Oracle Rdb Status and Direction

Philippe Vigier
Oracle New England Development Center

ORACLE

Agenda

- Strategy
- Recent Wins
- Roadmap
- Features
- Itanium port

ORACLE
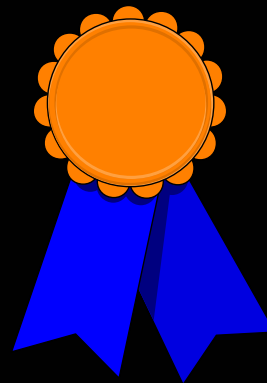
Product Development Strategy

- Optimised for OpenVMS
- Integrated with Oracle environment
  - Oracle 9i Application Server
  - Oracle Enterprise Manager
  - Java / JDBC development tools
- High-end OLTP systems focus
  - High performance
    - Unique scalability on OpenVMS
    - Extensive tuning capabilities
  - High availability
    - Robust on-line management

ORACLE

3

Recent Wins

- New Sales driven by applications
  - OM Group
    - EDX London
  - EssNet (Lottery Systems)
  - CMG (Short Messaging Services)
  - Shared Medical Systems
- New projects with existing customers
  - Deutsche Börse
  - SIAER
  - Sharp
  - NTT
  - Aramark Uniform Services
  - … more soon

ORACLE

4

How do we do this?

- Knowing our customers and their needs
- Responding to those needs with great new features
  - Continuous LogMiner (Thrifty)
  - Hot Standby
  - Row Cache
  - Bit Mapped Indexes
  - SQL*Net for Rdb, JDBC support
- Rdb Technical Forums and other events
- Email mailing list
- Cooperation with HP

ORACLE

5

Software Release Approach

- Maintenance Releases every 3-4 months
- New Feature Releases every 18-24 months
- Examples:

  - Rdb 7.0.6.3 January '02
  - Rdb 7.0.6.4 June '02
  - Rdb 7.0.6.5 September '02

  - Rdb 7.1.0.2 April '02
  - Rdb 7.1.0.3 July '02
  - Rdb 7.1.0.4, 7.1.0.5, December, '02

ORACLE

6

Oracle Rdb Roadmap

	Q1CY03	Q2CY03	Q3CY03	Q4CY03	Q1CY04	Q2CY04	Q3CY04
Rdb 7.0	•7.0.7.0 Bug Fix + EV7 Enabled (Mar)	•7.0.7.1 Bug Fix (Jun)	•7.0.7.2 Bug Fix (Sep)	•7.0.7.3 Bug Fix (Dec)		•7.0.7.4 Bug Fix (Apr)	•7.0.7.5 Bug Fix (Aug)
Rdb 7.1		•7.1.1.0 Feature + EV7 Qualified + Bug Fix (Apr)	•7.1.2.0 Feature + EV7 Qualified + Bug Fix (Jul)	•7.1.2.1 Bug Fix (Oct)	•7.1.3.0 Feature + Bug Fix (Dec)	•7.1.3.1 Bug Fix (Apr)	•7.1.3.2 Bug Fix (Sep)
Rdb 7.2 IPF + Alpha							•7.2.0.0 (~ Oct '04)

ORACLE

Hardware Support

- Improvements in scaling for NUMA systems
- Next Generation Alpha System
  - Rdb EV7 certification in progress (<90 days from FRS)
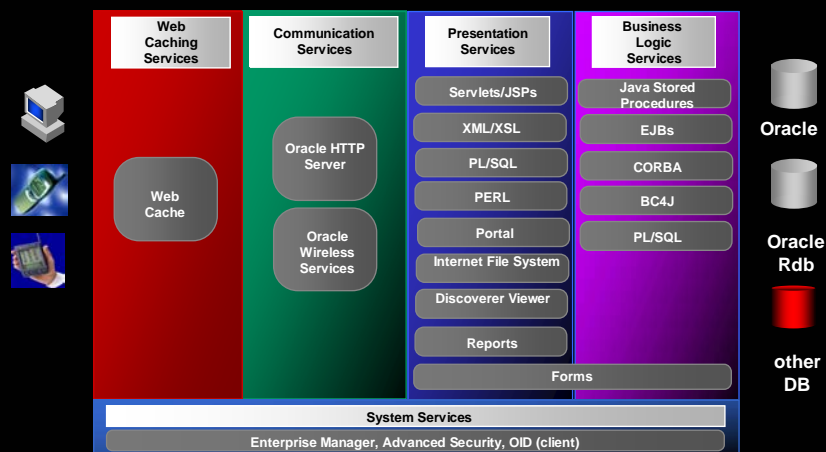- Benefit: Significant performance improvement

ORACLE

VMS V7.3-2

- VMS 7.3-2
  - Rdb Certification
  - Baselevel (pre-field test) testing in progress
- Circa Q3CYO3
- Benefit: Upgrade with confidence to take advantage of the latest VMS enhancements.

ORACLE

9

Oracle9*i* Application Server Release 2 Qualification

Web Caching Services	Communication Services	Presentation Services	Business Logic Services
		Servlets/JSPs	Java Stored Procedures
	Oracle HTTP Server	XML/XSL	EJBs
		PL/SQL	CORBA
Web Cache		PERL	BC4J
	Oracle Wireless Services	Portal	PL/SQL
		Internet File System	
		Discoverer Viewer	
		Reports	
		Forms	

System Services

Enterprise Manager, Advanced Security, OID (client)

Oracle

Oracle Rdb

other DB

ORACLE

10

DECdtm XA Interface Project

- HP's DECdtm/XA Gateway means
  - DECdtm-compliant components participate with XA-compliant components
  - DECdtm becomes XA-compliant RM
- Rdb supports DECdtm 2PC so it can now participate in XA transactions
- Benefit: True distributed transactions that update multiple Rdb and Oracle databases.

ORACLE

11

Tape Library Support

- Oracle Media Management version 2.0 API support begins in Rdb version 7.1.1.0
  - Used by leading librarians: ABS, Legato, Veritas
- ABS tested and supported[1]
  - Other support possible
- Parallel backup plan files supported
- Benefits:
  - Same tape library support for OpenVMS and Rdb backups
  - Tape library support for parallel backups

[1] Testing by HP will be completed before ship date

ORACLE

12

Oracle Database Compatibility

- Extended LOB support : including new Oracle RDBMS native types: LONG and LONG RAW
- Oracle 9i OCI updates
- PL/SQL Support
- Native JDBC driver (in Beta)
- Benefits:
  - Easier portability of code between database systems
  - Better support for web services, web applications

ORACLE

13

Oracle Enterprise Manager

- Enterprise Manager will be able to
  - Discover Rdb databases
  - Detect events and react to them
  - Schedule jobs
- Production release of the Oracle Rdb Cartridge for OEM 9i (currently in beta)
- Benefit: Events and jobs from same console for both Oracle Rdb and Oracle Database.

ORACLE

14

Query Optimizer

- Improved estimation
- Improved use of bit map indexes
- Benefits:
  - Better choices when multiple indexes could be used
  - Same queries result in fewer IOs

15

Quality

- Develop a random query generator
  a) does the query compile?
  b) does the query generate the same results as previous version [7.1.0.4 vs. 7.1.0.3, or 7.1 vs. 7.0]
  c) compare results with Oracle Database
- Benefits:
  - Detect poor strategies before we ship
  - Detect incorrect results before we ship

16

Recovery Performance Enhancements

- Redo & Undo
  - Additional prefetching of Database, AIJ and RUJ
  - Additional asynch I/O
  - Benefit: Faster recovery from process or node failures
- RMU /RECOVER
  - Performance improvements with optimized AIJ
  - Benefit: Faster recovery from database failures

ORACLE

17

Row Cache Improvements

- Snapshots in Cache
- 64 bit row cache: Address existing cache-size limitations
  - ~33 million row cache size limit removed
  - Eliminate current 32-bit addressing limitations of cache data structures
  - Move from P0/S0 to P2 address space
- Benefits:
  - Vastly larger caches
  - Improved performance
    - More existing applications get write benefits from Row Cache
    - Uses OpenVMS shared memory performance features

ORACLE

18

Itanium Processor Support

19

Products Being Ported

- Oracle Rdb
- Oracle CODASYL DBMS
- Replication Option for Rdb
- SQL Services / SQL*Net for Rdb
- Oracle Trace
- CDD/Repository
- DBA Pack
- Rdb OEM Integration

20

Progress Update

- Cross Compilation
  - COSI   100%
  - KODA   85%
  - DBMS   90%
  - Rdb   85%
- Updating Cross Tools and Libraries, etc. Weekly
  - Each release improves
  - Considered V1.0 at this point

ORACLE

21

More To Do…

- Cross linking
- First boot
- Threading and condition handling
- Initial regression test
- Test environment
- Native compilation
- Other members of product family
- More
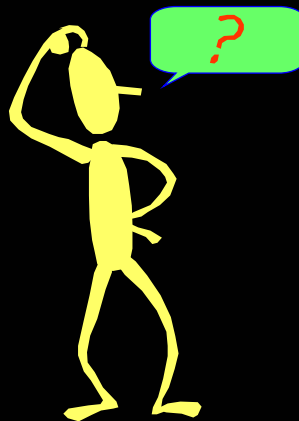
ORACLE

22

FCS Release Plans

- This is a delta schedule
- Current plan is (iVMS FCS + 1 quarter)
- Current projected release date: October 2004

- Benefits: A long, bright future for both OpenVMS and Oracle Rdb

ORACLE

23

Questions? Comments?

`philippe.vigier@oracle.com`

ORACLE

24

ORACLE®

http://www.oracle.com/rdb