

IBM

IBM i 7.1 Overview

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IBM i Strategy and Roadmap

"With our clearly defined roadmaps for POWER processors and the IBM i operating environment, IBM's commitment to our i clients is solid and unchanged. We are making substantial investments in the future of i as an important, strategic element in the IBM product portfolio."

Rosa
General Manager, IBM Power Systems

New IBM white paper reviews IBM i Strategy and Roadmap

Includes information about the IBM i market, Power Systems and IBM i roadmap, and concludes with a listing of the wide range of IBM initiatives to help businesses reduce costs, improve service, and manage risk.

<http://www.ibm.com/systems/power/software/ibmi/roadmap/index.html>

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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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Power is...

Workload-Optimizing Systems

Virtualization without Limits

Resiliency without Downtime

Dynamic Energy Optimization

Management with Automation

Integrated Value

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IBM i 7.1 Announcement Highlights

- DB2**
- PowerHA**
 - Async Geographic Mirroring & LUN-level switching
- Virtualization**
 - IBM i 6.1 virtualization for i 7.1 partitions
- Solid State Drives**
 - Automatic movement of hot data to SSDs
- Open Access for RPG**
 - Extend application reach to pervasive devices
- Zend Server Community Edition**
 - PHP environment preloaded with IBM i
- Systems Director**
 - Richer management of IBM i via Systems Director

Announce April 13
GA April 23

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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
- DB2 Web Query supports querying XML documents with IBM i 7.1**

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 and VIOS with NPIV attached SANs

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

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Virtualization Enhancements for IBM i

- IBM i 6.1 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
- IBM i 7.1 partition can host**
 - IBM i 7.1 and 6.1 partitions
 - AIX and Linux partitions
 - ISCSI attached System x and BladeCenter
- PowerVM VIOS can host**
 - IBM i 7.1 and 6.1 partitions
 - AIX and Linux partitions
 - VIOS supports advanced virtualization technologies including Active Memory Sharing and NPIV

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

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IBM i Storage Management Enhancements for SSD

- 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

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

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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 provides an integrated platform management solution for IBM i and heterogeneous servers

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			✓

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IBM i Network Upgrade Simplifies Upgrading Multiple Systems

6.1 Base Support

- Installation of LPs, and PTFs onto a IBM i 6.1 system

October 2009 - 6.1.1 Support

- Upgrade to IBM i 6.1.1 from i 6.1 system

April 2010 - 7.1 Support

- Upgrade to IBM i 7.1 from i 6.1 or i 6.1.1

Future Plan*

- Scratch install of new system
- IBM i 6.1, IBM i 6.1.1, or IBM i 7.1


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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

Integrated Web technologies easily support new application deployments



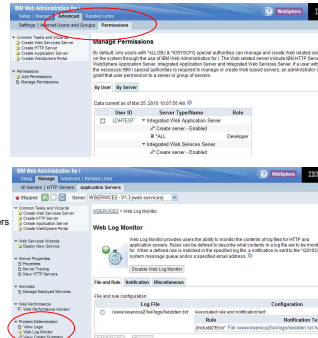
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Web Integration New Features

- Developers can use Web Admin**
 - No longer need "ALLOW" special authority
 - Administrators can grant users "Permission"
 - Empowering the User
- Monitor Web Server Log files**
 - Monitor log and error files for ALL Web servers
 - Send notifications on discovery
 - *QSYSOPR or Email

Integrated GUI interface now available to Developers and Operators without compromising your system security




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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



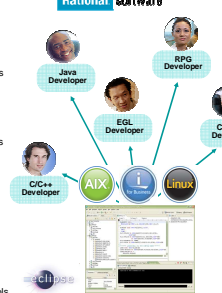
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Rational Support for IBM i 7.1

- 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, automates 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 compilers + 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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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

RPG Applications Today

RPG Applications with Open Access

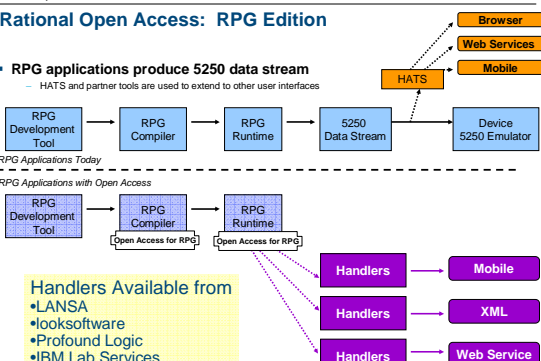
Handlers Available from

- LANSA
- looksoftware
- Profound Logic
- IBM Lab Services

Handlers → **Mobile**

Handlers → **XML**

Handlers → **Web Service**



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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**
 - Eclipse-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
- New and improved features**

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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

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 PCS250 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 Life Cycle

Service

IBM i Upgrade paths

*The projected data 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 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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IBM i System Support

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

* Specific models

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