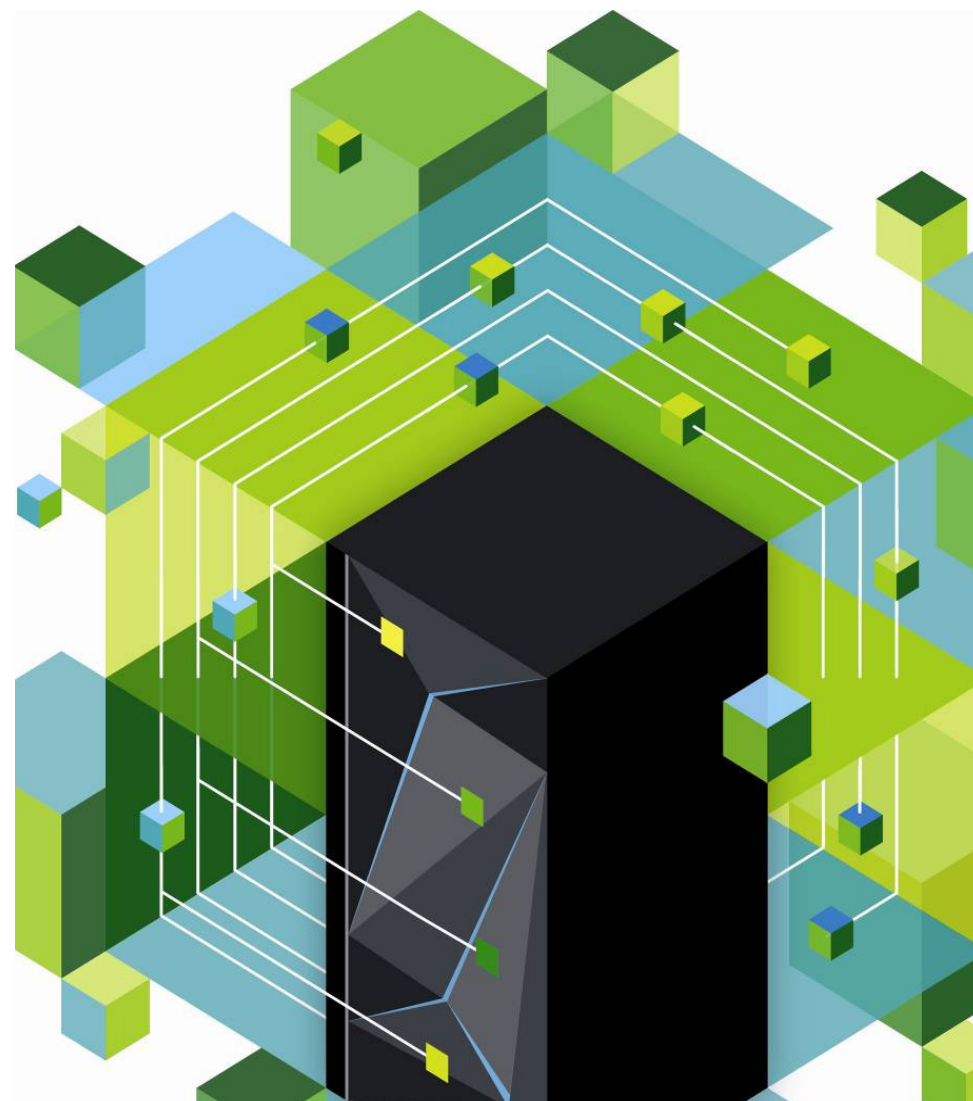


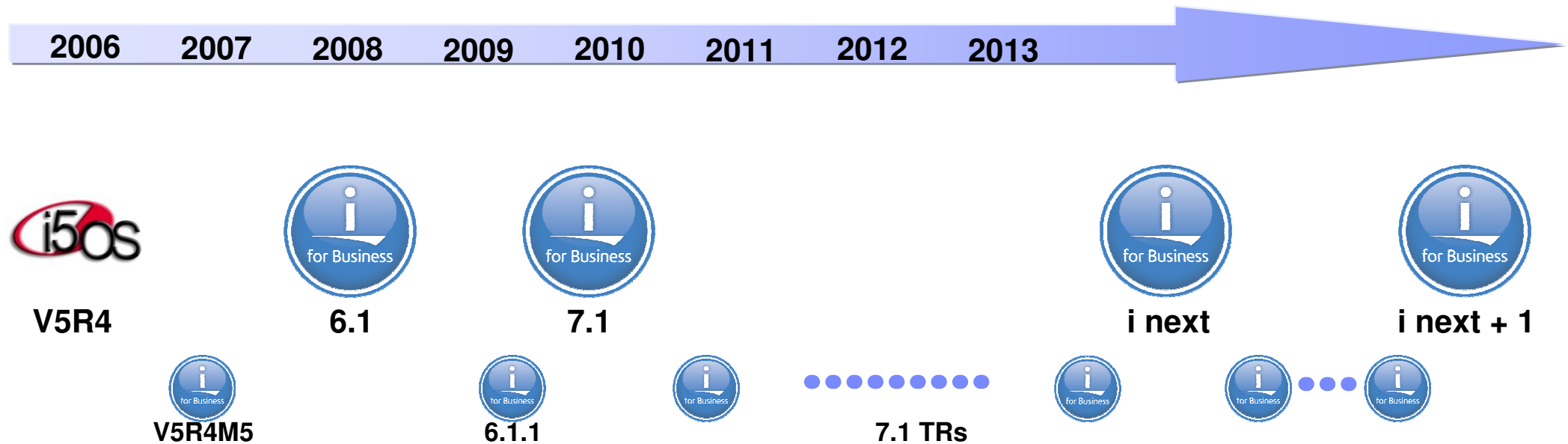
IBM i Quarterly Update

IBM i Team

Announcement Feb 5



IBM i Roadmap

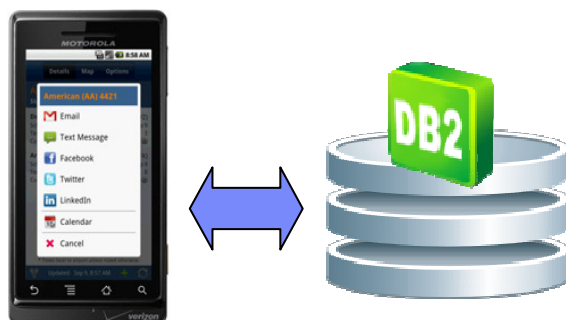


- Responding to IBM i market, time between releases is longer
- Interim technology refreshes will provide new functions and I/O support
- Simpler to install on a current release and less disruptive

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

IBM i 7.1 Technology Refresh 6 - Highlights

- Enhancing the value proposition of **DB2 for i** by extending SQL capabilities, improving performance and enhancing data center manageability
- Support for latest **POWER7+ Express Servers**
- Use of **USB Flash Drives** now supported by IBM i
- **New Mobile Solutions**
 - **Zend Server for i Version 6** provides mobile application development and runtime
 - **IBM Mobile Database** solution uses DB2 for i as data source
 - Statement of Direction for **IBM Lotus Notes Traveler** and **IBM Connections** availability
- **IBM i Secure Sockets Layer (System SSL)** supports TLSv1.1 and TLSv1.2 and Online Certificate Status Protocol (OCSP)
- **PowerHA SystemMirror for i** adds support for additional storage devices, including IBM SAN Volume Controller (SVC) and IBM Storwize V7000, V3700 and V3500
- **IBM Systems Director** error detection and reporting



IBM i on Power and Pure



Enterprise Servers

Power 795



Power 780



Power 770



Power 760



Power 750



Express Servers

Power 720/740



Power 710/730

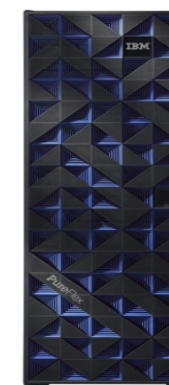


Blades

PS 701, 702, 703, 704



IBM PureFlex



Power Express 710 – 740 Highlights

New Power 710, 730, 720, 740 'D' models with enhanced capabilities

Higher performance with POWER7+

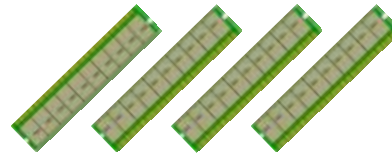
- Higher frequencies, bigger L3 cache

Improved price performance



Double the memory capacity

Improved price performance

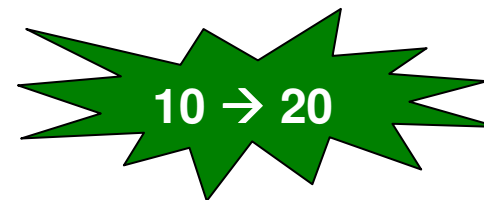


Enhanced Ultra SSD I/O Drawer



2X partitioning capability

- Up to 20 partitions/core with PowerVM



More Performance -- Less Price

New POWER7+ Models Offer Significantly Improved Price/Performance



- Power 740
 - 21-42% Better
- Power 720
 - 14-21% Better
- Power 730
 - 49-60% Better
- Power 710
 - 16-39% Better

Based on rPerf and USA prices.
Prices are subject to change without notice. Reseller prices can vary

Announcing two new mid-range offerings for Power

Taking the best of the Power 740 and the Power 770 for better performance, density and flexibility

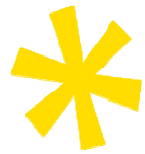


Product Innovation

- Boosting today's Power 750 by 20% throughput increase with POWER7+
- Doubling the memory capacity
- Adding PCIe Gen2 support
- Introducing a new model ... Power 760 ... high density platform (48 core & 2 TB)



Power 750

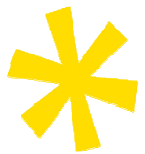


Cloud ready

- 2X improvement in VM density (now 20 per core)
- Seamless growth with Processor Upgrade on Demand (760)
- Built-in dynamic workload optimizer (Dynamic Platform Optimizer)



Power 760



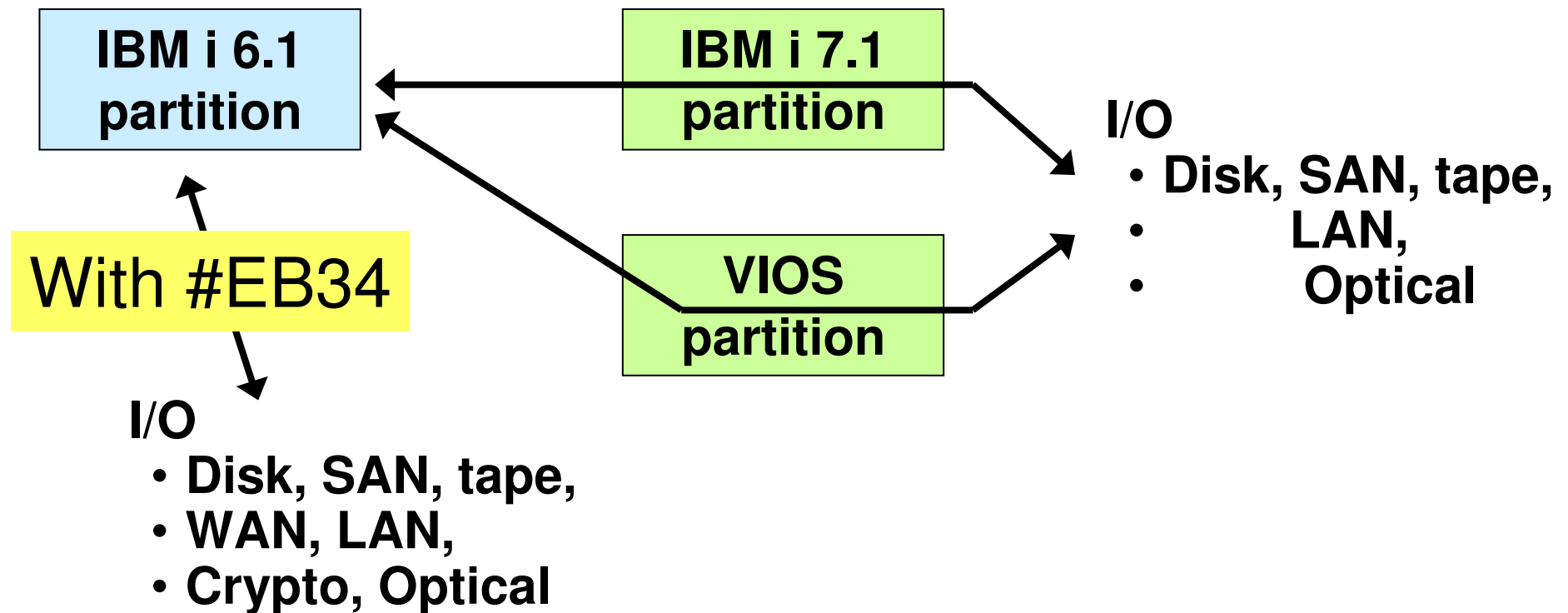
Big Data / Analytics

- Application acceleration with support for SSD storage

POWER7+ 710/720/730/740/770/780 IBM i Native I/O support



- IBM i 7.1 native I/O support & virtualized I/O
- IBM i 6.1 native I/O support (with #EB34)
- Plus virtualized options -- supported as client of IBM i 7.1 or VIOS

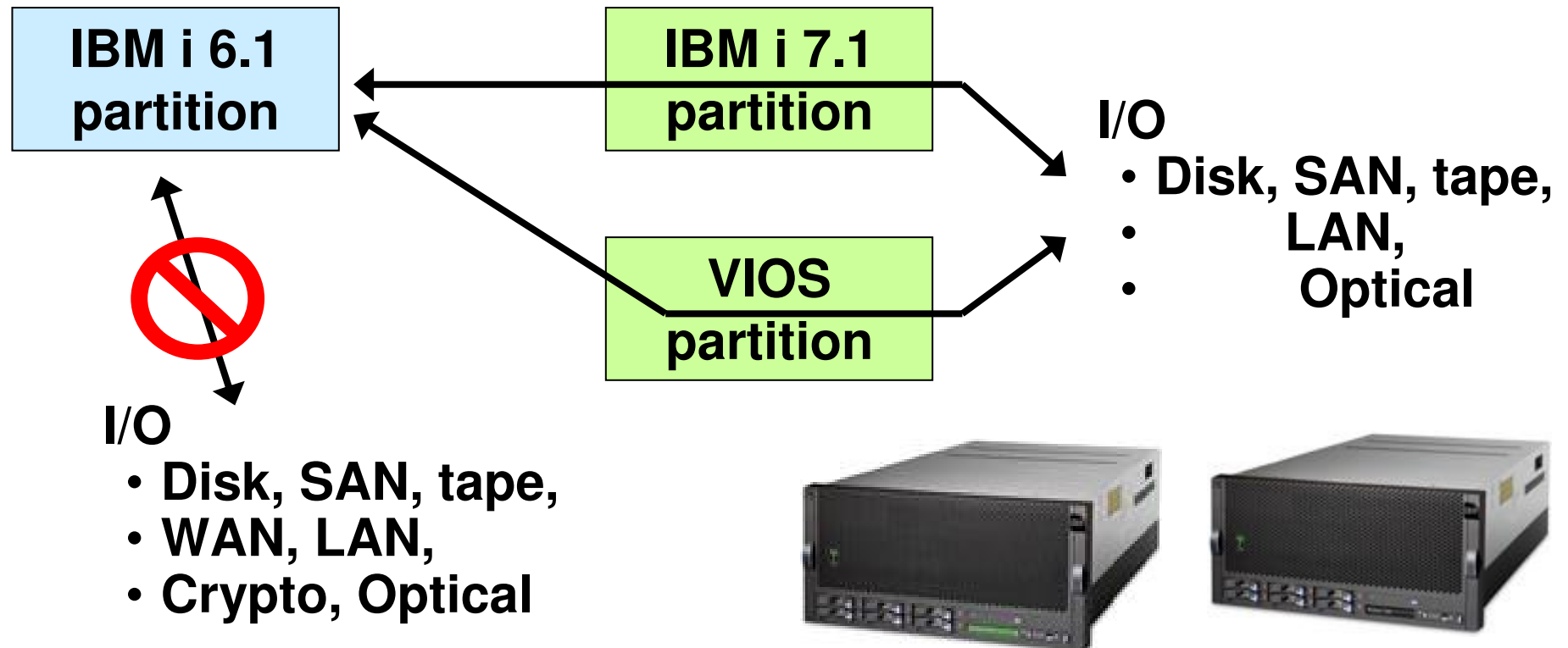


POWER7+ 750/760 IBM i Native I/O support



Plan:

- IBM i 7.1 native I/O support
- IBM i 6.1 **NO** native I/O support (no #EB34)
- I/O supported as client of IBM i 7.1 or VIOS



EXP30 Ultra SSD I/O Drawer Enhancements

#EDR1



Up to 480,000 IOPS (100% read)
Up to 11.6 TB
Up to 4.5 GB/s bandwidth
Downstream HDD

Feb 2013 Announcements:

- Support on 'D' models of 710, 720, 730, 740, 750, 760
(already supported on 'D' model 770 and 780)
- SOD for 'C' model 770 and 780
- IBM i 7.1 TR6 native support (not supported through VIOS)
- New 6-pack convenience package

- **Ultra performance**
- **Ultra density**

Use of USB Flash Drives with TR6



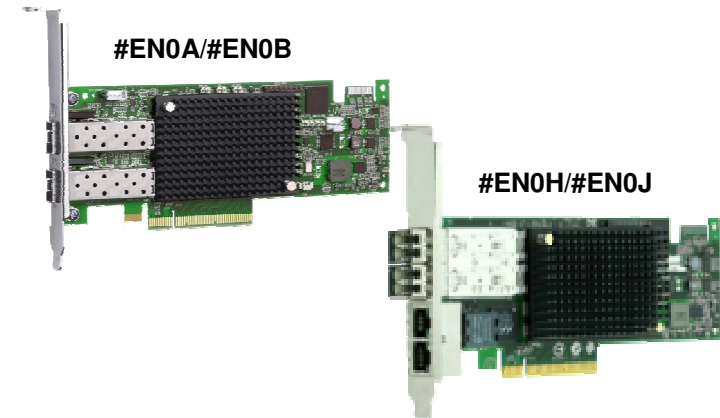
- POWER7+, POWER7 Rack Servers → System Unit ports only
- “Optical Class Drives” → Same ease of use as IBM i Optical devices
- Intended uses are data movement (IFS, Save/Restore) and D-mode IPLs
- Not recommended as back-up devices, **but handy and useful for:**
 - Copying a file (e.g., PTF fix, database file, spool file) from one IBM i partition to another.
 - Copying a file from an IBM i partition to another type of system – even to a PC
 - Installing PTFs, or an XPF application
 - ISV software distribution
 - Performing a D mode IPL
 - Use as an alternative to sending files over a network, if network is constrained
 - Copying a mainstore dump and other debug info from an IBM i partition and taking it to another partition, or even a PC, to send it in to IBM service.

- Generic USB 2.0 support → Use vendor devices up to 32 GB in capacity
- IBM i 7.1 Native support, and virtualization to another IBM i 7.1 or IBM i 6.1 partition

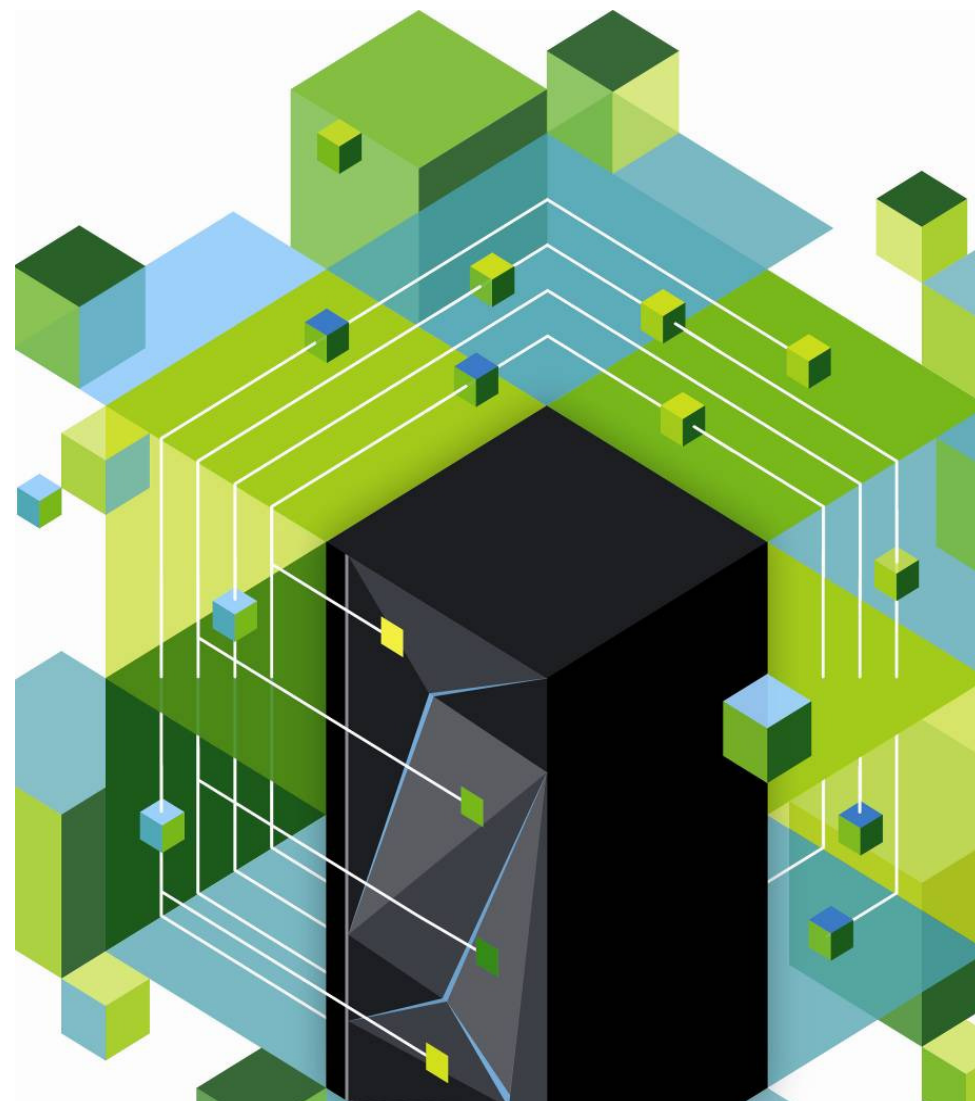


Other I/O News of IBM i Interest

- More removable media choices
 - LTO-6 for 720/740 CEC and in 7226 1U drawer
 - Bigger RDX cartridge – 1.5TB
- Two new PCIe Gen2 Adapters
 - 2-port 16Gb Fibre Channel
 - Requires VIOS
 - 4-port 10Gb CNA/FCoE + 1GbE
 - Requires VIOS
 - IBM i supports NIC, not FCoE
- NPIV (N_Port ID Virtualization) attach of SVC, V7000 Storwize, V3700
 - Expands existing VSCSI support
 - Native support not offered
- Ethernet Link Aggregation Enhancements
 - Automatic retry to re-link dropped links



DB2 for i Enhancements

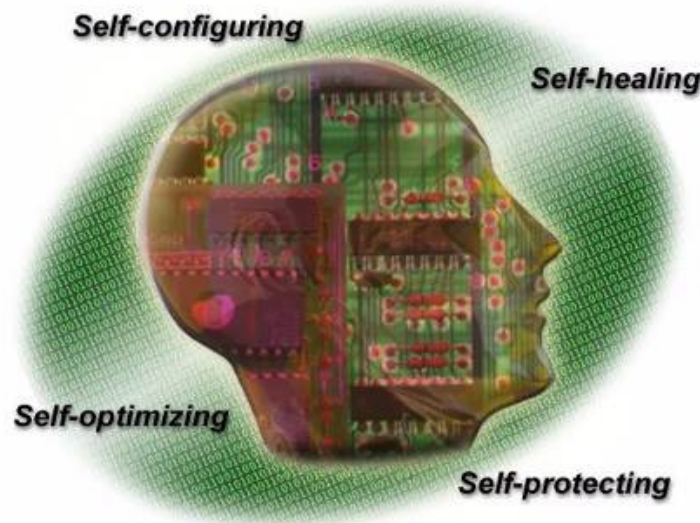


IBM i Customers Buy These Values

- Simplicity - Run the Business, not the Computer
- Integration - “It’s In There”
- DB2 for i - My Data is My Business, and the Data is on i

DB2 for i enhancements extend the value proposition:

- You can do more with SQL
- The database is faster and smarter
- You have new ways to understand your business, from an IT perspective
- Greater insight translates to improved operations
- The security auditor can do more and do it more easily



DB2 for i – Enhancements for TR6

“solution platform”

▪ **Functional enhancements:**

- New and enhanced SQL language capabilities
- New database centric application interfaces

“tuned to the task”

▪ **Performance enhancements:**

- Improved Navigator performance for Database tasks
- Enhanced Index Strategy techniques and insight
- New JDBC method to achieve blocked fetch of data

“industry leading tooling”

▪ **Database Management enhancements:**

- Database Reorganization more efficient driven by smaller service windows
- New techniques for managing SQL objects across machines

“near zero downtime”

▪ **Availability and Recovery enhancements:**

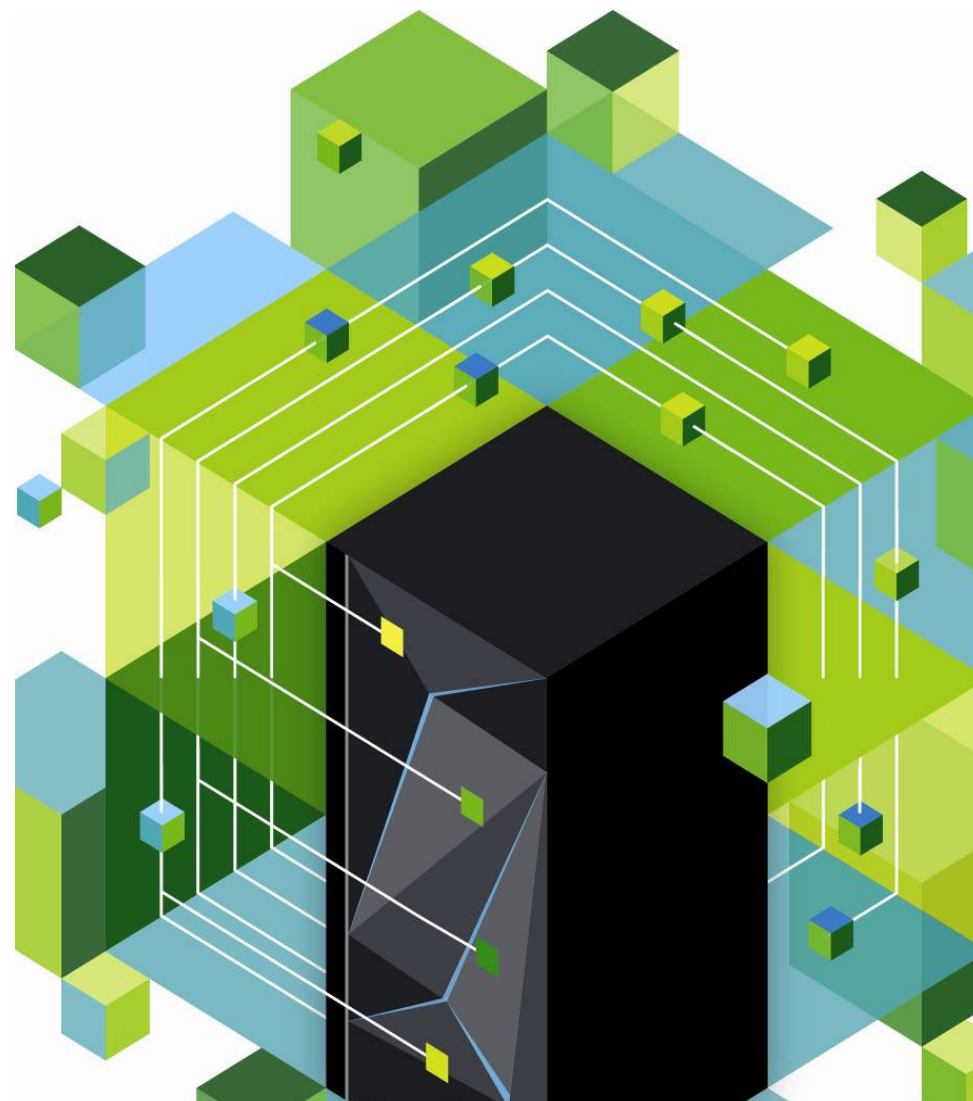
- Tracking important system limits
 - studying trends drives to fewer outages

“secure and auditable”

▪ **Security enhancements:**

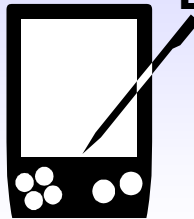
- New capabilities to extract non-Database detail
- Wider use Client Special registers for DB2 for i commands and applications

IBM Mobile Database



IBM Mobile Database Value Proposition

Mobile Info Management for All Enterprises



- 6 MB footprint zero admin database to fit on mobile devices
- Database encryption data protection for the most sensitive data

Bidirectional Synchronization Solution



- Reliability ensured
- Advanced conflict detection with customized resolution
- Designed for occasionally connected devices

Application Development Freedom



- Standard SQL
- JDBC and ODBC interfaces

Investment Protection



- Open standards compliance
- Android support
- Multi-platform synchronization server support
- Award winning 24 X 7 product support for your peace of mind

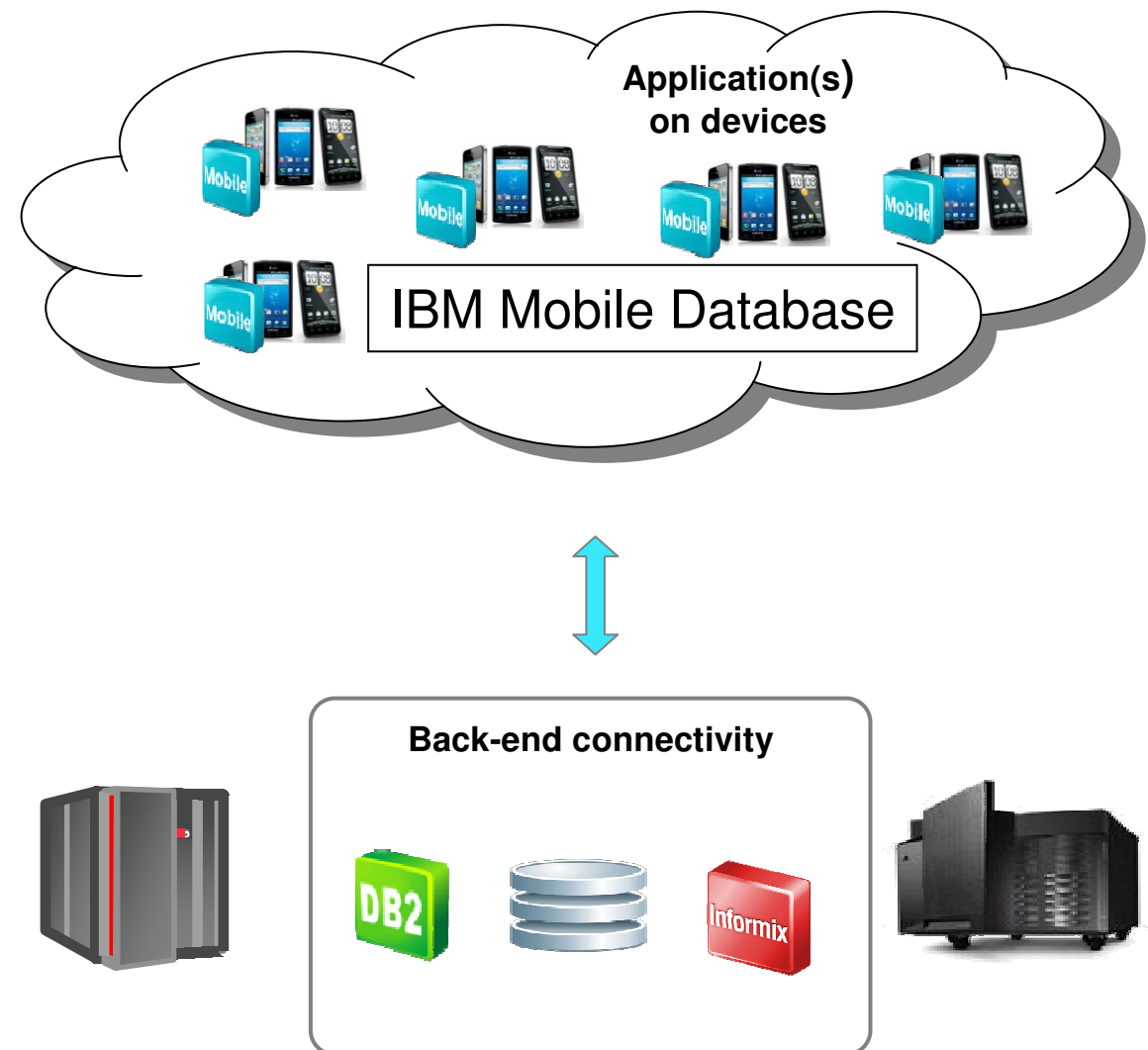
Simple to Install, Manage and Deploy



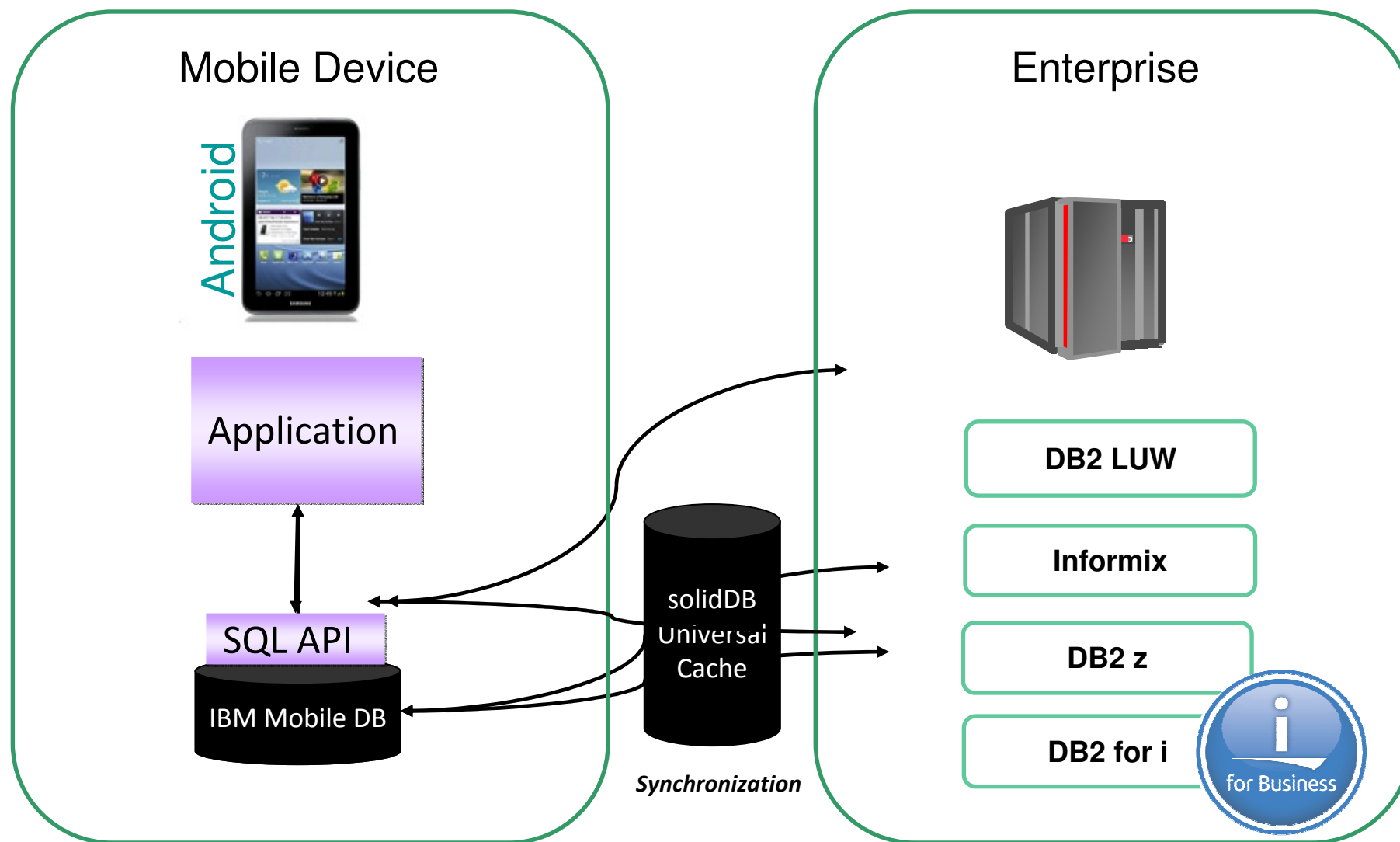
- Easily scalable to support enterprise mobility requirements on demand
- Zero administration database
- Simple installation and configuration out-of-the-box (only a few files)

IBM Mobile Database

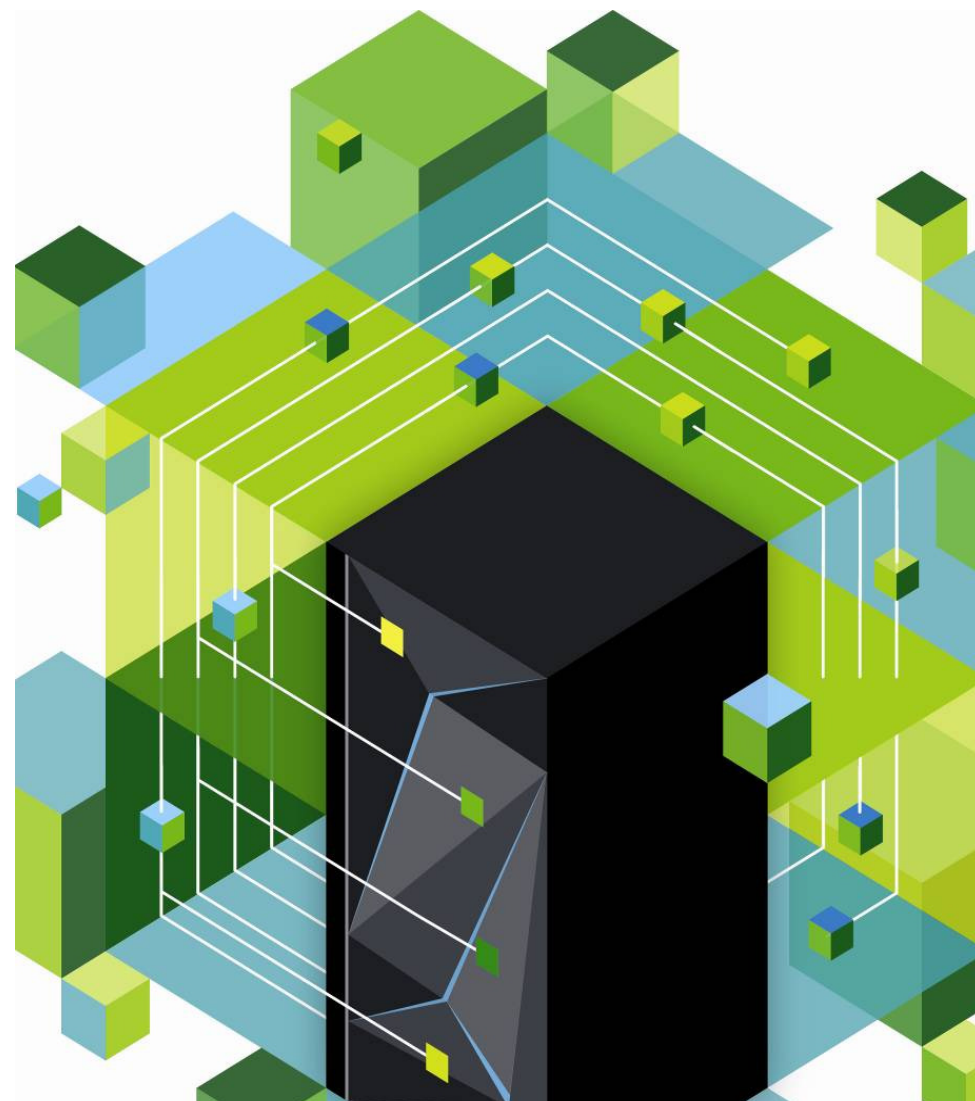
- Full-featured, small footprint mobile data management solution
 - Persistent data
 - Secure storage
 - Synchronization with back-end databases
- Available on Android
- Free to download from the web



IBM Mobile Database GA Sept 14, 2012

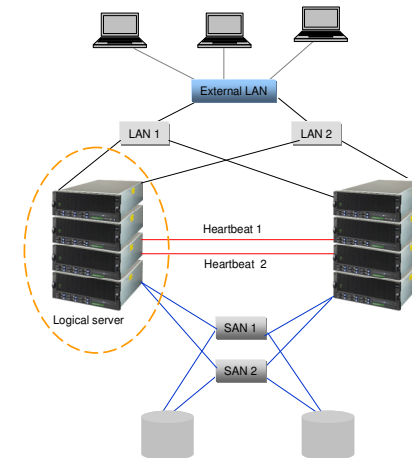


IBM PowerHA SystemMirror for IBM i TR6

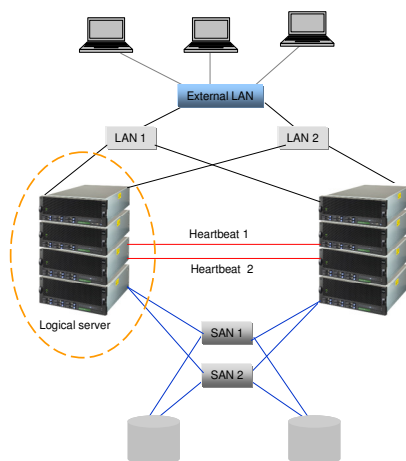


PowerHA High Availability Clustering Solutions

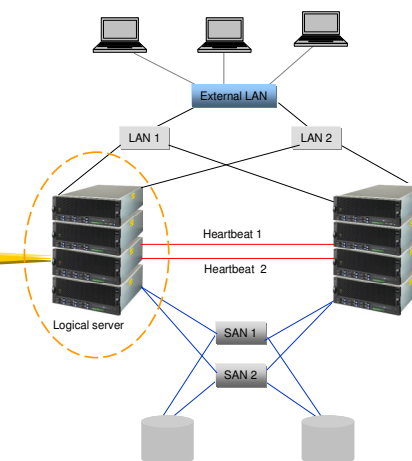
- **High Availability (HA) Management**
 - Business continuity by workload failovers
 - Provides for redundant operating environment
 - Automated workload bring ups
 - Environment specific outage actions
 - Planned and unplanned outage management
- **Disaster Recovery (DR) Management**
 - Geographically dispersed locations
 - Host based or Storage based replication
 - Simplified compliance testing



Data Center Clustering



Multi-Site Clustering



PowerHA SystemMirror for IBM i 7.1

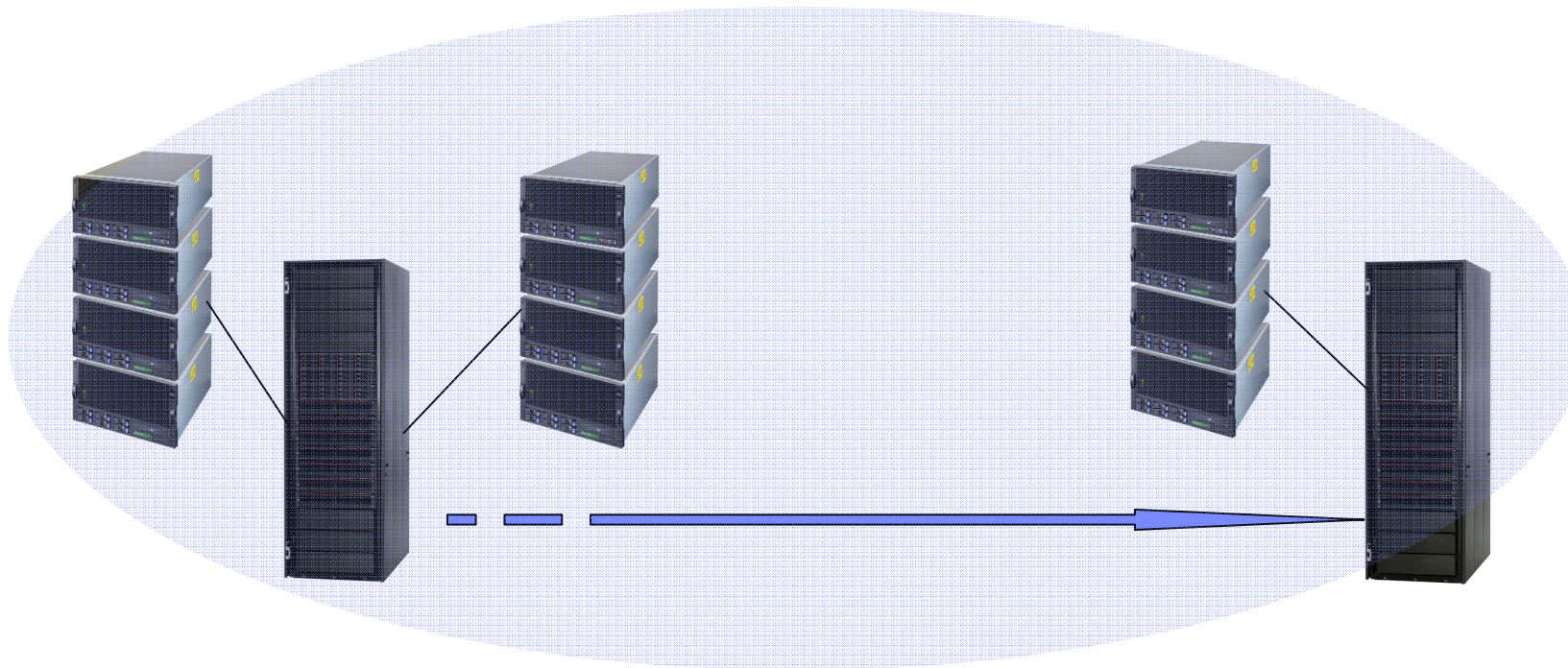
- PowerHA is embedded OS technology and provides a unified solution for High Availability and Disaster recovery
- PowerHA Standard Edition provides HA solutions for the data center
- PowerHA Enterprise Edition provides mutli-site solutions based on storage replication services



1Q 2013

PowerHA SystemMirror V7	Standard Edition	Enterprise Edition
IBM Director Navigator graphical interface	✓	✓
IBM i cluster enabled storage management	✓	✓
SLIC level event management	✓	✓
IASP encryption	✓	✓
Integrated copy services management	✓	✓
Host based replication (geomirroring)	✓	✓
IBM storage based replication		✓
Cluster wide sysbas synchronization	✓	✓
Automated failover/failback	✓	✓
Three site MGM (Metro Global Mirror)		✓
Config wizards	✓	✓
Advanced Copy Services (Lab Services)	✓	✓
Cluster Enabled Admin Domain	✓	✓
Cluster Enabled Flashcopy & Copy Services	✓	✓
V7000 & V3700 LUN Level Switching	✓	✓
Single command D side FlashCopy		✓
New PowerHA GUI (replaces previous GUIs)	✓	✓

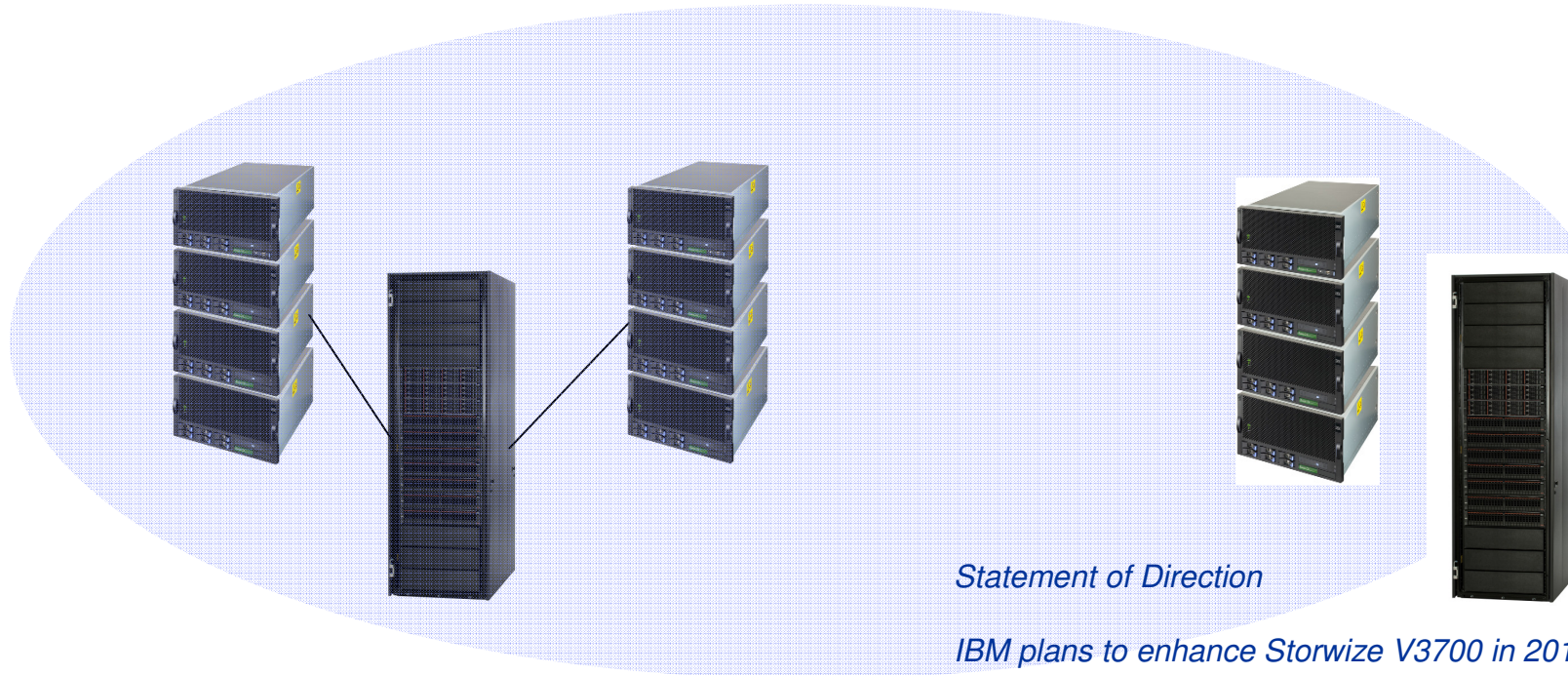
Storwize V7000 PowerHA SystemMirror for i



- PowerHA SystemMirror 7.1 TR6
- SVC and Storwize V7000
 - FlashCopy (ACS available from Lab Services as well)
 - Metro Mirror, Global Mirror
 - and with NPIV LUN Switching



IBM Storwize V3700 PowerHA SystemMirror for i



Statement of Direction

IBM plans to enhance Storwize V3700 in 2013 with the following:

6Gb SAS host attachment support

Optional features:

Easy Tier

Remote mirroring

FlashCopy support for up to 2,045 targets

- PowerHA SystemMirror 7.1 TR6
- Storwize V3700
 - FlashCopy and with NPIV LUN Switching
 - SOD



PowerHA SystemMirror for IBM i 7.1

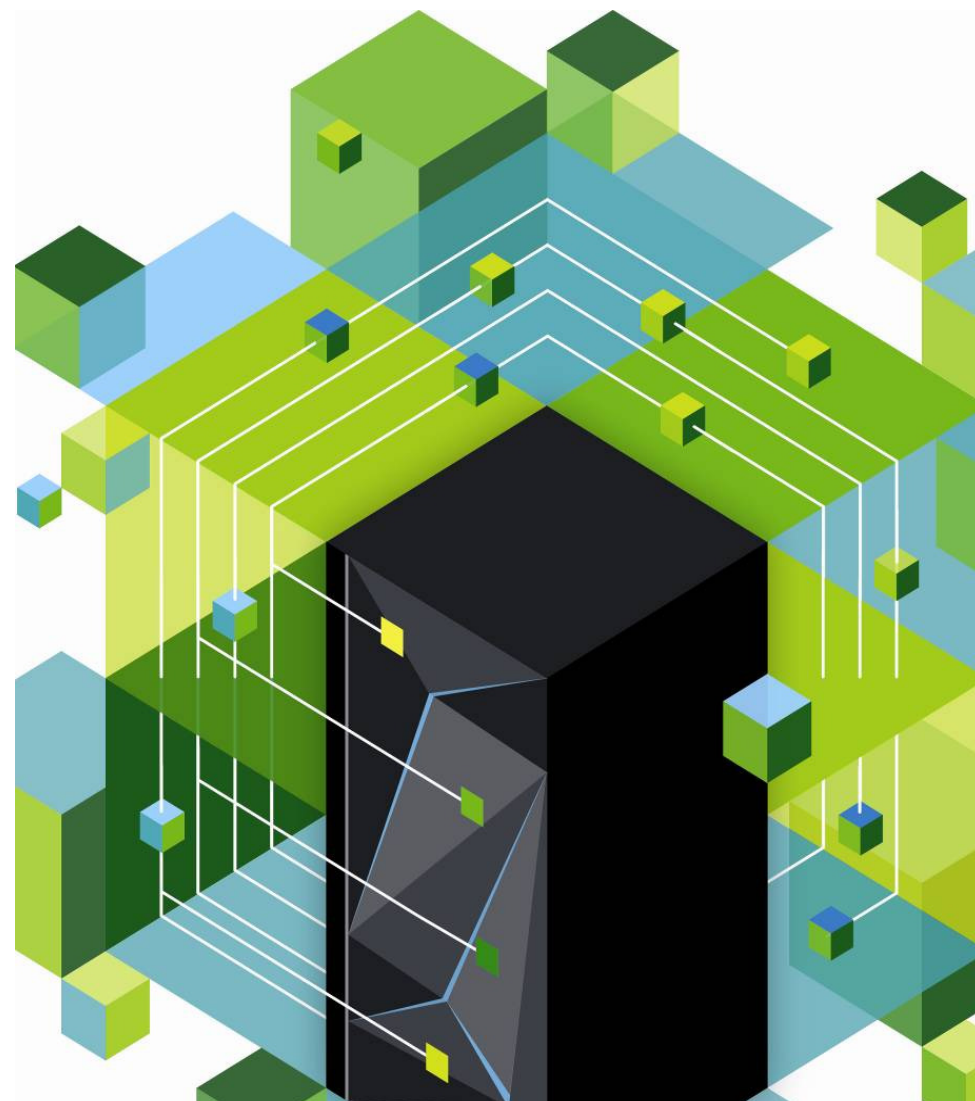
Storage Options for your Enterprise



	Sync mode	Async mode	Switched LUNs
Geomirror	Yes	Yes	
DS8800	Metro Mirror	Global Mirror	✓
Storwize® V7000	Metro Mirror	Global Mirror	✓
Storwize® V3700	Metro Mirror	Global Mirror	✓
SVC	Metro Mirror	Global Mirror	✓

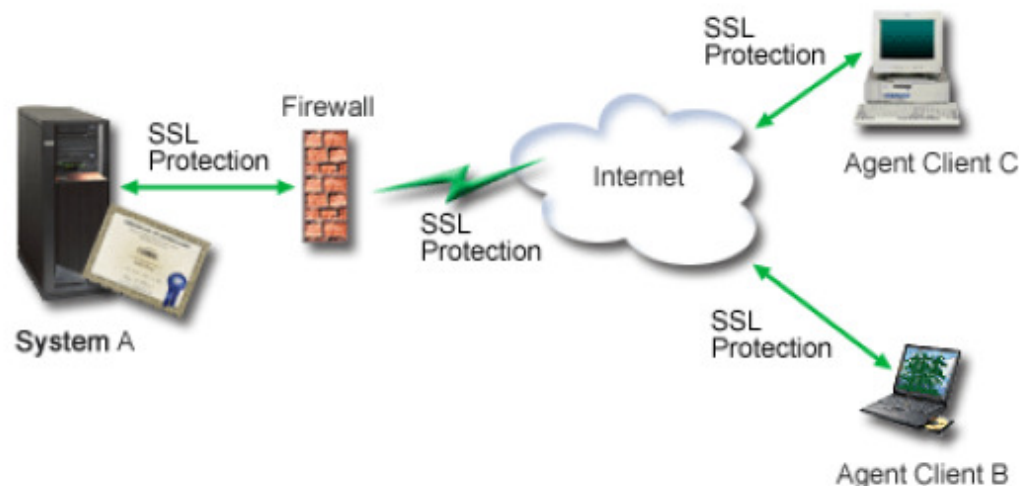
- Solutions for high availability and disaster recovery
- IBM storage options that span the market
- Advanced Copy Services (ACS) for PowerHA
 - Single interface for PowerHA and DS8K storage management
 - Option for Storwize V7000 FlashCopy automation

Security Enhancements



System SSL Support for Transport Layer Security Version 1.2

- The TLS protocol allows client-server applications to communicate across a network in a way designed to prevent eavesdropping and tampering
- IBM i Secure Sockets Layer has been enhanced to support the latest industry standards of Transport Layer Security version 1.2 (TLSv1.2) and Transport Layer Security version 1.1 (TLSv1.1) protocols.
- The TLSv1.2 protocol uses SHA2 hashing algorithms. System SSL also supports the Online Certificate Status Protocol (OCSP) during the certificate validation process. OCSP is used for checking the revocation status of end entity certificates.
- Applications making use of the Global Secure Toolkit (GSKit) System SSL programming interface can switch to the new protocols by making changes to the code and recompiling.

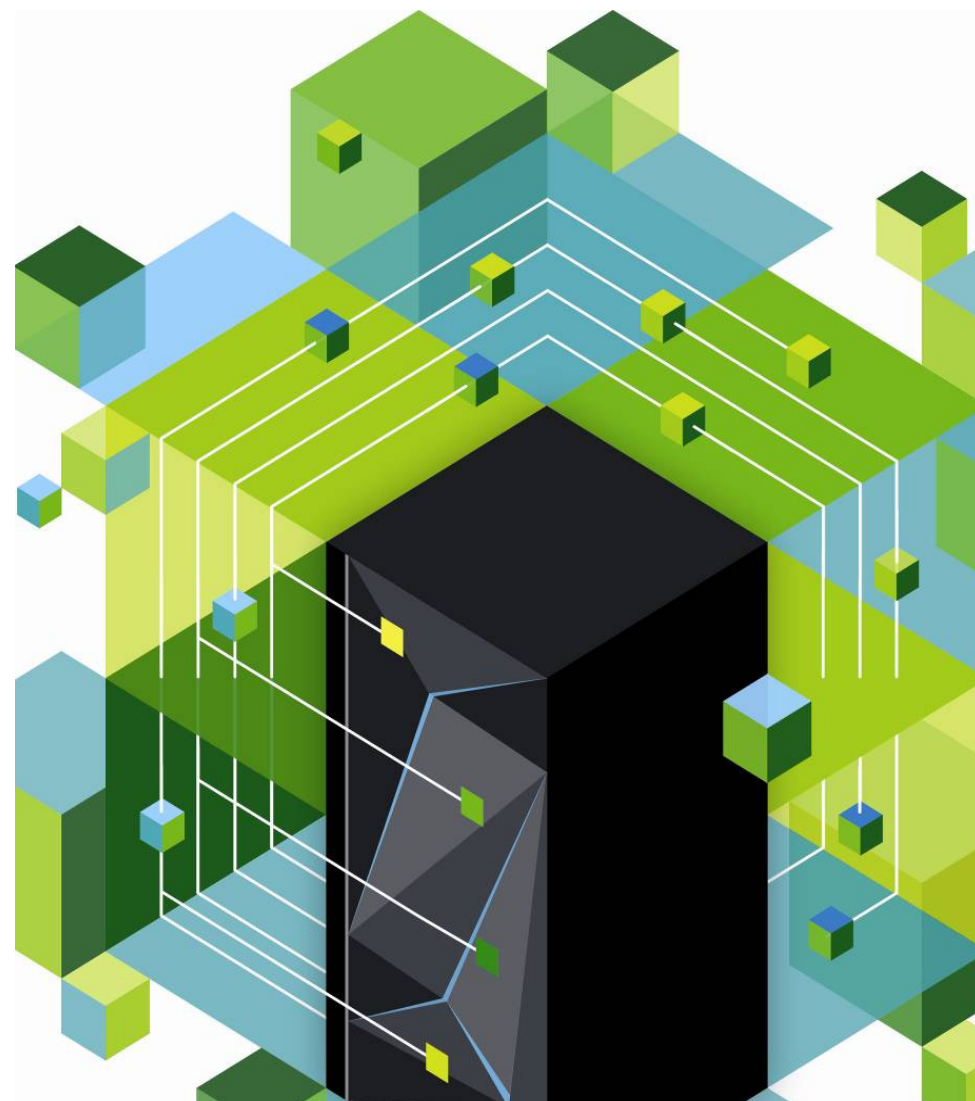


Digital Certificate Manager

- A digital certificate is an electronic credential used to establish proof of identity in an electronic transaction.
- Digital Certificate Manager (DCM) is a free feature, to centrally manage certificates for applications
 - allows the management of certificates from any Certificate Authority (CA)
- NEW in IBM i 7.1 TR6
- Options on the Application Definition configuration panels to allow many of the core IBM networking applications (Telnet, FTP, etc.) to use new protocols and enable OCSP



Content on Demand



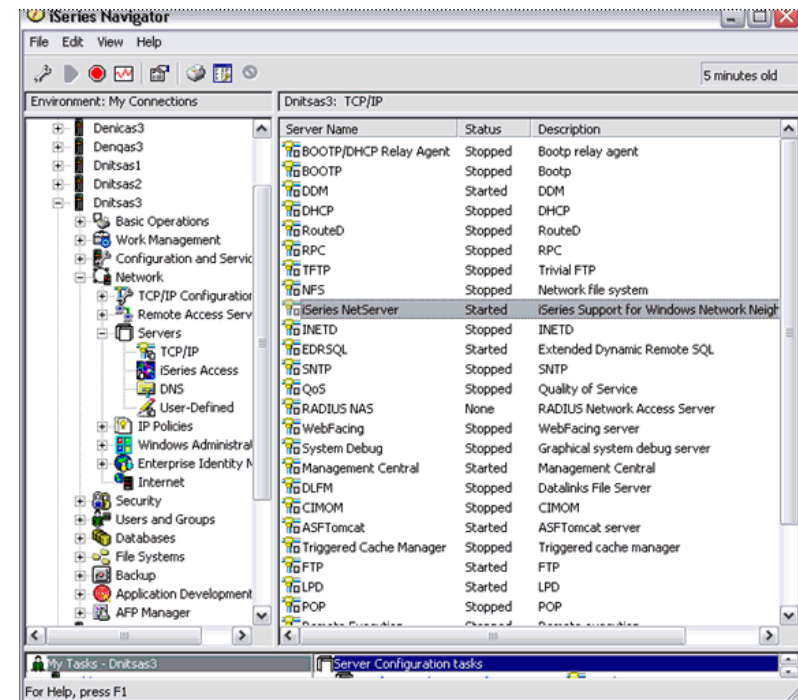
Content Manager OnDemand

- IBM® Content Manager OnDemand (CM OnDemand) is high-performance middleware for enterprise report management
- Enterprise report management software manages formatted computer output and reports
- It helps companies gain significant return on investment by transforming costly high-volume print output to electronic information capture and presentation in support of customer service

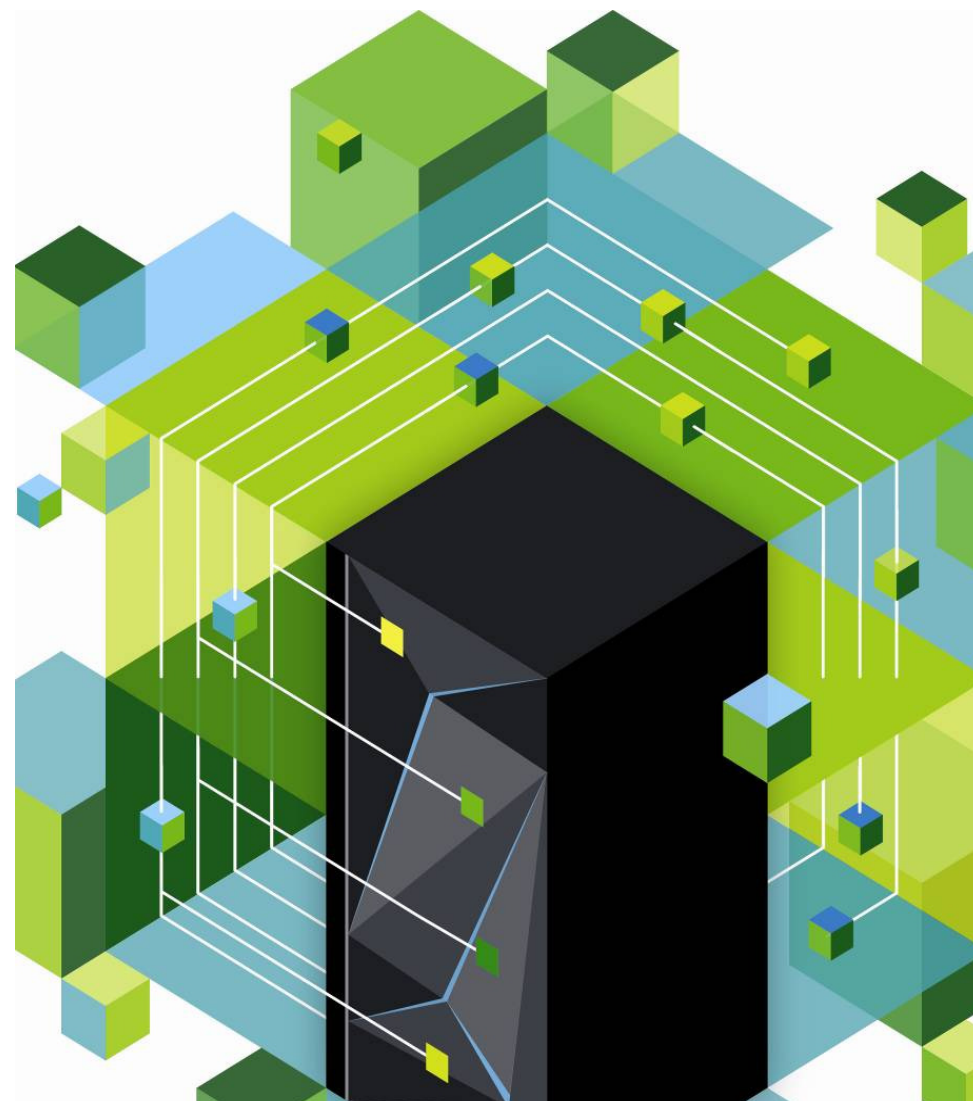


IBM Content Manager for i

- IBM Content Manager OnDemand for i (5733-RDR) announces support for the OnDemand Administration component for IBM Navigator for i
- Navigator for i is a web console interface used to perform key tasks for IBM i administration.
- OnDemand Administration component of Navigator for i supports all tasks available in OnDemand Archive plugin for i Navigator Windows client
 - Nothing needs to be installed on the workstation to use Navigator for i
- The OnDemand Administration component is part of the base Content Manager OnDemand for i software.
- OnDemand Administration tasks include creating and managing migration policies, archive media, output queue monitor definitions, and directory monitor definitions

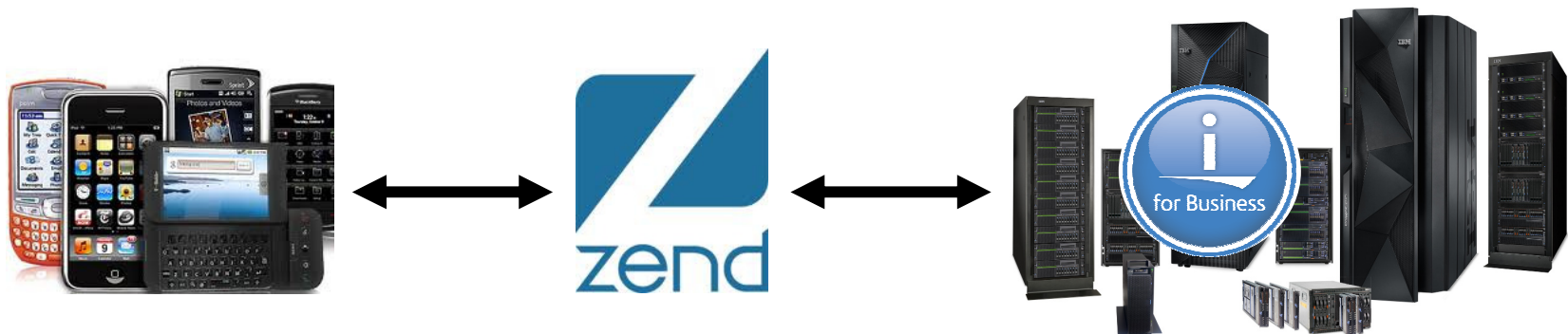


Zend Server for i Version 6



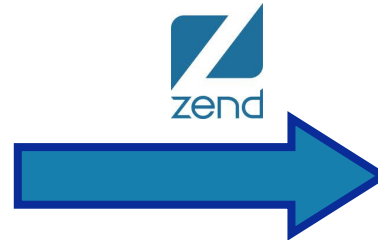
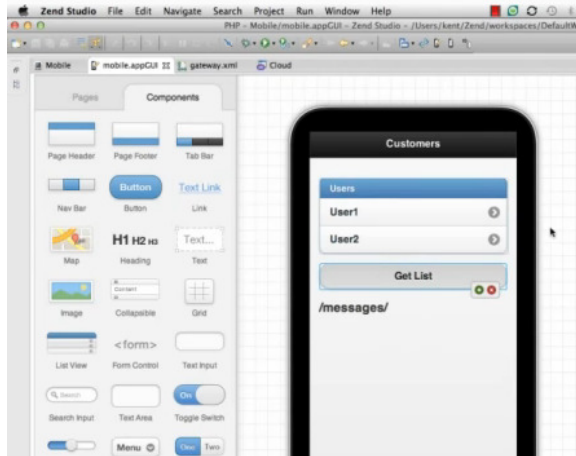
Zend Server for IBM i Version 6

- Zend Studio and Zend Server will create/run mobile apps
 - Visual, drag-and-drop mobile client app creation in Zend Studio
 - Visual, drag-and-drop creation of RESTful PHP web services which connect the mobile app to Zend Server
 - Zend Studio creates mobile apps ready for deployment to app marketplaces of iOS, Android, Windows Phone, & more platforms
- Zend Server has enterprise-grade features for managing PHP applications
 - Application deployment, performance insight, management, caching, and monitoring on an application-by-application basis
 - Security and user management functions include
 - different roles for administrators and developers
 - permissions by application based on the users in an LDAP directory
 - maintaining a user audit trail



Quickly & Easily Create Mobile Solutions for IBM i Applications

Zend Studio 10

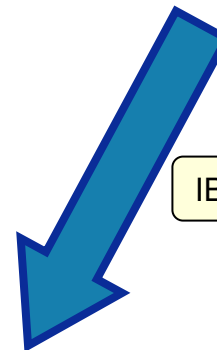


Deploy mobile apps application market places!



iOS, Android, Windows Phone, & more

- Drag & Drop interface
- Tie mobile apps to native IBM i artifacts
- Single development location for creating
 - mobile applications
 - Integrating restful web service
 - Tie to IBM i native toolkit
 - PHP application to drive the interactions



IBM i XML Service



Zend Server for IBM i Version 6

- RESTful Web Services
- "Mobil-ize" RPG & COBOL applications
- XML Service ties Mobile application to native i artifacts
- Mobile solutions for IBM i!

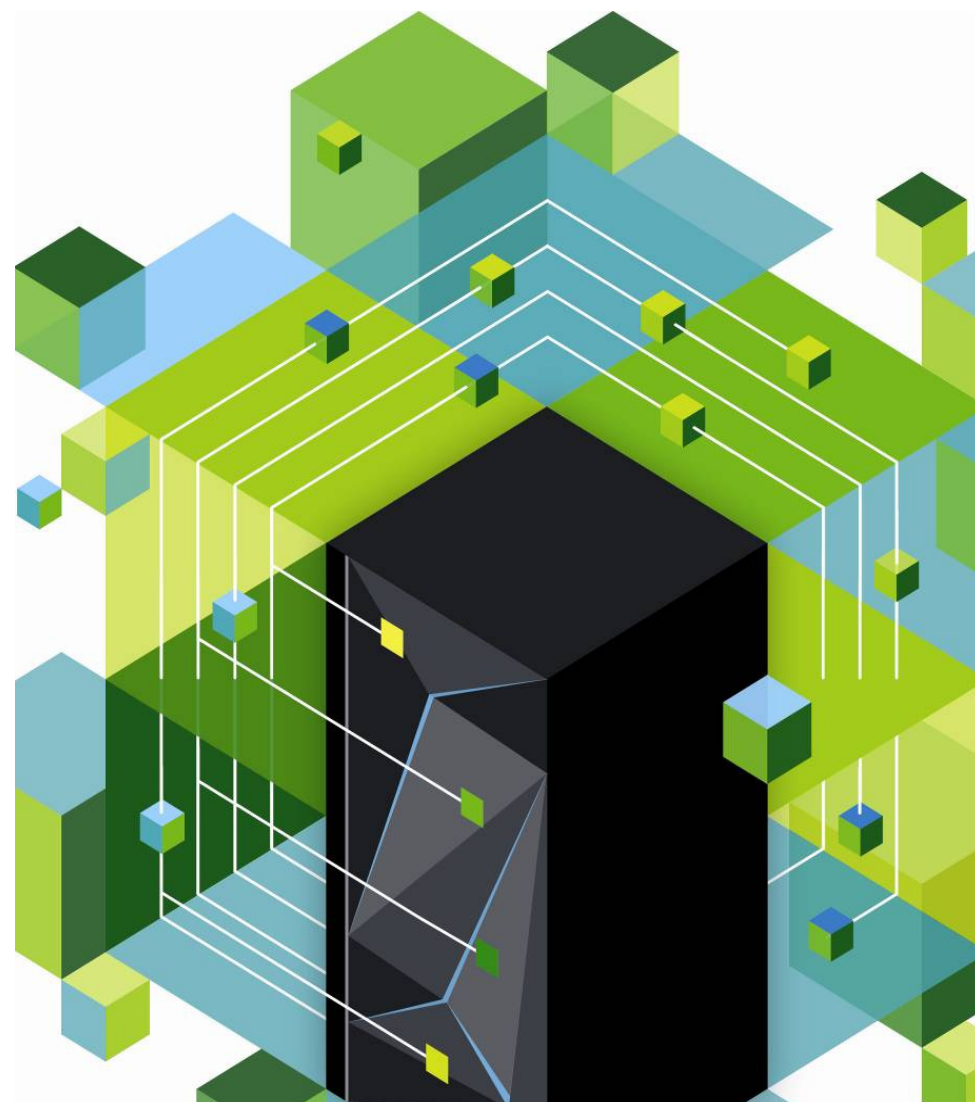
<http://www.youtube.com/watch?v=t4nmRO9-gN4&feature=plcp>

Want the New Version?

- IBM i clients may download the new version of Zend Server for i, Basic Edition Version 6 or Zend Studio for i Version 10, directly from Zend website
- Clients with contracts from Zend for Gold level support are entitled to download Zend Server for i, Standard Edition V6 or Zend Studio for i, Standard Edition V10
- Clients with contracts from Zend for Platinum level support are entitled to download Zend Server for i, Enterprise Edition Version 6 or Zend Studio for i, Enterprise Edition V10.



Lotus Announcements



Statement of Direction for IBM i

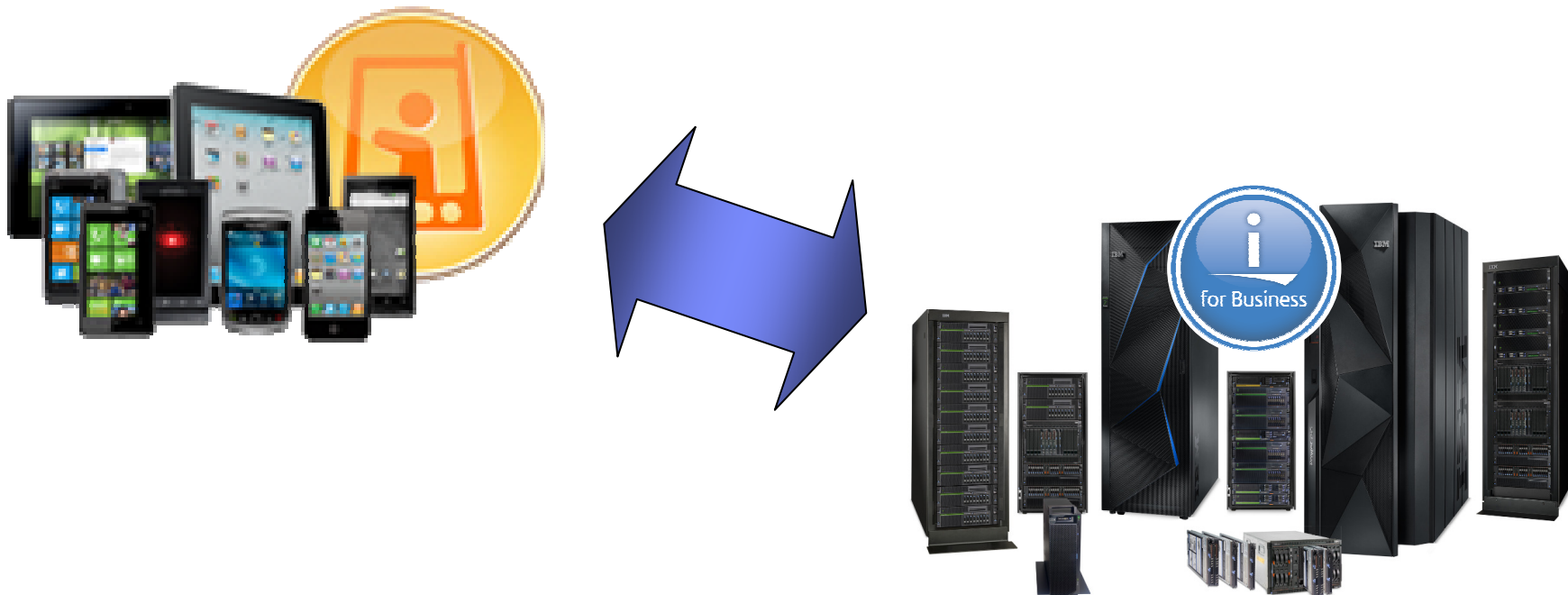
- Full-featured e-mail for smartphones and tablets
- Adheres to important corporate policies and safeguards sensitive corporate data
- No charge mobile offering for IBM Lotus Notes® and Domino® users
- Read and compose Lotus Domino encrypted mail
- Search corporate directory for contacts
- Support remote wipe for lost or stolen devices
- Security policies enforce password rules, denial of access and prohibiting of camera use
- Data on device is encrypted on Apple iOS, Google Android and Nokian Symbian devices



IBM Lotus Notes Traveler – Next Key Features

Statement of Direction for IBM i

- Expanded platform and device support for BYOD deployments
- Support for Traveler running on IBM i
- Support for these devices:
 - Windows Phone 7.5 / 7.8 / 9
 - Windows 8 Tablets
 - Blackberry 10 (through Blackberry Enterprise Service (BES 10))



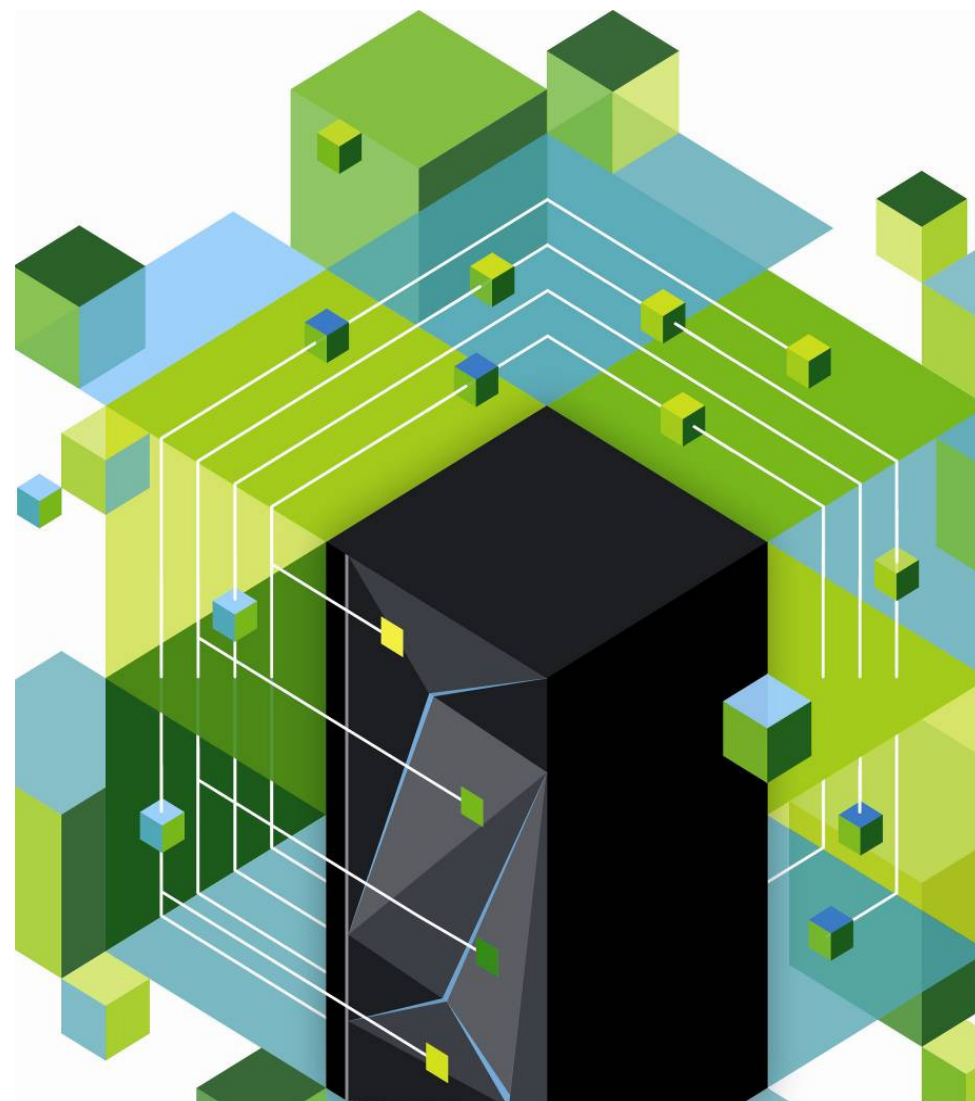
IBM Connections

Statement of Direction for IBM i

- The social platform that can integrate social into business processes across an entire customer experience
- Leading social software platform that enables organizations to engage the right people, drive innovation, and deliver results
- Integrated and secure
- Powerful social analytics and metrics
- Delivered to any mobile device, including tablets.
- The social business solution offering the choice to deploy in the cloud, on premise and hybrid options.



More Details



IBM i 7.1 Technology Refresh 6 – More details

- DeveloperWorks
 - Main page: <http://www.ibm.com/developerworks/ibmi>
 - Landing page for Refresh Updates: <http://www.ibm.com/developerworks/ibmi/techupdates>
- Blogs
 - Steve Will: http://ibmsystemsmag.blogs.com/you_and_i/
 - Dawn May: http://ibmsystemsmag.blogs.com/i_can/
 - Mike Cain: <http://db2fori.blogspot.ca/>
 - Tim Rowe: <http://www.iprodeveloper.com/blog/modern-i-zation-25/ibm-i>

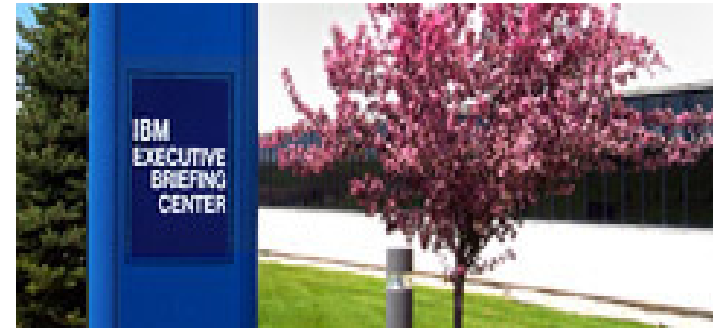


Powerful Resources

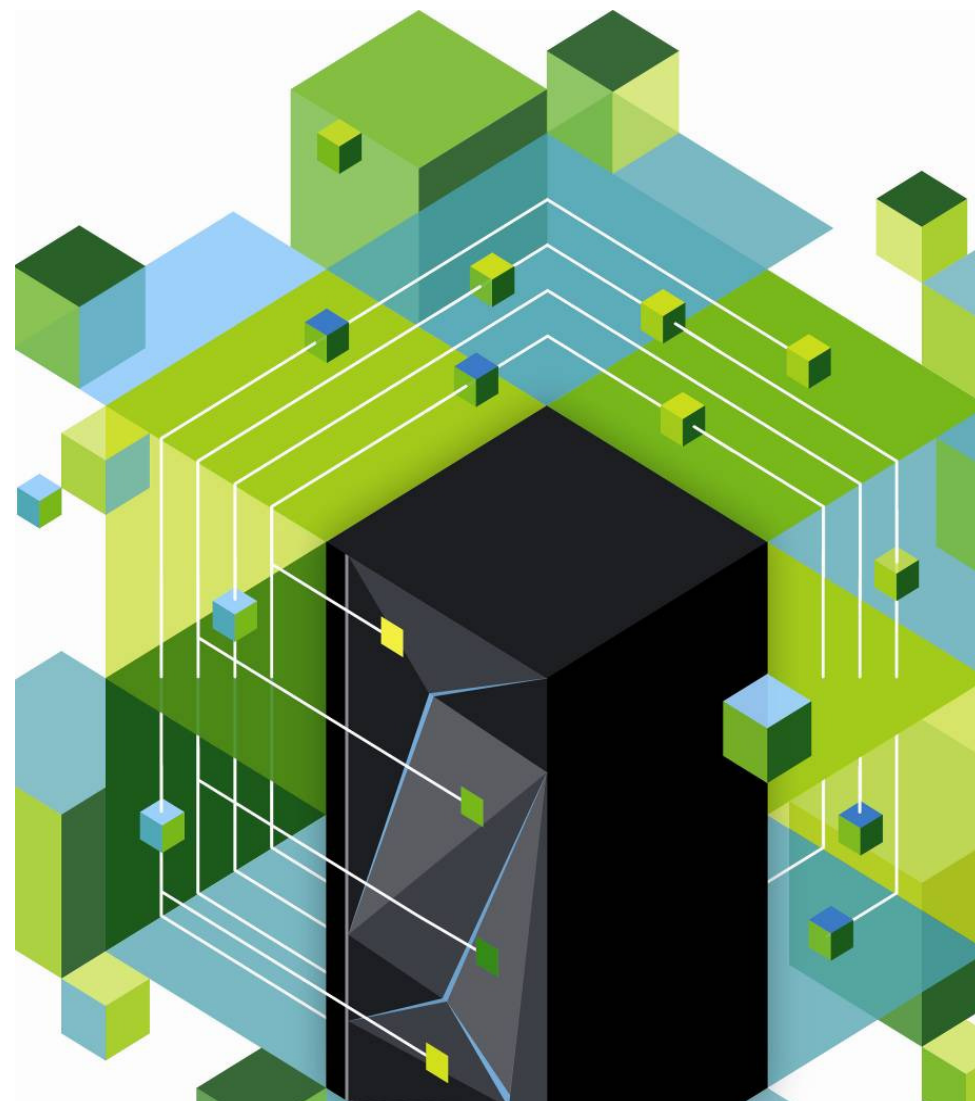
- **IBM Rochester Executive Briefing Center**
 - Client briefings – inbound, outbound or ebriefings
 - Discuss options and formulate strategies
 - [IBM](#) Or [Partner](#)

- **IBM Systems Lab Services & Training**
 - Expert assistance with variety of technologies
 - Contact [Rochester Lab Services](#):
 - Rochester Performance and Scalability Center [More information](#)
 - performance benchmarks
 - SSD and external storage analysis
 - other PoCs

- **ISV Enablement Team**
 - Expert assistance to leverage the latest IBM technologies
 - Contact [ISV Enablement team](#)



Questions ?



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