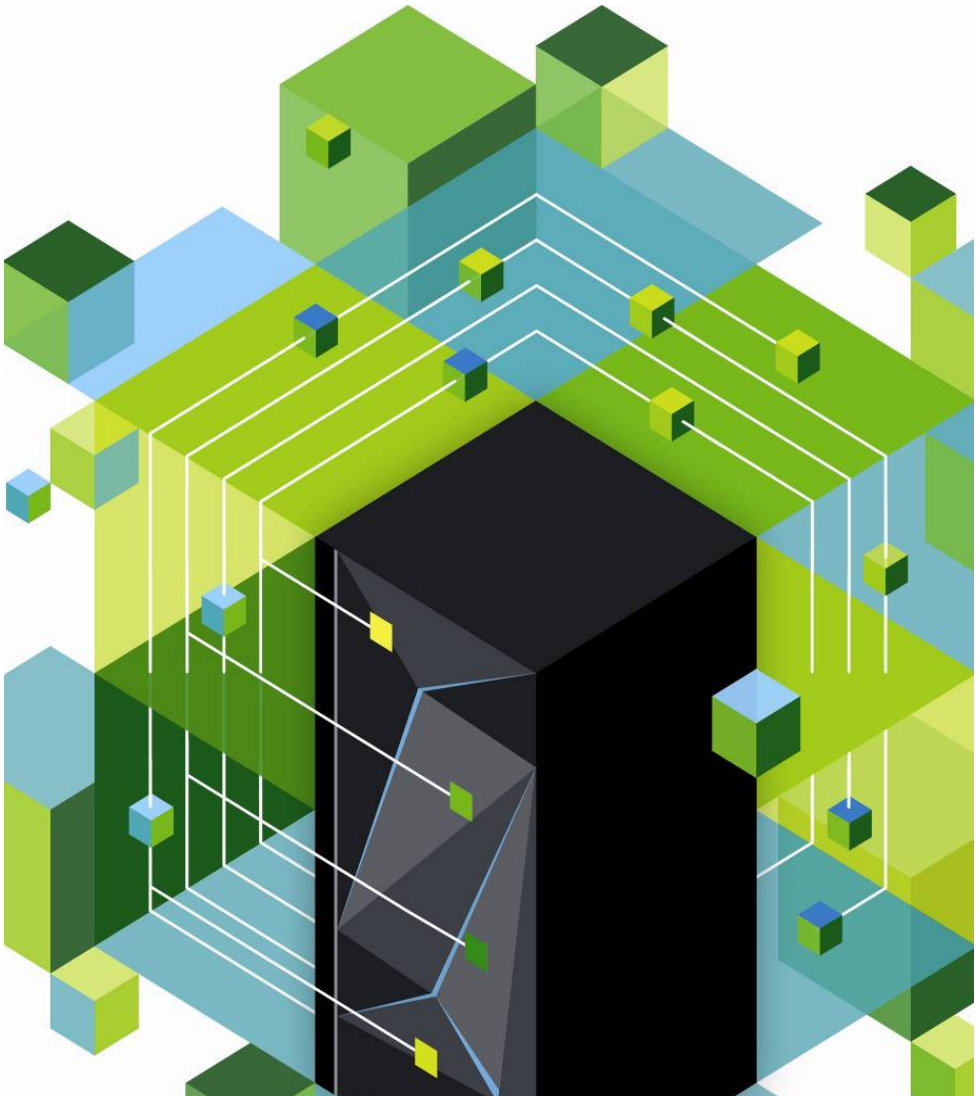
What's new in DB2 for i?

IBM i 7.1 Technology Refresh 6

Scott Forstie



IBM i 7.1 – Where to Find 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

Quarterly Updates

- IBM Quarterly Update Calls:
  - April 18
  - June 27
  - October 1

Upcoming Web Events

Date	Topic
2/12	What's New in DB2 for i?
2/14	IBM i and Pure Systems
2/27	PowerHA SystemMirror and IBM i
2/28	DB2 WebQuery – What's New?
4/16	IBM i Software Ts and Cs
4/18	IBM i Quarterly Update
4/23	IBM i License Transfer
4/30	IBM Rational Licensing and Transfers
6/27	IBM i Quarterly Update
10/1	IBM i Quarterly Update

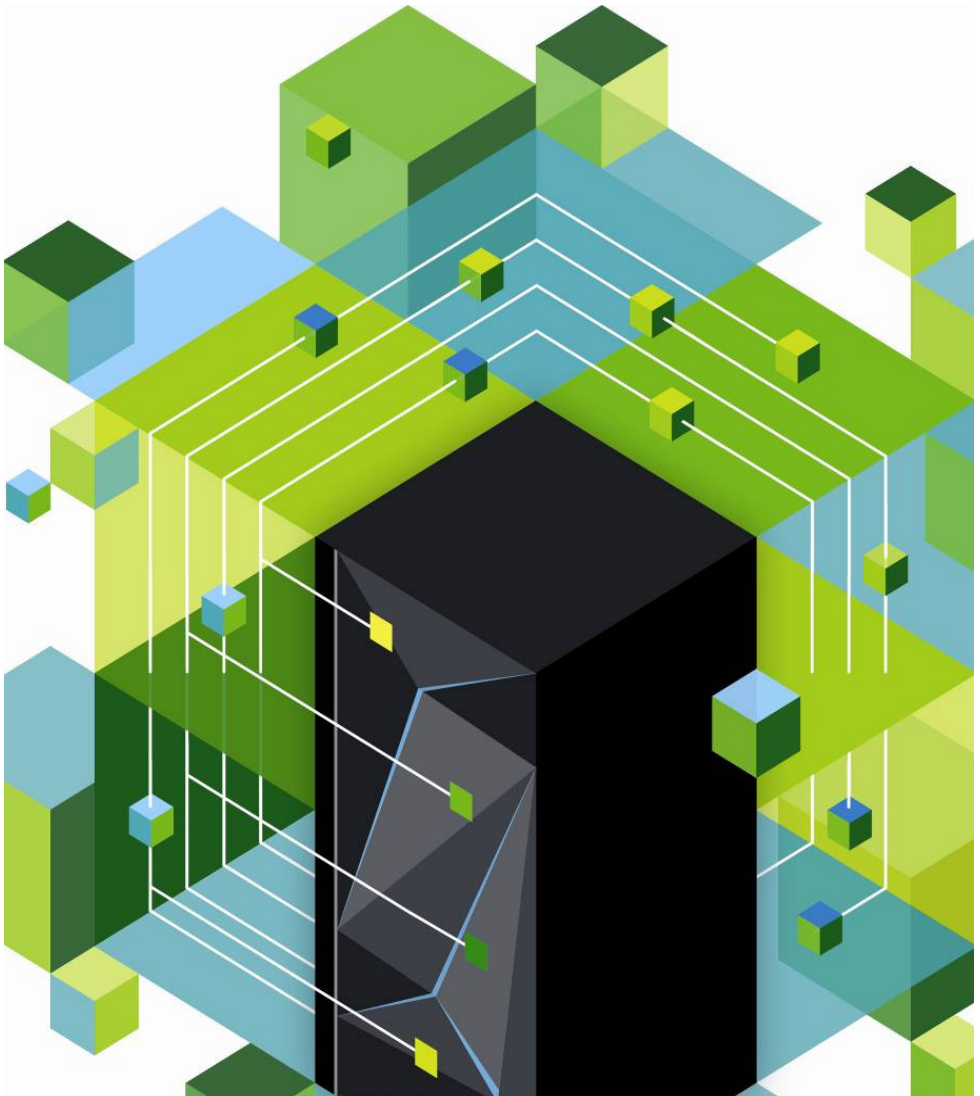
**** dates are subject to change**

What's new in DB2 for i?

IBM i 7.1 Technology Refresh 6

Scott Forstie

DB2 for i Business Architect
SQL Development Team Leader
IBM i developerWorks Content Manager

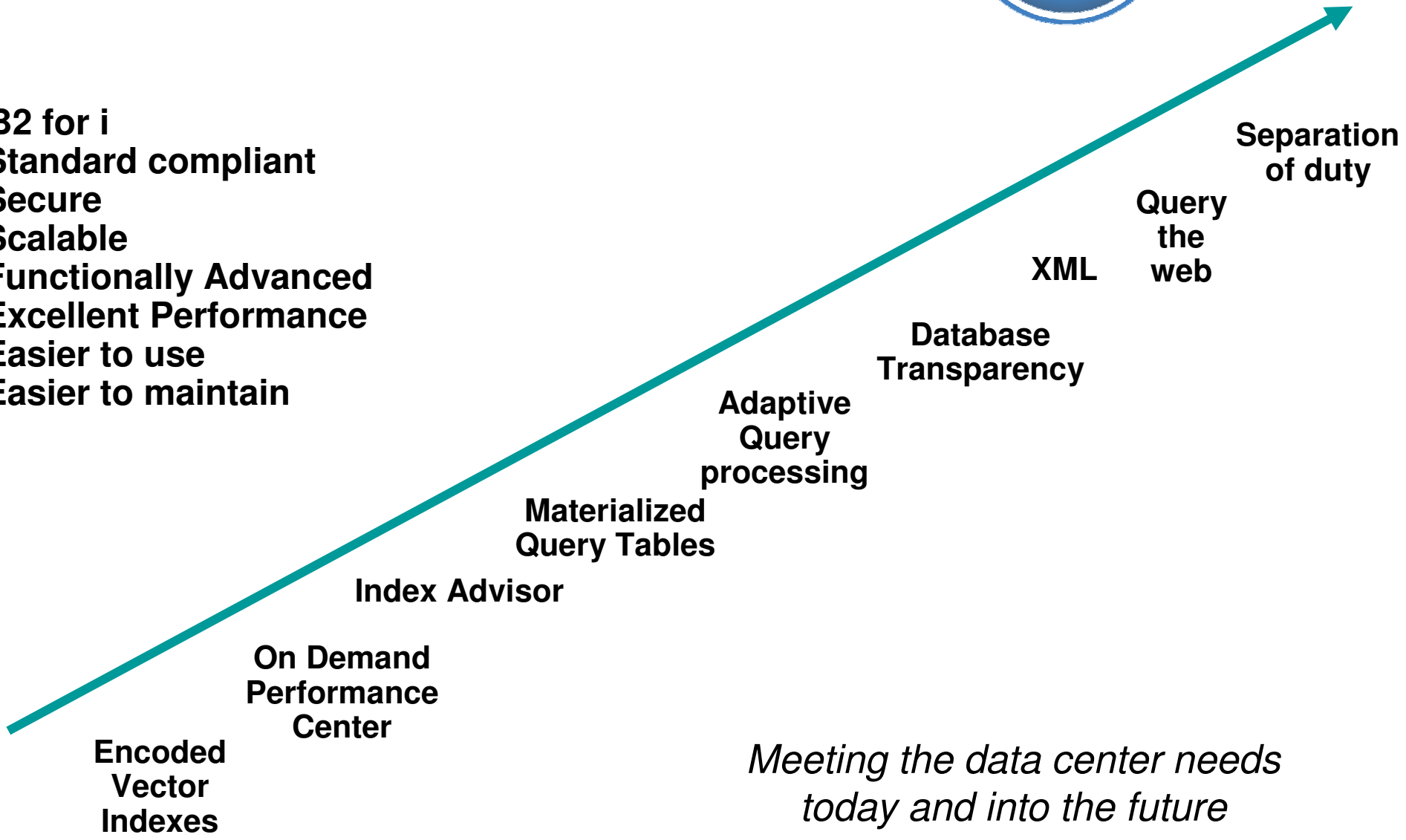


IBM and Integrated DB2 for i

IBM Information Management software

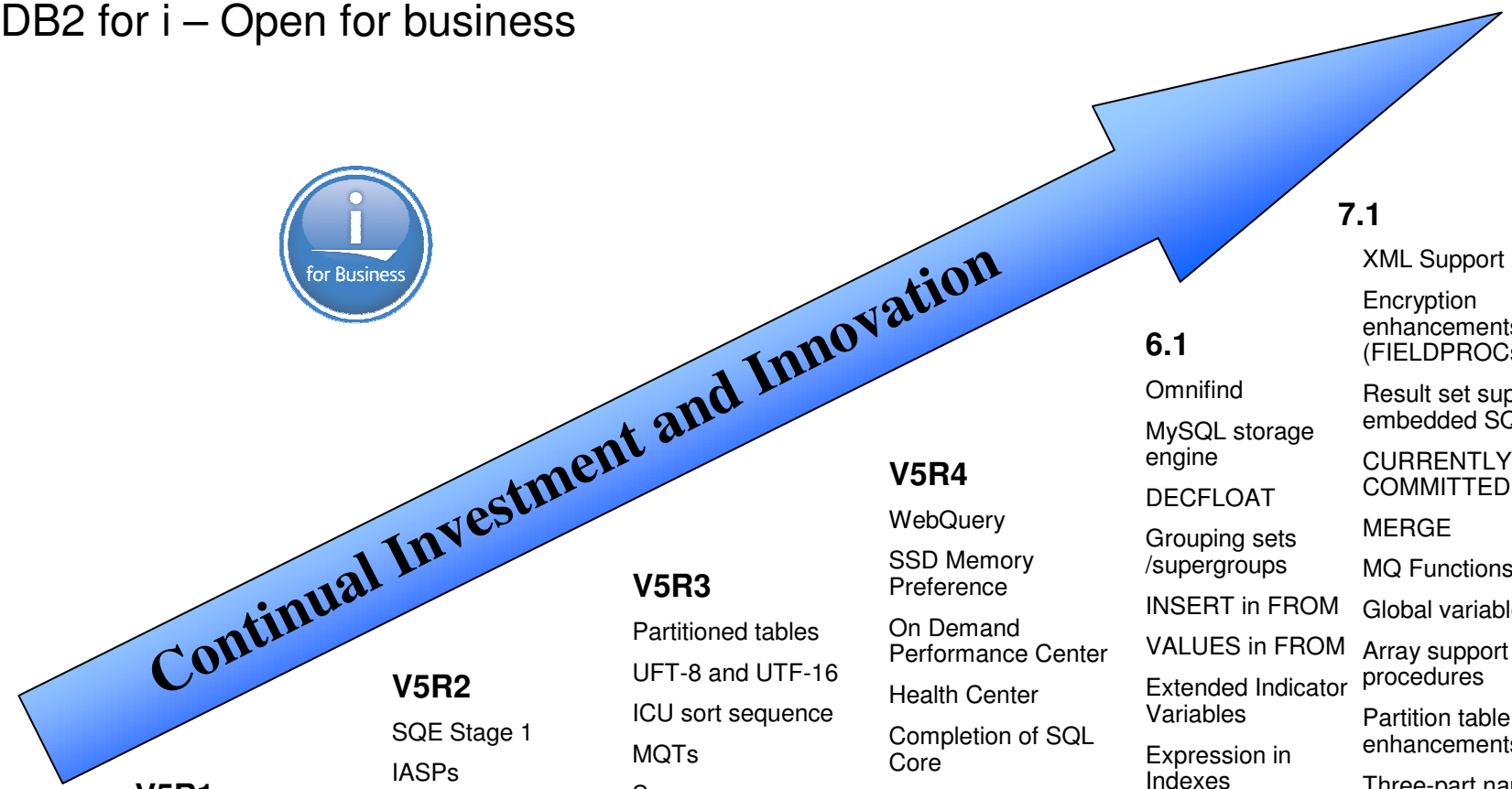
for Business

DB2 for i
- Standard compliant
- Secure
- Scalable
- Functionally Advanced
- Excellent Performance
- Easier to use
- Easier to maintain



Meeting the data center needs today and into the future

DB2 for i – Open for business



V5R1
- SQL triggers
- Java Functions
- DRDA DUW TCP/IP
- 2 GB LOBs
- 1 Terabyte Table
- Journal Minimal Data
- Two-phase over TCP/IP
- DDL Journaling
- Database Navigator
- Generate SQL

V5R2
- SQE Stage 1
- IASPs
- Identity columns
- Savepoints
- UNION in views
- Scalar subselect
- UDTFs
- DECLARE GLOBAL TEMPORARY TABLE
- Catalog views
- JDBC V3.0
- DRDA Kerberos
- Journal Standby

V5R3
- Partitioned tables
- UFT-8 and UTF-16
- ICU sort sequence
- MQTs
- Sequences
- Implicit char/numeric
- BINARY/VARBINARY
- GET DIAGNOSTICS
- DRDA Alias
- DECIMAL(63)
- SQE Stage 3
- Ragged SWA
- QDBRPLAY
- Online Reorganize

V5R4
- WebQuery
- SSD Memory Preference
- On Demand Performance Center
- Health Center
- Completion of SQL Core
- Scalar fullselect
- Recursive CTE
- INSTEAD OF triggers
- Descriptor area
- XA over DRDA
- DDM 2-phase
- Scrollable cursor
- 2M SQL statement
- 1000 tables in a query
- SQE Stage 5
- Implicit journaling enhancements

6.1
- Omnifind
- MySQL storage engine
- DECFLOAT
- Grouping sets /supergroups
- INSERT in FROM
- VALUES in FROM
- Extended Indicator Variables
- Expression in Indexes
- ROW CHANGE TIMESTAMP
- Statistics catalog views
- CLIENT special registers
- SQE Stage 6
- DDM and DRDA IPv6
- Deferred Restore of MQT and Logicals
- Environmental limits

7.1
- XML Support
- Encryption enhancements (FIELDPROCs)
- Result set support in embedded SQL
- CURRENTLY COMMITTED
- MERGE
- MQ Functions
- Global variables
- Array support in procedures
- Partition table enhancements
- Three-part names and aliases
- SQE Logical file support
- SQE Adaptive Query Processing
- EVI enhancements
- Inline functions

Next
- Row and Column Access Control
- XMLTABLE
- CONNECT BY
- OLAP Extensions
- Regression Functions/Covariance/Correlation
- TRANSFER OWNERSHIP
- Named arguments and defaults for parameters
- Obfuscation of SQL routines
- Array support in UDFs
- Timestamp precision
- Multiple-action Triggers
- Built-in Global Variables
- Record movement between partitions on UPDATE
- 1.7 Terabyte Indexes
- Health Center – Non-database limits
- Navigator Graphing and Charting

DB2 for i – Enhancements delivered by DB2 PTF Groups

- The developerWorks IBM i Technology Updates wiki includes the schedule, status and enhancement breakdown.
- **www.ibm.com/developerworks/ibmi/techupdates/db2/groupptf**

You are in: IBM i Technology Updates > IBM i Technology Updates > DB2 for i - Technology Updates > DB2 for IBM i 2013 Group PTF Schedule

DB2 for IBM i 2013 Group PTF Schedule

Updated Jan 17 by ScottForstie | Tags: *None*

Page Actions

Note: This plan and the external availability dates are subject to change.

Subscribe to this page to remain aware of the DB2 for i PTF Group status and plan changes.

DB2 for i 7.1

PTF Group	Enhancements in this DB PTF Group	Level	External Availability	Status
SF99701	Group 21 enhancements	21	1/16/2013	Released
SF99701	Group 22 enhancements	22	3/8/2013	Planned
SF99701	Group 23 enhancements	23	6/21/2013	Planned
SF99701	Group 24 enhancements	24	10/18/2013	Planned

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

Move up & Keep up

Multiple events supported in a single SQL trigger

- A single SQL trigger programs can now handle multiple events
- Reducing the number of SQL triggers improves the management, installation and maintenance

The following trigger:

a) increments the number of employees each time a new person is hired
b) decrements the number of employees each time an employee leaves the company
c) raises an error when a salary increase is greater than ten percent

```
CREATE TRIGGER HIRED
      AFTER INSERT OR DELETE OR UPDATE OF SALARY ON EMPLOYEE
      REFERENCING NEW AS N OLD AS O FOR EACH ROW
        BEGIN
          IF INSERTING
            THEN UPDATE COMPANY_STATS SET NBREMP = NBREMP + 1;
          END IF;
          IF DELETING
            THEN UPDATE COMPANY_STATS SET NBREMP = NBREMP - 1;
          END IF;
          IF UPDATING AND (N.SALARY > 1.1 * O.SALARY)
             THEN SIGNAL SQLSTATE '75000'
                SET MESSAGE_TEXT = 'Salary increase > 10%'
          END IF;
        END
```

7.1
DB2 PTF Group SF99701 Level 22

Data Centric Computing

Direct control of system names for tables, views and indexes

- The FOR SYSTEM NAME clause has been added to these SQL statements:
  - CREATE TABLE
  - CREATE VIEW
  - CREATE INDEX
  - DECLARE GLOBAL TEMPORARY TABLE
- **Use the FOR SYSTEM NAME clause to achieve direct control over table, view and index system names, making it simpler to manage the database.**
- The Generate SQL / QSQGNDDL() interface will leverage this enhancement to produce SQL DDL scripts that produce identical object names.

```
CREATE OR REPLACE VIEW
  PRODLIB/COMPARE_YEARS_2012_AND_2011
      FOR SYSTEM NAME COMP_12_11
    AS SELECT …
```

COMP_12_11 *FILE object created instead of COMPA00001, COMPA00002, etc…

7.1
DB2 PTF Group SF99701 Level 22

Improved controls = Business Value

COMPARE_SYSROUTINE() procedure added to SYSTOOLS

- Given the complex nature of keeping SQL and external procedure/function database catalog entries in sync across machine, DB2 for i is providing a catalog assessment utility.

CALL SYSTOOLS.COMPARE_SYSROUTINE(<target-database-name>,
<schema-to-compare>,
<optional-result-set-parameter>)

- Example below shows 4 routines differ across machines…
and when they were created and by whom.

CALL SYSTOOLS.CHECK_SYSROUTINE('LP01UT18', 'SYSIBM', default) - X1423p1(X1423p1)

SERVER_NAME	ROUTINE_CREATED	ROUTINE_DEFINER	LAST_ALTERED	SPECIFIC_SCHEMA	SPECIFIC_NAME	ROUTINE_SCHEMA	ROUTINE_NAME
X1423P1	2012-09-14 08:41:48.885000	QSYS	-	SYSIBM	SQLPS00002	SYSIBM	SQLPSEUDOCOLUMNS
X1423P1	2012-09-13 19:09:53.937000	QSYS	-	SYSIBM	SQLPS00001	SYSIBM	SQLPSEUDOCOLUMNS
X1423P1	2012-09-30 20:25:00.230000	JMBROICH	-	SYSIBM	DB2CON_LIC	SYSIBM	DB2CON_LIC
X1423P1	2012-10-16 12:13:37.805000	QLPINSTALL	-	SYSIBM	CPRIVS	SYSIBM	CPRIVILEGES

Near Zero Downtime

7.1
DB2 PTF Group SF99701 Level 21

COMPARE_SYSCST() procedure added to SYSTOOLS

- Similar in concept to the COMPARE_SYSROUTINE() procedure, this procedure allows you to automate Disaster Recovery preparedness checking.

CALL SYSTOOLS.COMPARE_SYSCST (<target-database-name>,
<schema-to-compare>,
<optional-result-set-parameter>)

- Example:

One constraint is missing on the master (local) database
A second constraint has been disabled on the master!

CALL SYSTOOLS.CHECK_SYSCST('LP01UT18', 'CORPDB_EX') - X1423p1(X1423p1)

SERVER_NAME	CONSTRAINT_SCHEMA	CONSTRAINT_NAME	CONSTRAINT_TYPE	CONSTRAINT_STATE	ENABLED
LP01UT18	CORPDB_EX	Q_CORPDB_EX_EM...	PRIMARY KEY	ESTABLISHED	YES
LP01UT18	CORPDB_EX	NUMBER	CHECK	ESTABLISHED	YES
X1423P1	CORPDB_EX	NUMBER	CHECK	ESTABLISHED	NO

Near Zero Downtime

7.1
DB2 PTF Group SF99701 Level 21

Improved index advice generation to handle OR predicates

- Index Advisor has been extended for local selection (WHERE clause) that references a single table that is ORed together
- OR advice requires two or more indexes to be created as a set. Missing one index means the optimizer won't be able to cost and choose/use it
- This relationship appears in a new **DEPENDENT_ADVICE_COUNT** column:
  a) Zero – This advised index stands on its own, no OR selection
  b) Greater than Zero – Compare this column against the **TIMES_ADVISED** column to understand how often this advised index has both OR and non-OR selection
- Dependent implies it is dependent on other advised indexes and all of the advised indexes must exist for a bitmap implementation to be utilized.

Improved Index Strategy = Performance Boost

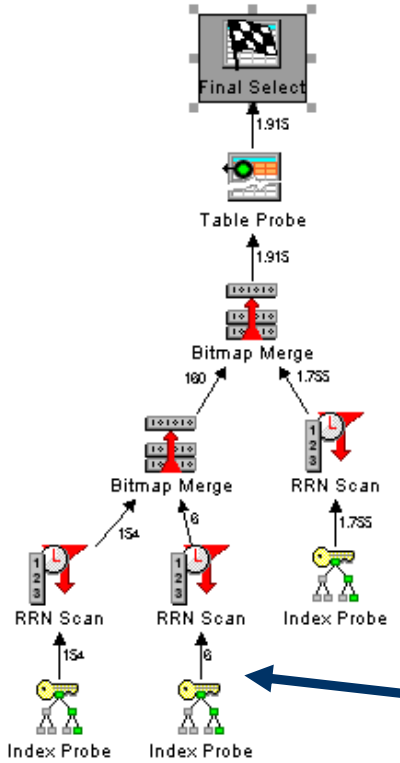
7.1
DB2 PTF Group SF99701 Level 22

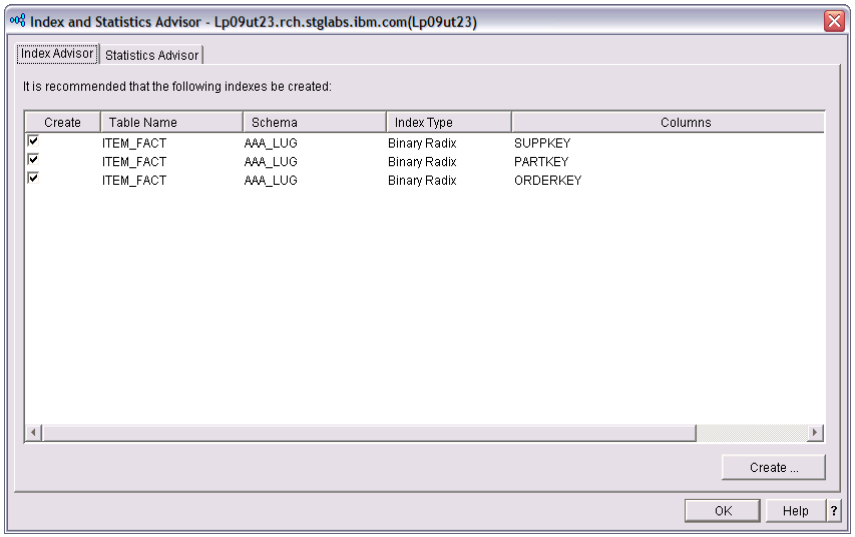
Improved index advice generation to handle OR predicates

Index OR Advice example

- Should advise indexes over all 3 OR'ed predicate columns
- All 3 advised indexes will have **DEPENDENT_ADVICE_COUNT > 0**
- Execution with indexes should produce bitmap implementation and register no new advice

```
select orderkey, partkey, suppkey
      linenumber, shipmode orderp
from   ABC_ITEM_fact
where OrderKey <= 10 OR
        SuppKey  <= 10 OR
        PartKey  <= 10
optimize for all rows
```





Visual Explain

Implementation & Advice

7.1
DB2 PTF Group SF99701 Level 22

PTF_INFO catalog - Use SQL to query PTF detail

- Similar to being able to use SQL to query PTF Group information, (**QSYS2.GROUP_PTF_INFO)** you can interrogate PTF information using a DB2 for i catalog (**QSYS2.PTF_INFO**)
- Data returned is similar to the QpzListPTF() API output

```
-- I'm about to IPL, will the IPL impact PTF state?
SELECT PTF_IDENTIFIER, PTF_IPL_ACTION, A.*
 FROM QSYS2.PTF_INFO A
 WHERE PTF_IPL_ACTION <> 'NONE'

-- Which PTFs are loaded, but not applied?
SELECT PTF_IDENTIFIER, PTF_PRODUCT_DESCRIPTION, A.*
 FROM QSYS2.PTF_INFO A
 WHERE PTF_LOADED_STATUS = 'LOADED'
 ORDER BY PTF_PRODUCT_ID
```

Using SQL to extend the value of traditional interfaces

6.1	7.1
DB2 PTF Group SF99601 Level 29	DB2 PTF Group SF99701 Level 21

QSYS2.GROUP_PROFILE_ENTRIES – new security view

Use SQL to understand:

- What Group Profiles exist
- Which User Profiles belong to specific Group Profiles

Handles both:
Group profile . . . . . GRPPRF
Supplemental groups . . SUPGRPPRF

```
SELECT * FROM QSYS2.GROUP_PROFILE_ENTRIES;
```

GROUP_PROFILE_NAME	USER_PROFILE_NAME
DRDAGRP	MARDA
DRDAGRP	SCOTTF
PERFTEAM	MJA
PERFTEAM	SCOTTF
PERFTEAM	SLROMANO

6.1	7.1
DB2 PTF Group SF99601 Level 29	DB2 PTF Group SF99701 Level 22

Reorganize Enhancements

Improved performance
- New FROMRCD (From Record) parameter
- Better pre-bring of the rows processed during reorganize
- Suspend statistics during reorganization

Improved concurrency
- A limit on the number of rows changed in a reorganize transaction so that typically no row will be locked for a time larger than the file or override WAITRCD value. This reduces the possibility of conflict with concurrent applications.

Improved Information
- New message sent if the amount of storage returned was less than what we expected (this is an estimate)
- New status file row that will store information about the truncate
- Navigator - Reorganize status will show the user how many deleted rows were recovered, the space returned (if any), the RRN that was used to start the reorganize (coming in the next Navigator update)

Near Zero Downtime

6.1	7.1
DB2 PTF Group SF99601 Level 29	DB2 PTF Group SF99701 Level 22

Reorganize - FROMRCD

Specifies which records in the file will be reorganized.
Only records from the specified record to the end of the file will be reorganized.

***START**

All records in the file will be reorganized.

***PRVRGZ**

If the previous reorganize of this file was unable to remove some or all of the deleted records, the reorganize will begin at the record that would have been the last record in the file if a concurrent insert had not prevented the deleted records from being removed. If the previous reorganize completed normally and was able to remove the deleted records, the reorganize will begin with the first record in the file.

*PRVRGZ is ignored if the reorganize is continued from a previously canceled reorganize.

If *PRVRGZ is specified, ALWCANCEL(*YES) must be specified and either KEYFILE(*RPLDLTRCD) or KEYFILE(*NONE) must be specified.

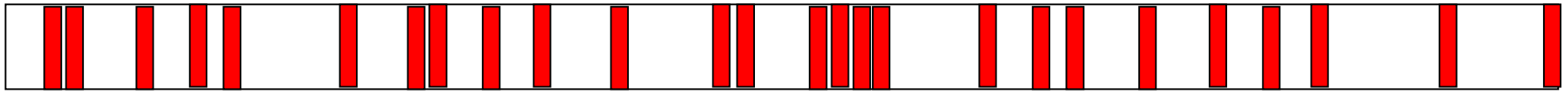
1-4294967288

Specifies the record number of the first record to be reorganized.

If a record number greater than 1 is specified, ALWCANCEL(*YES) must be specified and either KEYFILE(*RPLDLTRCD) or KEYFILE(*NONE) must be specified.

Reorganize – FROMRCD worst case example

Valid rows



Original REUSEDLT(*NO) file prior to reorganize

File just before reorganize attempts to truncate

Concurrent job inserts one more row just prior to the truncate – NO STORAGE WILL BE RETURNED

Concurrent job deletes the first row – A subsequent reorganize would have to move ALL rows again

New FROMRCD(*PRVRGZ) option will only reorganize rows starting from where we expected to truncate – A subsequent reorganize would only have to move the ONE row

Tracking Important System Limits

In production environments a new type of health indicator is needed to understand when the system is trending towards an **outage** or **serious condition**.

Automatic tracking of System Limits enables you to:

a) Understand when an application is trending towards a failure
b) Identify applications which are operating inefficiently
c) Establish a general use mechanism for communicating limit information

-- How close am I coming to hitting the Maximum Active jobs limit?

```
SELECT SBS_NAME, SIZING_NAME, CURRENT_VALUE, MAXIMUM_VALUE , A.*
  FROM QSYS2.SYSLIMITS A
  WHERE LIMIT_ID = 19000
  ORDER BY CURRENT_VALUE DESC
```

SBS_NAME	SIZING_NAME	CURRENT_VALUE	MAXIMUM_VALUE
QSERVER	MAXIMUM NUMBER OF JOBS	10400	485000

Integrated OS Health Metrics

6.1	7.1
DB2 PTF Group SF99601 Level 29	DB2 PTF Group SF99701 Level 22

System Limits - External Requirements

- Customers want to know when they are approaching a limit rather than just waiting for an error message
- Customers want to be able to see trends and take action in run-away situations
  (For example, an application that changes too many rows in a single transaction)
- Customers want a fast way to see the highest water marks for each limit so they can be assured that they are not trending towards a limit

Near Zero Downtime

System Limits – Key points

- IBM i operating system limits are documented in the Maximum Capacities book
- By moving up to the DB2 PTF Group level, system wide tracking is automatically enabled
- Tracking occurs when resource consumption exceeds a system defined “floor” and when an “increment” is exceeded
- The tracked data is stored within a DB2 table, making it possible to review later or act immediately

Tracking Important System Limits – Phase 1

Limits are **categorized** by function:

- Database
- Security
- Work Management
- File System
- Save/Restore
- Journal
- Etc…

Limits are organized by the following **types**:

1) System Limits
2) ASP Limits
3) Job Limits
4) Object Limits

System Limits (phase 1)

- Maximum number of active jobs

Job Limits (phase 1)

- Maximum number of rows locked in a unit of work
- Maximum number of row change operations in a unit of work

ASP Limits (phase 1)

- Maximum number of spool files

Object Limits (phase 1)

- Maximum number of members

6.1	7.1
DB2 PTF Group SF99601 Level 29	DB2 PTF Group SF99701 Level 22

New HTTP functions added to SYSTOOLS

- HTTP is the preferred way for communicating in Resource oriented architecture (ROA) and Service oriented architecture (SOA) environments

- Use these **RESTful** services to integrate information sources that can be addressed via a URL and accessed using HTTP

- The HTTP functions are added to DB2 for i in the SYSTOOLS schema, where we ship DB2 for i supplied tools and examples
(NOT covered by IBM's Software Maintenance and Support)

- Fast-Start to building your own applications
- Requires Java 1.6 (5761-JV1)

"Query the web"

HTTP functions:

httpGetBlob	httpDeleteBlob	URLencode
httpGetClob	httpDeleteClob	URLdecode
httpPutBlob	httpBlob	Base64encode
httpPutClob	httpClob	Base64decode
httpPostBlob	httpHead	
httpPostClob		

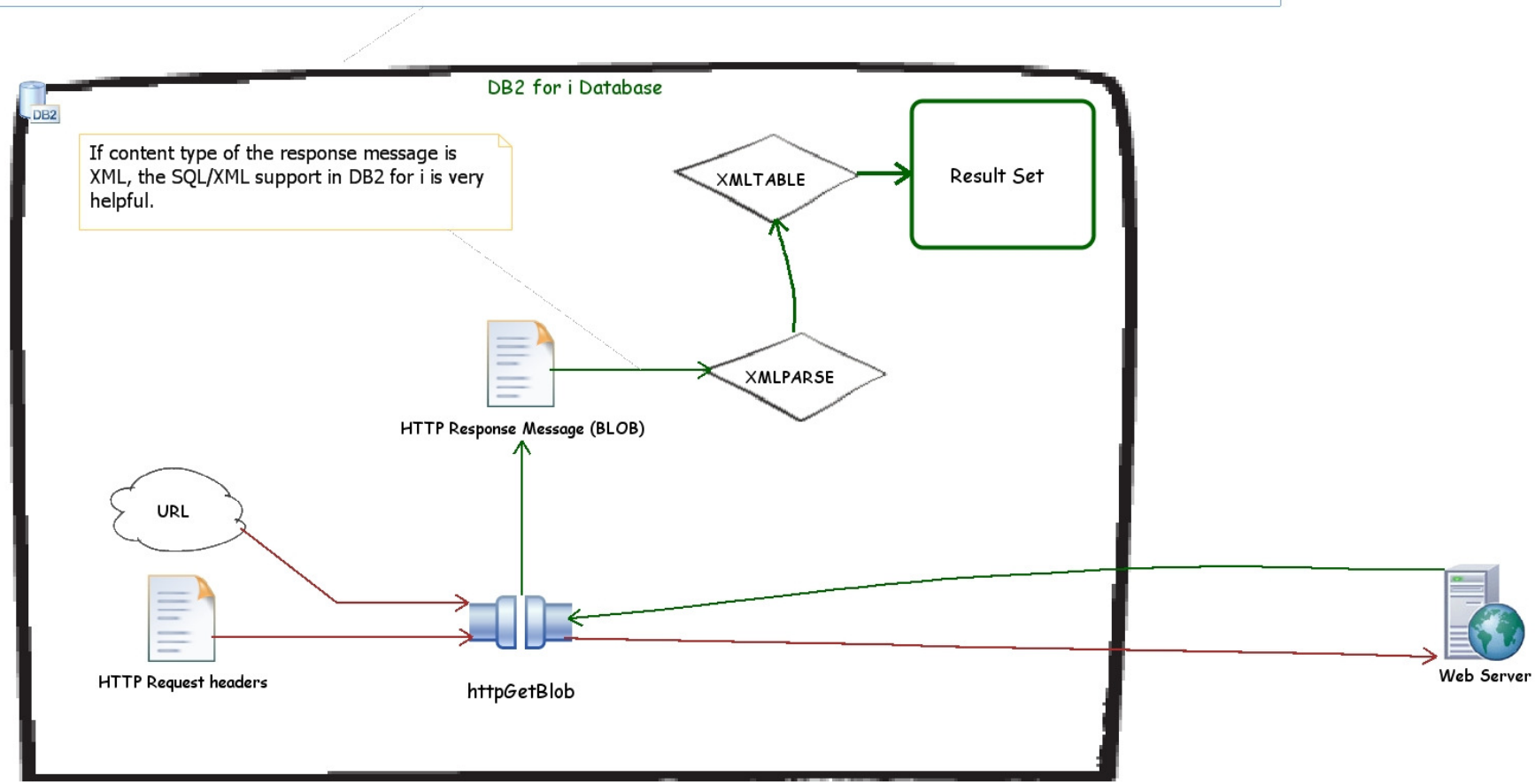
7.1
DB2 PTF Group SF99701 Level 22

httpGetBlob

Get information about an order with httpGetBlob

- Scalar Function
  - No response header information returned
    - use the httpGetBlobVerbose table function to retrieve the response headers
- Inputs
  - URL (Resource to GET)
  - Request headers (information about the request (XML AS CLOB or XML))
- Result
  - response message (as a BLOB)

In this example XMLPARSE and XMLTABLE are used to convert the response message into a result set.



Query the web example – Mike Cain's Blog

```
-- Blog Posts for the last 6 months, order by reader responses
SELECT published, updated, author, title, responses, url, author_bio, html_content, url_atom
FROM
XMLTABLE(
XMLNAMESPACES(DEFAULT 'http://www.w3.org/2005/Atom',
'http://purl.org/syndication/thread/1.0' AS "thr"),
'feed/entry'
PASSING XMLPARSE(DOCUMENT
SYSTOOLS.HTTPGETBLOB(
-- URL --
'http://db2fori.blogspot.com/feeds/posts/default?published-min=' ||
SYSTOOLS.URLENCODE(QGPL.RFC339_DATE_FORMAT(CURRENT_TIMESTAMP - 6 MONTHS), 'UTF-8') ||
'&published-max=' || SYSTOOLS.URLENCODE(QGPL.RFC339_DATE_FORMAT(CURRENT_TIMESTAMP + 1
DAYS) , 'UTF-8') ,
-- header --
'<httpHeader> <header name="Accept" value="application/atom+xml"/> </httpHeader>'
) )
COLUMNS … (see developerWorks for details)
```

XMLTABLE
XMLPARSE
HTTPGETBLOB

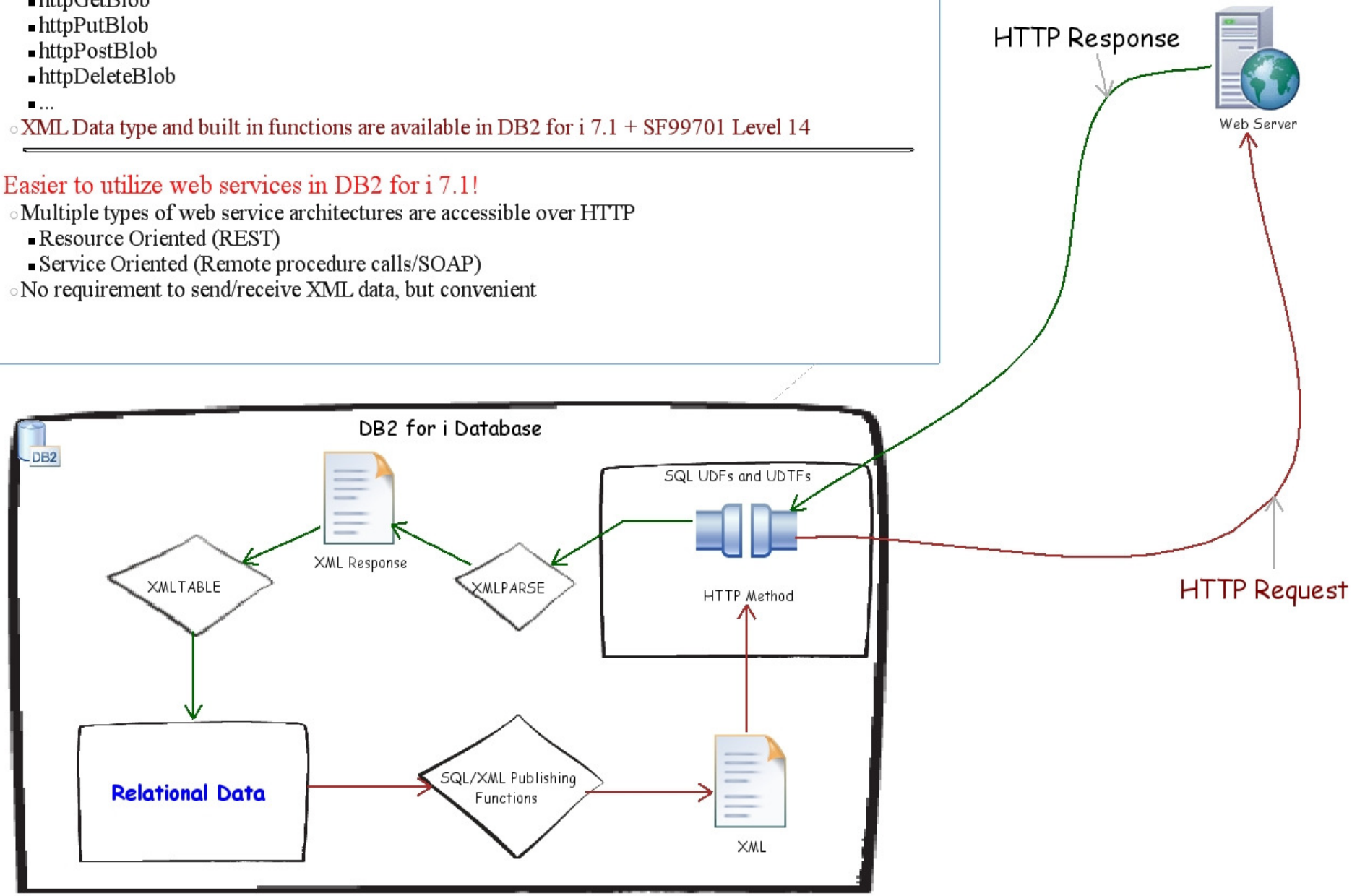
SELECT published, updated, author, title, responses, url, author_bio, html_content, ... - Rchaptf3(Rchaptf3)

PUBLISHED	UPDATED	AUTHOR	TITLE	RESPONSES	URL
2012-11-06 04:04:00.000000	2012-11-06 04:04:16.199000	Mike Cain	One of the Crown Jewels: Single Level Storage	3	http://db2fori.blogspot.com/2012/11/one-of-crown-jewels-single-level-stor
2012-12-19 22:00:00.000000	2012-12-19 22:06:33.429000	Mike Cain	6.1 or 7.1?	1	http://db2fori.blogspot.com/2012/12/61-or-71.html
2013-02-06 22:31:00.000000	2013-02-06 22:31:23.663000	Mike Cain	What to Make of IBM i 7.1 TR6?	0	http://db2fori.blogspot.com/2013/02/what-to-make-of-ibm-i-71-tr6.html
2013-01-28 03:29:00.000000	2013-01-29 19:10:15.132000	Mike Cain	...But Mike, Can I Trust the Query Optimizer?	0	http://db2fori.blogspot.com/2013/01/but-mike-can-i-trust-query-optimizer.
2012-12-10 08:54:00.000000	2012-12-10 08:54:47.234000	Mike Cain	How to Become an IBM i Database Engineer	0	http://db2fori.blogspot.com/2012/12/how-to-become-ibm-i-database-engi
2012-12-04 03:34:00.000000	2012-12-04 03:34:46.898000	Mike Cain	Data Scientists in Action!	0	http://db2fori.blogspot.com/2012/12/data-scientists-in-action.html
2012-11-29 19:16:00.000000	2012-11-29 19:16:23.717000	Mike Cain	Forget Database Engineer...	0	http://db2fori.blogspot.com/2012/11/forget-database-engineer.html
2012-11-16 20:12:00.000000	2012-11-16 20:12:50.914000	Mike Cain	DB2 for i Database Engineer – A Description of the Job	0	http://db2fori.blogspot.com/2012/11/db2-for-i-database-engineer-descript
2012-10-22 21:31:00.000000	2012-10-25 16:02:37.333000	Mike Cain	Take Advantage of More POWER	0	http://db2fori.blogspot.com/2012/10/take-advantage-of-more-power.htm
2012-10-08 15:18:00.000000	2012-10-08 15:18:15.529000	Mike Cain	Learn Something New this Autumn, Take a Bite Out of the Apple	0	http://db2fori.blogspot.com/2012/10/learn-something-new-this-autumn-ta
2012-10-04 02:20:00.000000	2012-10-04 14:17:33.263000	Mike Cain	BOOM! Another IBM i 7.1 Technology Refresh	0	http://db2fori.blogspot.com/2012/10/boom-another-ibm-i-71-technology-r
2012-09-24 22:16:00.000000	2012-09-25 02:01:46.867000	Mike Cain	BIG DATA?	0	http://db2fori.blogspot.com/2012/09/big-data.html
2012-09-14 18:08:00.000000	2012-09-14 18:08:19.555000	Mike Cain	Get Smart, Meet Mr. McKinley, Drink a Dark and Malty Beverage	0	http://db2fori.blogspot.com/2012/09/get-smart-meet-mr-mckinley-drink-da
2012-09-07 19:53:00.000000	2012-09-07 19:53:10.433000	Mike Cain	What Engine Powers Your Queries?	0	http://db2fori.blogspot.com/2012/09/what-engine-powers-your-queries.ht
2012-08-08 22:44:00.000000	2012-08-08 22:52:07.849000	Mike Cain	Quantitative vs Qualitative Information	0	http://db2fori.blogspot.com/2012/08/quantitative-vs-qualitative-informatio

Summary

- Functions available in DB2 for i
  - Sample UDFs and UDTFs to invoke HTTP Methods (TR6)
    - httpGetBlob
    - httpPutBlob
    - httpPostBlob
    - httpDeleteBlob
    - ...
  - XML Data type and built in functions are available in DB2 for i 7.1 + SF99701 Level 14

- Easier to utilize web services in DB2 for i 7.1!
  - Multiple types of web service architectures are accessible over HTTP
    - Resource Oriented (REST)
    - Service Oriented (Remote procedure calls/SOAP)
  - No requirement to send/receive XML data, but convenient



XML on DB2 for i - Whitepaper

A new whitepaper will be published in February, 2013
Use this 100+ page resource as an aid to deploying XML on DB2 for i

“Replacing DB2 XML Extender with integrated DB2 for i XML Capabilities”

Abstract

This paper explores using the new integrated XML features in DB2 for i 7.1 as a replacement for the XML-related functions and data types provided by the priced DB2 XML Extender option, which is part of DB2 Extenders Version 9.5 for i licensed product (5761DE1 and 5770 DE1).

The paper will review the differences between the DB2 XML Extender and the integrated XML support. A fictional company’s application is utilized as a mechanism to compare the integrated XML functionality with the capabilities provided by XML Extender.

www.ibm.com/systems/i/db2/awp.html

JTOpen Lite - enabling mobile devices which use java

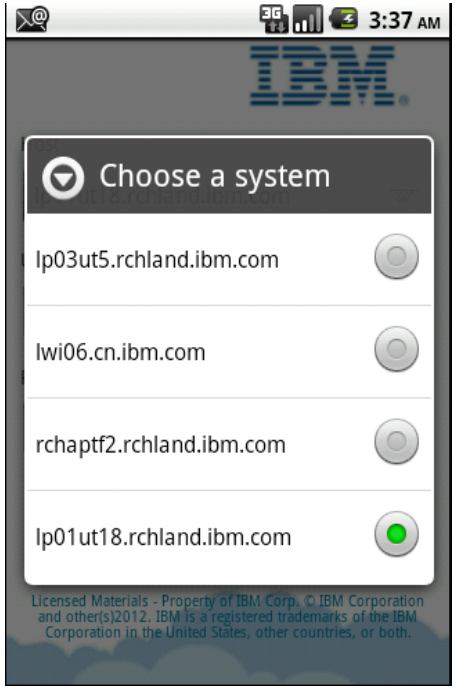
- JTOpen Lite… a java solution for mobile application development against DB2 for i (delivered with TR5)
- Download for free and go mobile with DB2 for i http://jtlite.sourceforge.net/
- Robust subset of java programming features

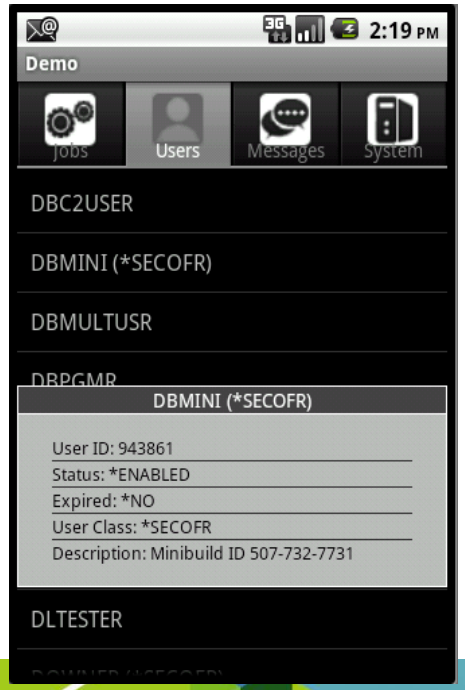
Database (SQL and DDM)
Integrated File System
Program calls
Command execution

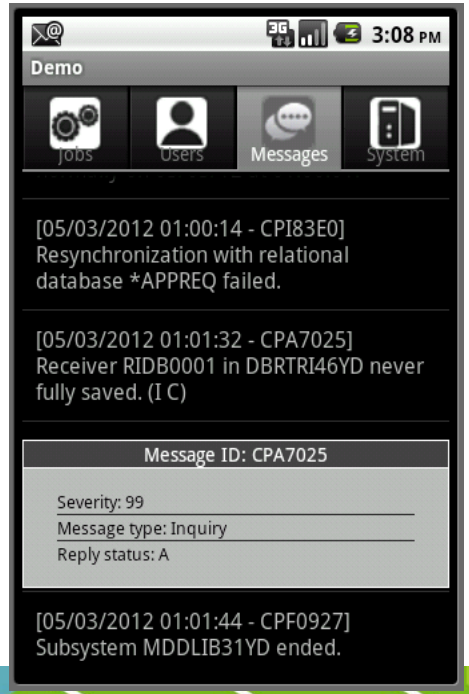
Job Information
Messages
Disk Status
Object Information
User/Group Information

- Work Active Job – built using JTOpen Lite

… an example we built to demonstrate the technology

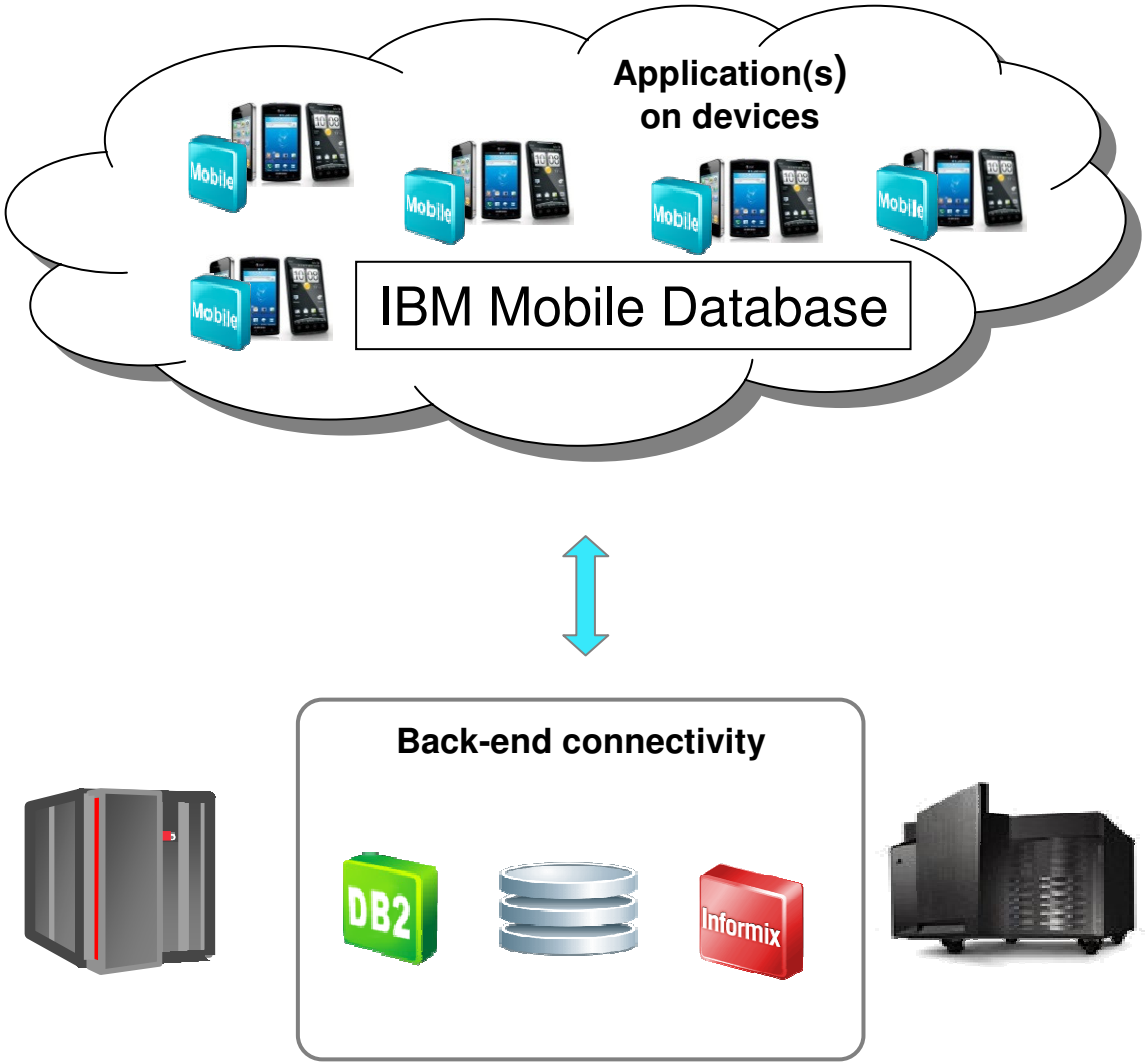






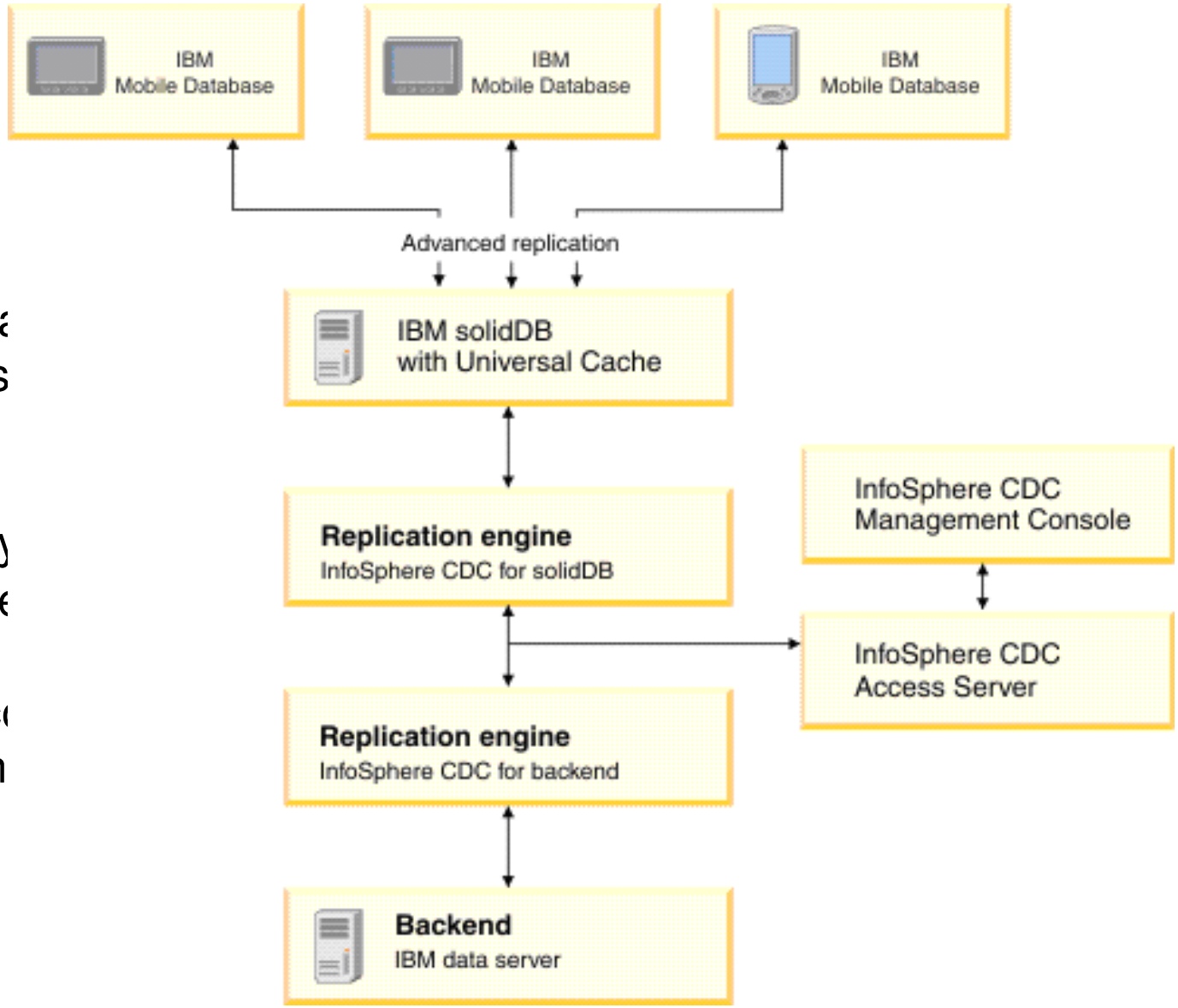
IBM Mobile Database

- 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

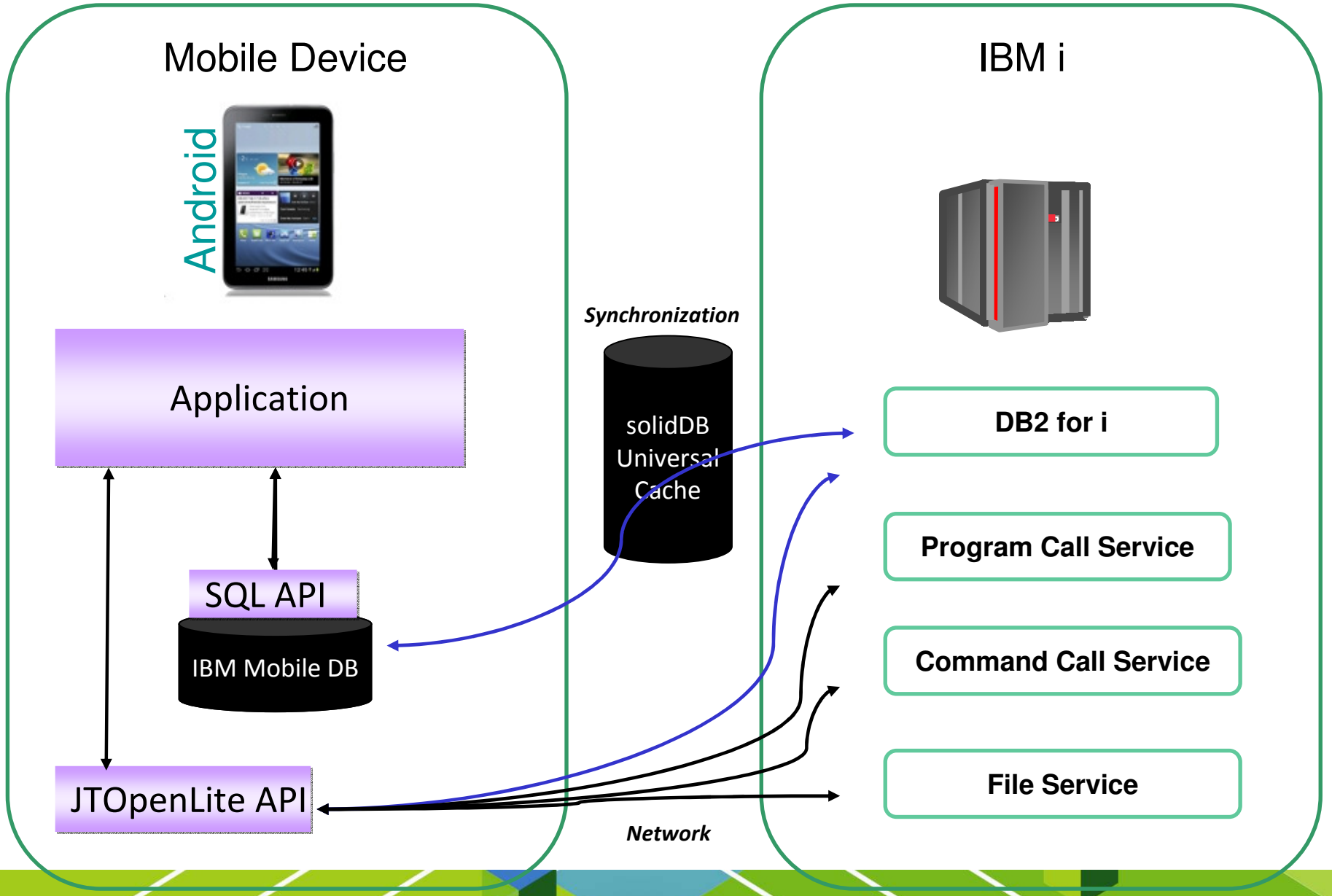


IBM Mobile Database topology

- InfoSphere Change Da
  Management (CDC) is
  access the DB
- IBM solidDB is the
  intermediary repositor
- IBM Mobile DB provide
  mobile application
- Useful structure for ac
  different database ven

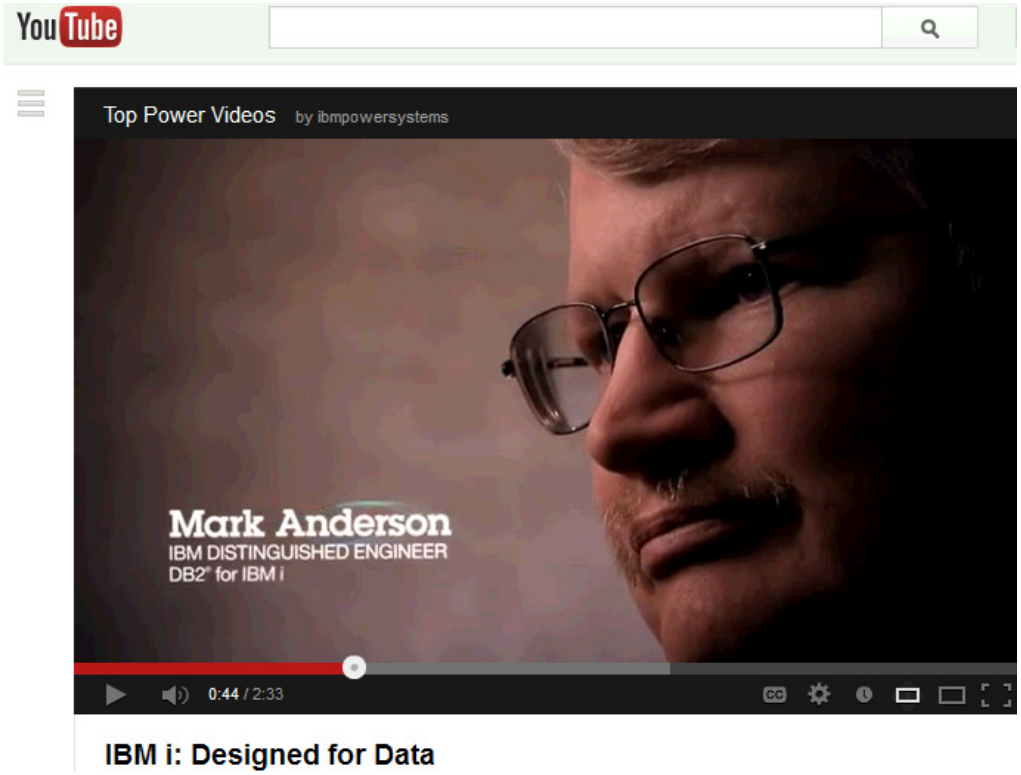


IBM Mobile Database vs JTOpen Lite API



Leverage the DB2 for i experts

- New “why i?” video series includes a “why DB2 for i?” video http://bit.ly/whyDB2fori
- Previously released “designed for data” video http://bit.ly/DB2foriandBigData



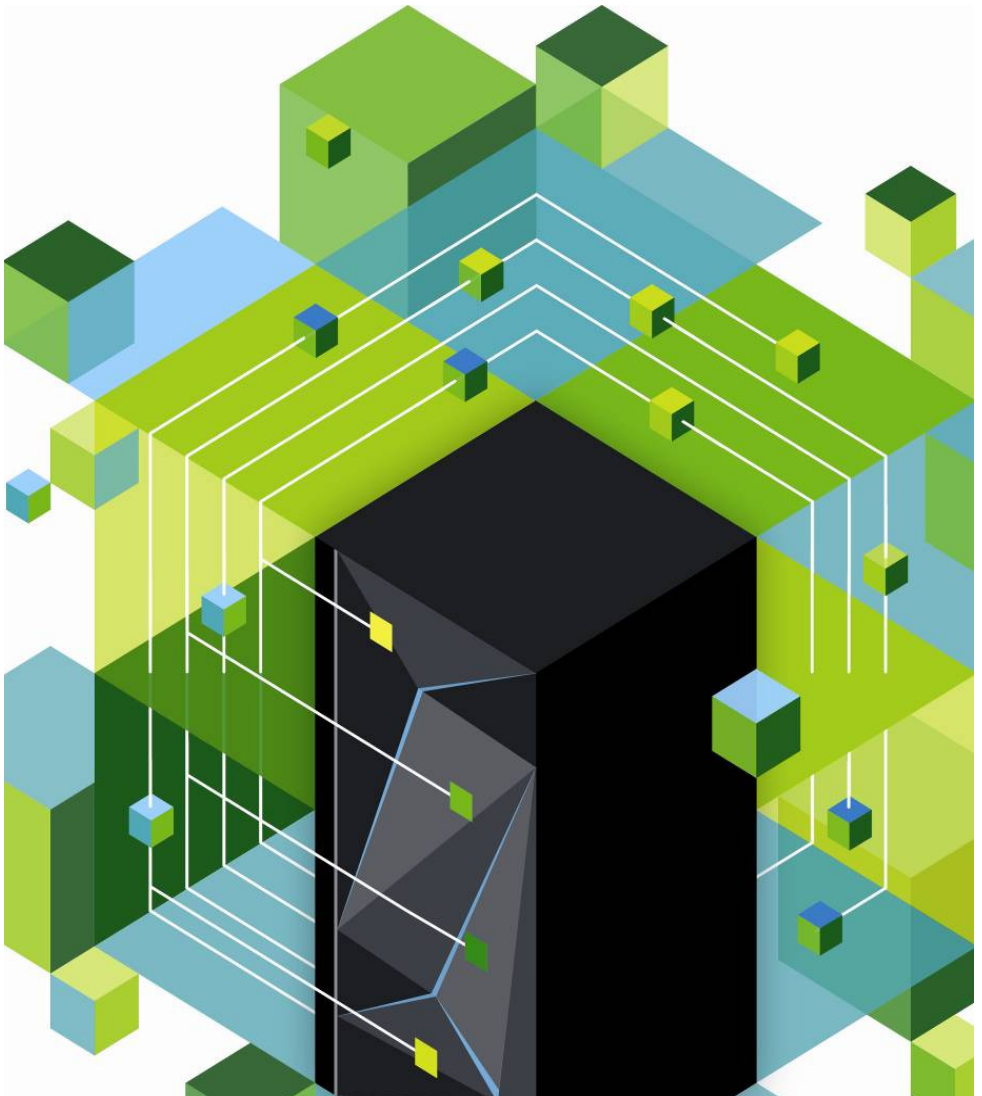
Leverage the DB2 for i experts

- The DB2 for i Center of Excellence team can assist with sales engagements
- Do you have a sales opportunity and need support?
  Contact Mike.
- Do you have a customer, workload or data on IBM i at risk?
  Contact Mike.
- Mike Cain (mcain@us.ibm.com)

DB2 for i – a call to action

- Use these materials to engage your customers and promote DB2 for i
- Let me know what you need from the DB2 for i team
- Did this tech talk help you?
  I want to hear from you within 2 weeks
- Contact:
  - Scott Forstie (forstie@us.ibm.com)

Questions ?



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Backup

Navigator enablement

Number deleted rows eliminated

Starting record
Amount of storage recovered

Navigator updates scheduled for June, 2013