SQLDev

TipsandTricks

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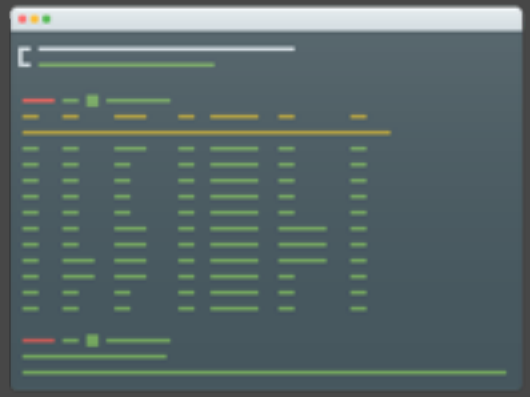
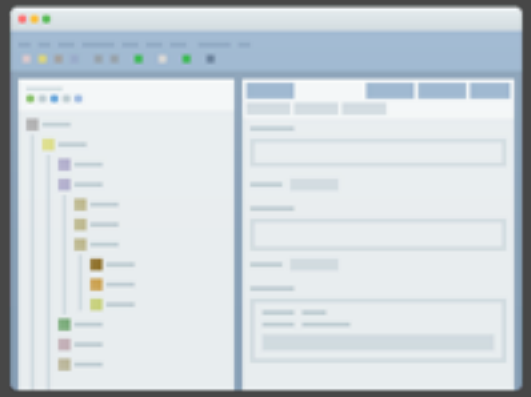
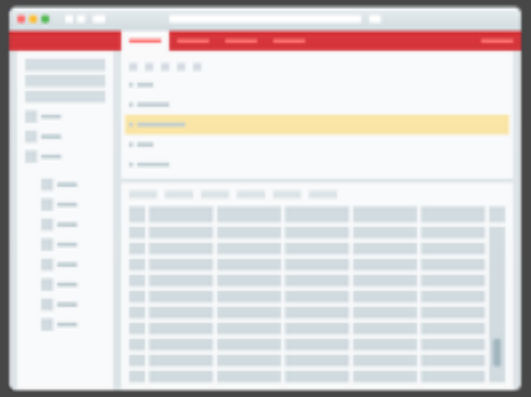
Database Tools, Oracle Corp



Terminal



Desktop



Web

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Not Just THAT SQLDev Guy…

- Database Development Tools team
- Product manager/story teller
- Corrupted my first database in 1999
- I ~~bother~~ help people online, everywhere
- Contact me for a free remote presentation for your group/company
  - Jeff.d.smith@oracle.com
  - @thatjeffsmith
  - https://www.thatjeffsmith.com

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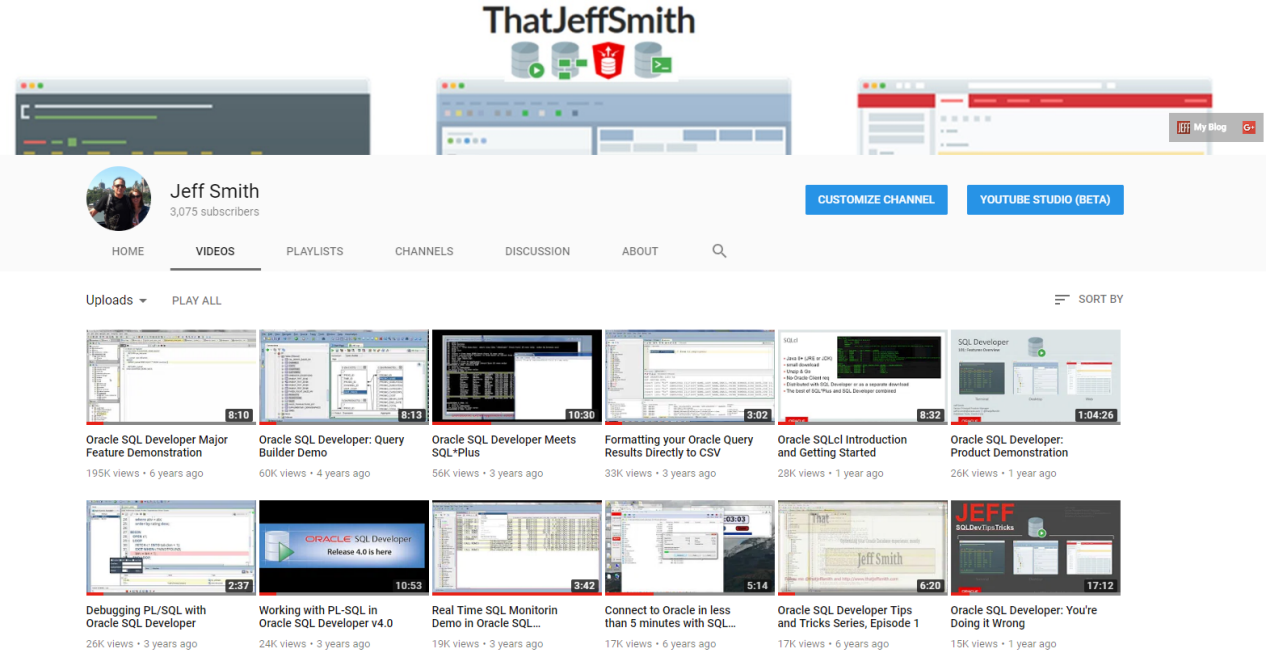
thatJeffSmith on YouTube

- 60+ Videos
- Feature demos
- Tips & Tricks
- Short & Long Form
  - SQL Developer
  - SQLcl
  - Data Modeler
  - ORDS



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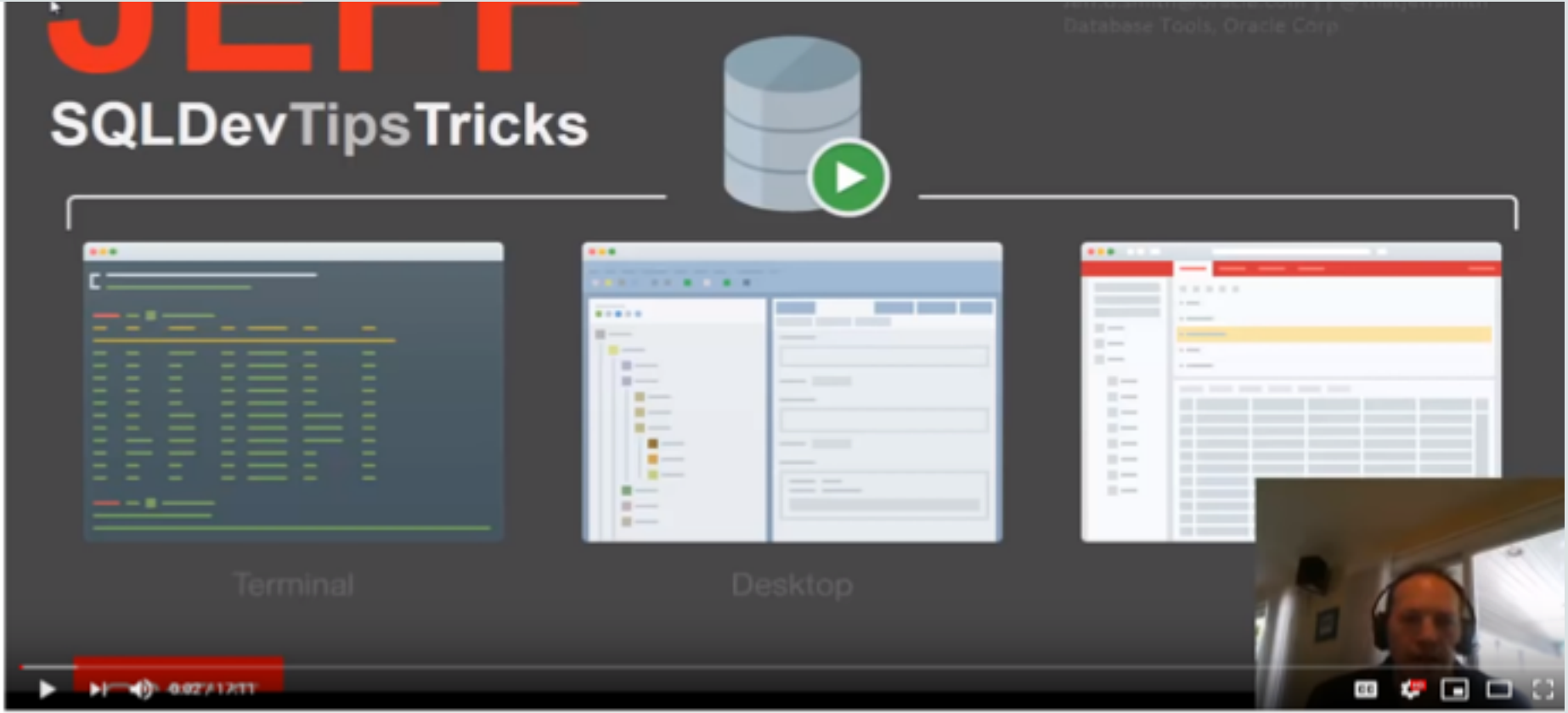

Oracle SQL Developer: You're Doing it Wrong

19,030 views

193 5 SHARE SAVE

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SQL Developer Snapshot

Time Tested

Launched in 2005

Always Improving

Quarterly Releases

An Industry Standard

5M+ Oracle DBAs & Developers

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SQL Developer Snapshot

OVER 1 BILLION SQL WORKSHEETS SERVED

Time Tested

Launched in 2005

Always Improving

Quarterly Releases

An Industry Standard

5M+ Oracle DBAs & Developers

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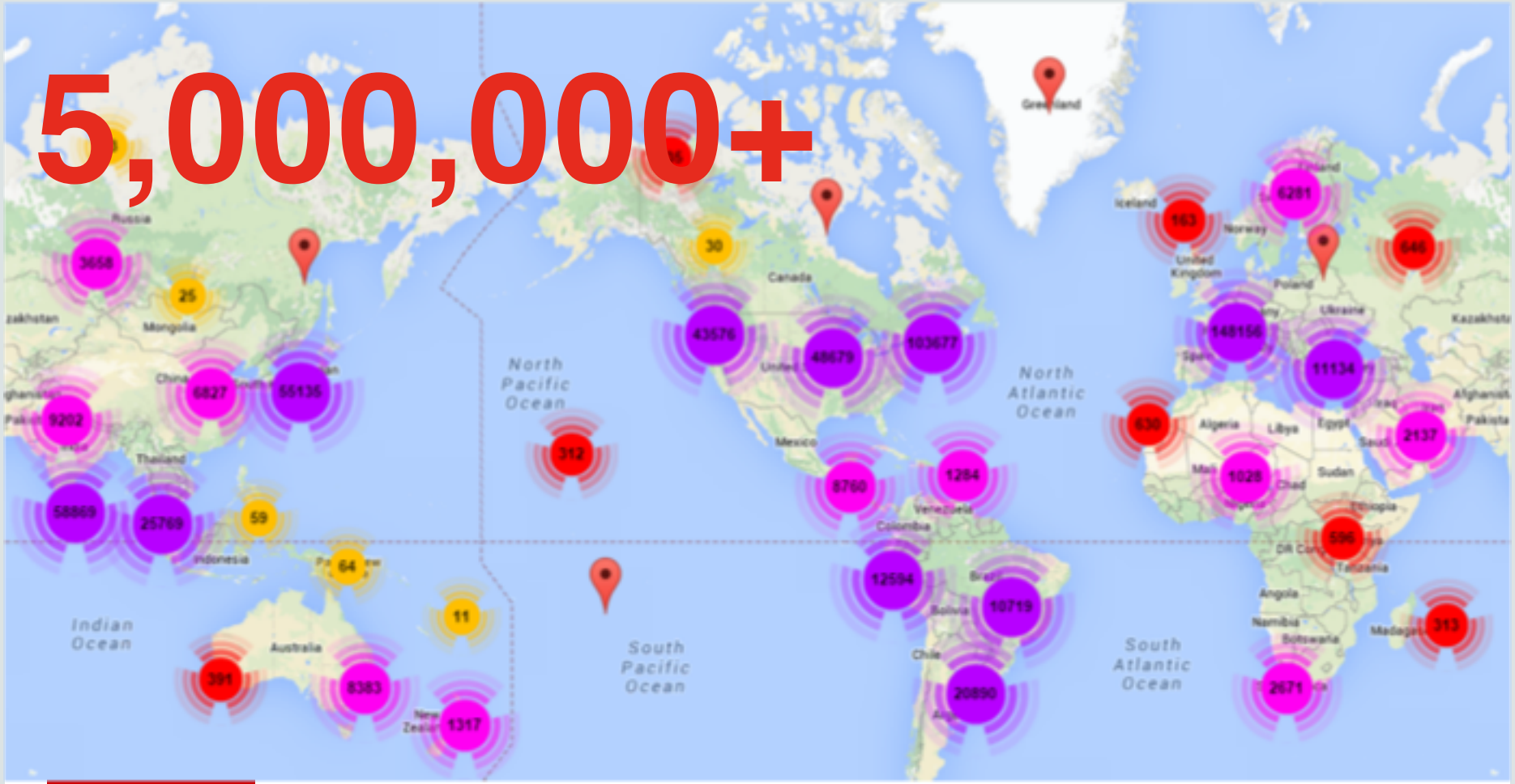
5,000,000+



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Release History

2005

Project Raptor
- Early Adopter on OTN

2006

SQLDev v1.0
- SQL Worksheet
- Procedure Editor
- The world takes notice!

2007

1.1
- File Based PL/SQL editing
- Reports
- Ships with 11gR1

2008

1.5
- Schema Copy/Diff/Export
- Thick connections
- Versioning
- TimesTen

2009

1.5.x
- Localizations - Japanese, Spanish, Italian, German, French, Portuguese, Chinese, & Koreans
- Ships with 11gR2

2010

2.1
- Unit Testing
- Data Modeler Viewer
- Unshared SQL Worksheets

2011

3.0
- Full Data Modeler
- View > DBA
- SQL Tuning Advisor
- Query Builder

2012

3.1
- New Database DIFF
- PDF Reports
- RMAN
- Data Pump

2013

3.2
- APEX Listener / ORDS Support
- Database 12c Support
- Schema Service Support

2014

4.0
- Java 7
- ASH/AWR/ADDM
- Color Coded Connections
- Command line Interface

2015

4.0.3
- Optimized Code Insight
- Oracle Big Data Appliance

2016

SQLcl
- New CLI
- Modern SQL*Plus

2017

4.1
- ORDS Included/Full GUI
- instance Viewer
- SQLcl
- Copy PDB to DBaaS
- Larry live demos PDB relocate @ OOW

4.2
- Real Time SQL Monitoring
- Top SQL Report
- Formatter & Other Editor Enhancements
- Easier RESTful Services Development

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Release History

2017.2
- Bug Fixes
- Sharding
- Data Guard

17.3 & 17.4
- Bug Fixes

18.2/3
- PL/SQL Injection Detection
- Cloud data Loads
- SQL Developer Web

2017

2018

18.1
- Autonomous Data Warehouse Support
- New Welcome Screen/Connections
- SQL Injection Detection
- PL/Scope SQL Statement Support
- Better Formatting

Quarterly Releases!!!

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What's New in 18.x

- New features/tweaks
  - Improved Welcome page
  - Formatter/Highlighting – right align keywords, custom highlighting (dbms_output)
  - Oracle ⇔ ANSI Joins translations
  - 12.2 PL/Scope Statements support
  - Amazon RDS => ADW Migrations
  - Import from OSS to Cloud
  - Data Pump from on-premises to Cloud
  - Faster Query Builder
  - Faster Excel Imports
  - DBMS_XPLAN

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Oracle SQL Developer : 02:57:24

File Edit View Navigate Run Team Tools Window Help

Find Database Object

hr

emp

Go

- All Schemas
- All Object Types
- All Identifier Types
- All Identifier Usages
- Columns
- Code
  - Search for %pattern%
  - All Source Lines
  - All Statements
  - ORDS
  - All Views
- All Dependencie

Executes

```
select * from all_statements
```

It searches within statements embedded in PLSQL. This PLSCOPE feature is available since version 12.2.

Welcome Page | hr | GET customers/{id}/accounts/ | GET customers/{id}/pic

Found 16 objects in 609 ms

- HR
  - FUNCTION
    - MAX_SAL
      - SELECT /*+ NO_REWRITE */ MAX(SALARY) FROM EMPLOYEES WHERE DEPART
  - PACKAGE BODY
    - EMPLOYEES_TAPI Body
      - INSERT INTO EMPLOYEES(JOB_ID ,EMPLOYEE_ID ,SALARY ,HIRE_DATE ,D
      - UPDATE EMPLOYEES SET JOB_ID = :B11 ,EMPLOYEE_ID = :B10 ,SALARY =
      - DELETE FROM EMPLOYEES WHERE EMAIL = :B1 in **EMPLOYEES_TAPI** Body at line
  - PROCEDURE
    - ADD_EMP2
      - E, SALARY) VALUES (:B2 , :B1) RETURN
      - stuff/link' "$goto" FROM SIMPLE_EMP W
      - E_EMP in **ADD_EMP2** at line 18, col 4
      - SELECT FIRST_NAME, JOB_ID, HIRE_DATE FROM EMPLOYEES in **COLEMAN_EM**
    - CUR_FETCH
      - SELECT * FROM EMP FETCH FIRST :B1 ROWS ONLY in **CUR_FETCH** at line 4, col 4
    - GETEMPLOYEE
      - SELECT LAST_NAME FROM EMPLOYEES WHERE EMPLOYEE_ID = :B1 in **GETEMP**
    - GETEMPLOYEE_NULLS
      - SELECT * FROM EMPLOYEES WHERE COMMISSION_PCT IS NOT NULL in **GETEMI**
      - SELECT EMPLOYEE_ID, FIRST_NAME, LAST_NAME, EMAIL, PHONE_NUMBER,
    - SCOPE_EXAMPLE
      - SELECT (SELECT FIRST_NAME || ' ' || LAST_NAME FROM EMPLOYEES) FR
    - SCOPE_EXAMPLE2
      - SELECT (SELECT FIRST_NAME || ' ' || LAST_NAME FROM EMPLOYEES) FR
    - YOUTUBE_ERROR
      - SELECT FIRST_NAME, JOB_ID, HIRE_DATE FROM EMPLOYEES in **YOUTUBE_ERI**
  - TABLE
    - **EMP**

customers/{id}/pic | DBMS_XPLAN | DBMS_XPLAN

Version: 18.1.0.061.0642

Getting Started

Information | Tutorials | Demos | Training

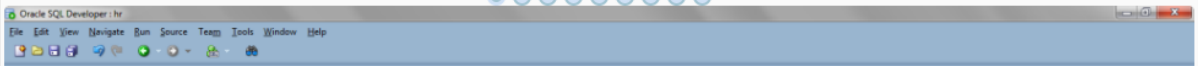
- Overview Video
- What's New
- Release Notes
- Documentation
- SQL Developer on OTN

Related Tools

- Modeler - Data modeling and database design
- SQLcl - The power of SQL Developer in a CLI
- Oracle Live SQL - Learn and share SQL, for free.
- ORDS - REST Enable the Oracle Database

Follow Us!

Feature Screenshots



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Worksheet Query Builder

```
BEGIN
  dbms_output.put_li
END;
/
```

Script Output

Task completed in 0.073 sec

```
PL/SQL procedure success
```

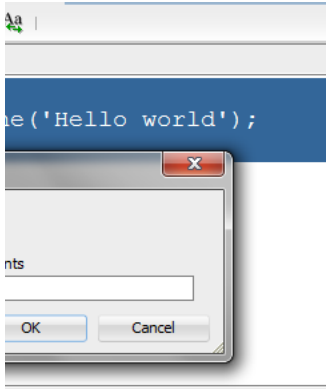
Statements - Log

Seque...	Connection Name	Elaps
164	sys	4
163	sys	5

Worksheet Query Builder

```
-- refactored
procedure hello as
begin
BEGIN
  dbms_output.put_line('Hello world');
END;
/
end;

begin
hello;
end;
```



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HR

Worksheet | Query Builder

```
19        ,a.postal_code
20        ,a.city
21        ,a.state_provi
22
23
24
25
26
27
28
29
```

HR

Worksheet | Query Builder

Main

b (DEPARTMENTS)
- *
- DEPARTMENT_ID
- DEPARTMENT_NAME
- MANAGER_ID
- LOCATION_ID
- EXTRA_COLUMN

a (LOCA
- *
- LOCA
- STREE
- POSTA
- CITY
- STATE
- COUN

c (EMPLOYEES)
- *
- EMPLOYEE_ID
- FIRST_NAME
- LAST_NAME
- EMAIL
- PHONE_NUMBER
- HIRE_DATE
- JOB_ID

HR

Worksheet | Query Builder

```
15        ,c.manager_id
16        ,c.department_id
17        ,a.location_id
18        ,a.street_address
19        ,a.postal_code
20        ,a.city
21        ,a.state_province
22        ,a.country_id
23   FROM departments b
24  INNER JOIN locations a ON a.location_id = b.location_id
25  INNER JOIN employees c ON c.employee_id = b.manager_id
26    AND b.department_id = c.department_id;
27
```

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Real Time SQL Monitoring => HTML Reports

Start Page | Real Time SQL Monitor | demo | Relational_1 (Untitled_1) | Logical (Untitled_1)

Auto Refresh: 5.0 s

#	Status	Duration	Type	Sql Id	Plan Hash	User	Parallel	Database Time	I/O Requests	I/O Bytes	Buffer Gets	Start Time	End Time	SQL Text
1	✓	3.1 s	SQL	cj7m4wx5kdad5	3812554323	DEMO	2	2.8 s	1.8K	18.5MB	54K	26-Jul-2016 14:34:22	26-Jul-2016 14:34:23	SELECT 'ARGUMENT' type, null owner, a.owner||
2		2810.7 ms	SQL	53dw3tu8sfk2w	3854267419	DEMO	2	1224.6 ms	5	196.6KB	3K	26-Jul-2016 14:34:37	26-Jul-2016 14:36:19	select /*+ MONITOR */ * from all_source where lo
3	✓	8.4 ms	SQL	348jv235vcchg	513297451	DEMO		0 ms	0	0B	7	26-Jul-2016 14:33:17	26-Jul-2016 14:33:17	select /*+ MONITOR */ * from untappd where style

1 2 3

1/...

PLAN STATISTICS | METRICS

Operation	Line ID	Name	Est. Rows	Cost	Executions	Timeline	Actual Rows	Memory	Max. Mem.	Temp. Mem.	Max. Temp.	I/O Requests	I/O Byt
SELECT STATEMENT	0				1		1200						
FILTER	1				1		1200						
PX COORDINATOR	2				3		1200						
PX SEND (QC (RANDOM))	3	:TQ10000	1000	1	2								
PX PARTITION LIST (ALL)	4		1000	1	2								
FIXED TABLE (FULL)	5	X$COMVW$	1000	1	2		1568						
NESTED LOOPS (SEMI)	6		1	2	2		2						
FIXED TABLE (FULL)	7	X$KZSRO	2		2		12						
INDEX (RANGE SCAN)	8	I_SYSAUTH1	1	1	12		2						
NESTED LOOPS (SEMI)	9		1	2	0		0						
FIXED TABLE (FULL)	10	X$KZSRO	2		0		0						
INDEX (RANGE SCAN)	11	I_OBJAUTH1	1	1	0		0						
NESTED LOOPS (SEMI)	12		1	1	0		0						
FIXED TABLE (FULL)	13	X$KZSRO	2		0		0						
INLIST ITERATOR	14				0		0						
INDEX (UNIQUE SCAN)	15	I_SYSAUTH1	16	1	0		0						

First Activity Time: 26-Jul-2016 14:34:37
Last Activity Time: 26-Jul-2016 14:36:19

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Real Time SQL Monitoring

SQL ID: g6px76dmiv1iv

SQL ID: 89tyqj3wwa7kg

Overview | Plan Statistics | Parallel

PARALLEL SERVER	DATABASE TIME	ACTIVITY %	IO REQUESTS	IO BYTES	BUFFER GETS
Instance 1					
PX Coordinator	736.89 ms (Other: 499.04 ms (49.37%))		4	32 KB	2.02 K
Parallel Set 1					
Parallel Server 1 (p000)	49.55 ms				28
Parallel Server 2 (p001)	50.12 ms				
Parallel Set 2	174.17 ms		8	64 KB	116

1 0 0 | 11:55:10 AM - REST call resolved successfully.

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Huge Product, Most Folks are Self-Taught…

- PL/SQL IDE
- SQL editor
- GUI for browsing and managing database objects
- Ad Hoc reporting
- Database Design & Data Modeling
- Database Administration
- 3rd Party RDBMS Migrations to Oracle
- Deploy and Administer Oracle REST Data Services
- REST Enablement of the Database
- Command Line Interface

…it's our fault, not yours.

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Jeff's Driving School

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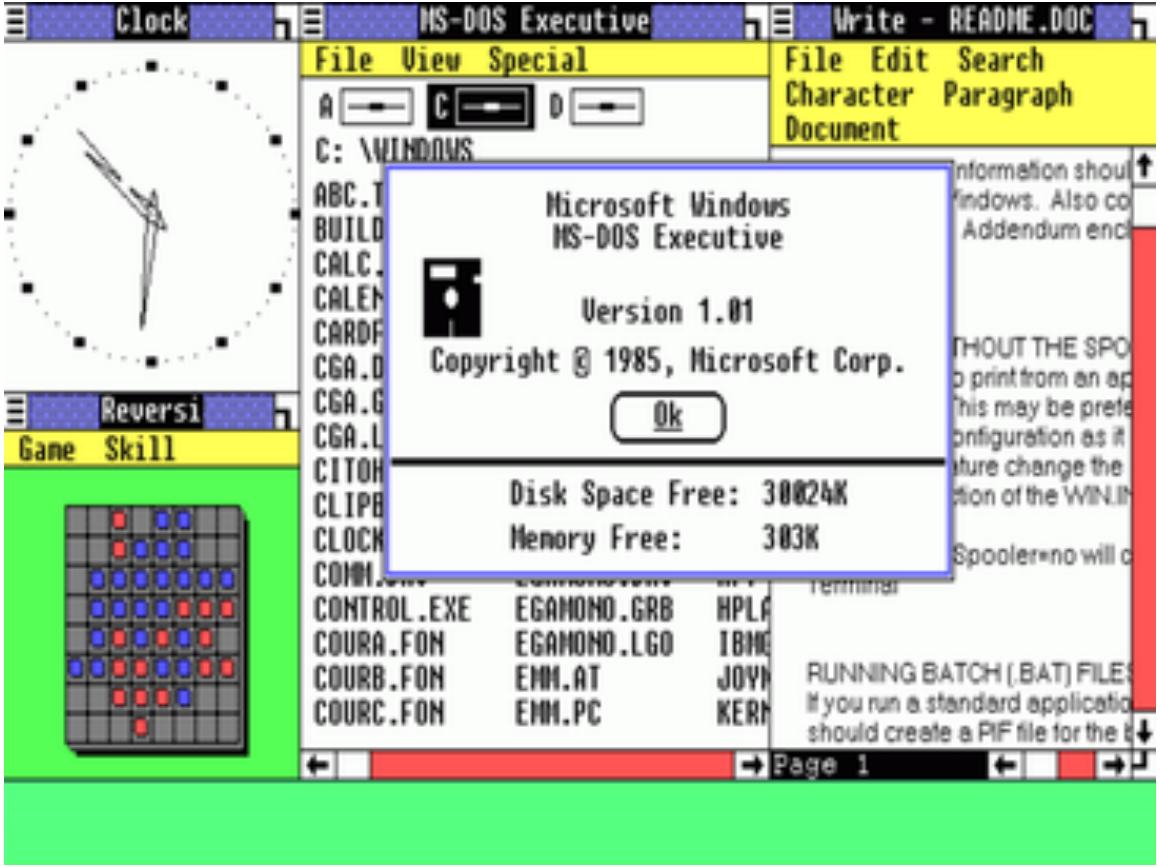

Biggest complaint?

Too much… MOUSE.

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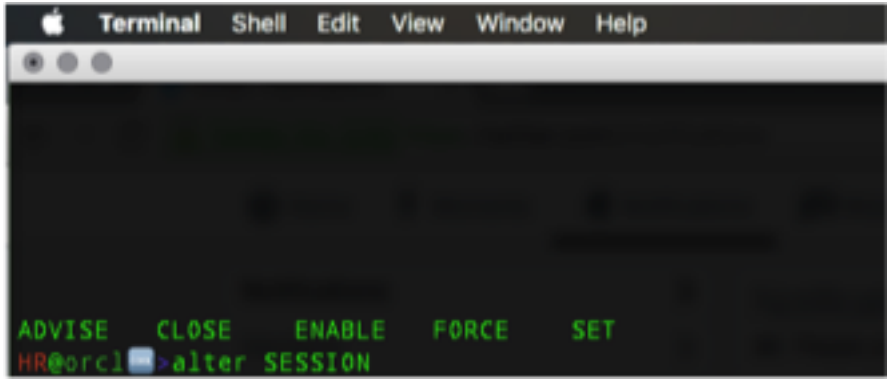
Also Available on the command-line: SQLcl & <TAB>

```
CLOB_STUFF        COMMISSION_PCT    DEPARTMENT_ID     EMAIL             EMPLOYEE_ID
EMP_DEVICE        FIRST_NAME        HIRE_DATE         JOB_ID            LAST_NAME
MANAGER_ID        PHONE_NUMBER      REVIEW            SALARY
HR@orcl >select
  2  from hr.employees
  3  where COMMISSION_PCT       is not null
```

- Just hit <TAB> for help
- Autocompletes on Single Match
- Lists possible matches otherwise!



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SQL Statement & Script History – access with Up/Down Key

```
HR@orcl >history full
  1  info EVERYFIRSTANDTHIRDWED

  2  ddl EVERYFIRSTANDTHIRDWED

  3  alias dom=SELECT
  >      table_name "TABLE",
  >      tablespace_name "TABLESPACE",
  >      logging,
  >      num_rows,
  >      blocks,
  >      empty_blocks,
  >      avg_row_len,
  >      cache,
  >      last_analyzed stats,
  >          CASE WHEN
  >              la > 2
  >          THEN
```

```
HR@orcl >history
History:
  1  info EVERYFIRSTANDTHIRDWED
  2  ddl EVERYFIRSTANDTHIRDWED
  3  alias dom=SELECT     table_name "TABLE",
  4  show sqlformat
  5  select count(*) from v$session where username
  6  select * from sh.sales
  7  connect sys as sysdba
  8  alter user sh unlocked
  9  alter user sh status unlocked
 10  connect sh/oracle
 11  alias list dom
 12  tables2
 13  host cat login.sql
 14  host cat login.js
```

```
HR@orcl >history 69
  1  select FIRST_NAME, LAST_NAME, SALARY, HIRE_DATE
  2  from hr.employees
  3* where COMMISSION_PCT is not null
HR@orcl >
```

- Sensitive commands, *connect* black-listed
- Defaults to last 100
- Avail from session to session per OS user

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CLI: Use an ALIAS to Make DBMS_XPLAN EASY

```
C:\windows\system32\cmd.exe - sql hr/oracle

(HR) orcl >alias list plan
plan
----

SELECT * FROM table(DBMS_XPLAN.DISPLAY_CURSOR)

(HR) orcl >dom
TABLE                TSPACE  LOGGING  NUM_ROWS  BLOCKS  EMPTY_BLOCKS  AVG_ROW_LEN  CACHE  STATS                 STALE          PART  IOT
COUNTRIES                            25                                15           N      07-JUL-016 01:02:06    71.3 days      NO    IOT
DAVE                 USERS   YES     2         5       0             17           N      15-SEP-016 09:34:00    23.3 hours     NO
DEPARTMENTS          USERS   YES     27        5       0             21           N      07-JUL-016 01:02:06    71.3 days      NO
EMPLOYEES            USERS   YES     107       5       0             69           N      31-AUG-016 01:01:37    16.3 days      NO
INSERTS              USERS   YES     115       5       0             3            N      13-SEP-016 01:01:35     3.3 days      NO
IPSUM                USERS   YES     1         5       0             732          N      31-AUG-016 01:01:13    16.3 days      NO
ITUNES_MUSIC         USERS   YES     10229     496     0             307          N      31-AUG-016 01:01:13    16.3 days      NO
JOBS                 USERS   YES     19        5       0             33           N      07-JUL-016 01:02:07    71.3 days      NO
JOB_HISTORY          USERS   YES     10        5       0             31           N      07-JUL-016 01:02:07    71.3 days      NO
LOCATIONS            USERS   YES     23        5       0             49           N      07-JUL-016 01:02:06    71.3 days      NO
MVIEW1               USERS   YES     107       5       0             69           Y      15-SEP-016 01:01:37    31.8 hours     NO
REGIONS              USERS   YES     4         5       0             14           N      07-JUL-016 01:02:06    71.3 days      NO
TABLE_BLOG_QUESTION  USERS   YES     0         0       0             0            N      03-SEP-016 01:01:33    13.3 days      NO
UMLAUT               USERS   YES     4         5       0             3            N      03-SEP-016 01:01:41    13.3 days      NO


14 rows selected.

(HR) orcl >plan
PLAN_TABLE_OUTPUT
SQL_ID  0fz4kwwn59pat, child number 2
-------------------------------------
SELECT     table_name "TABLE",     tablespace_name "TSPACE", logging,
  num_rows,     blocks,     empty_blocks,     avg_row_len,   cache,
last_analyzed stats,         CASE WHEN            la > 2        THEN
```

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Get your files, whichever way you want them

```
(HR) orcl >set sqlformat csv
(HR) orcl >set head off
(HR) orcl >set feedback off
(HR) orcl >cd C:\Users\jdsmith\Desktop
(HR) orcl >spool locations.csv
(HR) orcl >select * from locations fetch first 5 rows only;
1000,"1297 Via Cola di Rie","00989","Roma","","IT"
1100,"93091 Calle della Testa","10934","Venice","","IT"
1200,"2017 Shinjuku-ku","1689","Tokyo","Tokyo Prefecture","JP"
1300,"9450 Kamiya-cho","6823","Hiroshima","","JP"
1400,"2014 Jabberwocky Rd","26192","Southlake","Texas","US"
(HR) orcl >spool off
(HR) orcl >host type locations.csv
1000,"1297 Via Cola di Rie","00989","Roma","","IT"
1100,"93091 Calle della Testa","10934","Venice","","IT"
1200,"2017 Shinjuku-ku","1689","Tokyo","Tokyo Prefecture","JP"
1300,"9450 Kamiya-cho","6823","Hiroshima","","JP"
1400,"2014 Jabberwocky Rd","26192","Southlake","Texas","US"

(HR) orcl >
```

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Custom Formats, just add JavaScript

```
cmd - sql hr/oracle
<1> cmd - sql hr/o...
I am HR on orcl > script cardview select * from hr.employees fetch first 5 rows only;
 select * from hr.employees fetch first 5 rows only

>ROW 0:
        EMPLOYEE_ID : EMPLOYEE_ID
        FIRST_NAME : FIRST_NAME
        LAST_NAME : LAST_NAME
        EMAIL : EMAIL
        PHONE_NUMBER : PHONE_NUMBER
        HIRE_DATE : HIRE_DATE
        JOB_ID : JOB_ID
        SALARY : SALARY
        COMMISSION_PCT : COMMISSION_PCT
        MANAGER_ID : MANAGER_ID
        DEPARTMENT_ID : DEPARTMENT_ID
>ROW 1:
        EMPLOYEE_ID : 100
        FIRST_NAME : Steven
        LAST_NAME : King
        EMAIL : SKING
        PHONE_NUMBER : 515.123.4567
        HIRE_DATE : 1987-06-17 00:00:00.0
        JOB_ID : AD_PRES
        SALARY : 24000
        COMMISSION_PCT : null
        MANAGER_ID : null
        DEPARTMENT_ID : 90
>ROW 2:
        EMPLOYEE_ID : 101
        FIRST_NAME : Neena
        LAST_NAME : Kochhar
        EMAIL : NKOCHHAR
        PHONE_NUMBER : 515.123.4568
        HIRE_DATE : 1989-09-21 00:00:00.0
java.exe*[64]:20872
```

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Auto-Replace/Spell Checking in SQLcl

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oracle / oracle-db-tools

Watch 29 Star 40 Fork 9

Code Issues 0 Pull requests 0 Projects 0 Pulse Graphs

Adding a couple examples of making a new command listener in javascript

master

Browse files

krisrice committed on Mar 8 1 parent b0d0bad commit 0c6a27f10ccde69408020bcd50d3bf69b84a8a95

Showing 2 changed files with 93 additions and 0 deletions.

Unified Split

53 sqlcl/examples/autocorrect.js View

```
@@ -0,0 +1,53 @@
+
```

```
[KLRICE@🍺>select 'ABC_XYZ'  "myalias" from dual;
***Mispelled " again.   AUTOCORRECTING ***

***Mispelled " again.   AUTOCORRECTING ***
myalias
ABC_XYZ
```

- Uses SCRIPT/JS
- Looks for ‘bad’ text
- Replaces before sending to JDBC
- Shows corrected SQL with Output

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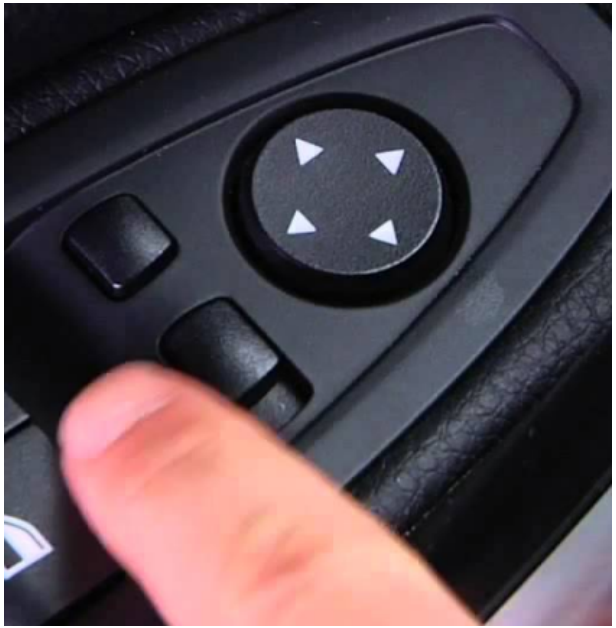
Buckle Up, Adjust Your Mirrors



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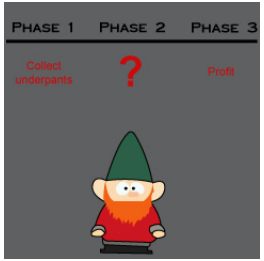
Application Basics in 3 Steps

Setup

- look and feel
- code editors

Object Navigation

‘Program’ in your favorite bits of code



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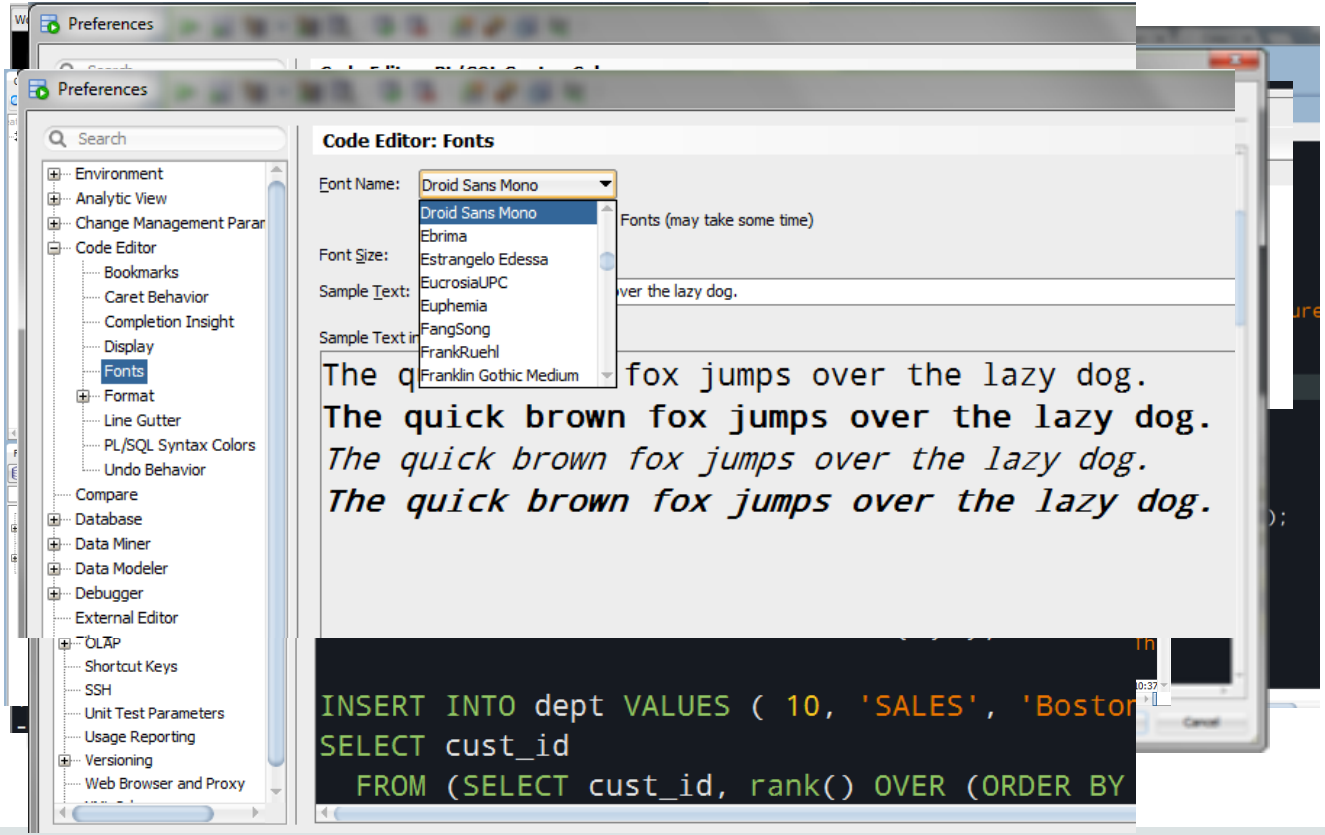
Step 1: LOOK GOOD

- fonts
- output
- line numbers
- highlighting
- formatting
- desktop management



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Step 2: Navigate Like a Boss

- trim your tree
- …or Schema Browser
- ctrl+click
- Alt+G

Connections HR

Code Outline

UNTAPPD identifier query_table_expression table_reference
re_clause
WHERE
comparison_condition condition simple_comparison_condition
STATE column expr identifier simple_expression
= cmp_op
'TX' expr literal simple_expression string_literal
sql_statement unlabeled_nonblock_stmt
lock select simple_set_expr sql_query_or_dml_stmt sql_stmt

Find Database Object

untappd Go

All Schemas
All Object Types
All Identifier Types
All Identifier Usages
Columns
Code
All Dependencies

Auto-Searches the DB...

Start Page HR HR_1

Worksheet Query Builder

```
1 --set sqlformat ansiconsole
2 clear screen
3
4 SELECT beer
5      ,  brewery
6      ,  city
7      ,  state
8 FROM
9     untappd
```

ALT+G at cursor...

Script Output Query Result

SQL All Rows Fetched: 7 in 0.005 seconds

	BEER	BREWERY
1	Ancho Oscuro	Freetail
2	Phoenixx	Real Ale
3	OPA (Oatmeal Pale Ale)	Ranger Cr

untappd NESTED_PROCEDURES

Found 1 objects in 284 ms

HR
TABLE
UNTAPPD

Click on Results to open Objects

Code Details Grants Dependencies Profiles Errors

Script Output Query Result

SQL All Rows Fetched: 7 in 0.005 seconds

ions

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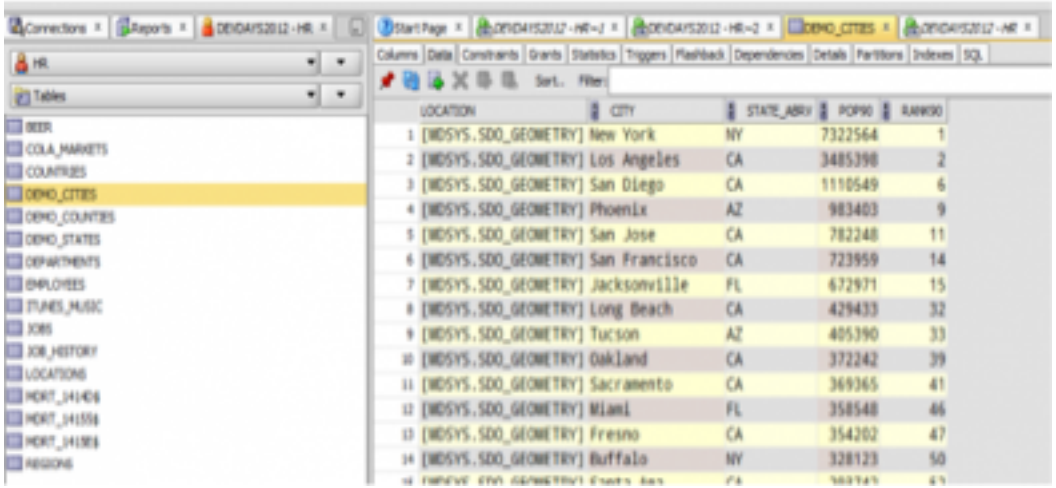
Alternatives to the Tree: Schema Browser

- Right-Click on a Connection
- Drop Down Controls for
  - Schema
  - Object
- Same Functionality as Tree



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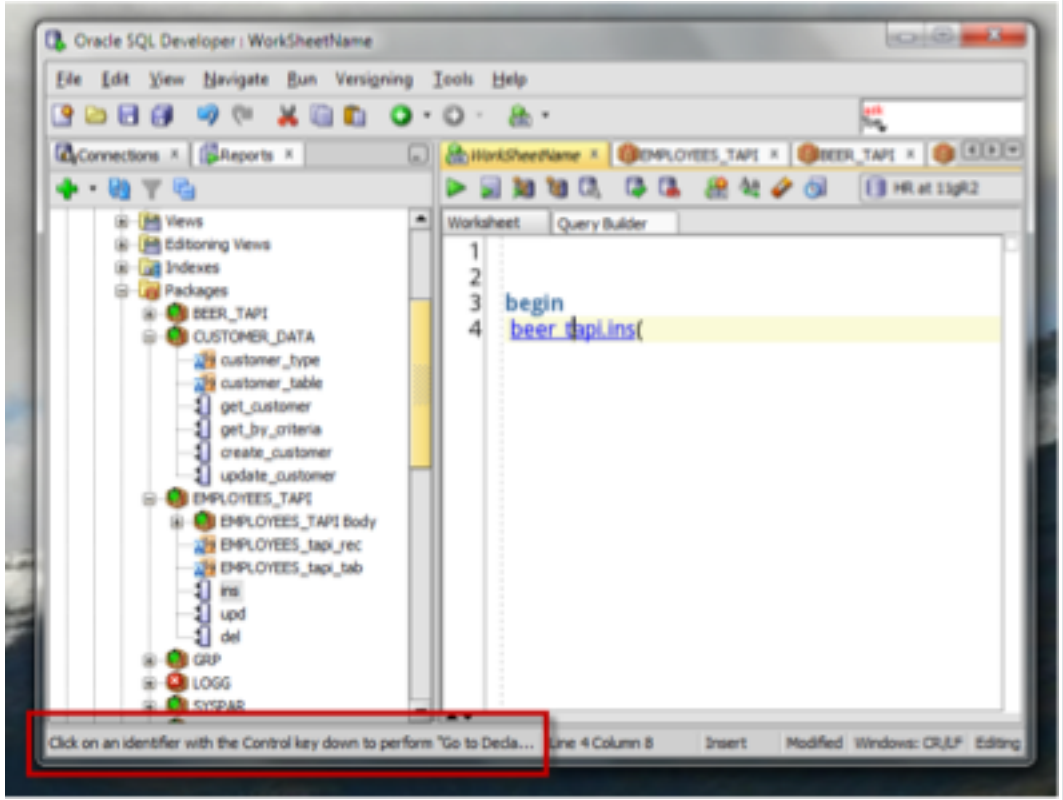
Three More Ways to Open/Browse Objects

1. Hold down Ctrl...
   …Mouse over object
   ...CLICK to open object
2. SHIFT+F4 (DESC)
3. Find DB Object
   Alt+G on object text



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Step 3: Automate Your Stuff

- Code Snippets
- …or Auto-Replace
- Reports

Edit Report

Master Report
SQL Query
Child Reports
Report
SQL Query
Property
PDF
Binds
Drill Down
Property
PDF

SQL Query - Report

Show SQL

```
declare
report clob;

begin
 SELECT DBMS_SQLTUNE.REPORT_TUNING_TASK(:TASK_NAME) into report FROM DU
 dbms_output.put_line('<pre>' || report || '</pre>');
end;
```

Master Report: Automatic Tuning Advisor

```
select * from DBA_ADVISOR_FINDINGS
```

Help Apply Cancel

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Advanced Concepts

…Get ready to go FAST

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- Automatic = suggestions as you type
- Manual = suggestions as you ask for them (*ctrl+space*)

```
select *
from DEPARTMENTS, EMPLOYEES
where
EMPLOYEES.DEPARTMENT_ID = DEPARTMENTS....
EMPLOYEES.EMPLOYEE_ID = DEPARTMENTS.DE...
EMPLOYEES.MANAGER_ID = DEPARTMENTS.MAN...
DEPARTMENTS.DEPARTMENT_ID
DEPARTMENTS.DEPARTMENT_NAME
DEPARTMENTS.LOCATION_ID
DEPARTMENTS.MANAGER_ID
```

```
COMMISSION_PCT    DEPARTMENT_ID    EMAIL            EMPLOYEE_ID      FIRST_NAME
HIRE_DATE         JOB_ID           LAST_NAME        MANAGER_ID       PHONE_NUMBER
SALARY
SQL> select * from employees
  2* where
```

```
EMPLOYEES.LAST_NAME
EMPLOYEES.MANAGER_ID
EMPLOYEES.PHONE_NUMBER
EMPLOYEES.SALARY
```

```
begin
 add_job_history(
P_EMP_ID NUMBER,P_START_DATE DATE,P_END ...
```

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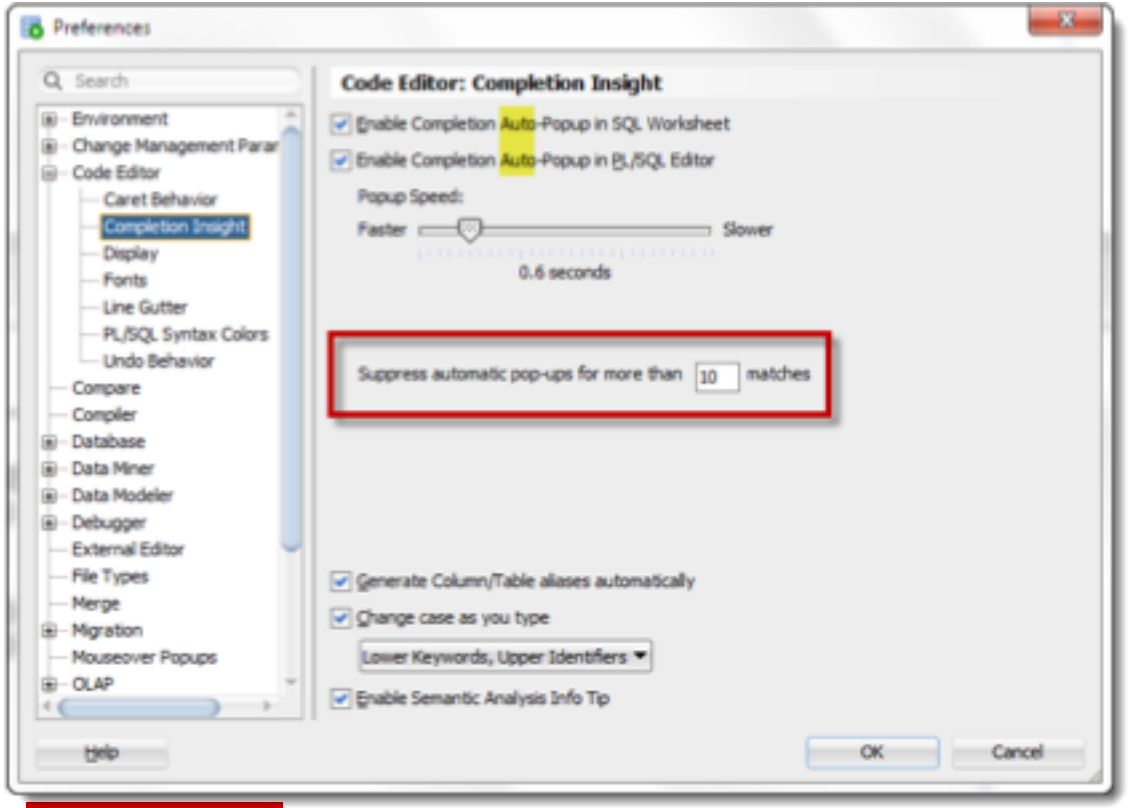
Completion Insight, I recommend MANUAL Mode



- Adjust delay
- Suppress automatic suggestions

OR

- Turn off completely and use keyboard, on demand

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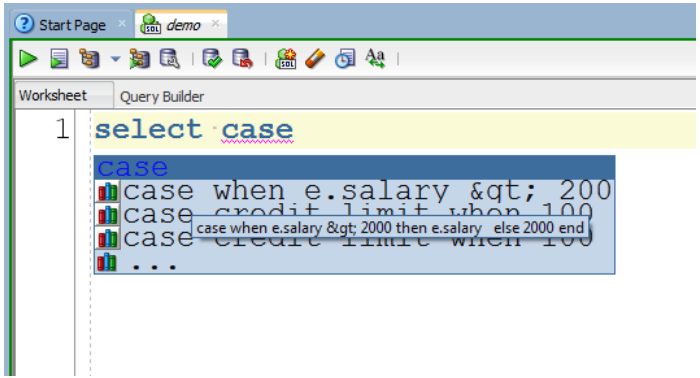
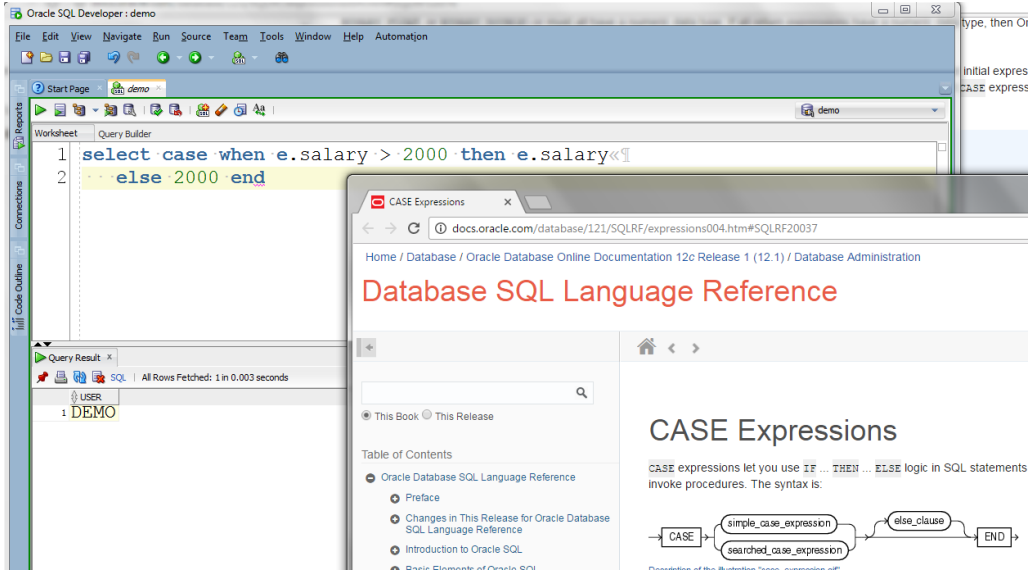
Bonus: Get Help/Examples with Commands!



- *peak* into Docs for sample code on your function/command



- click on ‘book’ to go straight to the DOCS page for that function/command

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SQL History

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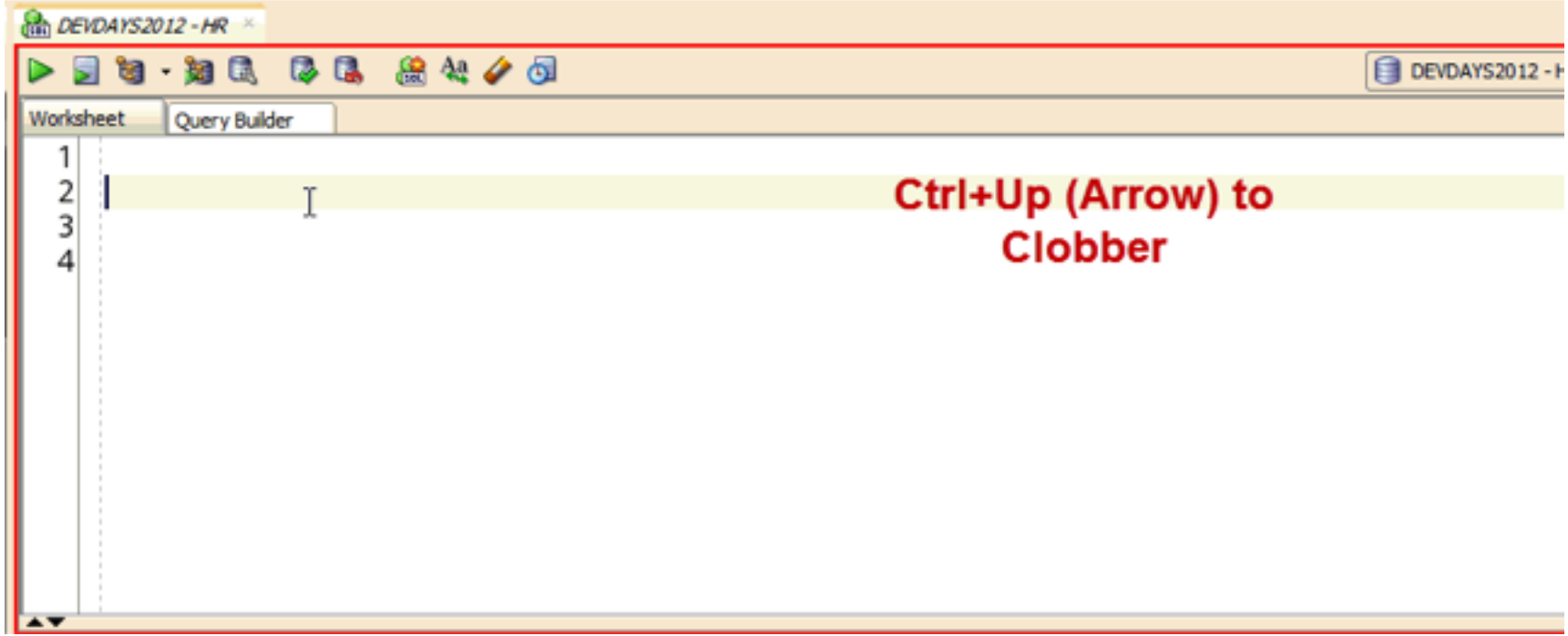
SQL History – Code You Don't Recognize After 3 Days ☺



In lieu of clicking through SQL History (F8)

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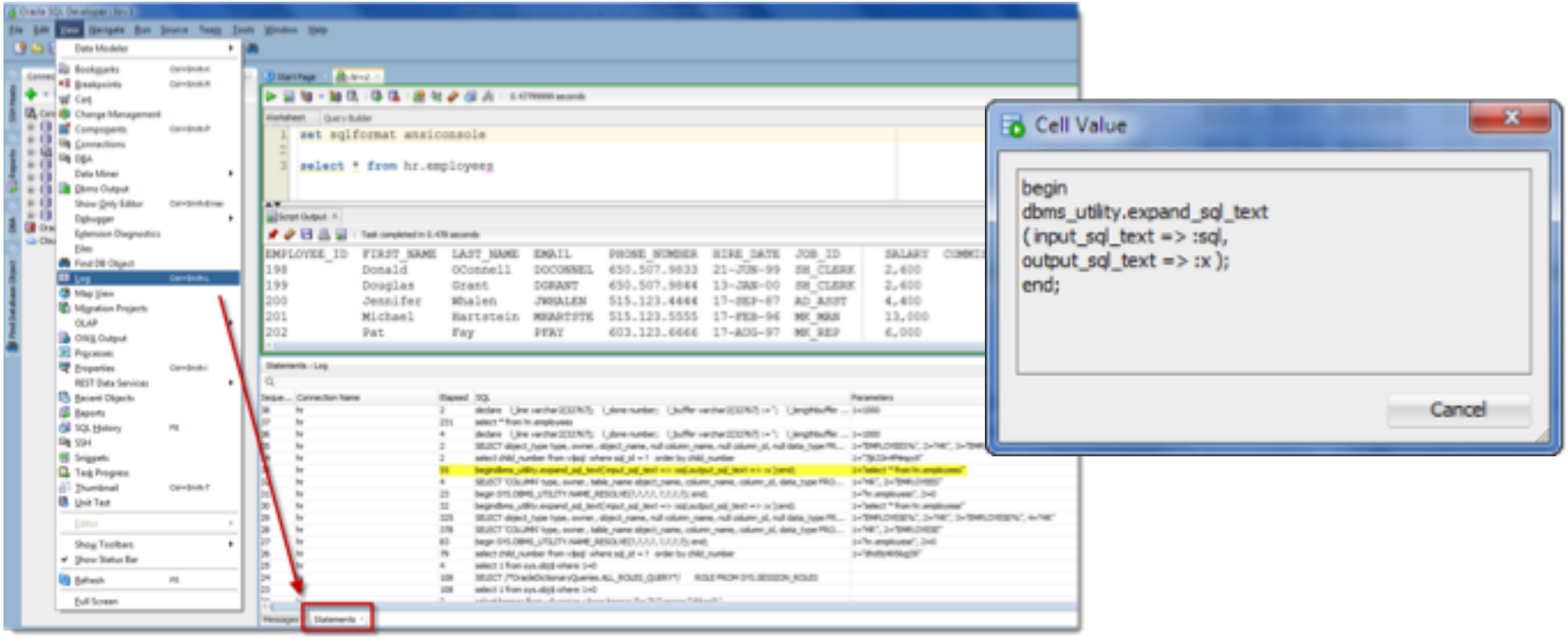
2. SQL ~~History~~ Logging: every SQL to DB captured



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I love it when a plan comes together!!

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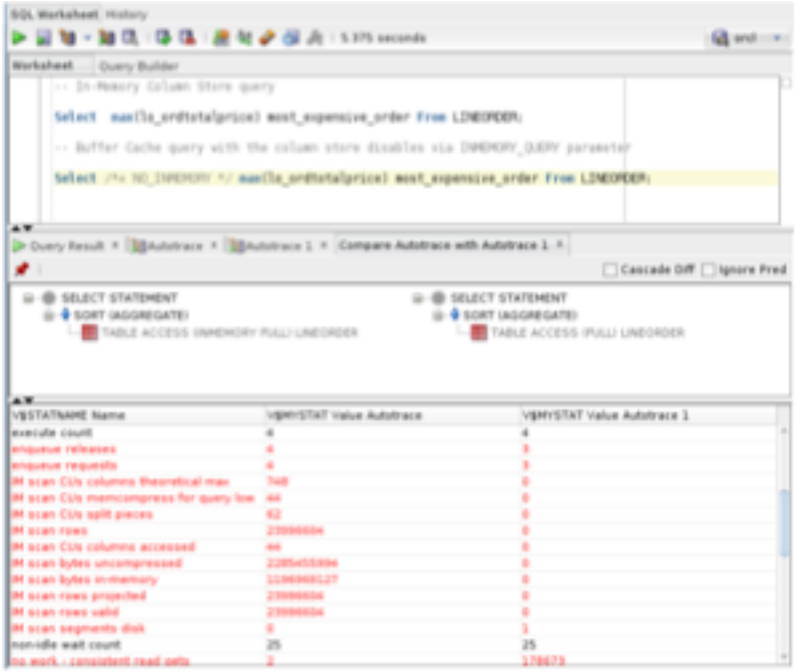
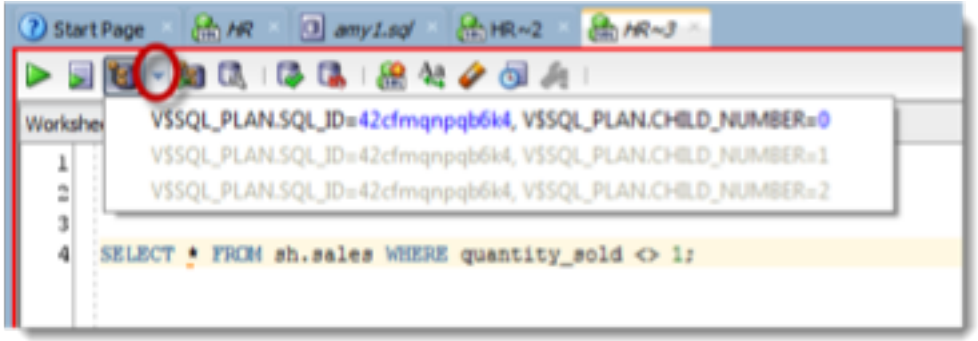
Plans/AutoTrace – generate & compare side by side!



Pin Plan, Gen Plan, Right-Click > Compare for Side By Side View



Hit the drop-down control next to Plan Button to access cached plans from v$sql_plan

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And New in v18 – DBMS_XPLAN

Welcome Page | Import-so-dates-table-csv-bad.sql* | POST peeps/ | hr | hr (Unshared) | repo | Object Count by Type

V$SQL_PLAN.SQL_ID=5bwwj8wx4xvrz, V$SQL_PLAN.CHILD_NUMBER=0
V$SQL_PLAN.SQL_ID=5bwwj8wx4xvrz, V$SQL_PLAN.CHILD_NUMBER=1
V$SQL_PLAN.SQL_ID=5bwwj8wx4xvrz, V$SQL_PLAN.CHILD_NUMBER=2
DBMS_XPLAN

```
1  blocker_sid,        waiting.sid
2  ime / 60) min_waiting,
3  waiting.request   FROM (   SELECT *     FROM gv$lock    WHERE block !=
4  0       AND type = 'TX' ) blocker,        gv$lock waiting  WHERE
5  waiting.type = 'TX
6  blocker.id1;
7
8  set sqlformat ansi
9  set pagesize 250
10 clear screen
11 select * from tabl
12
```

Script Output | Query Result

Task completed in 0.397 seconds

```
|* 35 |        FIXED TABLE FULL     | X$KTATRFSL |      1 |        |        |          |
|* 36 |        FIXED TABLE FULL     | X$KTATL    |      1 |        |        |          |
|* 37 |        FIXED TABLE FULL     | X$KTSTUSC  |      1 |        |        |          |
|* 38 |        FIXED TABLE FULL     | X$KTSTUSS  |      1 |        |        |          |
|* 39 |        FIXED TABLE FULL     | X$KTSTUSG  |      1 |        |        |          |
|* 40 |        FIXED TABLE FULL     | X$KTCXB    |      1 |        |        |          |
-------------------------------------------------------------------------------------

Predicate Information (identified by operation id):
---------------------------------------------------

   1 - access("R"."KSQRSID1"="R"."KSQRSID1" AND
              TO_CHAR(USERENV('INSTANCE'))||RAWTOHEX("RADDR")=TO_CHAR("R"."INST_ID")||RAWTO
              HEX("R"."ADDR"))
```

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```
SELECT /*+ QB_NAME(MAINBLK) NO_QUERY_TRANSFORMATION */
    d.department_name,
    (
        SELECT /*+ QB_NAME(CNTBLK) */
            COUNT(*)
        FROM
            employees e
        WHERE
            e.department_id = d.department_id
    ) cnt,
    (
        SELECT /*+ QB_NAME(AVGBLK) */
```

OPERATION	QBLOCK_NAME	OBJECT_NAME	CARDINALITY	LAST_OUTPUT_ROWS
SELECT STATEMENT				27
SORT	CNTBLK		1	27
INDEX	CNTBLK	EMP_DEPARTMENT_IX	10	106
Access Predicates				
E.DEPARTMENT_ID=:B1				
SORT	AVGBLK		1	27
TABLE ACCESS	AVGBLK	EMPLOYEES	10	106
INDEX	AVGBLK	EMP_DEPARTMENT_IX	10	106

V$STATNAME Name	V$MYSTAT Value
buffer is not pinned count	16
buffer is pinned count	208
bytes received via SQL*Net from client	3283

- *enable things you want to see in your plans, like*

QBLOCK_NAME

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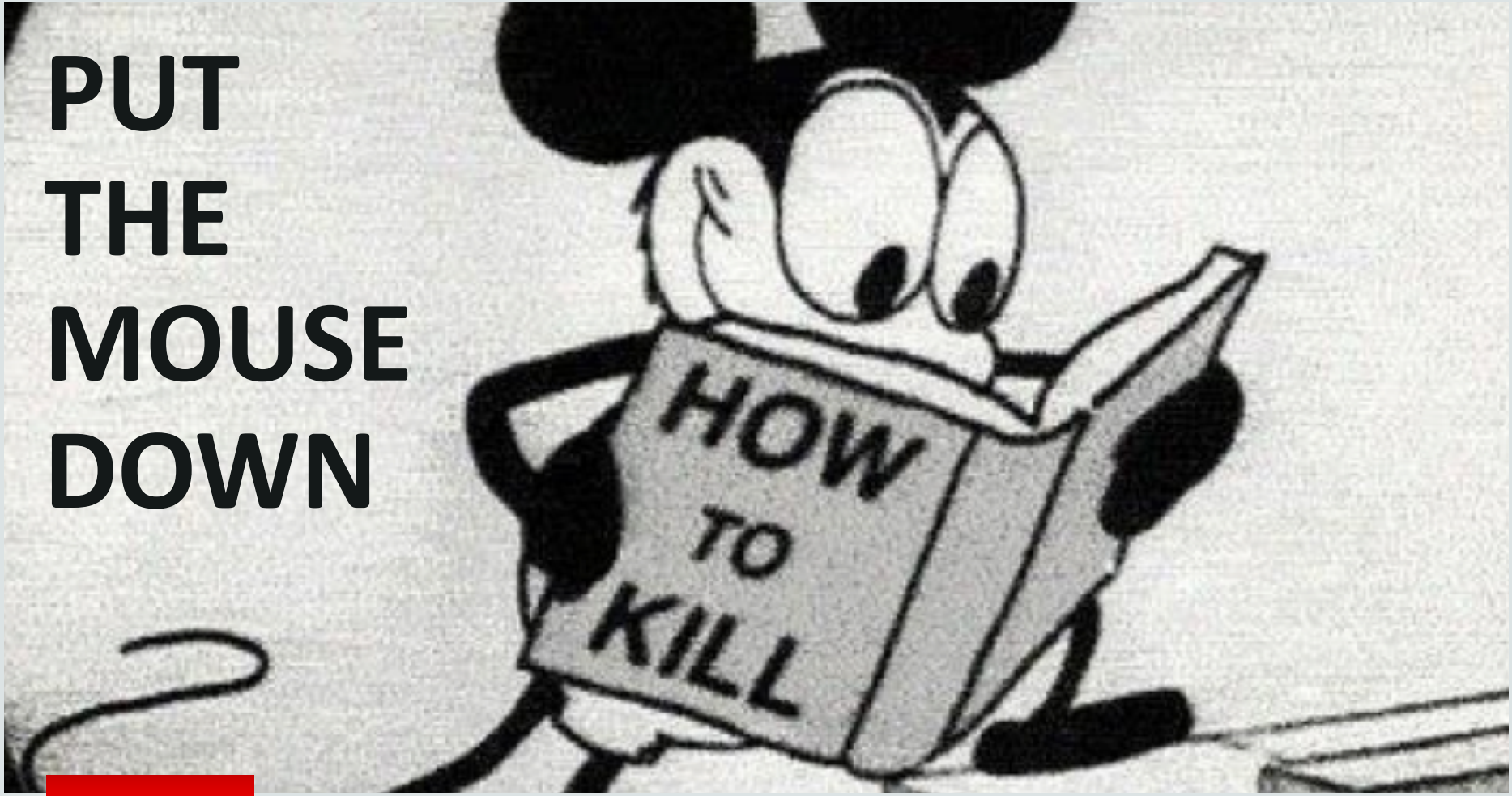
PUT THE MOUSE DOWN



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7 Clicks to go from Grid to Formatted Export to Output

Oracle SQL Developer : hr

File Edit View Navigate Run Source Team Tools Window Help Automation

Worksheet | Query Builder

```
SELECT
    table_name "TABLE",
    tablespace_name "TABLESPACE",
    logging,
    num_rows,
    blocks,
    empty_blocks,
```

Query Result

All Rows Fetched: 14 in 0.335 seconds

	TABLE	TABLESPACE	LOGGING	NUM_ROWS	BLOCKS	EMPTY_BLOCKS
1	COUNTRIES	(null)	(null)	25	(null)	(null)
2	DAVE	USERS	YES	2	5	0
3	DEPARTMENTS	USERS	YES	27	5	0
4	EMPLOYEES	USERS	YES	107	5	0
5	INSERTS	USERS	YES	115	5	0
6	IPSUM	USERS	YES	1	5	0
7	ITUNES_MUSIC	USERS	YES	10229	496	0
8	JOBS	USERS	YES	19	5	0
9	JOB_HISTORY	USERS	YES	10	5	0
10	LOCATIONS	USERS	YES	23	5	0
11	MVIEW1	USERS	YES	107	5	0
12	REGIONS	USERS	YES	4	5	0
13	TABLE_BLOG_QUESTION	USERS	YES	0	0	0
14	UMLAUT	USERS	YES	4	5	0

Worksheet | Query Builder

```
"TABLE","TABLESPACE","LOGGING","NUM_ROWS","BLOCKS"
"COUNTRIES","","",25,,,15,"    N",07-JUL-16,"
"DAVE","USERS","YES",2,5,0,17,"    N",15-SEP-16,"
"DEPARTMENTS","USERS","YES",27,5,0,21,"    N",07-J
"EMPLOYEES","USERS","YES",107,5,0,69,"    N",31-AU
"INSERTS","USERS","YES",115,5,0,3,"    N",13-SEP-1
"IPSUM","USERS","YES",1,5,0,732,"    N",31-AUG-16,
"ITUNES_MUSIC","USERS","YES",10229,496,0,307,"
"JOBS","USERS","YES",19,5,0,33,"    N",07-JUL-16,"
"JOB_HISTORY","USERS","YES",10,5,0,31,"    N",07-J
"LOCATIONS","USERS","YES",23,5,0,49,"    N",07-JUL
"MVIEW1","USERS","YES",107,5,0,69,"    Y",15-SEP-1
"REGIONS","USERS","YES",4,5,0,14,"    N",07-JUL-16
"TABLE_BLOG_QUESTION","USERS","YES",0,0,0,0,"    N
"UMLAUT","USERS","YES",4,5,0,3,"    N",03-SEP-16,"
```

Messages - Log

SQL History

Saved: hr

Line 4 Column 13 | Insert | Modified | Windows: CI

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Format Query Results Directly to CSV, XML, etc

- Add Comment
- Execute via F5 (Script)
- Comment labels match grid export formatter labels
- ONLY works in SQLDev… & SQLcl ☺

```
select /*csv*/ EMPLOYEE_ID ,
FIRST_NAME ,
LAST_NAME ,
EMAIL ,
PHONE_NUMBER ,
HIRE_DATE ,
JOB_ID ,
SALARY ,
COMMISSION_PCT ,
MANAGER_ID ,
DEPARTMENT_ID from hr.employees;
```

```
"EMPLOYEE_ID","FIRST_NAME","LAST_NAME","EMAIL","PHONE_NUMBER","HIRE_DATE","JOB_ID","SALARY",
198,"Donald","OConnell","DOCONNEL","650.507.9833",12-FEB-77,"SH_CLERK",2600,,124,50
199,"Douglas","Grant","DGRANT","650.507.9844",29-JAN-13,"SH_CLERK",2600,,124,50
200,"Jennifer","Whalen","JWHALEN","515.123.4444",16-SEP-87,"AD_ASST",4400,,101,10
201,"Michael","Hartstein","MHARTSTE","515.123.5555",16-FEB-96,"MK_MAN",13000,,100,20
202,"Pat","Fay","PFAY","603.123.6666",16-AUG-97,"MK_REP",6000,,201,20
203,"Susan","Mavris","SMAVRIS","515.123.7777",05-SEP-96,"HR_REP",6500,,101,40
204,"Hermann","Baer","HBAER","515.123.8888",06-JUN-94,"PR_REP",10000,,101,70
205,"Shelley","Higgins","SHIGGINS","515.123.8080",06-JUN-94,"AC_MGR",12000,,101,110
```

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Format Query Results Directly to CSV, XML, etc

Version 4.1 Updates!

- SET SQLFORMAT
- JSON
- ANSICONSOLE

```
set sqlformat ansiconsole

select * from hr.employees
```

EMPLOYEE_ID	FIRST_NAME	LAST_NAME	EMAIL	PHONE_NUMBER	HIRE_DATE	JOB_ID	SALARY	COMMISSION_PCT	MANAGER_ID	DEPARTMENT_ID
198	Donald	OConnell	DOCONNEL	650.507.9833	21-JUN-99	SH_CLERK	2,600		124	50
199	Douglas	Grant	DGRANT	650.507.9844	13-JAN-00	SH_CLERK	2,600		124	50
200	Jennifer	Whalen	JWHALEN	515.123.4444	17-SEP-87	AD_ASST	4,400		101	10
201	Michael	Hartstein	MHARTSTE	515.123.5555	17-FEB-96	MK_MAN	13,000		100	20
202	Pat	Fay	PFAY	603.123.6666	17-AUG-97	MK_REP	6,000		201	20
203	Susan	Mavris	SMAVRIS	515.123.7777	07-JUN-94	HR_REP	6,500		101	40
204	Hermann	Baer	HBAER	515.123.8888	07-JUN-94	PR_REP	10,000		101	70
205	Shelley	Higgins	SHIGGINS	515.123.8080	07-JUN-94	AC_MGR	12,000		101	110
206	William	Gietz	WGIETZ	515.123.8181	07-JUN-94	AC_ACCOUNT	8,300		205	110
1,001	Jeff	Smith	jsmith	919.555.5555	19-AUG-14	SA_REP	8,400	0.2	145	80
189	Jennifer	Dilly	JDILLY	650.505.2876	13-AUG-97	SH_CLERK	3,600		122	50
190	Timothy	Gates	TGATES	650.505.3876	11-JUL-98	SH_CLERK	2,900		122	50
191	Randall	Perkins	RPERKINS	650.505.4876	19-DEC-99	SH_CLERK	2,500		122	50
192	Sarah	Bell	SBELL	650.501.1876	04-FEB-96	SH_CLERK	4,000		123	50

EMPLOYEE_ID	FIRST_NAME	LAST_NAME	EMAIL	PHONE_NUMBER	HIRE_DATE	JOB_ID	SALARY	COMMISSION_PCT	MANAGER_ID	DEPARTMENT_ID
193	Britney	Everett	BEVERETT	650.501.2876	03-MAR-97	SH_CLERK	3,900		123	50
194	Samuel	McCain	SMCCAIN	650.501.3876	01-JUL-98	SH_CLERK	3,200		123	50
195	Vance	Jones	VJONES	650.501.4876	17-MAR-99	SH_CLERK	2,800		123	50
196	Alana	Walsh	AWALSH	650.507.9811	24-APR-98	SH_CLERK	3,100		124	50
197	Kevin	Feeney	KFEENEY	650.507.9822	23-MAY-98	SH_CLERK	3,000		124	50

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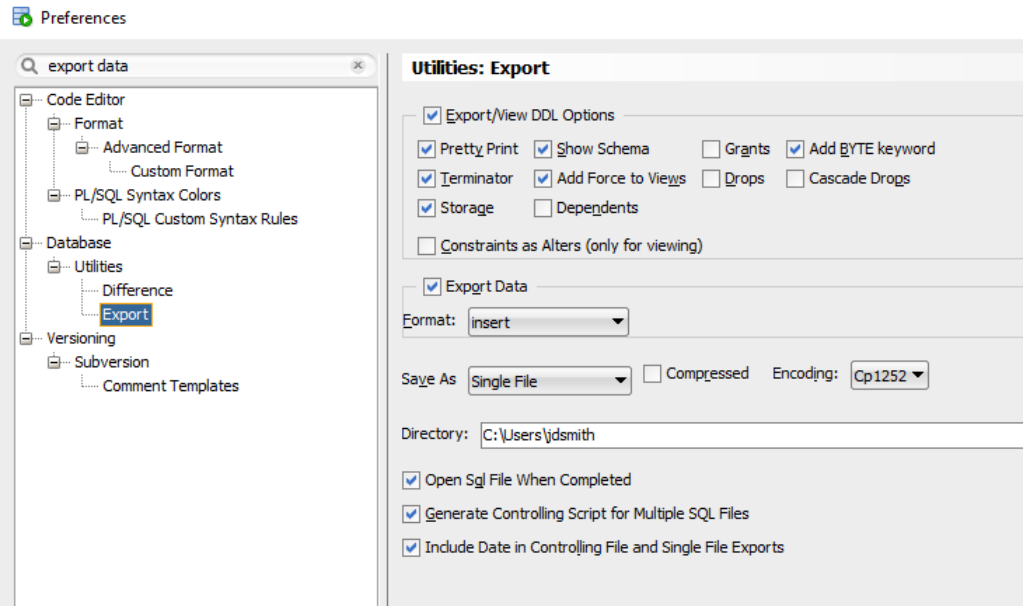
More Preferences To Consider

- Open Object on Single Click
- Display NULL As
- Export Defaults
- DDL Generation



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$200

I'll Take Potpourri for $200, Jeff

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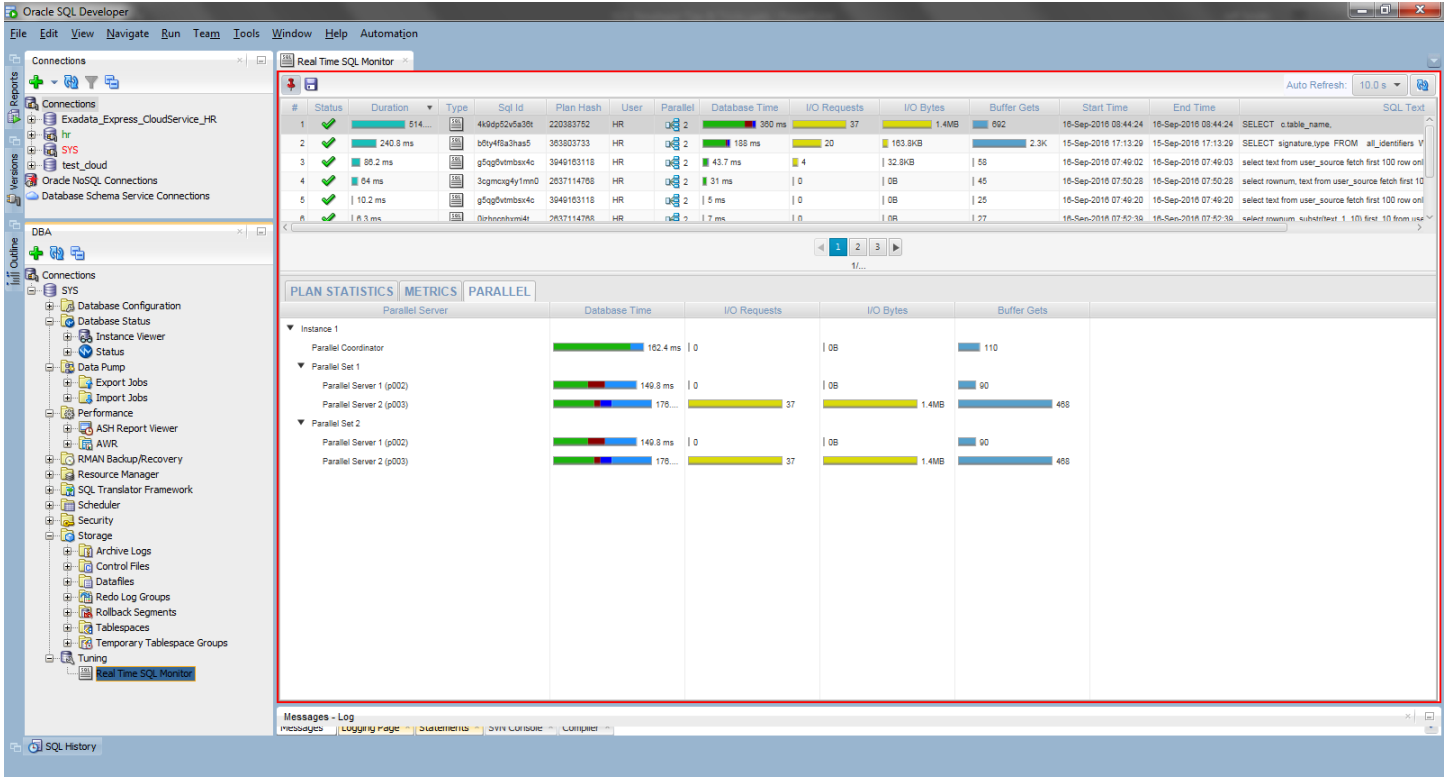
Double the functionality in SQL Developer…

- View Menu
- ‘DBA’
- Adding new things every release
- Not JUST for developers anymore



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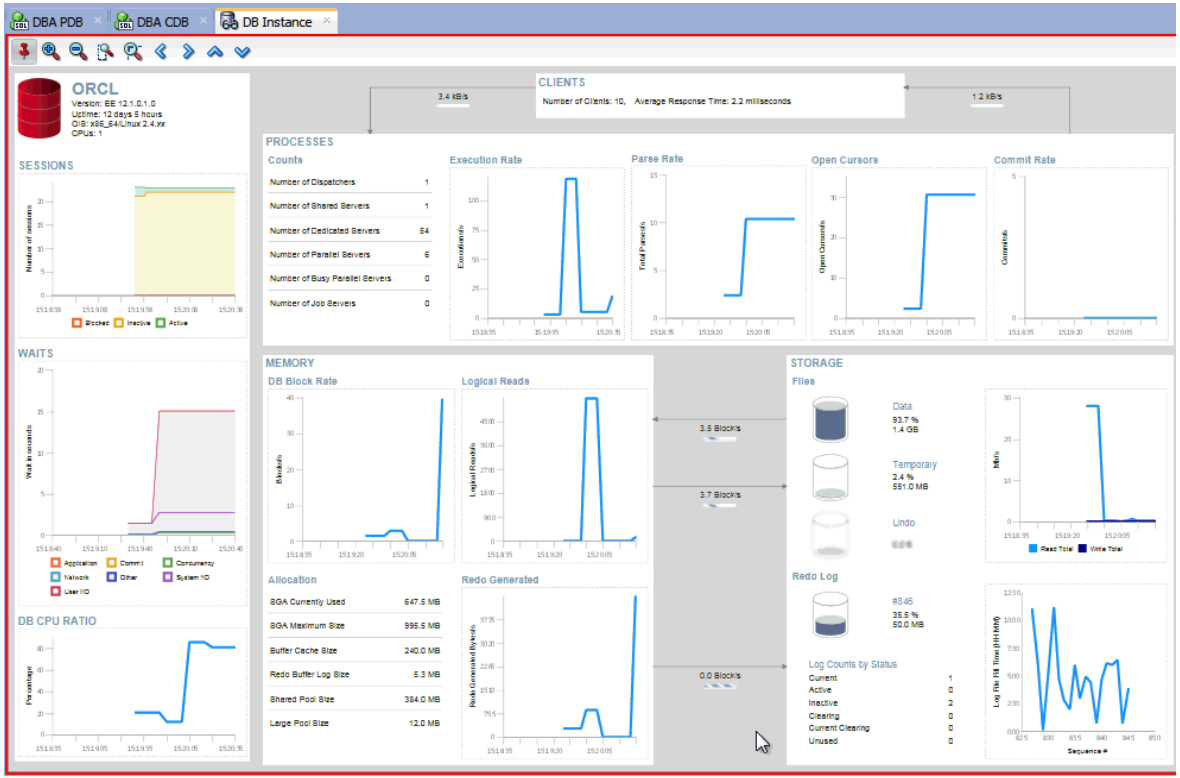
Watch Database Activity



- agent-less
- ZERO DB objects
- a ‘fancy’ report
  - no history
  - no alerts
  - drill-downs

We’re making more of these ☺

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Easy User Management

DBA

- Connections
  - hr
  - SYS
    - sys
      - Database Configuration
      - Database Status
      - Data Pump
      - Performance
      - RMAN Backup/Recovery
      - Resource Manager
      - SQL Translator Framework
      - Scheduler
      - Security
        - Audit Settings
        - Profiles
        - Roles
        - Users
      - Storage
      - Tuning
    - sys CDB

...ql* | POST peeps/ | hr | hr (Unshared) | repo | Object Count by Type | sys | Users

Actions...

	User Name	Account Status	Expiration Date	Default Tablespace
1	ADWC_USER	OPEN	(null)	USERS
2	ANONYMOUS	OPEN	(null)	SYSAUX
3	APEX_050100	OPEN	(null)	SYSAUX
4	APEX_LISTENER	OPEN	(null)	USERS
5	APEX_PUBLIC_USER	OPEN	(null)	USERS
6	APEX_REST_PUBLIC_USER	OPEN	(null)	USERS
7	DBJSON	LOCKED	(null)	USERS
8	EMULATION	OPEN	(null)	USERS
9	FLOWS_FILES	OPEN	(null)	SYSAUX
10	GERT	OPEN	(null)	USERS
11	HR	OPEN	(null)	USERS
12	HRREST	OPEN	(null)	USERS
13	HR_COPY	OPEN	(null)	USERS
14	LIMITED_PRIVS	OPEN	(null)	USERS
15	MOVEME	OPEN	(null)	USERS
16	MYDBA	OPEN	(null)	USERS
17	NORTHWIND	OPEN	(null)	USERS
18	OBE	OPEN	(null)	APEX_1981334033342723
19	ORDS_DEMO	OPEN	(null)	USERS
20	ORDS_PUBLIC_USER	OPEN	(null)	USERS
21	PDBADMIN	OPEN	(null)	USERS
22	REPO	OPEN	(null)	USERS
23	RESTFUL	OPEN	(null)	APEX_1983148280343043
24	SYS	OPEN	(null)	SYSTEM
25	SYSTEM	OPEN	(null)	SYSTEM
26	WEIRD##NAME	OPEN	(null)	USERS
27	WHY_YES_MY_NAME_IS_TH...	OPEN	(null)	USERS
28	XDBEXT	LOCKED	(null)	USERS
29	XDBPM	LOCKED	(null)	USERS
30	XFILES	OPEN	(null)	USERS
31	_	OPEN	(null)	USERS

HR

General | Roles | Sys Privs | Object Privs | Quotas | Consumer Group Privs | Proxy Users | Proxied Users | SQL

Actions...

	User Name	Profile	Default Tablespace	Temporary Tablespace	Account Status	Default Consumer Group
1	HR	DEFAULT	USERS	TEMP	OPEN	DEFAULT_CONSU

General | Roles | Sys Privs | Object Privs | Quotas | Consumer Group Privs | Proxy Users | Proxied Users | SQL

Actions...

	Role	Admin Option	Default
1	DBA	NO	YES
2	EXECUTE_CATALOG_ROLE	NO	YES
3	ROLE_MOVEME10	YES	YES
4	ROLE_MOVEME5	YES	YES
5	ROLE_MOVEME6	YES	YES
6	ROLE_MOVEME7	YES	YES
7	ROLE_MOVEME8	YES	YES

General | Roles | Sys Privs | Object Privs | Quotas | Consumer Group Privs | Proxy Users | Proxied Users | SQL

Actions...

```
1
2   CREATE USER "HR" IDENTIFIED BY VALUES 'S:74A7D802F0
3      DEFAULT TABLESPACE "USERS"
4      TEMPORARY TABLESPACE "TEMP";
5
6   GRANT "DBA" TO "HR";
7   GRANT "SELECT_CATALOG_ROLE" TO "HR";
8   GRANT "EXECUTE_CATALOG_ROLE" TO "HR";
9   GRANT "ROLE_TD" TO "HR" WITH ADMIN OPTION;
10  GRANT "ROLE_TD3" TO "HR" WITH ADMIN OPTION;
11  GRANT "ROLE_MOVEMEAGAIN" TO "HR" WITH ADMIN OPTION;
12  GRANT "ROLE_TDMOVEME4" TO "HR" WITH ADMIN OPTION;
13  GRANT "ROLE_MOVEME5" TO "HR" WITH ADMIN OPTION;
14  GRANT "ROLE_MOVEME6" TO "HR" WITH ADMIN OPTION;
15  GRANT "ROLE_MOVEME7" TO "HR" WITH ADMIN OPTION;
16  GRANT "ROLE_MOVEME8" TO "HR" WITH ADMIN OPTION;
17  GRANT "ROLE_MOVEME9" TO "HR" WITH ADMIN OPTION;
18  GRANT "ROLE_MOVEME10" TO "HR" WITH ADMIN OPTION;
```

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The Tips in Blog Format

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BY THATJEFFSMITH

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