

ORACLE®



ORACLE®

Oracle Rdb Connectivity Update

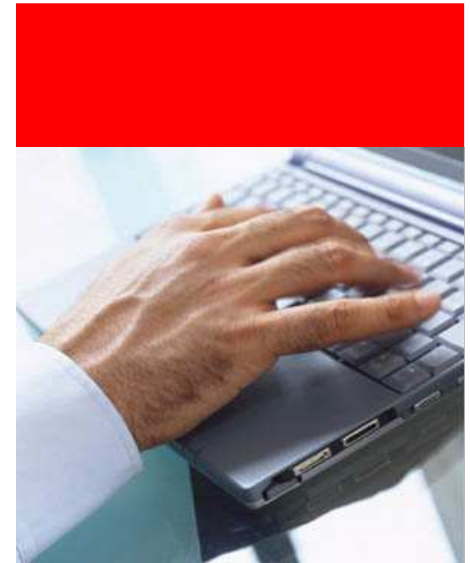
Jim Murray

Oracle New England Development Centre



Agenda

- SQL/Services update
- Oracle JDBC for Rdb
 - JDBC update
- Oracle Rdb Developer Tools for Visual Studio
 - Oracle Rdb Data Provider for .NET update
 - Oracle Rdb DDEX Provider



Oracle SQL/Services and OCI Services for Oracle Rdb





SQL/Services

- Release 7.3.0.3
 - Released May, 2010
 - Available on My Oracle Support
- Release 7.3.1
 - Released March, 2011
 - Available on My Oracle Support

Oracle SQL/Services and OCI Services for Oracle Rdb Version 7.3.0.3





Oracle SQL/Services Release 7.3.0.3

Features and Problems corrected

- **Updated Oracle SQL/Services Server Configuration Guide**
 - new chapter on configuring OCI Services for Oracle Rdb
- **Updated Help for SQLSRV_MANAGE**
- **Sample Application When Installing Client Kit**
 - `SYS$COMMON:[SYSHLP.EXAMPLES.SQLSRV]`
- **Scan Intrusion Security Now Supported**



Oracle SQL/Services Client API Release 7.3.0.3

Features and Problems corrected

- **SQL/Services Client API Kit**
 - Update kit for 32-bit Windows Platforms
 - New kit for 64-bit Windows Platforms
- **Updated Guide to Using the Oracle SQL/Services Client API**
- **Updated Help For SQL/Services**
- **New SQL/Services Client API Routines**
- **DECnet No Longer Supported on Windows Platforms**
- **Clarification of the BYTLM Check During Oracle SQL/Services Installation**



OCI Services for Oracle Rdb Release 7.3.0.3

Features and Problems corrected

- **Client Process ID Now Displayed in Executor Log for OCI Services**
- **New functions supported:**
 - DBTIMEZONE
 - SESSIONTIMEZONE
 - TZ_OFFSET
 - TO_TIMESTAMP
 - Remote function via DBLINK
- **V\$PARAMETER now a global temporary table**
- **Several BUGCHECKs fixed**

Oracle SQL/Services and OCI Services for Oracle Rdb Version 7.3.1





Oracle SQL/Services Release 7.3.1

Features and Problems corrected

- **Updated Linux Client API**
 - Red Hat Linux and Oracle Linux release 5.0 and later
- **Updated SQL/Services API Doc and Help**
- **SQLSRV_SQLCA_SQLSTATE**
- **Alignment Faults with BigInt and Double**
- **Dispatcher Log file Logical Name**
 - Colon (:) required else start fails
 - Eg SQLSRV> alter disp oci_disp log path 'my_log:';





Oracle SQL/Services Release 7.3.1

Features and Problems corrected

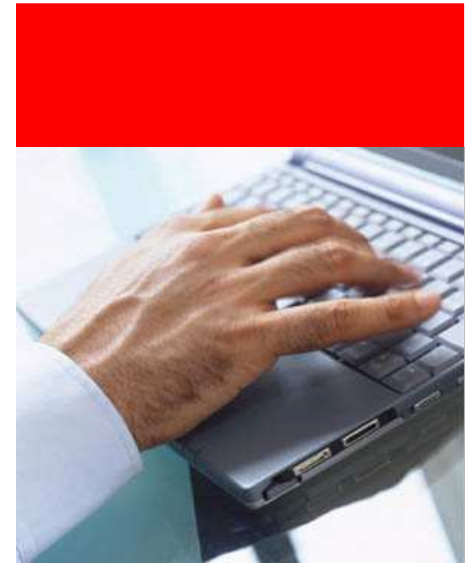
- **Bugcheck after RMS-E-FLK error**
 - Bugcheck if read/write of SYSUAF fails
 - Now SQL/Services retries instead
- **Access Violation in OCI during Bugcheck**
 - during the dump of information
- **/NOPASSWORD accounts Service problem**
 - User accounts with /NOPASSWORD unable to connect to service
 - Problem introduced in release 7.3.0.3


Oracle JDBC for Rdb



Oracle JDBC for Rdb

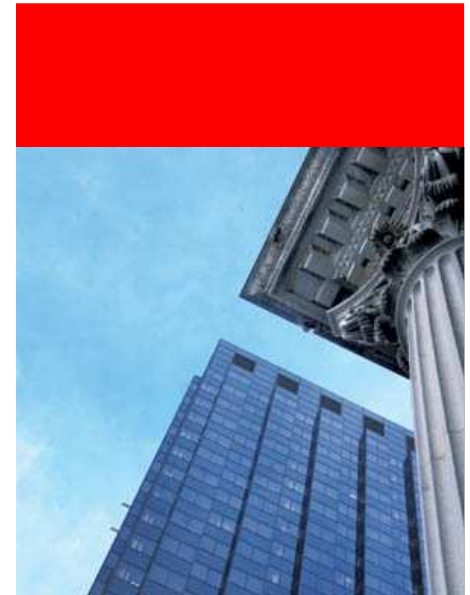
- Release 7.3
 - Released February 2010
- Release 7.3 -01
 - Released February 2011
- Release 7.3 -02
 - Released September 2011





Oracle JDBC for Rdb

Release 7.3





Oracle JDBC for Rdb 7.3 Problems Fixed

- Configuration File problem using *.CFG files
- Insert Blob caused Access Violation on disconnect
- PreparedStatement and Parameter Markers restriction now lifted
 - Truncation of parameter values to column size
 - Creates problems with wildcard patterns
 - Fix Requires Rdb V7.2-4
- Thincontroller SHOW CLIENTS MP Server executor leak
 - Each SHOW CLIENT create new Executor,
 - but executor not returned to pool
- Updating Blob Column Memory Leak
 - Statement handle not released
- Network Dump in Trace caused Access Violation
- Named INPUT parameter not working in CallableStatements



Oracle JDBC for Rdb 7.3 New Features

- ShutDown hook
- Driver.attach()
 - `oracle.rdb.jdbc.rdbThin.Driver.attach(...)`
- Get Known Databases
 - `Driver.getDatabases()`
 - `Stmt.Execute("show databases");`
- Thin Controller additions
 - Obfuscate passwords
 - e.g. ##014DA4128E4584DAD6E8FE5D697B4DCD483E17DA
 - REGEX Server matching on commands




Oracle JDBC for Rdb 7.3 New Features (cont.)

- Performance Enhancements
 - MP Server improvements
 - Server/executor synchronization
 - Client/Server improvements
 - Reduced number of network round-trips
 - Client-side Caching
 - Statement caching
 - Statement Handle caching
 - ResultSet caching
 - Record streaming



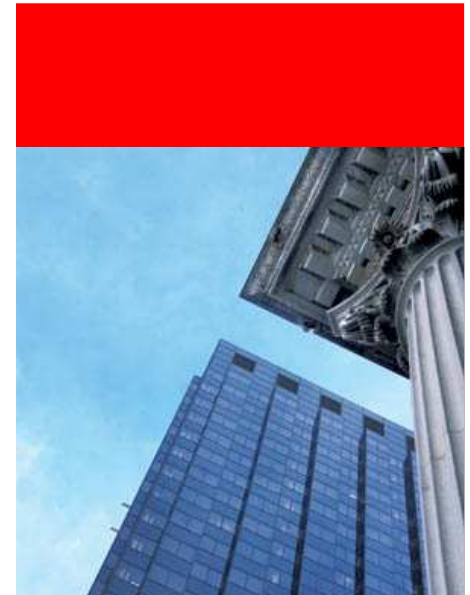
Oracle JDBC for Rdb 7.3 New Features (cont.)

- rdb_ext.jar
 - Hibernate - RdbDialect.JAVA
 - Oracle Universal Connection Pooling
 - New RdbDataSource class



Oracle JDBC for Rdb

Release 7.3-01





Oracle JDBC for Rdb 7.3-01

Problems Fixed

- **Show Clients not Showing Column Names**
 - Problem introduced on 7.3
- **Incompatibility between V7.3 Thin driver and Pre-V7.3 Servers**
 - Ideally, when upgrading JDBC, all components should be updated to the same version at the same time
 - pre-V7.3 Thin drivers connect to V7.3 servers should still work correctly
- **Global Memory leak when Executors are run-down**
 - Insufficient global memory
- **Autorestart on Pooled Servers not Working**
 - A problem was introduced in V7.3
 - Pool server incorrectly marks pooled server as “failed in startup”.
- **Missing Stmt Exception and PreparedStatement**
 - `java.sql.SQLException: Missing Stmt in rdbSelect`
 - Happens on 2nd and subsequent executions of a PreparedStatement



Oracle JDBC for Rdb 7.3-01 Problems Fixed


- **EOFException on READ_ROW**
 - Happens with Nested statements
 - Updates statements
- **Multiprocess with the JDBC Native Driver**
 - Problem introduced in 7.3
 - URL that contains the @multiprocess=true
 - Raises exception:
INFO: server version needs to be V7.3 or later
- **Prepared Statement not Closing underlying Cursor**
 - May cause memory leak
 - %SQL-F-CURALROPE, Cursor C_xxxxxxxxxx was already open
- **Unitialized SQLCA block in MP server**
 - %CXXL-F-TERMINATE, terminate() or unexpected() called
- **Underlying Blob handles not released**
 - RDMS-F-ACTQUERY, there are queries compiled that reference relation



Oracle JDBC for Rdb 7.3-01

Problems Fixed

- **Controller SHOW CLIENTS and MP Server problem**
 - This problem was reported fixed in V7.3 but fix incomplete
 - Executor started up but not closed down
 - Memory and other quota leak
- **Scaled integer problem**
 - If the column size is less than 4 octets and has a scaling factor other than 0 the native driver may return wrong values.
 - Native driver problem only
- **Server Matching Exception may Stop Poll**
 - *rdbthincontrol> poll #name:*srv*.*
 - Dangling meta character '*' near index 0



Oracle JDBC for Rdb

Release 7.3-02





Oracle JDBC for Rdb 7.3-02

Problems Fixed

- **Null pointer Exception during Server viability check by Pool Server**
 - Problem introduced on 7.3
- **MINUS and INTERSECT problem**
 - select * from employees MINUS select * from employees;
SQLException: in <rdbjdbcsrv:prepare_stmt> F-RELNOTDEF, Table MINUS is not defined in database or schema:42000
- **Memory Leak when Executor Process fails to Run**
 - MP Server fails to recover a small amount of memory (157 bytes)
- **PreparedStatement.getGeneratedKeys() problem.**
 - On the second or subsequent execution of a PreparedStatement, the call to the method getGeneratedKeys() will fail :
oracle.rdb.jdbc.common.RdbException: Closed Resultset



Oracle Rdb Developer Tools for Visual Studio





Oracle Rdb Developer Tools for Visual Studio .NET

ORDT Single installation Kit

- Standard Microsoft MSI and installation
- Option to install individual components
 - ORDP
 - DDEX
- Replaces the old Oracle Rdb Data Provider for .Net installation kit
- ORDP Configuration and DDEX integration into Visual Studio 2005 , 2008 and 2010 done automatically

Oracle Rdb Data Provider for .NET



Oracle Rdb Data Provider for .NET

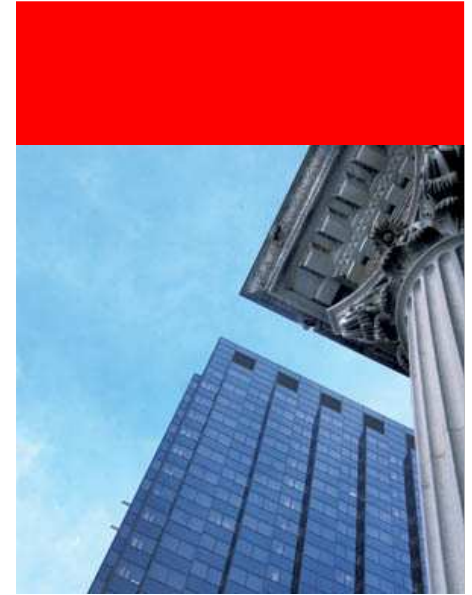
- Release 7.3.2
 - Released April 2010
- Release 7.3.2.1
 - Released September 2011





Oracle Rdb Data Provider for .NET

Release 7.3.2





Oracle Rdb Data Provider for .NET 7.3.2 Problems Fixed

- **CallBackOnCollectedDelegate**
 - Raising exceptions for Rdb or SQL/services within ORDP requires a callback on delegate method in ORDP
 - multiple concurrent connections made from the same application
 - leaves the delegate methods vulnerable for garbage collection

CallBackOnCollectedDelegate was detected
Oracle_DataAccess_Rdb!Oracle_DataAccess_RdbClient_Common_SQS+exceptionCallback



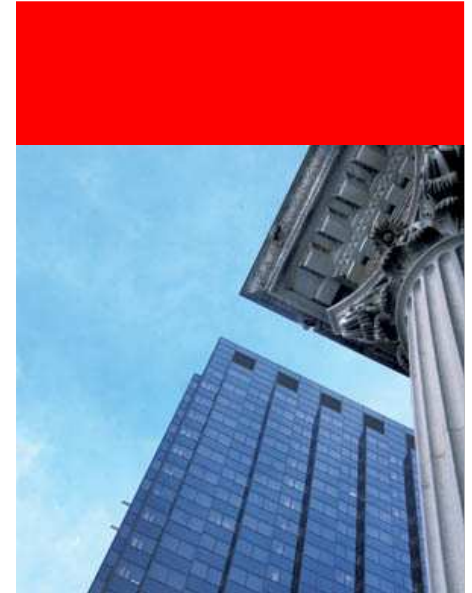
Oracle Rdb Data Provider for .NET 7.3.2 New Features

- Integration into Visual Studio 2005 and 2008
 - DDEX provider



Oracle Rdb Data Provider for .NET

Release 7.3.2.1





Oracle Rdb Data Provider for .NET 7.3.2.1 Problems Fixed

- **PopulateReservedWords problem on Pooled connection**
 - POOLEDTHIN or POOLEDSQS type
 - "Index was outside the bounds of the array."
- **Domains collection Remarks Column**
 - The Remarks column of the Rdb specific Collection Domains was not correctly converted to String on retrieval of the column description segmented string
- **Retrieval of scaled BIGINT values incorrect**
 - Error: Input string was not in a correct format.
 - Only with SQL/Services connection
- **Insert or Update of Scaled BIGINT problem**
 - Fractional digits incorrectly dropped.
 - Only with SQL/Services connection



Oracle Rdb Data Provider for .NET 7.3.2.1 New Features

- Integration into Visual Studio 2010
 - New classes and templates
- **Oracle Rdb Entity Framework Provider**
 - Supports .NET Framework 3.5 and 4.0
 - New classes and templates



Oracle Rdb DDEX Provider for Visual Studio .NET

Release 7.3.2



DDEX Provider for Visual Studio .NET

- Release 7.3.2 (First Release)
 - Released April 2010
- Release 7.3.2.1
 - Released September 2011

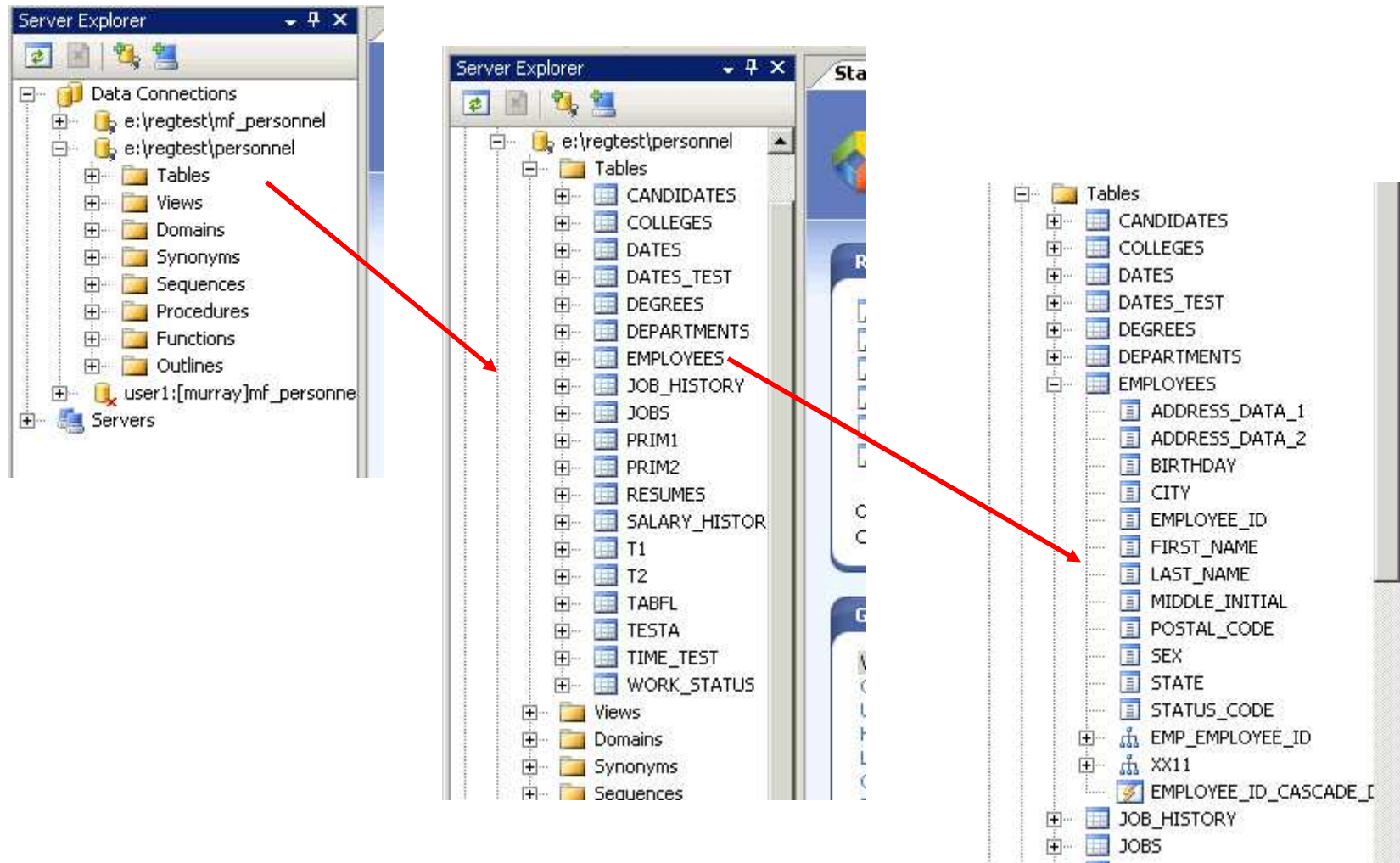




DDEX Provider for Visual Studio .NET

- Integration of RdbDataAdapter with Visual Studio
- Standard DDEX Provider
- Schema browsing
- Database Access Code generation
- Use standard Visual Studio Data Source tools

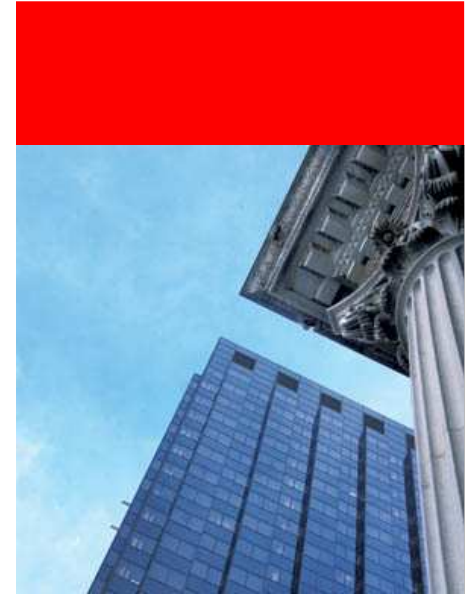
DDEX Provider for Visual Studio .NET





Oracle Rdb DDEX Provider for Visual Studio .NET

Release 7.3.2.1





Oracle Rdb DDEX Provider 7.3.2.1 Problems Fixed

- **ORDP Assembly not added to Visual Studio .NET References**
 - Add Reference... is invoked from the project References
 - Work-around: add manually to system registry
- **Keyword Not Supported : “DATABASE” Problem**
 - When trying to create a new Database Connection
- **GridView using RdbDataReader returns Incorrect Data.**
 - RdbDataReader object as a DataSource for a GridView
 - Instead of displaying the expected data, a table containing a column for each of the property fields of the RdbDataReader object is displayed.




Oracle Rdb DDEX Provider for .NET 7.3.2.1 New Features

- Integration into Visual Studio 2010
 - Integration into Visual studio 2005, 2008 and 2010 is automatically enabled during ORDT installation.
 - This may be turned off using the Custom installation feature.
- **Oracle Rdb Entity Framework Provider**
 - Supports .NET Framework 3.5 and 4.0



For More Information

search.oracle.com



OR

- www.oracle.com/rdb
- support.oracle.com
- <http://www.hp.com/products/openvms>
- Jim.murray@oracle.com



Q U E S T I O N S & A N S W E R S

SOFTWARE. HARDWARE. COMPLETE.

ORACLE®