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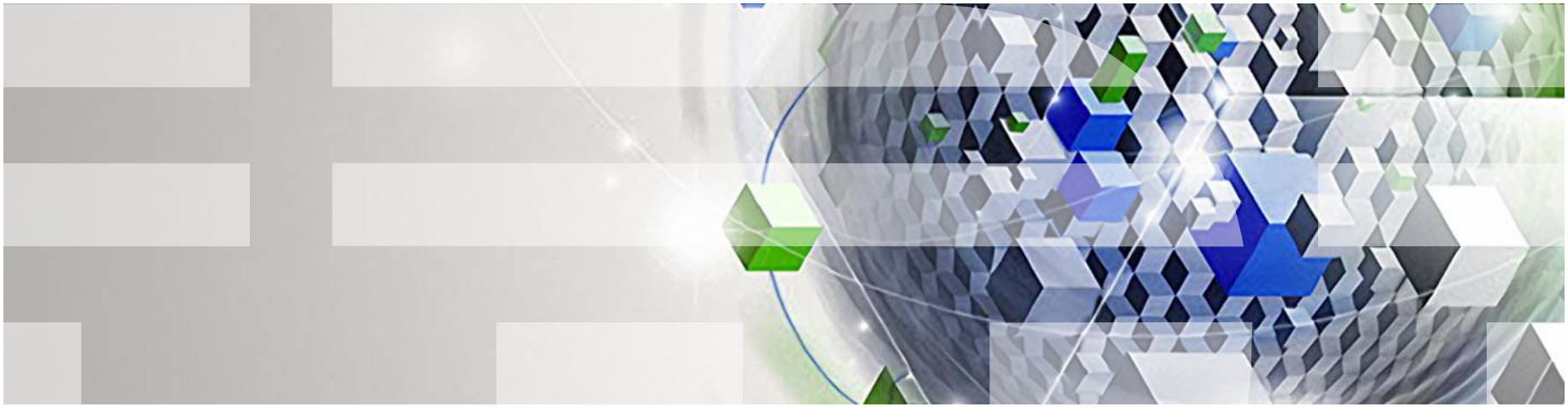
IBM i 7.1

John Bizon – jbizon@us.ibm.com



Wordpad.lnk

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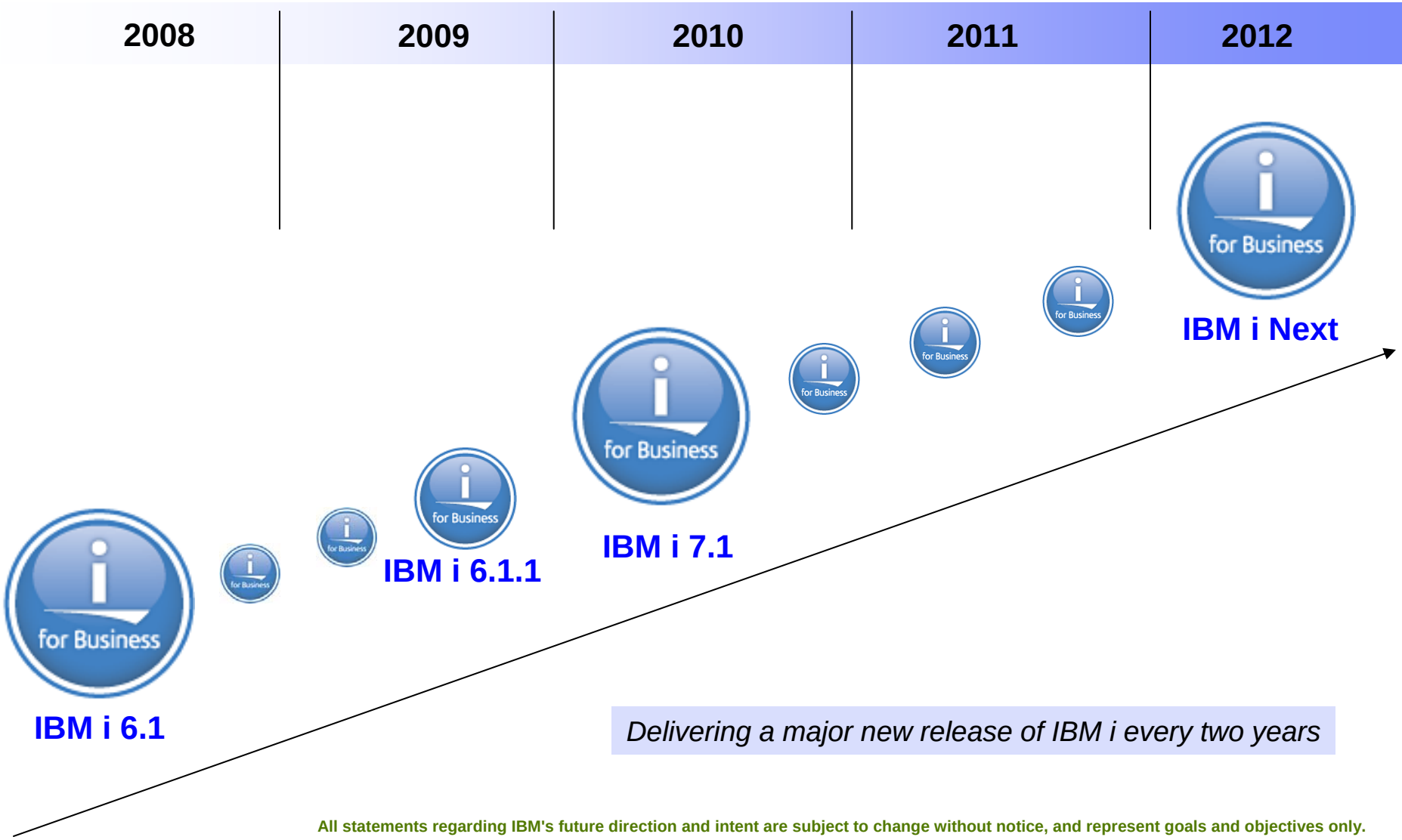
IBM i Roadmap



Delivering a major new release of IBM i every two years

All statements regarding IBM's future direction and intent are subject to change without notice, and represent goals and objectives only.

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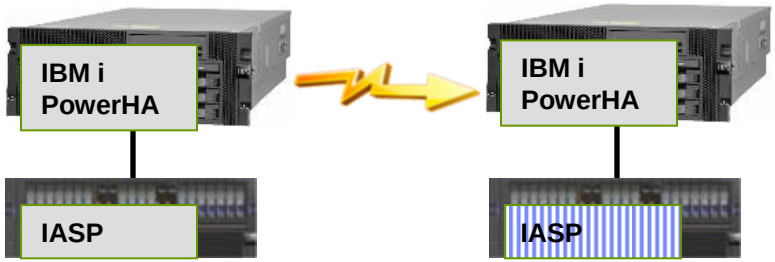
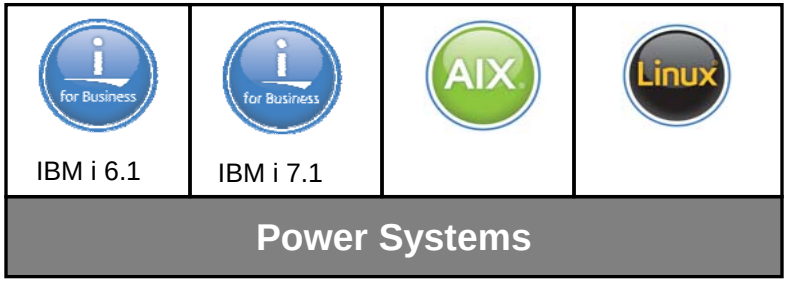
IBM i 7.1 Announcement Highlights

- **DB2**
  - Support for XML and column level encryption
  - SQL statements use OmniFind Text Search Server
- **PowerHA SystemMirror for i**
  - Async Geographic Mirroring & LUN-level switching
  - Space efficient Flash Copy
- **Virtualization**
  - IBM i 6.1 virtualization for i 7.1 partitions
  - N_Port_ID (NPIV) support for fibre tape and SAN
  - Fibre channel over Ethernet (FCoE)
- **Remotely Upgrade to IBM i 6.1.1 or 7.1**
  - NFS backed optical images for IBM i upgrades
  - Electronic Delivery Support expanded
- **Storage and Solid State Drives**
  - Automatic movement of hot data to SSDs
  - Concurrent remove of disk units
  - Native support for DS5000

PO #	Customer #	Date	Credit Card	Purchase Order
123	2468	5/27/09	&#^$&$^	~ XML ~





Announced on April 13
GA'd on April 23

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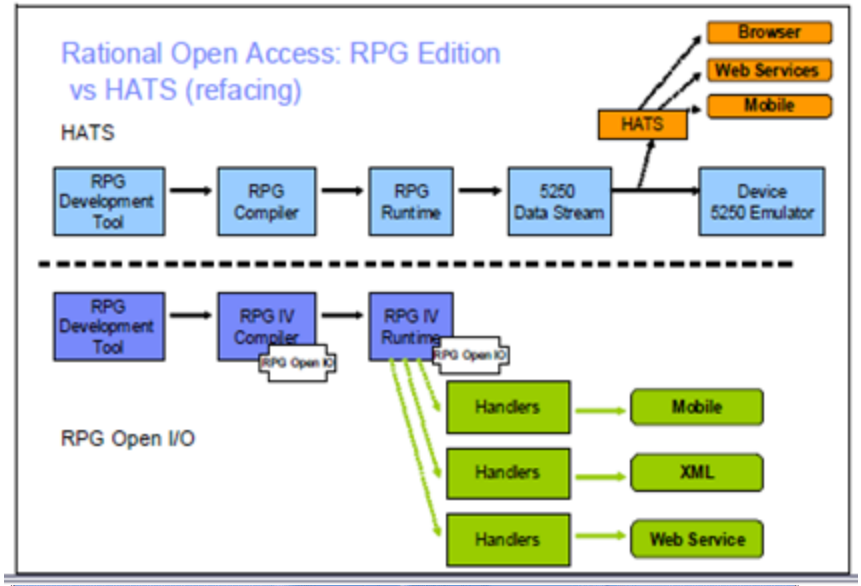
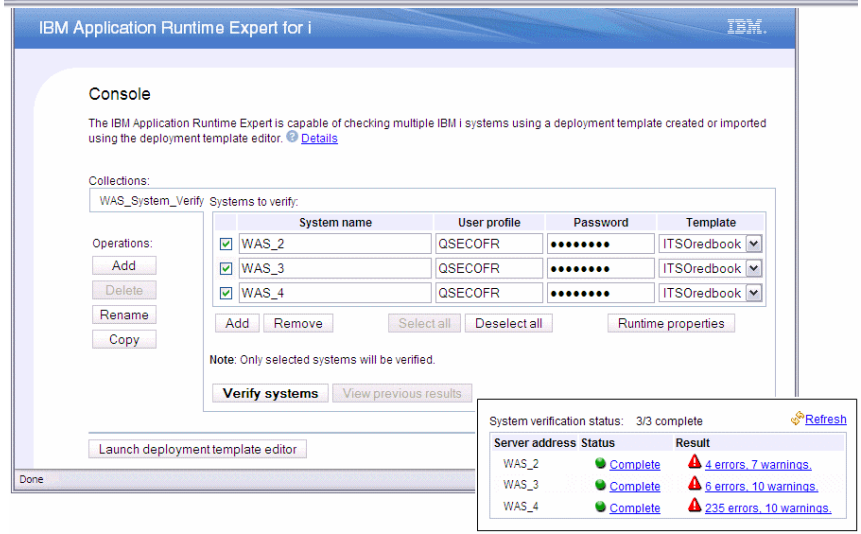
IBM i 7.1 Announcement Highlights continued

- **Open Access for RPG**
  - Extend application reach to pervasive devices
  - RPG applications can support other interfaces such as mobile devices by using "*Handlers*".
- **Zend Server Community Edition**
  - PHP environment preloaded with IBM I
- **Systems Director Navigator for i**
  - Richer management of IBM i via Director Navigator
  - 5250 Emulation and Set Target System
  - New Journal Management capabilities
- **SOD Application Runtime Expert for i**
  - Deliver a new capability for IBM i to verify application run time attributes to ensure consistent performance and deployment of new workloads.





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DB2 for i – XML Support

- **XML is an industry standard for exchanging information between customers, suppliers, and partners**

- **Rich XML Support now available with DB2 for i**
  1. XML data type stores XML documents supporting database operations
  2. Decompose (shred) XML documents into relational columns
  3. Generate XML documents from existing relational data

- **OmniFind Text Search Server provides support for searching XML documents**
  - Search elements of an XML document (e.g., customer name = Smith)
  - SQL statements use OmniFind to search the XML documents
  - Available with IBM i for no additional charge

- **Enhancements are a Strategic replacement for XML Extenders Program Product**

PO #	Customer #	Date	Purchase Order
123	2468	5/27/09	~ XML ~
456	1357	6/10/09	~ XML ~

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DB2 for i - Additional Enhancements

- **Column Level Encryption**
  - Allows for transparent (no application changes) encryption of a specific column in a database table accessed through SQL or native
  - Solutions from tool providers including Patrick Townsend, Linoma Software, and Protegrity supply encryption algorithms

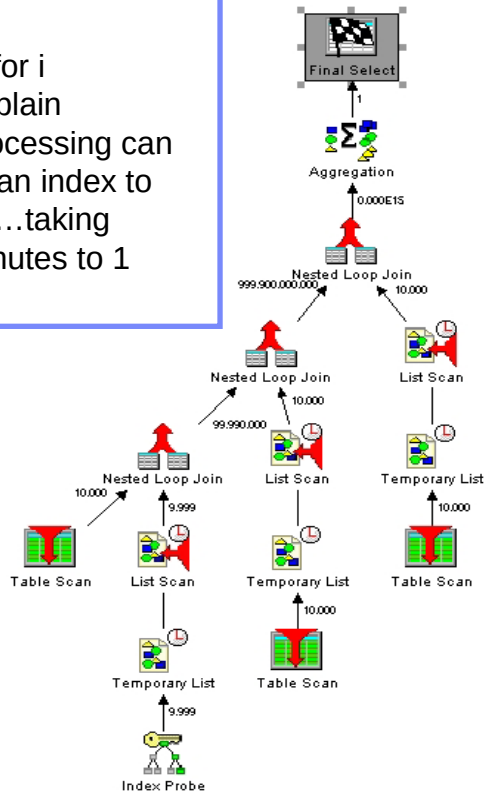
First Name	Last Name	City	State	Credit Card#
Megan	Jones	Minneapolis	Minnesota	*&^%$*
Casey	Smith	Ames	Iowa	$%@^

- **Application Developers**
  - MERGE, Array support, Global Variables, and consuming result sets in RPG allows for more powerful and efficient programming

- **Performance**
  - Adaptive Query Processing can modify query plan while the query is running to significantly improve performance
  - Advanced SQE query optimizer now supports native logical files

- **Management**
  - New tooling to monitor long running operations
  - SQL_CANCEL procedure to cancel long running queries.
  - New monitors for Random or Sequential I/O statistics to identify tables that can benefit from SSDs

On-Demand Performance Center
- Rich tools for DB2 for i
- Including Visual Explain
- Adaptive Query Processing can automatically build an index to replace table scan …taking queries from 30 minutes to 1 minute



DB2 is an integrated database supporting transaction processing and business intelligence applications

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DB2 Web Query Enhancements

- **New functions for IBM i 5.4, 6.1 and 7.1**
  - Security Enhancements
    - Change password from within DB2 Web Query
    - Enhanced meta data control
  - Administrative Enhancements
    - Change Management
    - New WRKWEBQRY functions simplifies admin
  - Performance Enhancements
    - Improved internal processing
    - Improved analysis capabilities
  - Functional Enhancements
    - Improved Dashboard development
    - Active Reports usability enhancements
  - http://www-03.ibm.com/systems/i/software/db2/webquery/
- **DB2 Web Query supports querying XML documents with IBM i 7.1**

✓ **Upgrade Query/400 with DB2 Web Query**

- **Get Better Performance**
  - Up to 5x better performance over Query/400
- **Reduce Report Maintenance**
  - Leverage parameterized reporting or OLAP functions to minimize report maintenance
- **Remove Dependency on IT**
  - Give the Power of the data to end users in the formats they want it with information in real time
- **Upgrade into full blown BI**
  - DB2 Web Query enabled Data Mart/Warehouses

✓ **Bring BI and Query Solution Back to IBM i**

- Stop the pain and expense of replicating data
- Make decisions with current data

DB2 Web Query provides an integrated Business Intelligence solution that offers rich functionality and breakthrough performance

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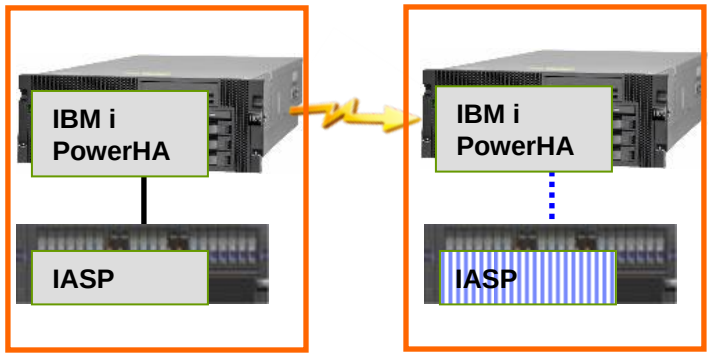
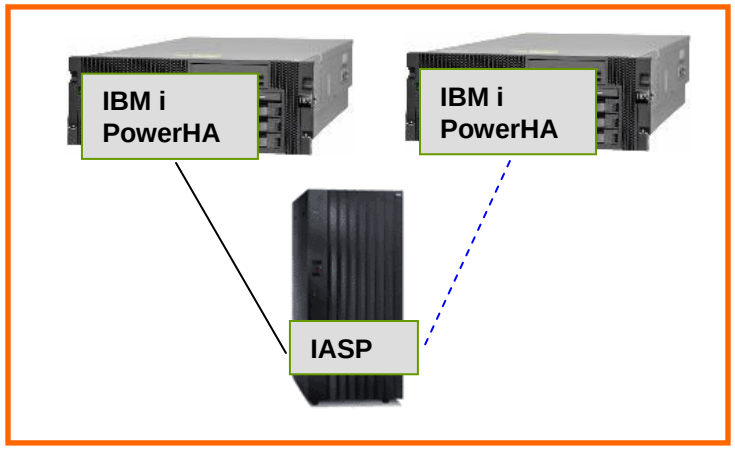
PowerHA SystemMirror for i - IBM 7.1 Enhancements

- **Asynchronous Geographic Mirroring for multi-site DR solution**
  - IBM i based mirroring for geographically dispersed systems
  - Asynchronously mirrors disk writes to target system
  - Support for automatic failover
  - Supports IASPs on integrated disk, SAN, and virtual disk
- **Space-Efficient Flash Copy**
  - Working with IBM DS8000 function to allow Flash Copy without requiring double DASD
- **LUN level switching for local HA solution**
  - Switch IASP on DS8000 or DS6000 between local systems
  - Support for automatic failover
  - Supports native IBM i and VIOS with NPIV attached SANs

PowerHA provides a robust, simple to manage High Availability and Disaster Recovery solution





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PowerHA SystemMirror for i Editions

- **PowerHA SystemMirror Standard Edition**
  - Targeted at data center high availability solutions
- **PowerHA SystemMirror Enterprise Edition**
  - Adds support for multi-site high availability and disaster recovery solutions

IBM i HA/DR Clustering	Standard Edition	Enterprise Edition
Centralized cluster management	✓	✓
Cluster resource management	✓	✓
Centralized cluster configuration	✓	✓
Automated cluster validation	✓	✓
Cluster admin domain	✓	✓
Cluster device domain	✓	✓
Integrated heartbeat	✓	✓
Application monitoring	✓	✓
IBM i event/error management	✓	✓
Automated planned switch over	✓	✓
Managed unplanned fail over	✓	✓
Centralized Flash Copy	✓	✓
LUN level switching	✓	✓
Multi-Site HA/DR management		✓
DS8000/DS6000 Metro Mirror		✓
DS8000/DS6000 Global Mirror		✓
Geomirror Async mode		✓

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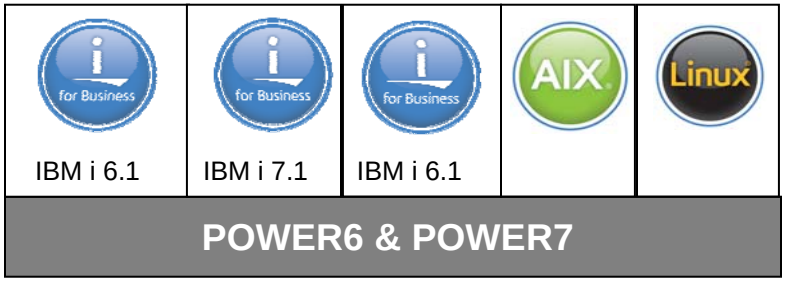
Virtualization Enhancements for IBM i

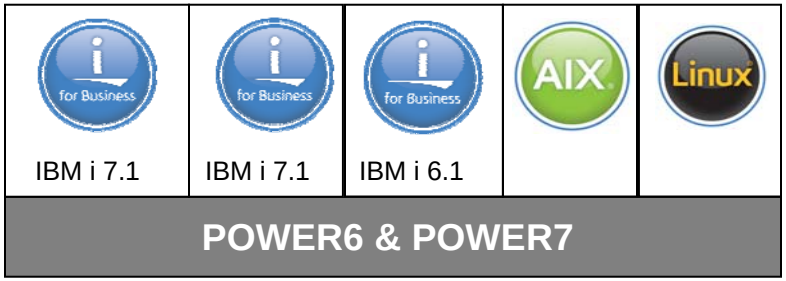
1. IBM i 6.1 partition can host

- IBM i 7.1 and 6.1 or 6.1 partitions
- AIX 5.2, 5.3, 6.1 and SLES and Red Hat Linux partitions
- iSCSI attached System x and BladeCenter



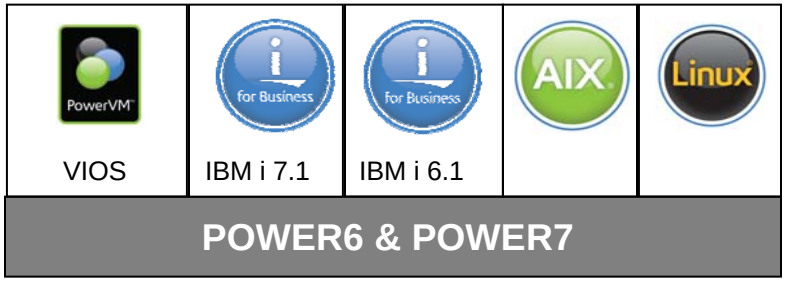
2. IBM i 7.1 partition can host

- IBM i 7.1 and 6.1 partitions
- AIX 5.2, 5.3, 6.1 and SLES and Red Hat Linux partitions
- iSCSI attached System x and BladeCenter



3. PowerVM VIOS can host

- IBM i 7.1 and 6.1 partitions
- IBM i 7.1 or 6.1.1 support Active Memory™ Sharing
- VIOS supports advanced virtualization technologies including Active Memory Sharing and NPIV
  - IBM i 6.1.1 or 7.1 can be hosted by dual PowerVM Virtual IO Servers for added high availability



Storage Virtualization can reduce costs while improving IT infrastructure flexibility

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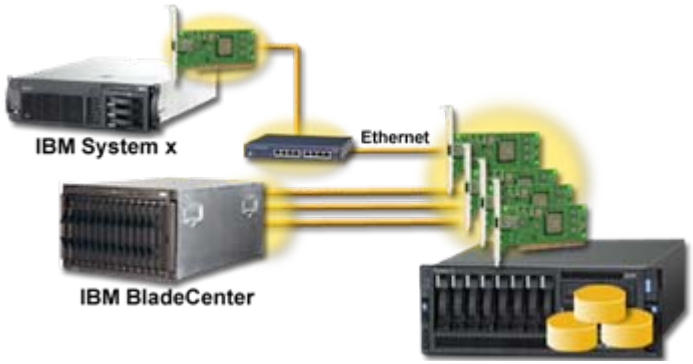
IBM i integration with BladeCenter and System x Enhancements

- **iSCSI Software Target Supports Higher Speed Connection**
  - Replaces current iSCSI adapter on Power server side with software in IBM i
  - Uses Ethernet adapters and network to connect Power to BladeCenter and System x
  - Supports 1 Gb and 10 Gb Ethernet connections
  - Can connect to iSCSI adapter or software initiator on BladeCenter and System x
- **Supported Environments**
  - Windows Server 2008 and 2003 Server editions
  - VMware ESX 4.0
  - VMware ESXi Embedded 4.0
- **New installation wizard**
  - Simplifies setup of integration environment and then starts install of Windows Server or VMware operating system

IBM i provides advanced storage management for x86 systems enabling cost reductions and better risk management



IBM Power Server with IBM i

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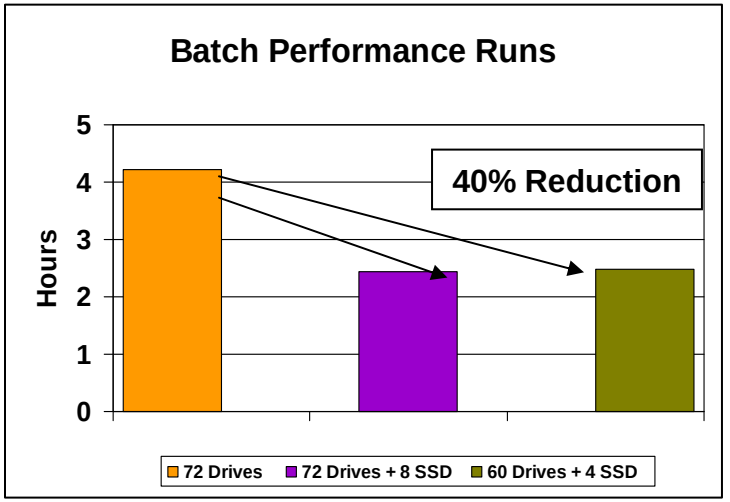
IBM i Storage Management and Enhancements for SSD

- **IBM i 6.1.1 and 7.1 adds**
  - Native support for IBM Systems Storage DS5100, DS5300, and DS8700
  - Support for PCI-e Dual SAS disk controllers
  - Concurrent disk remove and hot disk spare for mirroring
- **IBM i supports hierarchical storage management**
  - Now IBM i automatically collects I/O performance data and moves most active data to Solid State Drives (SSD)
- **DB2 for i supports SSD as preferred media**
  - New DB2 Random Read Statistics
- **Additional enhancements for SSDs**
  - New “SSD-Aware” utilities
  - Improved performance instrumentation
  - Usability enhancements
- **SSD Analyzer Tool**
  - Designed to help determine if SSDs can help improve application performance
  - Runs on IBM i 5.4, 6.1 or 7.1
  - Download SSD Analyzer Tool: http://www-03.ibm.com/support/techdocs/atsmastr.nsf/WebIndex/PRS3780

Associated Bank Reduces Batch Run Time by 40% with SSDs*



72 Drives replaced by 60 Drives + 4 SSD

SSDs can improve performance of long running batch jobs or queries. IBM i can easily get the right data on the SSDs

***http://www.ibmsystemsmagpowersystemsibmidigital.com/nxtbooks/ibmsystemsmag/ibmsystems_power_200909/index.php#/16**
 # Download http://www.ibm.com/support/techdocs/atsmastr.nsf/WebIndex/PRS3780

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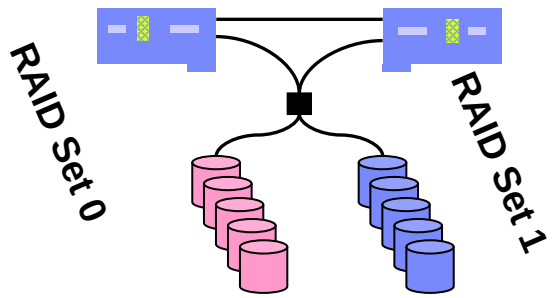
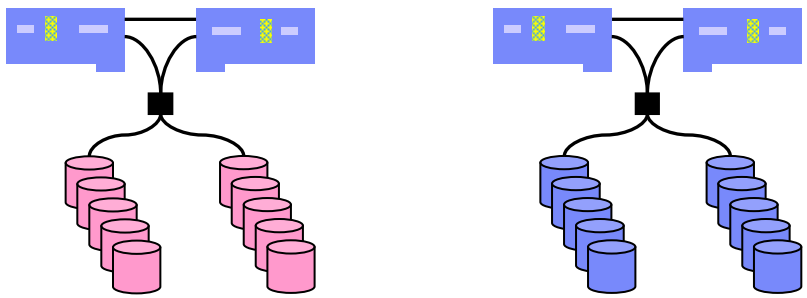
6.1.1 and 7.1 – Dual disk path for integrated disk

For optimal performance and protection on internal (integrated disk) using the newest SAS storage controllers for IBM i. Available for the disk in the new 12x – 5802/5803 expansion drawers or attaching 5886 SAS disk drawers

Dual SAS Adapter with RAID



Dual SAS Adapter with IBM i Mirroring



Mirror Side A **Mirror Side B**

New option:

Hot Spare for mirrored drives

```
                    Select Parity Optimization

Select how you want the parity set optimized:


The current parity optimization is:  Performance

Type choice, press Enter.
  Select parity optimization

     1. Availability
     2. Balance
     3. Capacity
     4. Performance




Selection
     4

F3=Exit          F12=Cancel
```

```
 -                        Display Disk Path Status

                  Serial                                Resource   Path
ASP Unit          Number          Type Model            Name       Status
  1    1  Y2103PD29K6Q          198B  099             DMP072     Active
                                                      DMP071     Passive
  1    2  Y2103PD2BCZ0          198B  099             DMP038     Passive
                                                      DMP037     Active
  1    3  Y2103PD29M4S          198B  099             DMP040     Passive
                                                      DMP039     Active
  1    4  Y2103PD2A082          198B  099             DMP042     Passive
                                                      DMP041     Active
  1    5  Y2103PD2AE6W          198B  099             DMP046     Passive
                                                      DMP045     Active
  1    6  Y2103PD1DFEK          198B  099             DMP052     Active
                                                      DMP051     Passive
  1    7  Y2103PD29FZR          198B  099             DMP044     Active
                                                      DMP043     Passive

Press Enter to continue.

F3=Exit          F5=Refresh                F9=Display disk unit details
F11=Display encryption status              F12=Cancel
```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Remove Disk Units Without an IPL or Outage

1

Work with Disk Configuration

Select one of the following:

1. Display disk configuration
2. Add units to ASPs
3. Work with ASP threshold
- . . .
- . . .
10. Stop hot spare
11. Work with encryption
12. Work with removing units from configuration

- Concurrent Remove of Disk Units
  - Hot remove disk unit(s) without having to IPL or take an outage
  - Does not require restricted state
  - Can be paused and restarted
  - *So hot, its cool*
- Any POWER hardware supporting IBM i 7.1

Manage from:

- *SST (System Server Tools)*
- *Systems Director Navigator for i*
- *System i Navigator*

2

Work with Removing Units From Configuration

Select one of the following:

1. Display disk configuration
2. Display status of remove operation
3. Remove units from configuration
4. Pause the remove operation
5. Resume the remove operation
6. Cancel the remove operation
7. Cancel the remove operation and balance data in the ASP

3

Size	%Used	Status
195754	33.56%	Unprotected
55924	40.77%	Configured
18643	40.78%	Configured
23308	40.78%	Configured
27965	40.77%	Configured
32623	40.77%	Configured
37287	2.88%	Removing

4

Serial Number	Resource Type Model Name	Capacity Status
YL4RUT3ERVR7	6B22 050 DD006	37287 Non-configured

More details in Chapter 8 in: **IBM i 7.1 Technical Overview, SG24-7858-00**
http://www.redbooks.ibm.com/redpieces/abstracts/sg247858.html?Open

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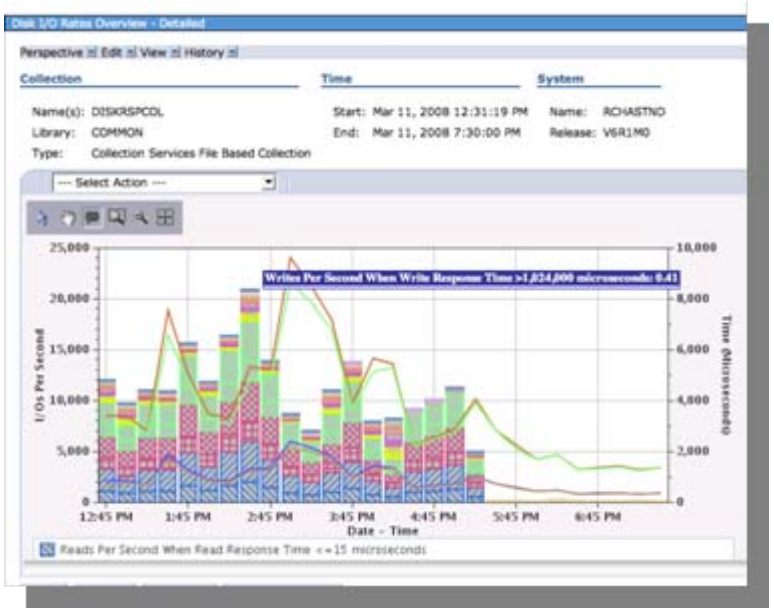
Systems Management Enhancements

- **Systems Director Navigator for i**
  - Ability to manage a target IBM i 5.4, 6.1 or 7.1 system
    - Navigator management server runs in one place
    - One browser used to manage multiple environments
    - Extends Navigator management to IBM i 5.4
  - Support for Tape and Journal management and BRMS
- **Performance Management Enhancements**
  - More metrics into Collection Services: DS8000, 12X Bus, Save/Restore, and Tape
  - Performance Data Investigator is enhanced to include Disk response time and Java memory perspectives
- **Systems Director Enhancements**
  - New functions for managing IBM i
  - Management server runs on AIX, Linux, or Windows
  - Manages IBM i 6.1 and 7.1 environments



Systems Director	6.1.1 2Q 09	6.1.2 4Q 09	6.2 2Q 10
Support Group and CUM PTFs	✓	✓	✓
6.1.2 Agent for IBM i		✓	✓
Support individual PTF			✓
Additional monitors			✓

Note:

Most new function for GUI management is being moved to Systems Director Navigator for i or the full Systems Director product suite. New function is not being added to PC client based - System i Operations Navigator.

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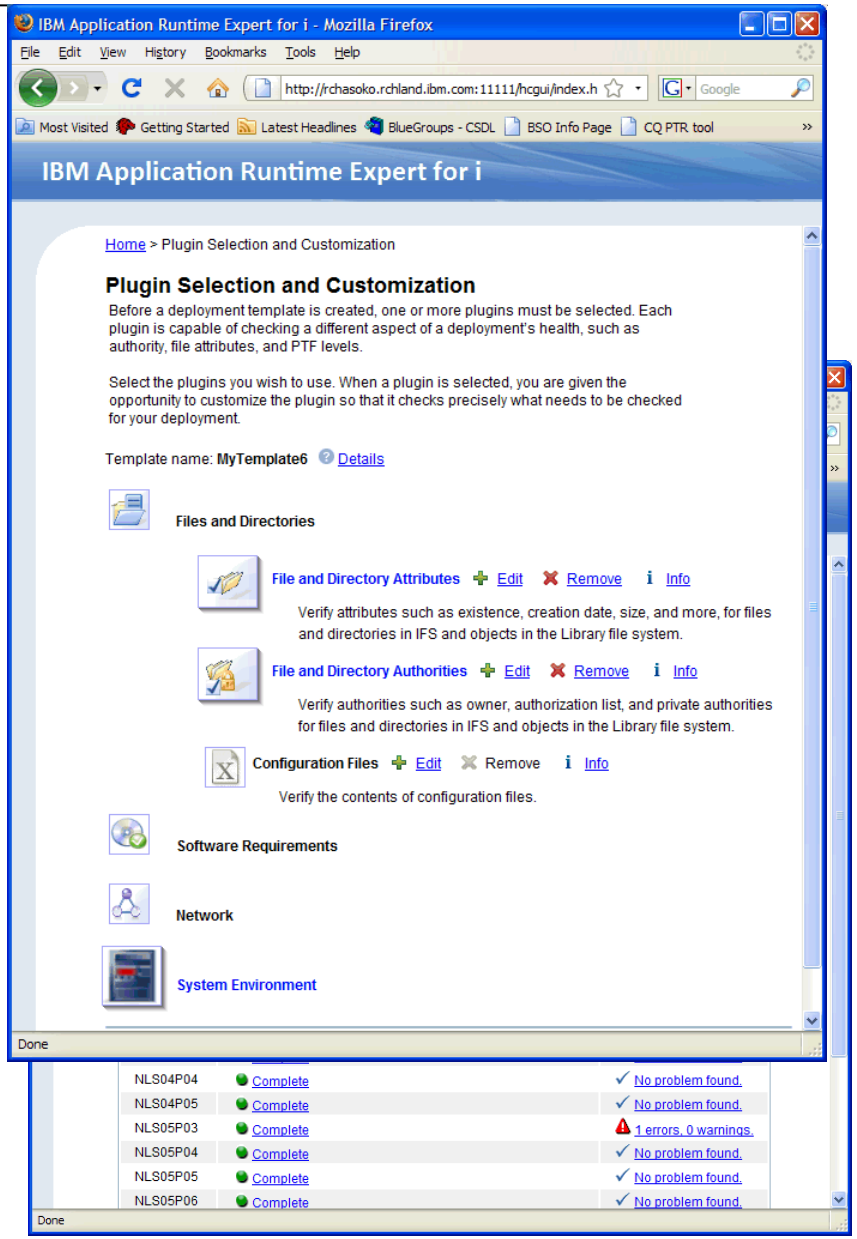
Application Runtime Expert for i

- **Tool to verify runtime attributes of an application to help resolve situations where application is not starting or working properly**
  - Creates a template for well running application
  - Performs health check against current environment
  - Identifies differences between template and actual runtime attributes
  - Provides the option to fix many of the differences found

- **Application Runtime Attributives**
  - File/Directory Authorities and Attributes
  - Attributes in property/http/xml configuration files
  - User profiles
  - PTFs
  - System Values
  - Products installed
  - TCP/IP Network verification and configuration
  - Environment variables
  - Ports in use

Application Runtime Expert can quickly identify issues in order to get applications back online



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Getting to IBM i 7.1 - Supported Upgrade paths

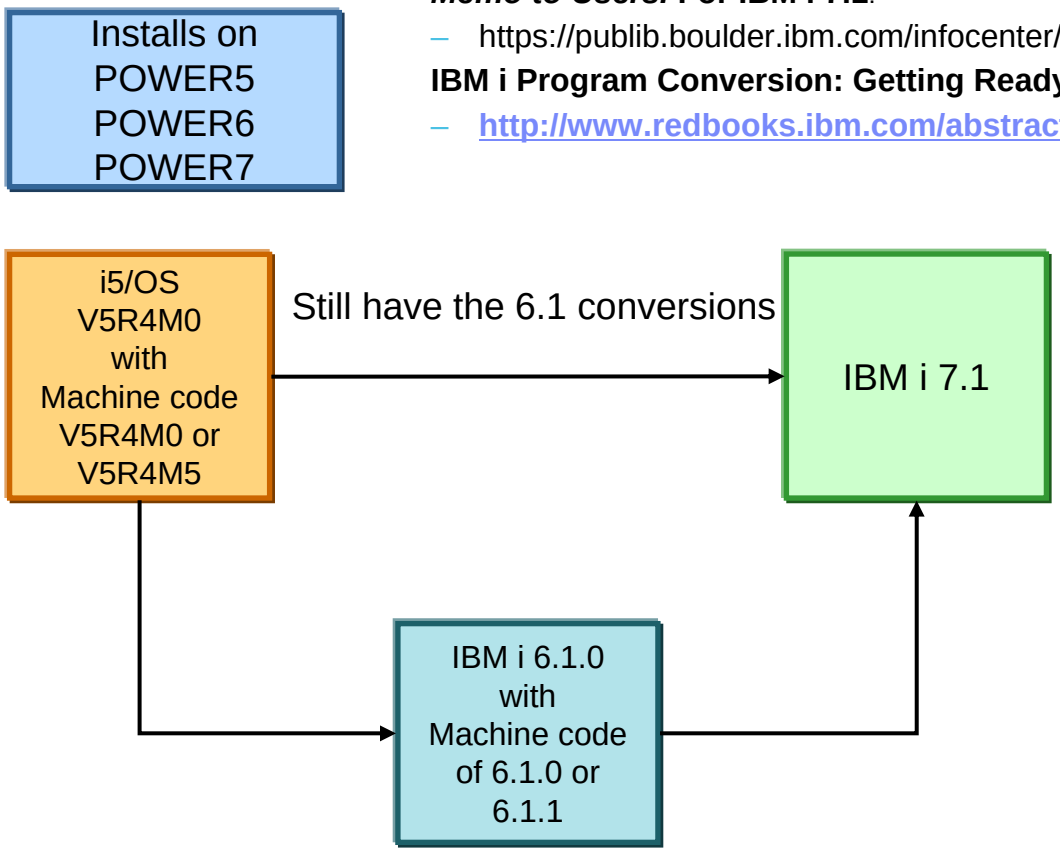
Important planning documents:

***Memo to Users.* For IBM i 7.1**:

– https://publib.boulder.ibm.com/infocenter/iseries/v7r1m0/topic/rzaq9/rzaq9.pdf

IBM i Program Conversion: Getting Ready for 6.1 and Beyond

– http://www.redbooks.ibm.com/abstracts/redp4293.html



Servers	IBM i 5.4	IBM i 6.1	IBM i 7.1
POWER7 **750, 770, 780**		✓	✓
Power Blades POWER7 **PS701, PS702**		✓	✓
Power Blades POWER6/6+ **JS12, 22, 23/43,**		✓	✓
POWER6+ **550*, 560**		✓	✓
POWER6 and POWER6+ **520, 550*, 570, 595**	✓	✓	✓
POWER5+ **515, 525**	✓	✓	✓
POWER5 **520, 550, 570, 595**	✓	✓	✓
800, 810, 825, 870, 890	✓	✓	
270, 820, 830, 840	✓		

IBM i planning website

http://www-947.ibm.com/systems/support/i/planning/migrationupgrade.html

http://www-947.ibm.com/systems/support/i/planning/upgrade/index.html

Installing, upgrading, or deleting IBM i and related software:

–http://publib.boulder.ibm.com/infocenter/iseries/v7r1m0/index.jsp?topic=/rzahc/rzahc1.htm

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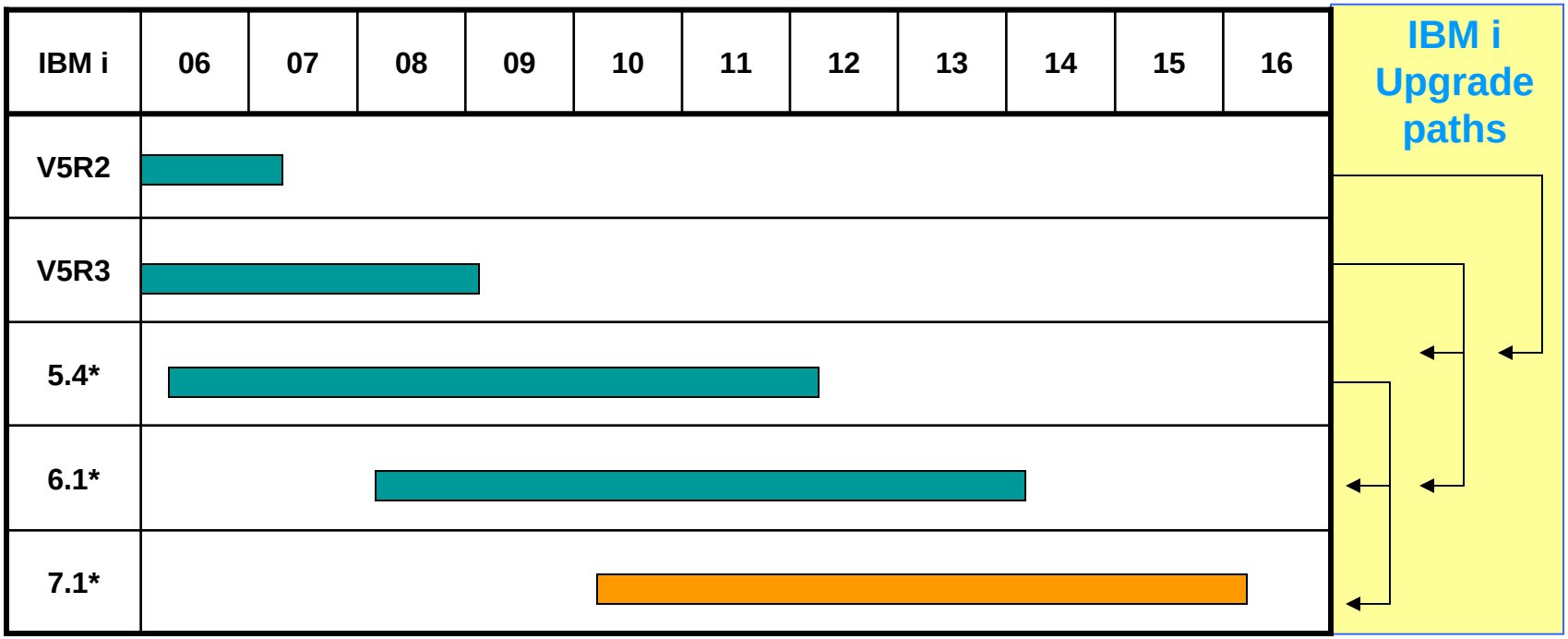
IBM i Life Cycle



Service

*The projected date for the service of IBM i releases is based on current IBM planning assumptions. Note that it is IBM's current practice to support an IBM i release until the next two releases have been made available, plus twenty four months. This presentation contains information about IBM's plans and directions. Such plans are subject to change without notice.

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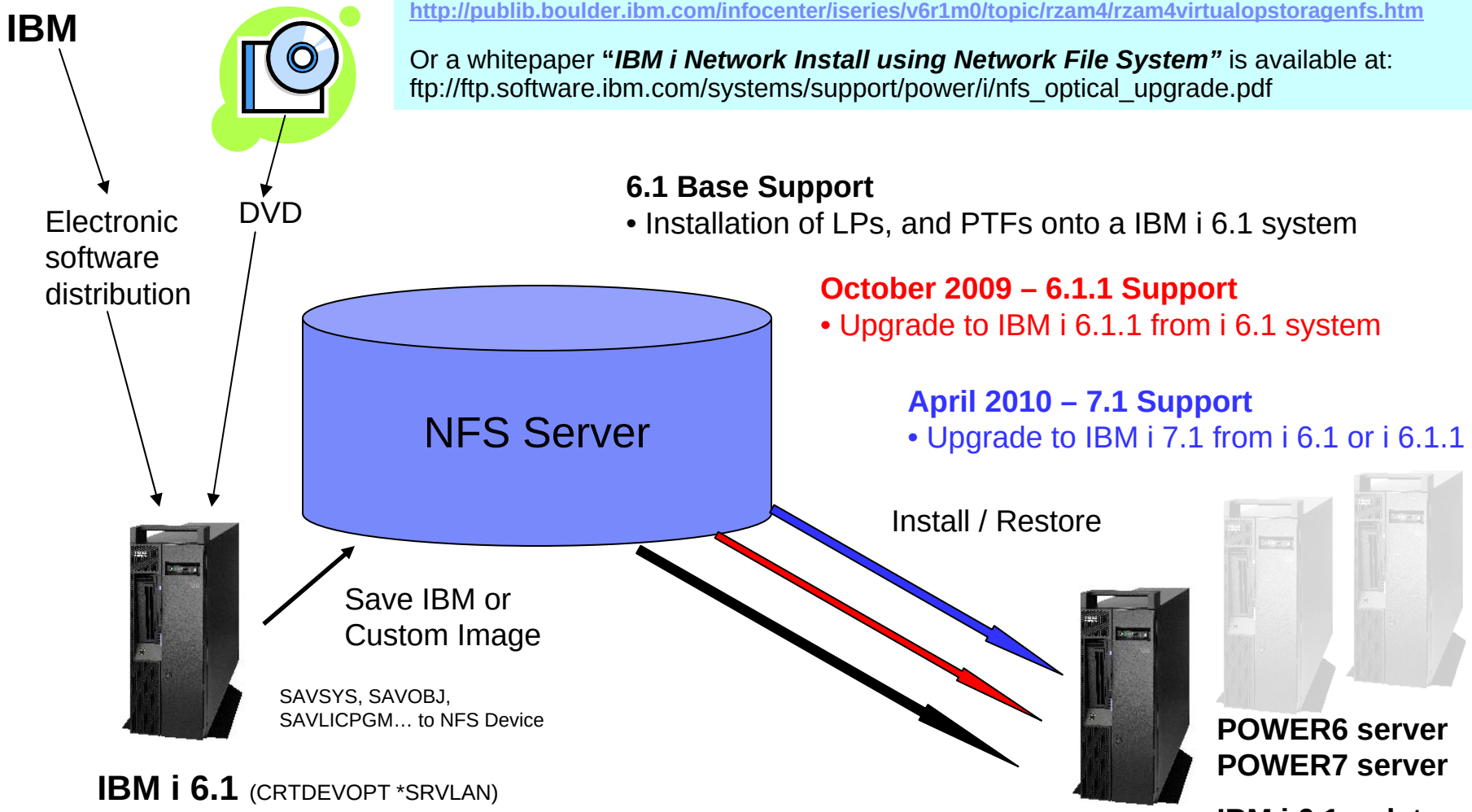
Network Upgrade Simplifies Upgrading Multiple Systems

IBM i 6.1 Information Center > Storage solutions > Virtual storage > Virtual optical storage > Virtual optical storage using the Network File System. **The direct link is:**
http://publib.boulder.ibm.com/infocenter/iseries/v6r1m0/topic/rzam4/rzam4virtualopstoragenfs.htm

Or a whitepaper ***"IBM i Network Install using Network File System"*** is available at:
ftp://ftp.software.ibm.com/systems/support/power/i/nfs_optical_upgrade.pdf



* All statements regarding IBM's future direction and intent are subject to change or withdrawal without notice, and represent goals and objectives only.

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Electronic Software Download

- All currently marketed IBM i releases available
  - IBM i 5.4, 6.1, 7.1
- Software is downloaded from ESS web site: http://www.ibm.com/servers/eserver/ess
  - Products available, countries supported, and instructions for download are on web site
- IBM manufacturing continues to support IBM i preload on newly purchased Power Systems and BladeCenter
- Effective April 13, 2010, $50 USD media charge for IBM i
  - No media charge if use Electronic Software Download

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Multi-Language Distribution Media

- **IBM i 7.1 packages 51 NLVs into 3 language groups for keyed media set**
  - IBM i 6.1 and previous versions/releases packaged each NLV separately
  - One language group will deliver 11-21 NLVs, depending on group ordered
  - US English included in each language group
- **Provides simplified ordering and software delivery**
- **Secondary language media can still be ordered, if desired**
- **No change for products (LPs) shipped individually, these continue to ship the product with all languages/NLVs**

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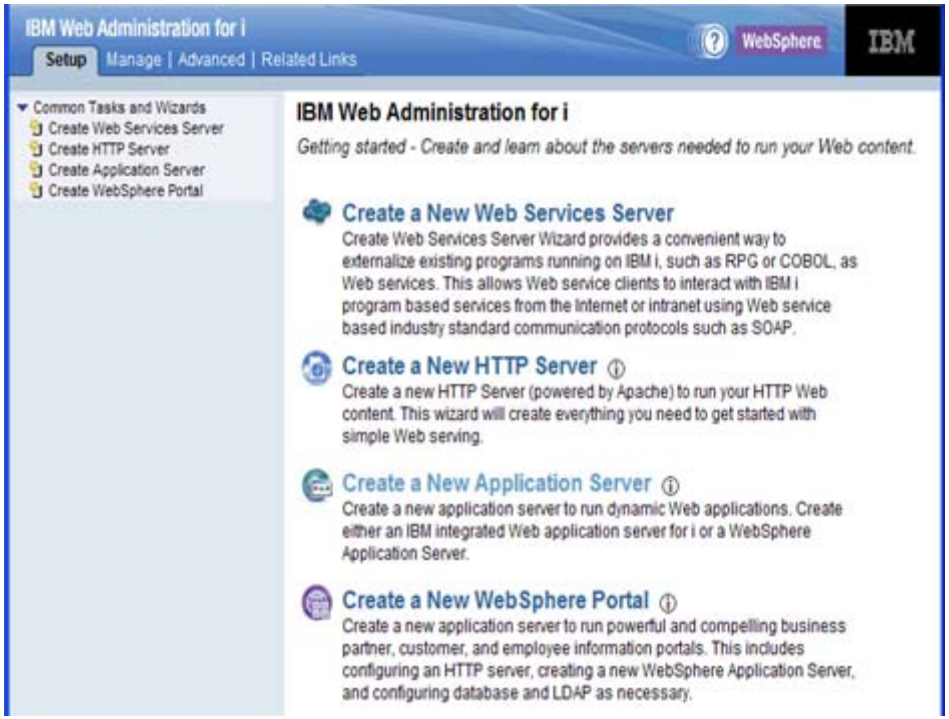
Web Server Enhancements

- **IBM HTTP Server for i running Apache**
  - Latest Apache 2.2 release
  - Payment Card Industry (PCI) Compliant
- **IBM Technology for Java**
  - Java 5 and 6 support for 32-bit and 64-bit JVMs
  - No longer shipping Classic JVM
- **Integrated Web Application Server**
  - Part of IBM i
  - Supports running Java 5 and 6 applications
- **Integrated Web Services Server**
  - Up to 2x performance improvement
  - Static WSDL support providing enhanced flexibility
  - Now supports programs in IASP

The Apache Software Foundation
http://www.apache.org/

Java



Integrated Web technologies easily support new application deployments

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WebSphere Support for IBM i 7.1

- **WebSphere Application Server**
  - WebSphere Application Server Express V6.1 and V7.0
  - WebSphere Application Server V6.1 and V7.0
  - WebSphere Application Server Network Deployment V6.1 and V7.0
  - Fix Packs 6.1.0.29 and 7.0.0.7 contain IBM i 7.1 level support
- **WebSphere MQ**
  - WebSphere MQ V7.0.1
  - WebSphere MQ File Transfer Edition V7.0.2.1
- **WebSphere Portal**
  - WebSphere Portal 6.1.5
- **WebSphere Commerce Server**
  - WebSphere Commerce Server 7 (with fix pack 1)
    - (SOD for 2010 delivery for IBM i 6.1 and 7,1)

WebSphere offers rich Web application server solutions for IBM i

WebSphere software

Access information

Customer retention

Operational efficiency

Cost reduction

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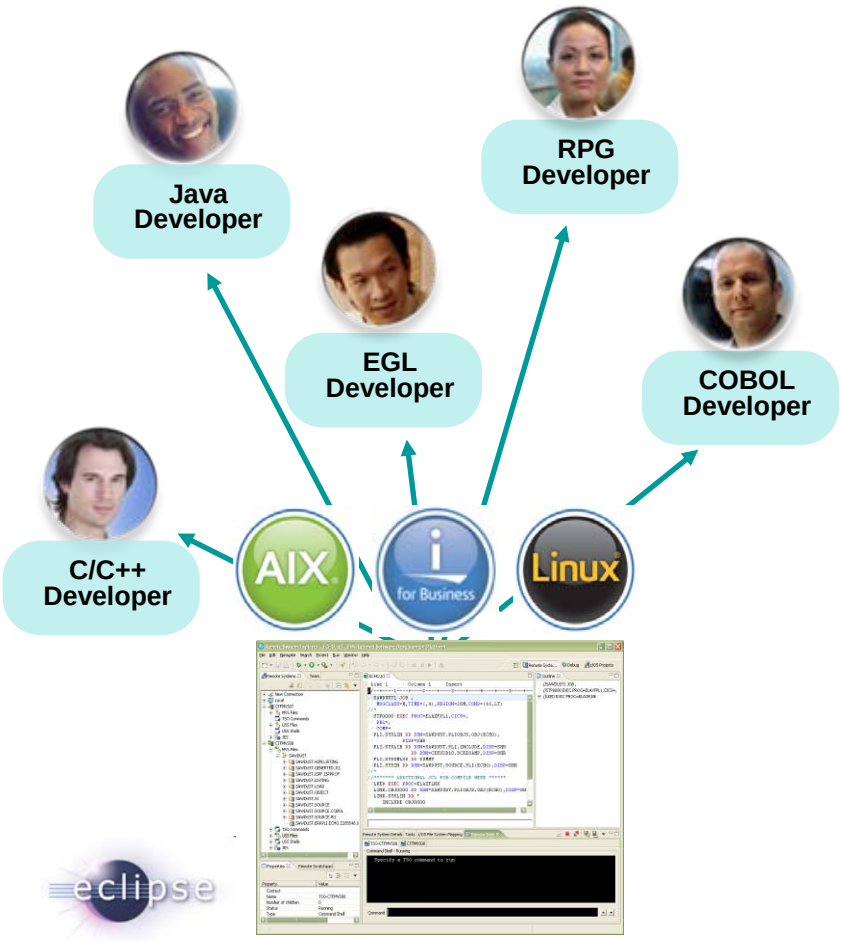
Rational Support for IBM i 7.1

Rational. software

- **Rational Developer for Power**
  - **Feature: RPG and COBOL Development for i**
    - eclipse-based tools for RPG/COBOL development
    - New print designer & support for language enhancements
    - Replaces Rational Developer for i (RDi)
  - Support for COBOL and C/C++ options for AIX
- **Rational Team Concert for Power**
  - Collaborative software development, automate best practices
  - Integrated source control and build management
  - IBM i or AIX repository options
- **Rational Application Developer**
  - Robust Java development environment
  - Web/Web Services development integration
  - EJB and J2EE fully supported
- **Rational Development Studio**
  - Rebranding for WebSphere Development Studio
  - Provides ILE & OPM compliers + traditional development tools
  - New language functions have been added to ILE Compilers



Eclipse-based development tools can improve programmer productivity and provide a familiar development environment for new employees

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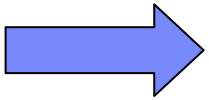
Re-Branding of WebSphere Development Studio for IBM i

April 2010

WebSphere software

WebSphere Development Studio for IBM i



Rational software

Rational Development Studio for i

- Feature 1 – ADTS
  - Stabilized
    - no new tool enhancements
    - no new language enhancements
- Feature 2 - OPM Compilers
  - Stabilized
- Feature 3 – ILE Compilers
  - RPG/COBOL enhancements

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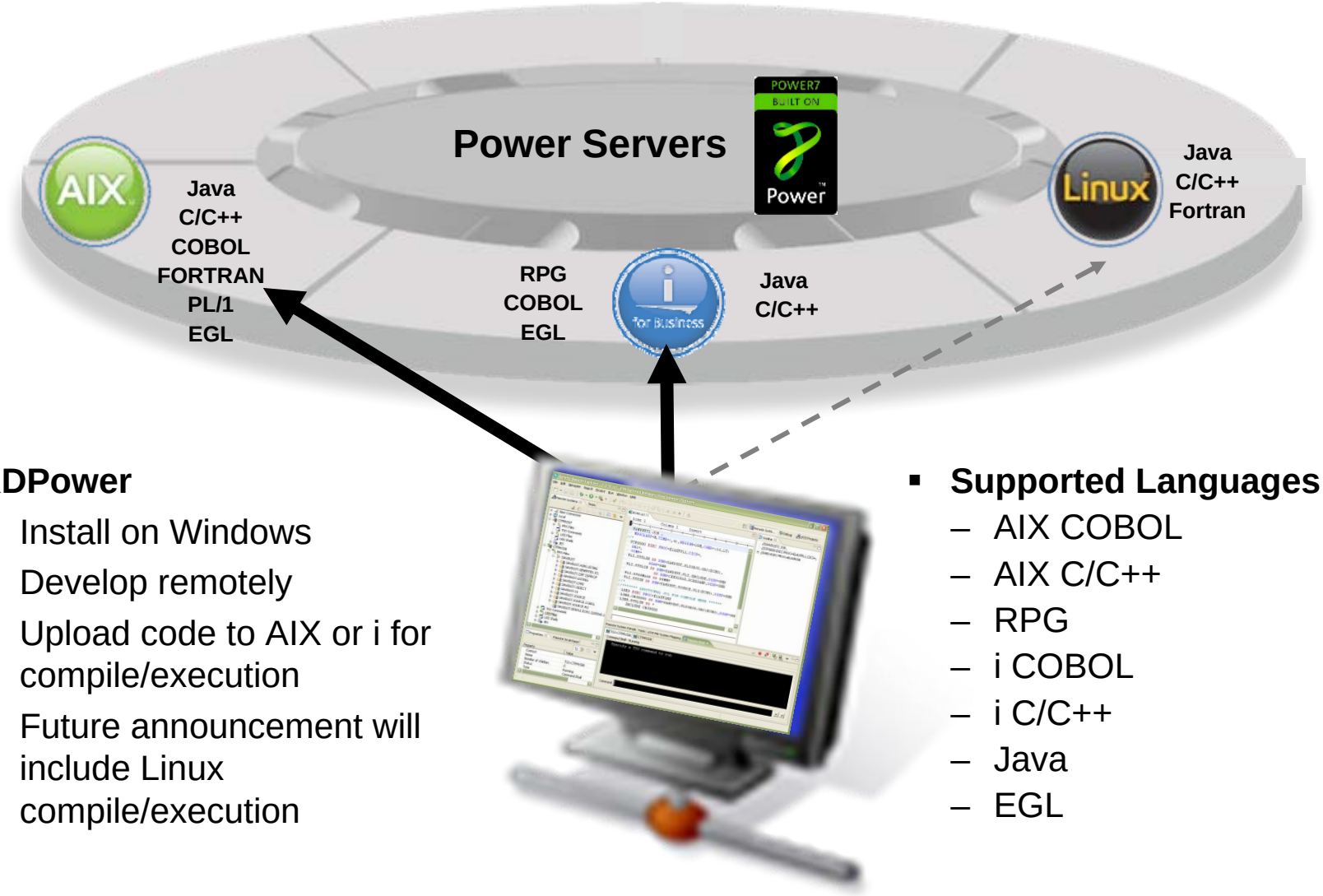
Rational Developer for Power Systems Software



- **RDPower**
  - Install on Windows
  - Develop remotely
  - Upload code to AIX or i for compile/execution
  - Future announcement will include Linux compile/execution

- **Supported Languages**
  - AIX COBOL
  - AIX C/C++
  - RPG
  - i COBOL
  - i C/C++
  - Java
  - EGL

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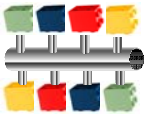
Rational Open Access: RPG Edition

- **Extends RPG application reach to pervasive devices**
  - Provides ability for RPG programs to work with a variety of clients including phones, XML, Web Services
  - Developers write handlers for non-5250 interfaces
- **Tool providers plan to offer handler solutions for common devices and interfaces**
- **New product 5733-OAR required to create or run programs that utilize Open Access for RPG**
- **Rational Developer for Power with RPG development feature is required to write the code to invoke handlers**
- **Supported Environments**
  - IBM i 7.1 and 6.1



Open Access enables RPG applications to easily reach new devices and new users with new interfaces

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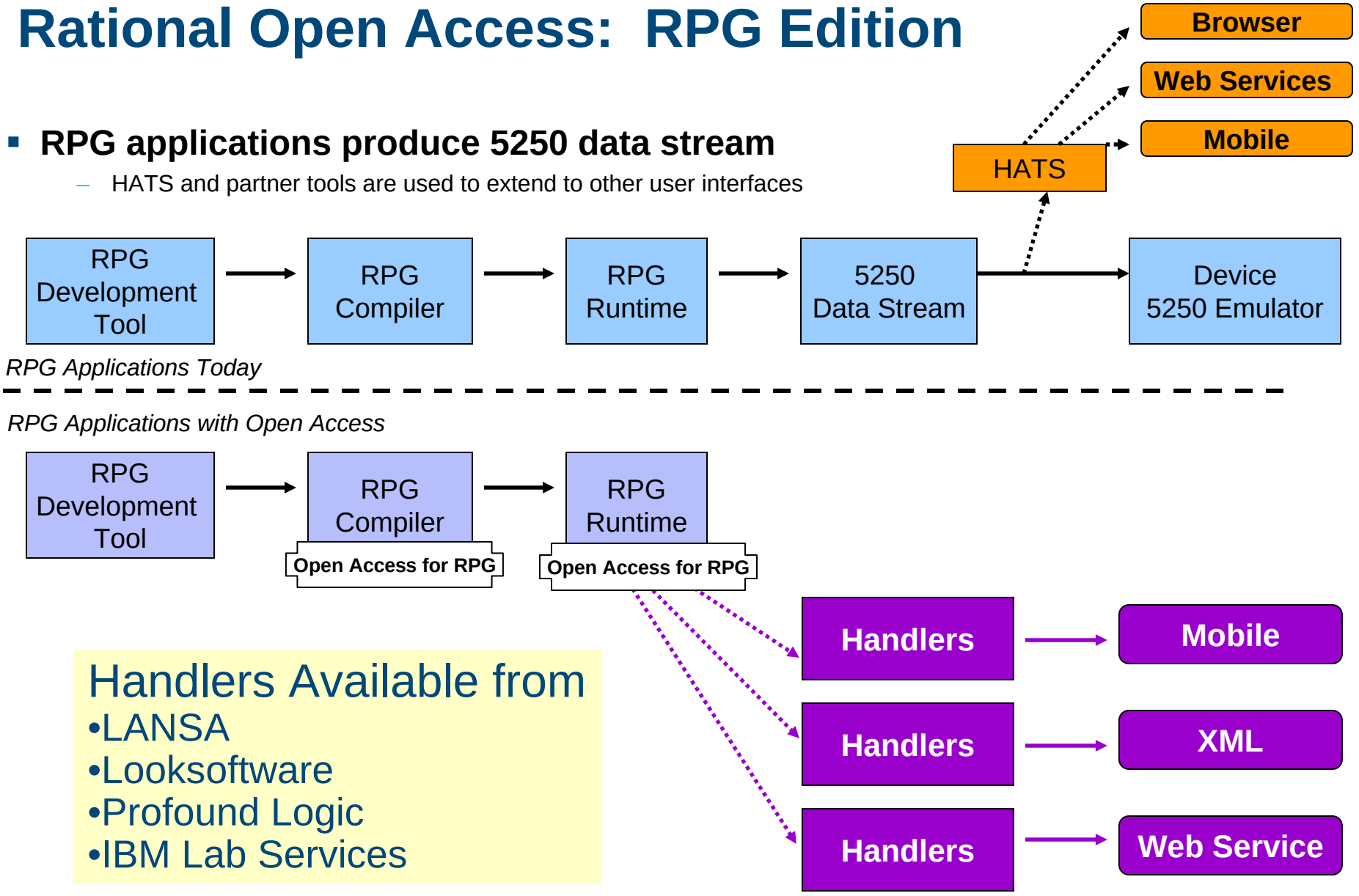
Rational Open Access: RPG Edition

- **RPG applications produce 5250 data stream**
  - HATS and partner tools are used to extend to other user interfaces



Handlers Available from
- LANSA
- Looksoftware
- Profound Logic
- IBM Lab Services

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Zend PHP Enhancements

- **Zend Server Community Edition for i**
  - Preloaded with IBM i 7.1, 6.1, 5.4
  - Includes one year of Silver support from Zend
  - Provided for no additional charge
  - Also available for download from zend.com
  - Replaces Zend Core
- **Zend Server for i**
  - Provides advanced functions
  - Available from IBM with advanced support offerings
  - Also available from zend.com
  - Replaces Zend Platform
- **Zend Studio for i**
  - Eclispe-based development environment
  - Integrates with Rational Developer for Power
  - Available with one year of Silver support from Zend for no additional charge
  - Advanced support offerings available
- **Simplified Set Up and Management**
  - FastCGI support between ILE Apache and PHP
  - Eliminates 2nd copy of Apache and reverse proxy
  - Software fixes via PTFs
- **Significant Performance Enhancements**

Zend provides open, easy to use PHP-based development and deployment solutions for i

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New Zend Product Offerings for IBM i

Zend Server Community Edition
Replaces Zend Core

	Zend Core	Zend Server CE
Native installation		✓
Certified PHP	✓	✓
DB2 Drivers	✓	✓
Bundled MySQL DB & Drivers	✓	✓+
Web-based administrator	✓	✓
Debugger interface	✓	✓+
Bytecode acceleration		✓
Zend Framework	✓	✓
IBM i Toolkit	✓	✓
Caching API		✓
Java connector		✓
Performance via Fast CGI		✓
Software updates & hot fixes	✓	✓
Technical support	✓	✓

Zend Server
Replaces Zend Platform

	Zend Platform	Zend Server
Native installation		✓
Certified PHP	✓	✓
DB2 Drivers	✓	✓
Bundled MySQL DB & Drivers	✓	✓+
Web-based administrator	✓	✓
Debugger interface	✓	✓+
Bytecode acceleration	✓	✓+
Zend Framework	✓	✓
IBM i Toolkit	✓	✓
5250 Bridge	✓	✓
Caching API	✓	✓+
Java connector	✓	✓
Application monitoring	✓	✓+
Performance via Fast CGI		✓
Page Caching		✓
Code tracing		✓
Job Queue	✓	✓+
Software updates & hot fixes	✓	✓
Technical support	✓	✓

New products provide more function, improved performance and deeper integration into IBM i

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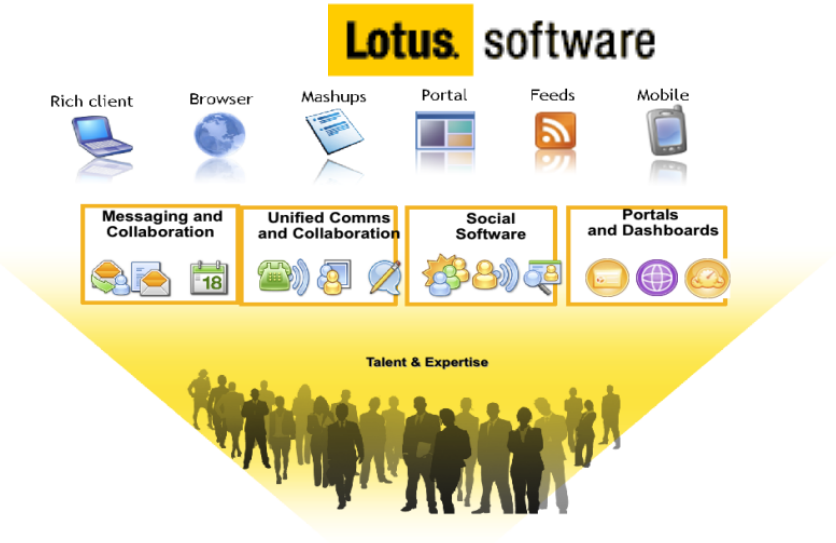
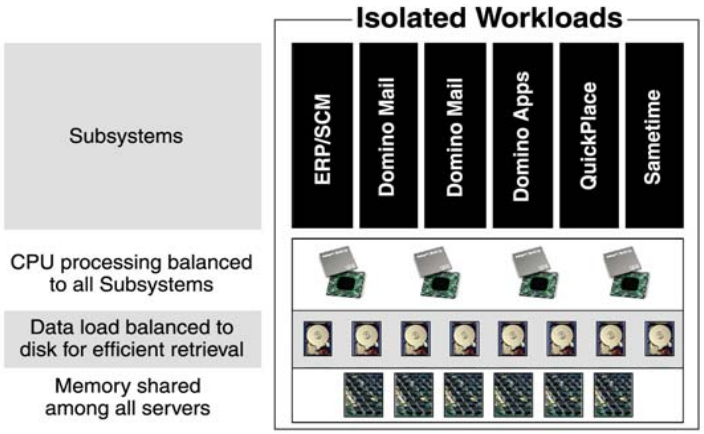
Lotus Support for IBM i 7.1

- **Lotus Notes and Domino**
  - *Collaboration beyond e-mail*
  - Domino 8.5.1
- **Lotus Sametime**
  - *Real-Time community collaboration*
  - Sametime 8.5.1
- **Lotus Quickr**
  - *Share everyday content*
  - Quickr 8.5
- **Additional Products**
  - Enterprise Integrator 8.5.2
  - Forms 3.5.1
  - Domino Fax V4R5

IBM i offers platform for consolidation of Lotus collaboration solutions



IBM i Supports Consolidation of x86 Workloads



For the latest information, see:
http://www.ibm.com/systems/resources/releasesupport.pdf

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Additional Enhancements

- **IBM Transform Services for i Enhancement**
  - Delivers Adobe PDF output support to IBM i applications
  - New support to transform existing Spool Files to PDF format
  - Shipped with IBM i

- **Encrypted ASP Enhancements**
  - Added ability to start/stop encryption on an existing iASP
  - Encryption key management enhancements

- **BRMS Enhancements**
  - Improved functions for managing backups, media, backup history, and recoveries

- **Support for additional Tape Libraries with NPIV through PowerVM VIOS**
  - 3577 (TS3400) with (TS1120/TS1130) drives
  - 3584 (TS3500) with (TS1120/TS1130) drives
  - 3576 (TS3310) with LTO drives

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Additional Enhancements

- **IBM i Access Family Enhancements**
  - IBM i Access for Windows 7.1 offers:
    - Enhancements to the .NET, ODBC, and OLE DB providers including support for XML data type
    - Enhancements to Data Transfer
    - Updated PC5250 Display and Printer Emulation based on IBM Personal Communications 6.0
    - Help files converted to html help format
    - Enhancements to Install, including install-time support for secondary languages
  - IBM i Access for Web 7.1 includes:
    - Additional option for viewing spooled files as PDF documents

- **Networking Enhancements**
  - IBM i DHCP server is now based on the ISC (Internet Systems Consortium) DHCP server which contains support for IPv6 and DHCP failover
  - IPv6 support for the DHCP Client, PPP (Point-to-point protocol), L2TP (Layer 2 Tunneling Protocol), and RADIUS (Remote Authentication Dial In User Service)
  - Support for the IKEv2 (Internet Key Exchange version 2) tunneling protocol in the IBM i VPN support
  - Telnet Client support on IBM i is now SSL enabled (also PTF to IBM i 6.1 & 5.4)

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IBM i License Transfer

- **Enables IBM i entitlement to be transferred between selected systems**
  - Implemented WW via IBM configurator
  - SWMA required on From and To systems
  - From system must have been installed at least one year
  - Applicable to optional, not **base licenses**
  - Administrative fee plus license price difference
  - Applicable to 550 and larger systems
  - IBM i processor-core entitlement moves to new system

Making it Easier for Clients to

- Buy a replacement system
- Consolidate systems
- Move workloads

From POWER5, 6, 7		To POWER6, 7
9406-550, 570, 595		
Power 550 (9409-M50, 8204-E8A)		Power 550 (9409-M50, 8204-E8A)
Power 560 (8234-EMA)		Power 560 (8234-EMA)
Power 570 (9406-MMA, 9117-MMA)		Power 570 (9406-MMA, 9117-MMA)
Power 595 (9119-FHA)		Power 595 (9119-FHA)
Power 750, 770, 780		**Power 750, 770, 780**

For detailed information: IBM i Processor Entitlement Transfer guide

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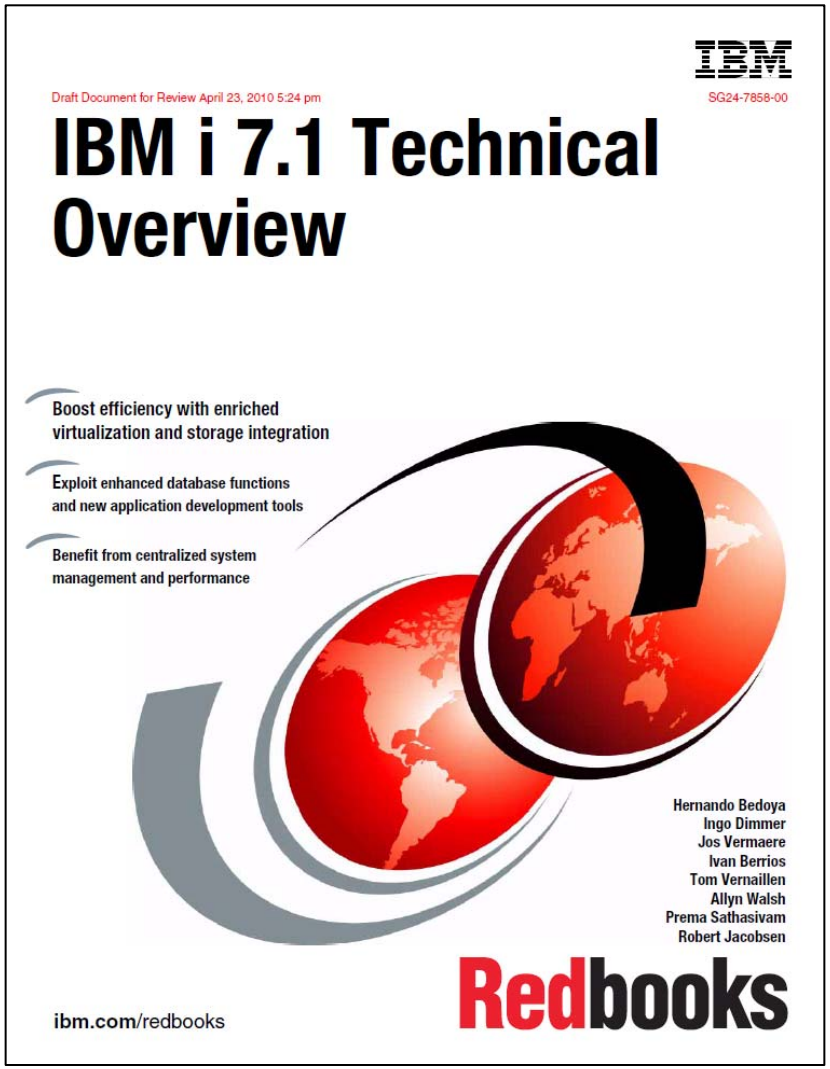

– http://www.redbooks.ibm.com/redpieces/abstracts/sg247858.html?Open

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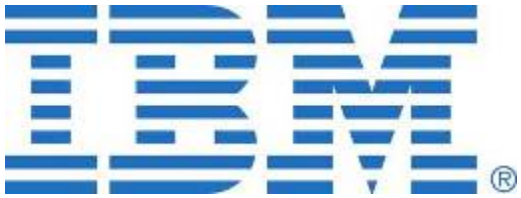

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