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Oracle on OpenVMS Products Update

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The following is intended to outline our general product direction. It is intended for information purposes only, and may not be incorporated into any contract. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions. The development, release, and timing of any features or functionality described for Oracle's products remain at the sole discretion of Oracle.



Agenda

- Oracle/HP Partnership
- Oracle's Commitment to OpenVMS
- Organizational News
- Oracle Database on OpenVMS Update
- Oracle Rdb Update



HP/Oracle Partnership



- 25 years of collaborative partnership
- Executive Alignment
- 150,000+ combined customers...
 - 41% of Oracle customers run HP servers
 - 70% mid-range HP-UX servers & 90% of Superdomes run Oracle
 - 90+% HP OpenVMS database servers use Oracle
- Hundreds of dedicated resources; performance characterization, benchmarking, engineering, business alliance in the field
- Collaborative Engineering



Over 150,000 Joint Customers





Oracle OpenVMS Development Team

- Oracle Server OpenVMS Porting
 - Development/Base porting, QA, DDR
 - Based in Nashua, NH USA, IDC (India Development Center), HQ & UK
- Oracle Rdb Development
 - Development, QA, DDR
 - Based in Nashua, NH USA, IDC, Colorado, Australia, Japan
- Oracle OpenVMS Development Teams working closely with HP OpenVMS Engineering



Oracle OpenVMS Support Team

- Philippe DeLobel Organization supporting both Oracle Database and Oracle Rdb on OpenVMS
 - Dedicated global resources
 - US, EMEA, Asia Pacific, IDC, Japan
- Metalink enhancements ... Communities
 - <http://communities.oracle.com> communities known as "Oracle on OpenVMS" formally known as the "Midrange" forum on <http://metalink.oracle.com>
 - Two OpenVMS Communities:
 - Oracle on OpenVMS
 - Rdb Product Family on OpenVMS



Organizational Benefits

- Renewed Commitment to both Oracle Rdb & Oracle Database Server on VMS businesses
- Resource allocation for critical projects
- Leveraging of expertise between groups benefits both products
- Customer Focus
- Coordinated close partnership with HP

Oracle Database on OpenVMS





Oracle Database on OpenVMS

- Current Releases and Lifetime Support Dates
- Roadmap
- Group Priorities and Projects
- Project Status
- Customer Focus



Oracle Current Releases

- 9i (9.2.0.8) Alpha
 - CPU patches continuing upon request
- 10.1.0.5 Alpha
 - CPU patches continuing upon request
- 10.2.0.4 Alpha and Integrity
 - Alpha & Integrity shipped together
 - New features
 - AUDIT_FILE_DESTINATION support
 - Improved Stat Pack Information
 - Multiple Database Write Processes (DBWR)
 - Database Vault
- Grid Control Agent
 - 10.2.0.2 GC Agent for I64 and Alpha shipping
 - Patch kit 5 is the latest version



Oracle Database Lifetime Support Dates

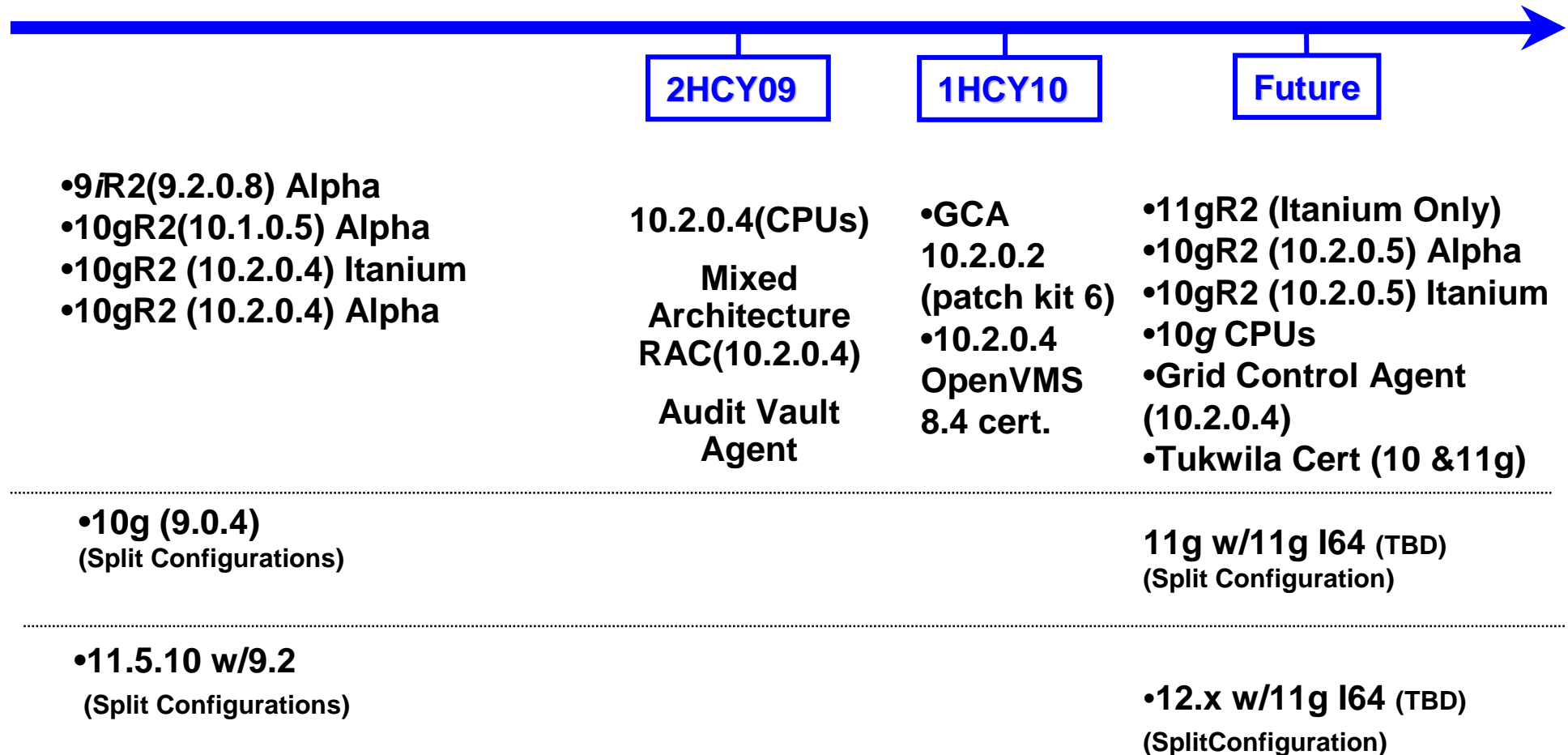
	General Availability	Premier Support Ends	Extended Support Ends	Sustaining Support Ends
9.2	Jul 2002	Jul 2007	Jul 2010	Indefinite
10.1	Jan 2004	Jan 2009	Jan 2012	Indefinite
10.2	Jul 2005	Jul 2010	Jul 2013	Indefinite
11.2	Aug 2009	Aug 2014	Aug 2017	Indefinite



Certification

- 10.2.0.4 Database and Grid Control Agent
 - I64 V8.2-1, through V8.3-1H1
 - Alpha V8.2 through V8.3
 - Montvale
- 10.1.0.5
 - Alpha V7.3-2 through V8.3
- 9.2.0.8
 - Alpha V7.3 through V8.3

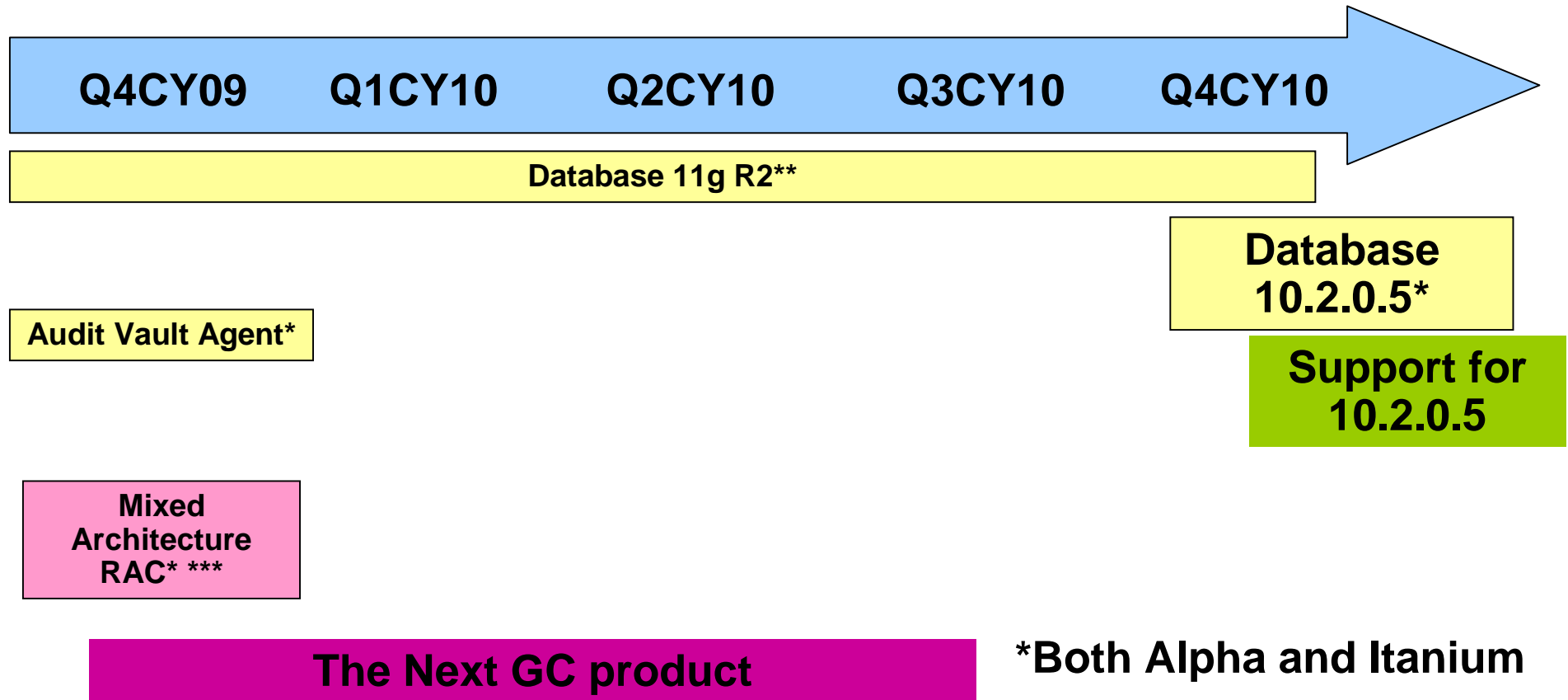
Oracle Roadmap - OpenVMS



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•Split Configurations allow backend database to reside on OpenVMS. Apps must be on supported middle-tier: HP-UX PA-RISC, Tru64 UNIX, Linux x86, Windows x86

Oracle on OpenVMS Development Pipe Line



***Both Alpha and Itanium**

****Itanium Planned Only**

***** Planned**

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Group Priorities and Projects

- Mixed Alpha/Itanium RAC Support
- 11g
- Audit Vault Agent
- RAC Install
- Expedited Patch Sets
- Performance
- Customer Focus



Oracle 11g Release

- Customer base on OpenVMS is risk averse
 - Bet your business applications
 - High reliability and availability required
- Customers often cautious when upgrading between major versions
- Adoption rate for any given R1 release is low
 - Why then invest resources for R1 releases?
- 11g ported to OpenVMS starting with R2
- 11g target ship is 2HCY10



Oracle 11g Release

- Oracle Database on OpenVMS Plans
 - IA64 only
 - RAT (Real Applications Testing)
 - Active Data Guard
 - Development environment will be the first release making use of symbolic soft links on OpenVMS



Expedited Patch & CPU Releases

- Maintaining high level of quality for all Oracle releases on OpenVMS is top priority
- Not porting R1 version of major releases (e.g.11g) frees cycles to help increase the number of patch releases we deliver and reduce time to market
- Some significant internal process enhancements & new capabilities now available may allow us to shorten our development cycles



Customer Focus

- Maintaining contact with the customer base is key to understanding your needs and to our continued success
- Customer mailing list as we have done for Oracle Rdb - including online subscribe
 - To join go to
<http://www.oracle.com/technology/products/oraonopenvms/index.html>
- 1-on-1 customer meetings
- Presence at Oracle and HP events such as OpenWorld, VMS Technical Days, Technical Forums, Online seminars through Oracle Support



Example Results of Oracle's Renewed Focus

- Customer reports “export is slow” and excessive CPU time
 - Analysis and investigation reveal inefficient method writing to output file
 - Optimization & tuning of the code results in four-fold performance increase
 - Improvements are available in 10.2.0.4



Example Results of Oracle's Renewed Focus

- Customer requests for Database Vault
 - Release for Both Alpha and Itanium in February 2009
- Customer requests for mixed-architecture RAC
 - Destructive testing underway
 - Anticipate initial deployment H2CY09

Oracle Rdb on OpenVMS





Oracle Rdb

- Marketing
- Customer base and new wins
- Recent Release History
- Current Development Activity
- Roadmaps
- Futures



Rdb Marketing Focus

- Focus on meeting our customers' needs
- Rdb Web page, Rdb Web Journal, MetaLink, OTN
- Rdb management personal customer visits
 - Well over 100 per year
 - Hundreds more via e-mail & telephone
- Events
 - Oracle OpenWorld
 - HP OpenVMS events
 - Oracle Users' Group
- Technical Forums 2009/10
 - Australia
 - Sydney, September 14-15
 - US
 - San Francisco, October 19-20
 - Nashua, October 22-23
 - Europe, Asia
 - Dates & Locations to be announced
- 7 held in 2008
 - San Francisco, Nashua, Tokyo, Osaka, Munich, Stockholm, Reading, Sydney
- 8 held in 2007
- 8 held in 2006



PARANOR



FLINDERS MEDICAL CENTRE



RailCorp



VOLVO



SHARP



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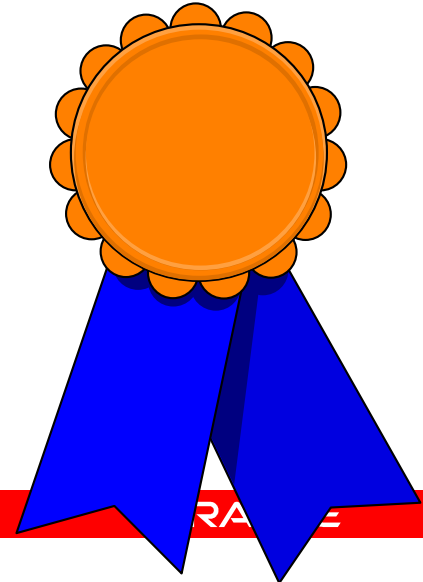
How Rdb Is Used

- Trading commodities, equities and futures: US, UK, Australia, Austria, Sweden, Spain, France, Greece, Italy, Switzerland, Hong Kong, Singapore, Korea & Germany
- Mobile phone systems: US, Japan, Hong Kong, UK, South Africa, Peru, Germany, Austria, Czech Republic, Denmark, France, Greece, Portugal & Switzerland
- Semiconductor manufacturing: Worldwide
- Lottery Systems: Europe, Canada, Australia, South America & US
- Automobile manufacturing: Volvo, Nissan, Toyota, Fiat, Ford
- Short Messaging Service: Worldwide
- Passport control: New Zealand
- Government: Ireland, Department of Social, Community and Family Affairs
- Education: Europe, United States, Australia -largest secondary education system in Southern Hemisphere
- Reservation systems: Thrifty & Dollar car rental
- Satellite Television: United States
- Automatic Toll Systems: United States



Recent Wins

- Deutsche Borse / Accenture
 - Shanghai Exchange
- OMX Technology
 - Osaka Stock Exchange
 - Tokyo Commodity Exchange
 - Thailand Exchange
 - Singapore Exchange
 - Hong Kong Exchange
- New projects with existing customers
 - SIAER
 - Sharp
 - Fidelity Investments
 - Plus more ...





Product Development Strategy

- High-end OLTP systems focus
 - High performance
 - Unique scalability on OpenVMS
 - Extensive tuning capabilities
 - High availability
 - Robust on-line management
- Integration with Oracle software environment
 - Oracle Developer Suite
 - Oracle Application Server
 - Extend Java, JDBC support
 - Oracle Enterprise Manager
 - Oracle Database



Rdb Product Family Releases Over The Last Year

- Rdb 7.2.3.5, April '09
- Rdb 7.2.3.4, February '09
- Rdb 7.2.3.2, November '08
- Rdb 7.2.3.1, September '08
- Rdb 7.2.3.0, July '08
- SQL Services 7.3, January '08



Beta Releases

- Easy Registration
- Problems reported back to Engineering via Metalink using customer assigned Beta CSI number
- Kits available on our beta download site
- Dedicated Beta Program Administrator



Rdb 7.2 Product Family on Alpha & Integrity

Oracle Rdb
Oracle CODASYL DBMS
Oracle CDD/Repository
Oracle SQL/Services
OCI Services for Oracle Rdb
Oracle Trace for Rdb
Replication Option for Rdb
Oracle Rdb ODBC Driver
Oracle Rdb JDBC Drivers
Oracle Rdb OEM Agent



Rdb Product Family Lifetime Support Dates

	General Availability	Premier Support Ends	Extended Support Ends	Sustaining Support Ends
Rdb 7.0	Oct 1996	Aug 2007	Aug 2009	Indefinite
Rdb 7.1	Jul 2001	Dec 2007	Dec 2010	Indefinite
Rdb 7.2	Jan 2006	Jan 2013	Jan 2016	Indefinite

Oracle has extended the Premier and Extended support dates for Rdb 72



Platforms & Versions

Rdb	Platform	OpenVMS
V7.0	VAX	V5.5-2 → V7.3
	Alpha	V6.1 → V8.3
V7.1	Alpha	V7.2 →
V7.2	Alpha	V8.2 →
	I64	V8.2-1 →



Rdb Futures

- Rdb 7.2.4
 - Stability
 - Performance
- Rdb 7.3
 - Encryption
 - Audit Vault
- SQL Services/OCI Services 11g upgrade
- JDBC Upgrades
- SQL Developer for Rdb
- Native Rdb Data Provider for .NET
 - Visual Studio Integration
 - 2PC
- ODBC 64 Bit
- New GUI for SQL/Services, JDBC and ODP.NET Management
- Rdb Extension Kit for Enterprise Manager 10g for Itanium



Rdb 7.3 Areas of Research and Development

- SQL enhancements
- Database encryption
- Auditing enhancements
- Database maintenance/management enhancements

Oracle Audit Vault

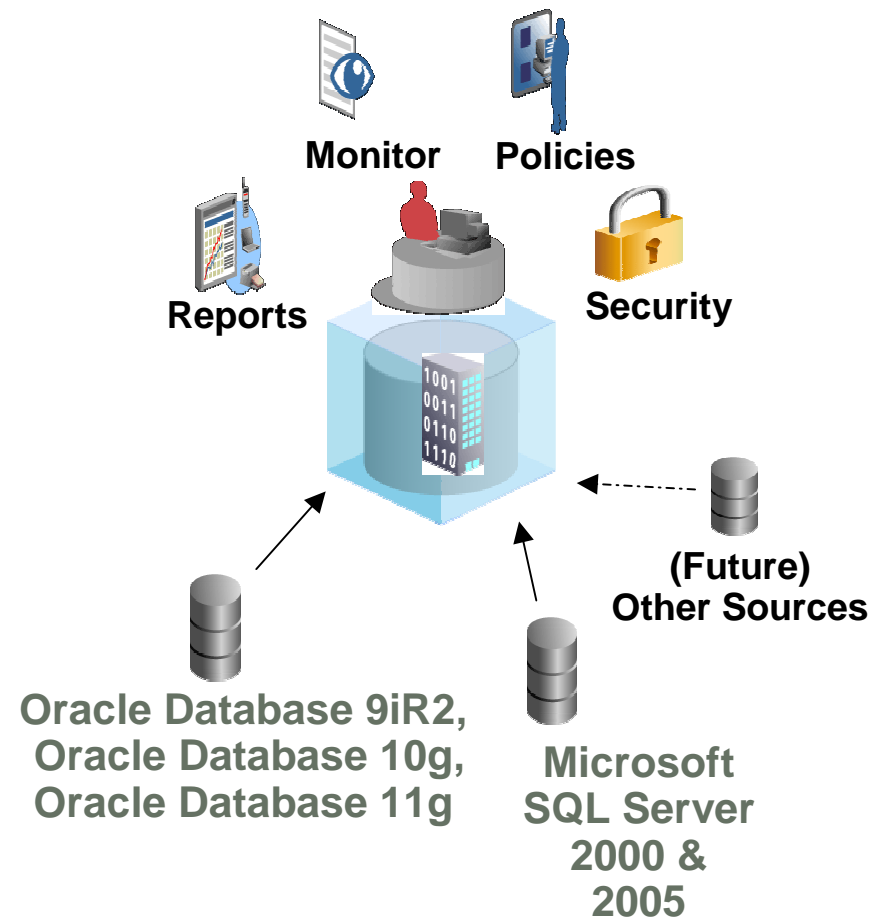
Overview

**Consolidate and Secure
Audit Data**

**Simplify Compliance
Reporting**

**Alert on Security
Threats**

**Lower IT Costs With
Audit Policies**



Oracle Audit Vault Reporting

ORACLE Enterprise Manager 10g
Audit Vault

Home Audit Reports Audit Policy Audit Status

Default Reports Custom Reports

Access Reports

 [Activity Overview](#)
[Data Access](#)
[Database Vault](#)
[Distributed Database](#)
[Procedure Executions](#)
[User Sessions](#)

Management Activity Reports

 [Account Management](#)
[Audit Commands](#)
[Object Management](#)
[Procedure Management](#)
[Role and Privilege Management](#)
[System Management](#)


System Exception Reports

 [Exception Activity](#)
[Invalid Audit Record Activity](#)
[Uncategorized Activity](#)

Compliance Reports

 [Account and Role Changes](#)
[Account and Role Changes - Blocked](#)
[Audit Setting Changes](#)
[Data Changes](#)
[Login Failures](#)
[Login/Logoff](#)
[Object Access](#)
[Structure Changes](#)
[System Events](#)



Alert Reports

 [All Alerts](#)
[Critical Alerts](#)
[Warning Alerts](#)
















- Built-in customizable compliance reports
 - Privileged user activity, role grants
 - DDL activity
- User defined reports
 - What privileged users did on the financial database?
 - What user 'A' did across multiple databases?

Consolidated Enterprise Reporting

Activity Overview

 Rows 

+  2

	Source	Category	Event	User	Target	Host	Event Time
	HR.ORACLE.VM	OBJECT MANAGEMENT	CREATE TABLE	PASSPORT	VISA	oel4upd4.oracle.vm	11-JUN-08 10:02:53
	HR.ORACLE.VM	OBJECT MANAGEMENT	RENAME	JSCHAFER	VW_TAB	oel4upd4.oracle.vm	10-JUN-08 17:13:28
	HR.ORACLE.VM	OBJECT MANAGEMENT	CREATE VIEW	JSCHAFER	VW_TAB	oel4upd4.oracle.vm	10-JUN-08 17:13:19
	PAYROLL.ORACLE.VM	OBJECT MANAGEMENT	RENAME	JSCHAFER	VW_TAB	oel4upd4.oracle.vm	10-JUN-08 16:19:35
	PAYROLL.ORACLE.VM	OBJECT MANAGEMENT	CREATE VIEW	JSCHAFER	VW_TAB	oel4upd4.oracle.vm	10-JUN-08 16:19:25
	HR.ORACLE.VM	OBJECT MANAGEMENT	RENAME	JSCHAFER	VW_TAB1	oel4upd4.oracle.vm	10-JUN-08 17:13:28
	HR.ORACLE.VM	OBJECT MANAGEMENT	CREATE VIEW	JSCHAFER	VW_TAB1	oel4upd4.oracle.vm	10-JUN-08 17:13:19
	PAYROLL.ORACLE.VM	OBJECT MANAGEMENT	RENAME	JSCHAFER	VW_TAB1	oel4upd4.oracle.vm	10-JUN-08 16:19:35
	PAYROLL.ORACLE.VM	OBJECT MANAGEMENT	CREATE VIEW	JSCHAFER	VW_TAB1	oel4upd4.oracle.vm	10-JUN-08 16:19:26
	mysqlserver1	OBJECT MANAGEMENT	ACCESS OBJECT	avsrcusr	configurations	oracle_ss	11-JUN-08 13:22:02
	mysqlserver1	OBJECT MANAGEMENT	ACCESS OBJECT	avsrcusr	configurations	oracle_ss	11-JUN-08 13:22:02
	mysqlserver1	OBJECT MANAGEMENT	ACCESS OBJECT	avsrcusr	fn_trace_getinfo	oracle_ss	11-JUN-08 13:22:02
	mysqlserver1	OBJECT MANAGEMENT	ACCESS OBJECT	avsrcusr	fn_trace_gettable	oracle_ss	11-JUN-08 13:50:05
	mysqlserver1	OBJECT MANAGEMENT	ACCESS OBJECT	avsrcusr	fn_trace_gettable	oracle_ss	11-JUN-08 13:50:02
	mysqlserver1	OBJECT MANAGEMENT	ACCESS OBJECT	avsrcusr	fn_trace_gettable	oracle_ss	11-JUN-08 13:50:00

- Audit data normalized for consolidated reporting

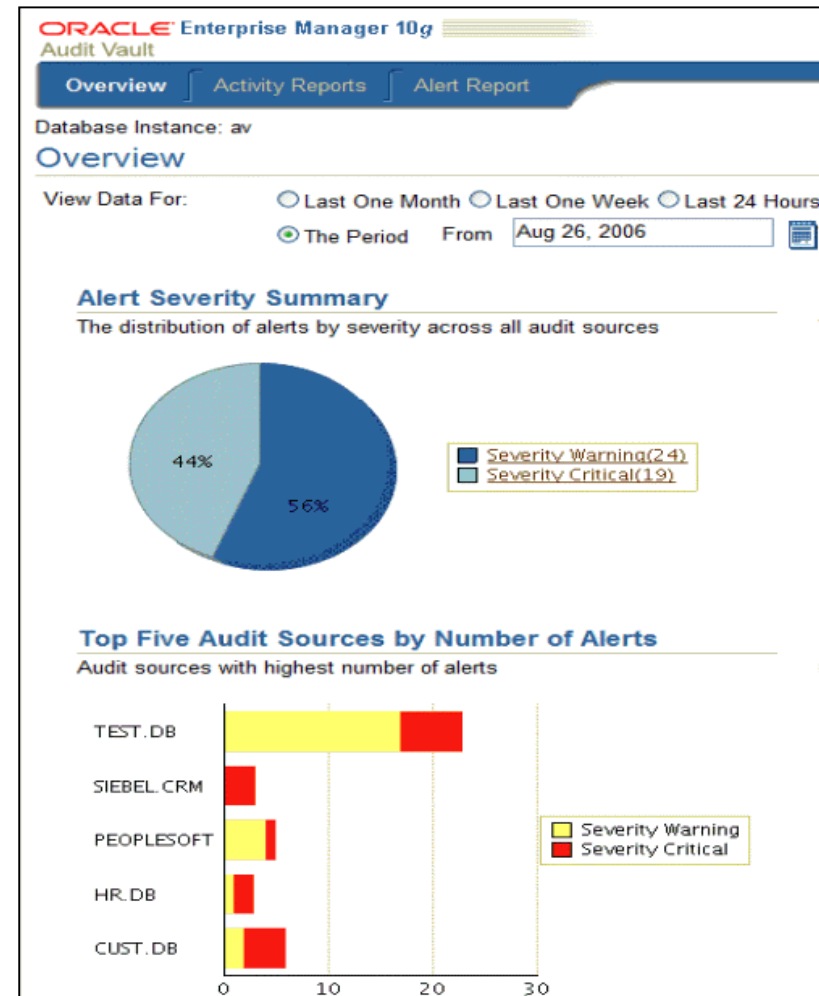
Oracle Audit Vault Report Customization

- Data filtering
- Record highlighting using condition values
- Charting with simple graphics
- Custom reports can be saved and shared

Object	Event	User	Source	Host	Event Time	SQL Text
OE.CUSTOMER_PAYMENT	SELECT	OE	PAYROLL.ORACLE.VM	oel4upd4.oracle.vm	05-FEB-08 09:48:24	select payment_card_numbr customer_payment
OE.CUSTOMER_PAYMENT	SELECT	VSHAH	PAYROLL.ORACLE.VM	oel4upd4.oracle.vm	05-FEB-08 09:48:24	select payment_code_id fro oe.customer_payment
OE.CUSTOMER_PAYMENT	SELECT	VSHAH	PAYROLL.ORACLE.VM	oel4upd4.oracle.vm	05-FEB-08 09:48:24	select payment_card_numbr oe.customer_payment
OE.CUSTOMER_PAYMENT	SELECT	VSHAH	PAYROLL.ORACLE.VM	oel4upd4.oracle.vm	05-FEB-08 09:48:24	select payment_expiration t oe.customer_payment
OE.ORDERS	UPDATE	VSHAH	PAYROLL.ORACLE.VM	oel4upd4.oracle.vm	05-FEB-08 09:48:10	
OE.ORDERS	SELECT	VSHAH	PAYROLL.ORACLE.VM	oel4upd4.oracle.vm	05-FEB-08 09:48:10	select order_total from oe.o

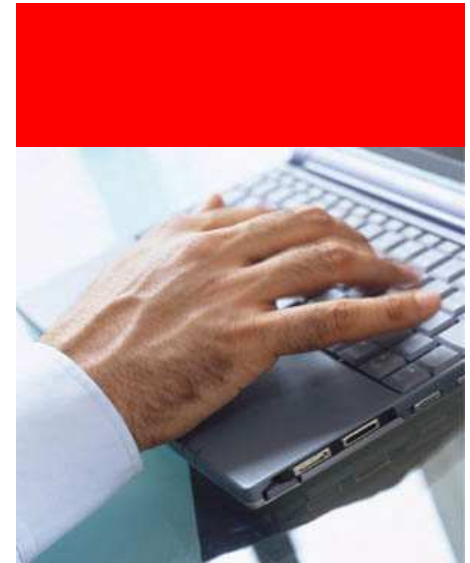
Oracle Audit Vault Alerts

- Efficient scanning
 - Inbound audit data scanning
- Alerts can be defined for
 - Direct views of sensitive columns
 - New users on sensitive systems
 - Role grants on sensitive systems
 - “DBA” grants on all systems
 - Failed logins
 - Enterprise-defined security policies



Program **Agenda**

- 7.2.5.2 Update - February 2008
 - Problems Fixed
 - New Features
- 7.2.5.3 Update – June 2008
 - Problems Fixed
- 7.2.5.4 Update – September 2009
 - Problems Fixed
- 7.3 Update – September 2009
 - New Features

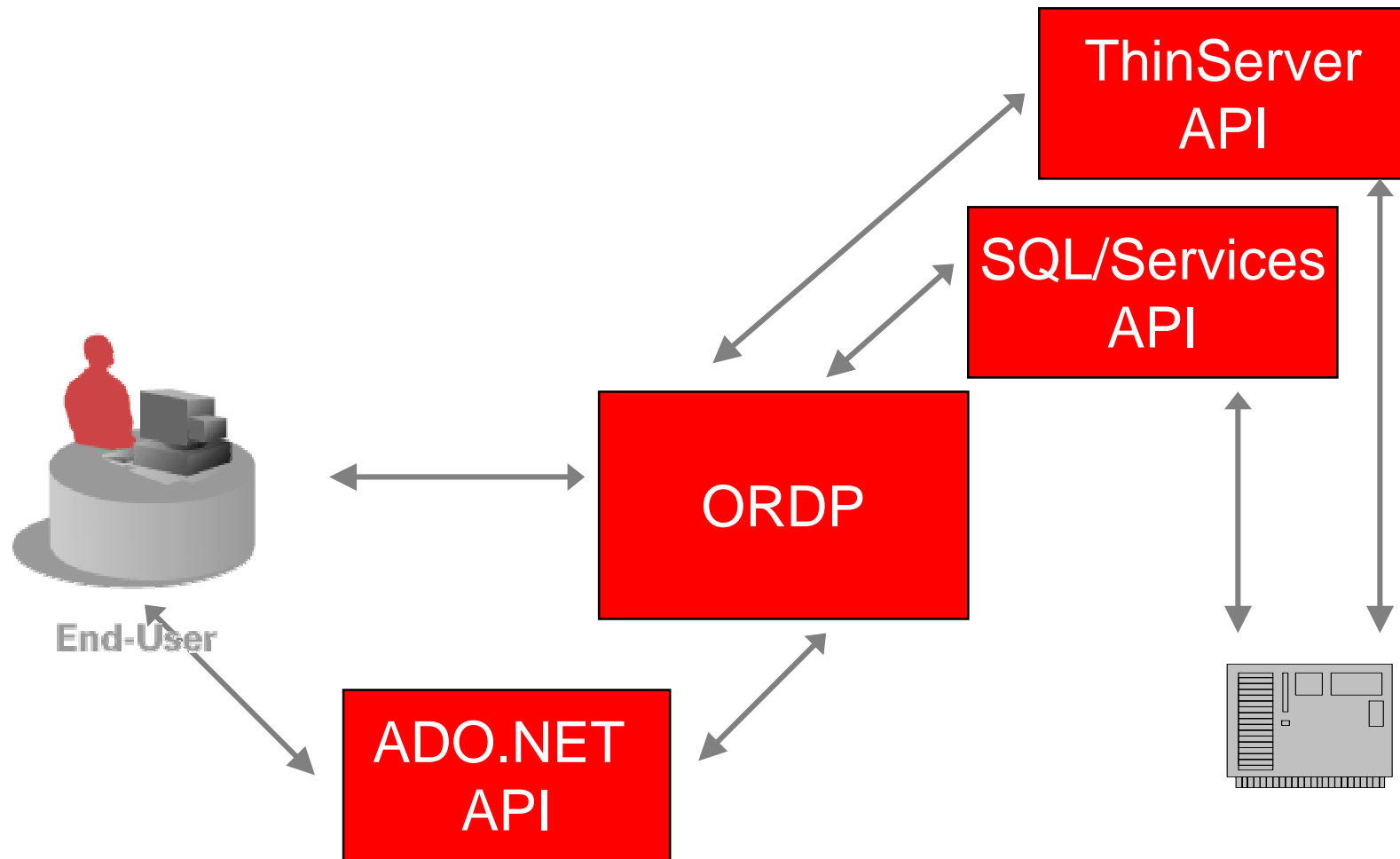




7.3 JDBC New Features

- Performance
- ShutDown hook
- Show DB output
- Driver.attach()
- Get Known Databases
- Obfuscate passwords
- Thin Controller additions

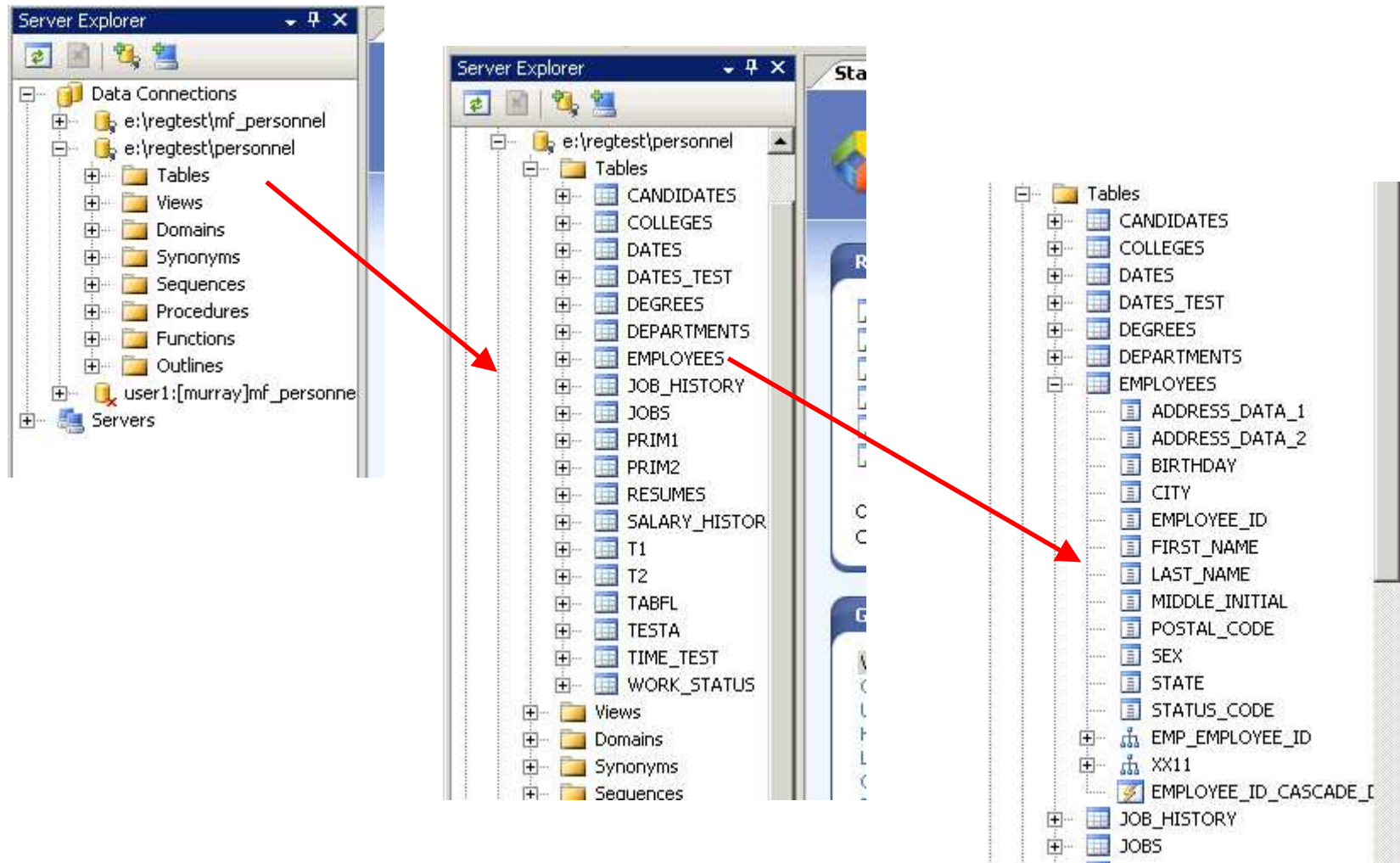
Oracle Rdb Data Provider for .NET



DDEX Provider for Visual Studio



DDEX Provider for Visual Studio





SQL Developer For Rdb


SQL Developer provides

- A free client database development tool
- Comprehensive core functionality
- Great user experience
- Enhanced productivity
- Simplified database development tasks



Product Overview

- Creating Connections
- Creating and Browsing Objects
- Querying Data
- Executing Queries
- Defining and Running Database Reports



SQL Developer

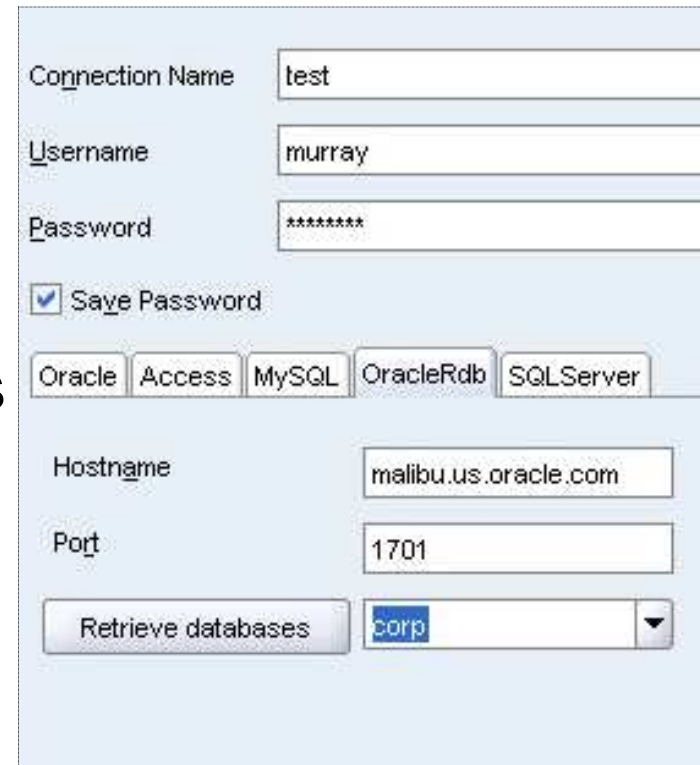
using the Oracle Rdb Addin



- Developed in the JDeveloper IDE
 - Leveraging a robust extensible IDE Framework
 - First independently branded product on JDeveloper IDE
- Bundled with JRE 1.5
- Easy install by unzipping the downloaded file
- Supports Windows, Linux and Mac OS X platforms
- Oracle Rdb Addin
 - Works with Oracle Rdb 7.2.0.1 and later
 - Uses Oracle JDBC for Rdb Thin driver

Database Connections

- Create and test connections
 - For multiple database systems
- Store often-used connections
- Import and export connections
- Reuse connections
 - Database browsing
 - SQL Development
 - Running reports
- Retrieve list of databases known to server

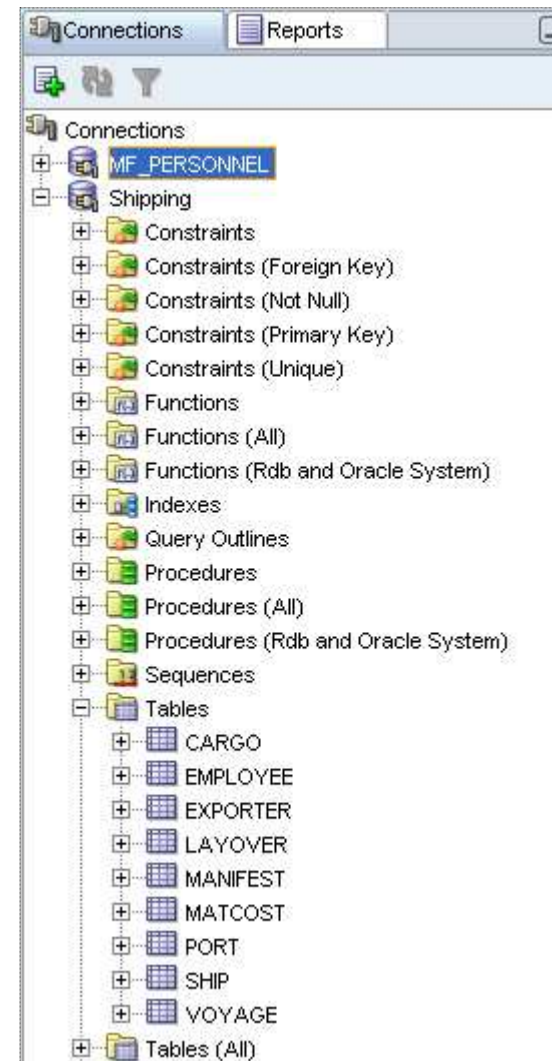


The screenshot shows the 'Create Database' dialog box in Oracle Database Configuration Assistant (DBCA). The 'Connection Name' tab is selected. The fields are filled with the following values:

- Connection Name: test
- Username: murray
- Password: *****
- ☒ Save Password
- Database type: Oracle (selected), Access, MySQL, OracleRdb, SQLServer
- Hostname: malibu.us.oracle.com
- Port: 1701
- Retrieve databases: corp (selected in the dropdown)

Object Browsing

- Tree Based Object Browser
- Browse Database Objects
- Support for common objects
 - Tables, Views, Indexes
 - Procedures, Functions
 - Triggers, Constraints
 - Query Outlines



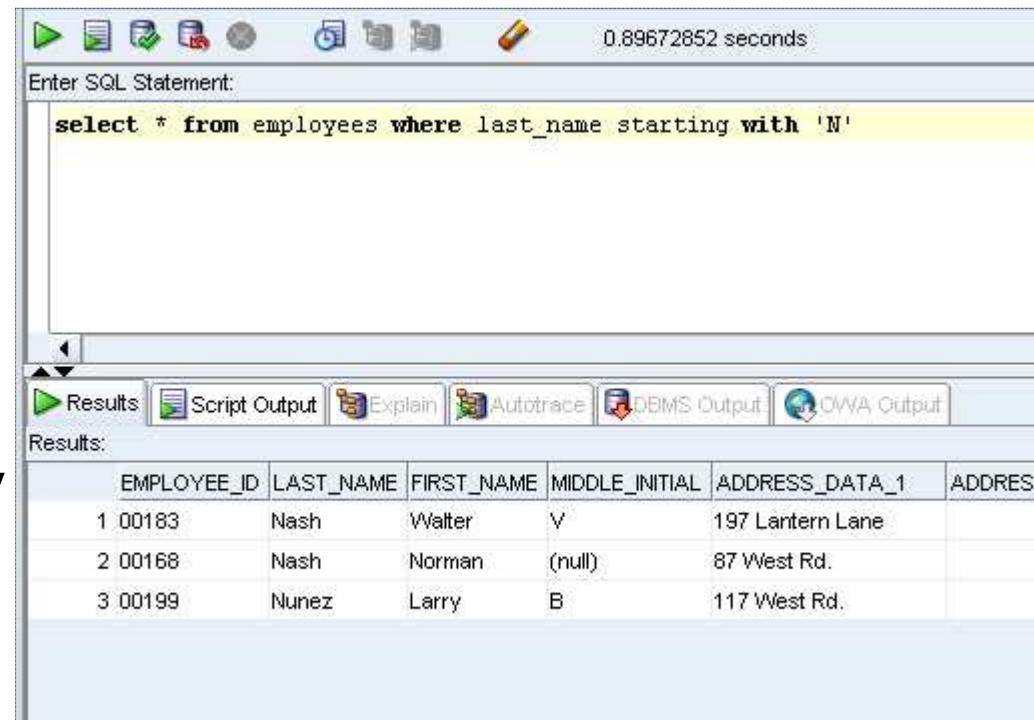
- Browse table grid data
 - Filter
 - Order
- Filter and sort data for views
- Export data

The screenshot shows the Microsoft Access interface with the 'EMPLOYEES' table open in Datasheet View. The 'Data' tab is active. A context menu is open over the 'Smith' row, and the 'Export Data' option is selected. A sub-menu is open for 'Export Data', showing various export formats, with 'INSERT' highlighted.

LAST NAME	FIRST NAME	MIDDLE INITIAL
Toliver	Alvin	A
Smith	Terry	D
Dietrich		(null)
Kilpatrick		(null)
Nash		(null)
Gray		(null)
Wood	Brian	K
D'Amico	Aruwa	G
Peters	Janis	V
Bartlett	Dean	(null)
Myotte	Daniel	(null)
Siciliano	George	
Hastings	Norman	M
Kinmonth	Louis	(null)

SQL Worksheet

- Syntax Highlighting
- Code Insight
- Single Statement Execution
- Script Execution
- Code Formatting
- Command History

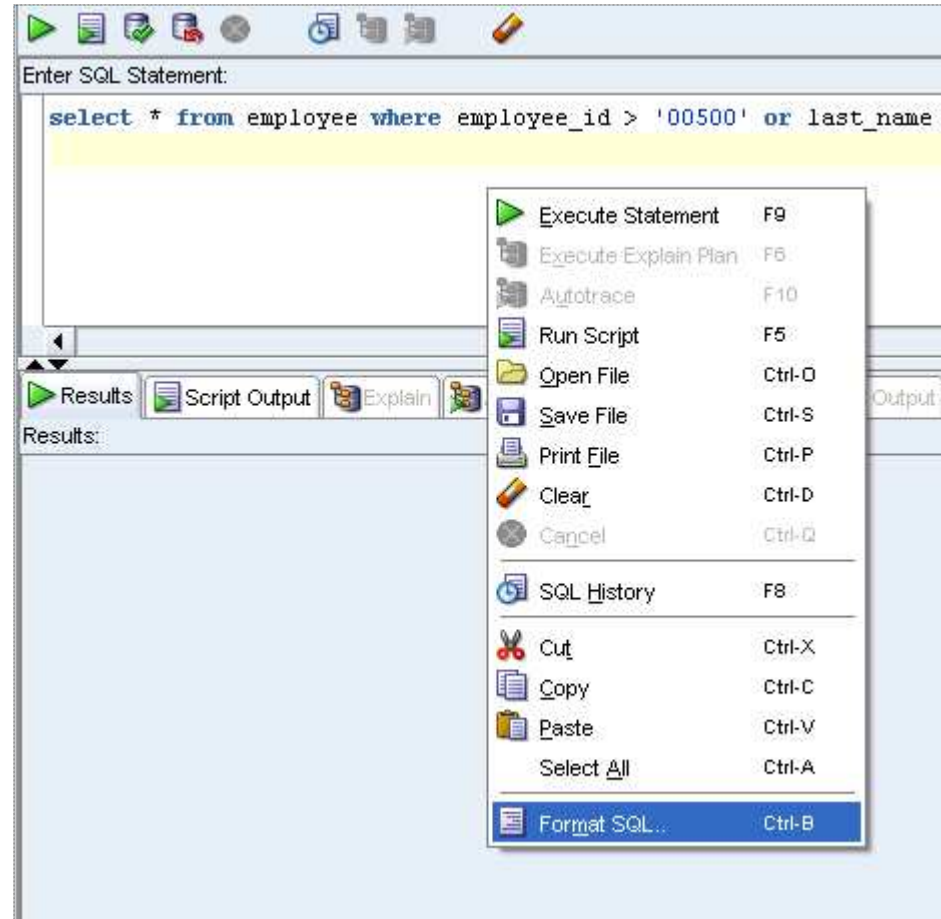


The screenshot displays an SQL Worksheet interface. At the top, a toolbar contains icons for execution, saving, and other functions, along with a timer showing 0.89672852 seconds. Below the toolbar is a text area labeled "Enter SQL Statement:" containing the query: `select * from employees where last_name starting with 'N'`. The query is syntax-highlighted. Below the text area is a tabbed interface with tabs for "Results", "Script Output", "Explain", "Autotrace", "DBMS Output", and "OWA Output". The "Results" tab is active, showing a table of results. The table has six columns: EMPLOYEE_ID, LAST_NAME, FIRST_NAME, MIDDLE_INITIAL, ADDRESS_DATA_1, and ADDRESS. The results are as follows:

EMPLOYEE_ID	LAST_NAME	FIRST_NAME	MIDDLE_INITIAL	ADDRESS_DATA_1	ADDRESS
1 00183	Nash	Walter	V	197 Lantern Lane	
2 00168	Nash	Norman	(null)	87 West Rd.	
3 00199	Nunez	Larry	B	117 West Rd.	

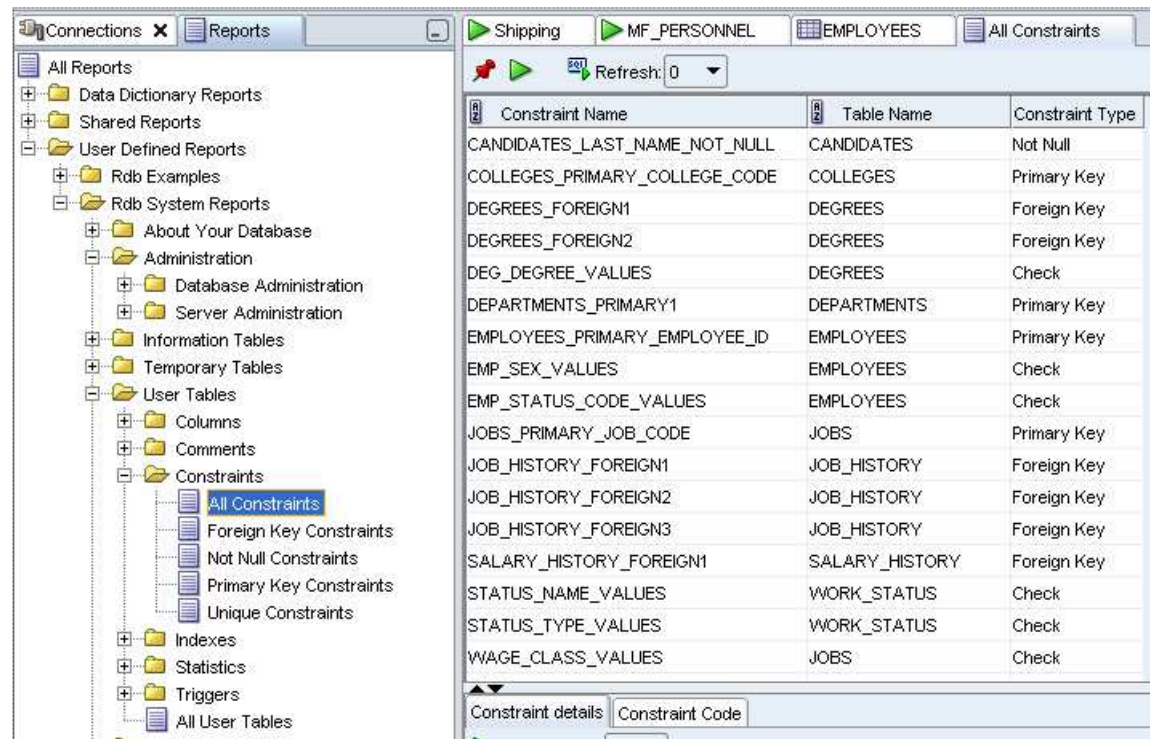
SQL Editing

- Full Function Editor
- Code Snippet Viewer
- Code Formatter
- Syntax Highlighting
- Code Insight (auto complete)
- Code Folding
- Inline Error Reporting
- Code Bookmarking
- Customizable Quick Keys
- Customizable Code Snippet Viewer



Reporting

- Suite of Reports
 - Data Dictionary
 - DBA
 - Monitoring
 - Table Object
- User Defined



The screenshot shows the Oracle Enterprise Manager Reports window. The left pane displays a tree view of reports, with 'All Constraints' selected under 'User Defined Reports'. The right pane shows a table of constraints with columns: Constraint Name, Table Name, and Constraint Type. The table lists various constraints for tables like CANDIDATES, COLLEGES, DEGREES, DEPARTMENTS, EMPLOYEES, JOBS, JOB_HISTORY, SALARY_HISTORY, and WORK_STATUS. Below the table, there are tabs for 'Constraint details' and 'Constraint Code'.

Constraint Name	Table Name	Constraint Type
CANDIDATES_LAST_NAME_NOT_NULL	CANDIDATES	Not Null
COLLEGES_PRIMARY_COLLEGE_CODE	COLLEGES	Primary Key
DEGREES_FOREIGN1	DEGREES	Foreign Key
DEGREES_FOREIGN2	DEGREES	Foreign Key
DEG_DEGREE_VALUES	DEGREES	Check
DEPARTMENTS_PRIMARY1	DEPARTMENTS	Primary Key
EMPLOYEES_PRIMARY_EMPLOYEE_ID	EMPLOYEES	Primary Key
EMP_SEX_VALUES	EMPLOYEES	Check
EMP_STATUS_CODE_VALUES	EMPLOYEES	Check
JOBS_PRIMARY_JOB_CODE	JOBS	Primary Key
JOB_HISTORY_FOREIGN1	JOB_HISTORY	Foreign Key
JOB_HISTORY_FOREIGN2	JOB_HISTORY	Foreign Key
JOB_HISTORY_FOREIGN3	JOB_HISTORY	Foreign Key
SALARY_HISTORY_FOREIGN1	SALARY_HISTORY	Foreign Key
STATUS_NAME_VALUES	WORK_STATUS	Check
STATUS_TYPE_VALUES	WORK_STATUS	Check
WAGE_CLASS_VALUES	JOBS	Check



Summary

- Oracle on OpenVMS continues because Oracle Database & Oracle Rdb business is healthy & valuable
- Cooperation between Oracle & HP development teams means better performance and manageability for you
- Development strategy maximizes value of your Oracle Database & Oracle Rdb investment.
 - Oracle development tools & middleware
 - Oracle management tools & API's
 - Oracle Database for reporting & data warehouses



Training Partner List

- **Europe, Asia, Middle East and Africa**

- VX Company

- Laren, The Netherlands

- <http://www.vxcompany.com/rdbtrainingcourses>



- **Americas**

- JCC Consulting, Inc.

- Granville, Ohio, United States

- <http://www.jcc.com/>



- **Oracle CODASYL DBMS Worldwide**

- Software Concepts International

- Nashua, New Hampshire, United States

- <http://www.sciinc.com/>



MAKLEE
software engineering
solutions




Q&A

QUESTIONS
ANSWERS



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