File and Print Serving
 - DHCP
 - Firewall
 - e-mail
 - DNS
- ▶ Run multiple Linux servers in partitions
- ▶ Consolidation Lowers Cost of Computing



Integration

- ▶ Extend (Modernization) OS/400 applications with Linux **eBusiness Applications**
- ▶ Run Linux applications on same server as OS/400
- ▶ Integration Lowers Cost of Computing

Application Flexibility

- ▶ Leverage Linux **LOB application** portfolio
- ▶ Run Linux applications on iSeries
- ▶ Flexibility Lowers Cost of Computing



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