

ORACLE APPLICATION DEVELOPMENT &
PERFORMANCE MANAGEMENT TOOL



Tip &

ORACLE APPLICATION DEVELOPMENT &
PERFORMANCE MANAGEMENT TOOL



Tip

Bind Variable

- SQL Tool Bind Query

SQL1 * |

```

1 SELECT dept.deptno,
2     dept.dname,
3     emp.empno,
4     emp.ename,
5     emp.job,
6     emp.sal
7 FROM dept, emp
8 WHERE dept.deptno = emp.deptno ;
9 |
        
```

Last Execute SQL: SELECT dept.deptno, dept.dname, emp.empno, emp.ename, emp.

Query Result | Server Output | Text Output | Explain Plan | Statistics |

	DEPTNO	DNAME	EMPNO	ENAME	JOB	SAL
1	20	RESEARCH	7369	SMITH	CLERK	800
2	30	SALES	7499	ALLEN	SALESMAN	1600
3	30	SALES	7521	WARD	SALESMAN	1250
4	20	RESEARCH	7566	JONES	MANAGER	2975
5	30	SALES	7654	MARTIN	SALESMAN	1250
6	30	SALES	7698	BLAKE	MANAGER	2850
7	10	ACCOUNTING	7782	CLARK	MANAGER	2450
8	20	RESEARCH	7788	SCOTT	ANALYST	3000
9	10	ACCOUNTING	7839	KING	PRESIDENT	5000
10	30	SALES	7844	TURNER	SALESMAN	1500

SQL1 * |

```

ECT dept.deptno,
dept.dname,
emp.empno,
emp.ename,
emp.job,
emp.sal
M dept, emp
RE dept.deptno = emp.deptno
and emp.sal > 2000 ;
        
```

SQL: SELECT dept.deptno, dept.dname, emp.empno, emp.ename, emp.

Server Output | Text Output | Explain Plan | Statistics |

	DNAME	EMPNO	ENAME	JOB	SAL
20	RESEARCH	7566	JONES	MANAGER	2975
30	SALES	7698	BLAKE	MANAGER	2850
10	ACCOUNTING	7782	CLARK	MANAGER	2450
20	RESEARCH	7788	SCOTT	ANALYST	3000
10	ACCOUNTING	7839	KING	PRESIDENT	5000
20	RESEARCH	7902	FORD	ANALYST	3000

Bind Variable

- Bind Variable List

SQL1 *

```

1 SELECT dept.deptno,
2     dept.dname,
3     emp.empno,
4     emp.ename,
5     emp.job,
6     emp.sal
7 FROM dept, emp
8 WHERE dept.deptno = emp.deptno
9     and emp.sal > :var ;
        
```

Last Execute SQL: SELECT dept.deptno, dept.dname, emp.empno, emp.ename, emp.job, emp.sal

Query Result | Server Output | Text Output | Explain Plan | Statistics

	DEPTNO	DNAME	EMPNO	ENAME	JOB	SAL
1	20	RESEARCH	7566	JONES	MANAGER	2975
2	30	SALES	7698	BLAKE	MANAGER	2850
3	10	ACCOUNTING	7782	CLARK	MANAGER	2450
4	20	RESEARCH	7788	SCOTT	ANALYST	3000
5	10	ACCOUNTING	7839	KING	PRESIDENT	5000
6	20	RESEARCH	7902	FORD	ANALYST	3000

```

deptno,
ime,
io,
ie,

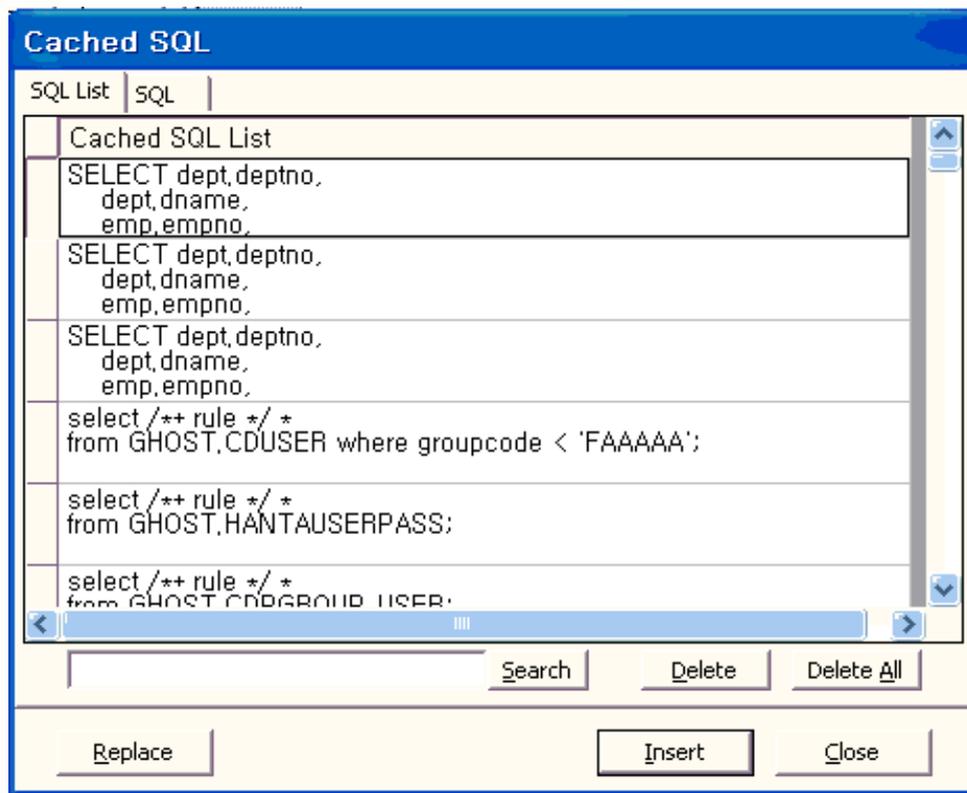
emp
deptno = emp.deptno
emp
sal > :var ;

dept.deptno, dept.dname, emp.empno, emp.ename, em
ut | Text Output | Explain Plan | Statistics |
E EMPNO ENAME JOB SAL
UNTING 7839 KING PRESIDENT 5000
        
```

Variable	Type	Value
:var	String	3000

Cached SQL

- F8 Local PC Cache SQL .
 - INSERT SQL EDITOR
- 가 .

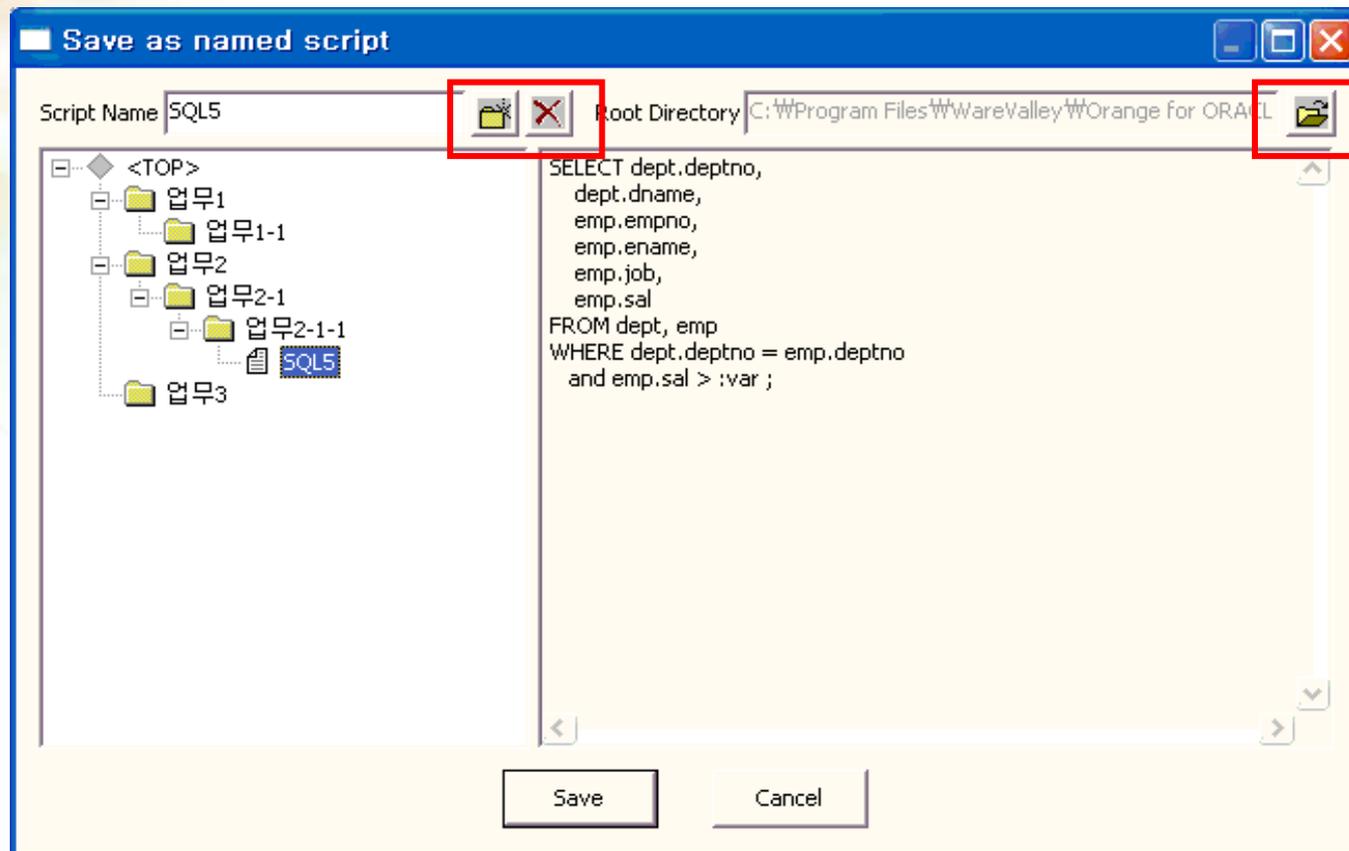


Named Script

SQL

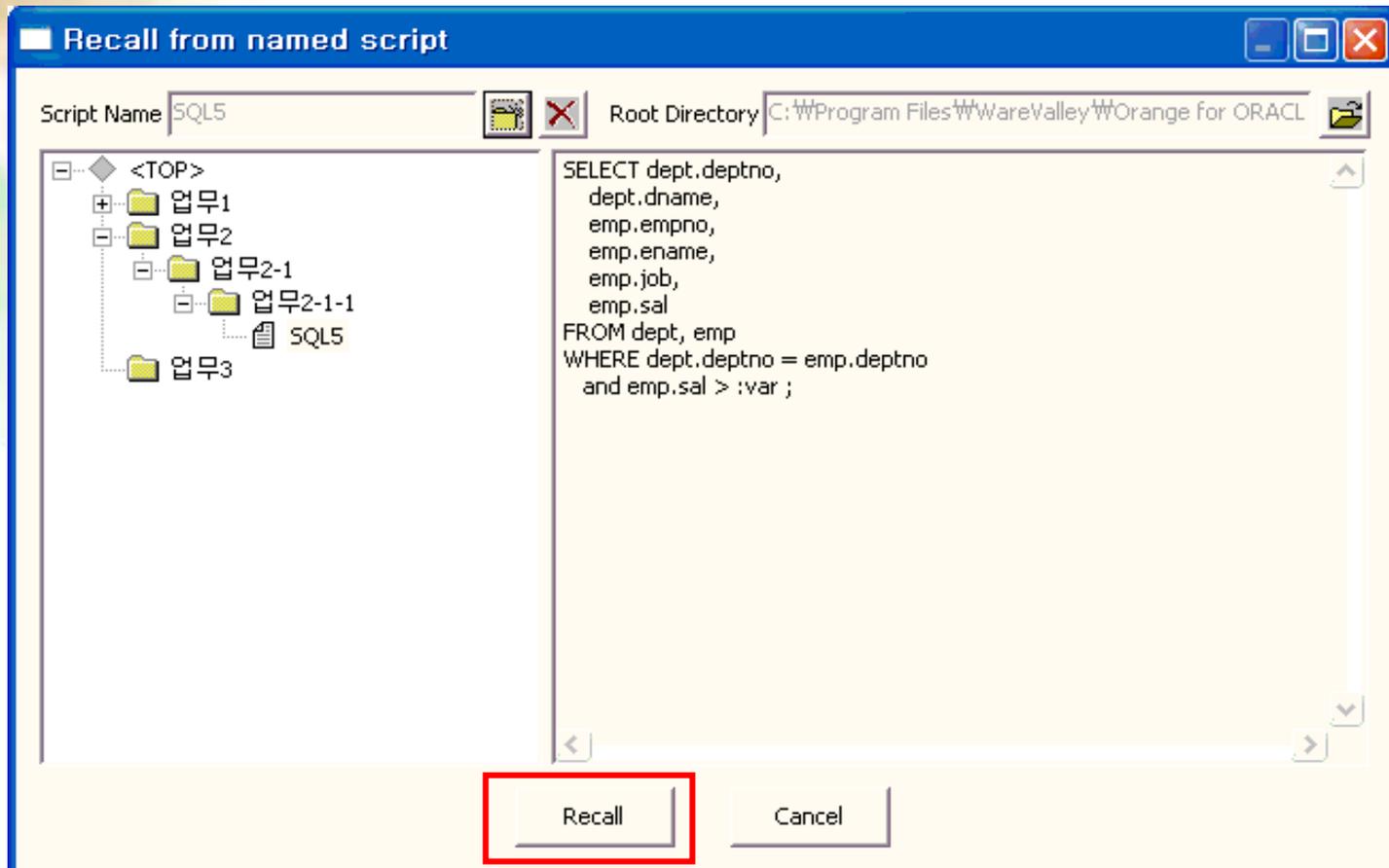
ALT+R

Named Script



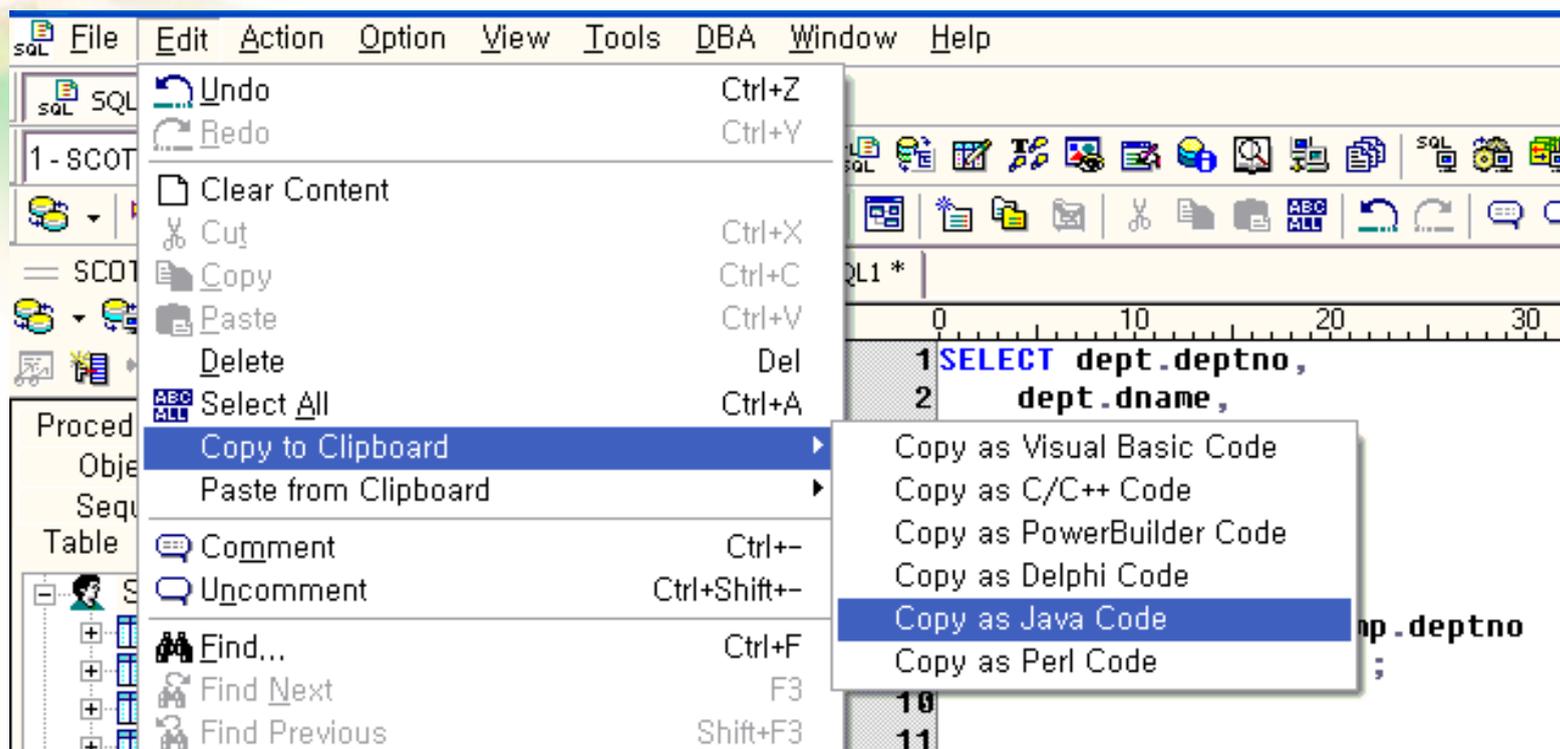
Named Script

- Named Script CTRL+R



Code conversion

- SQL Visual Basic, C/C++, PowerBuilder, Delphi, Java, Perl



The screenshot shows the Oracle SQL Developer application window. The menu bar includes File, Edit, Action, Option, View, Tools, DBA, Window, and Help. The 'Edit' menu is open, showing options like Undo, Redo, Clear Content, Cut, Copy, Paste, Delete, and Select All. The 'Copy to Clipboard' option is highlighted, and a sub-menu is displayed with the following options: Copy as Visual Basic Code, Copy as C/C++ Code, Copy as PowerBuilder Code, Copy as Delphi Code, Copy as Java Code (highlighted), and Copy as Perl Code. The background shows a SQL query editor with the following code:

```
SQL1 *  
1 SELECT dept.deptno,  
2    dept.dname,  
3  
4  
5  
6  
7  
8  
9  
10  
11
```

Code conversion

ORACLE APPLICATION DEVELOPMENT &
PERFORMANCE MANAGEMENT TOOL

Orange
by ORACLE



SQL1 *

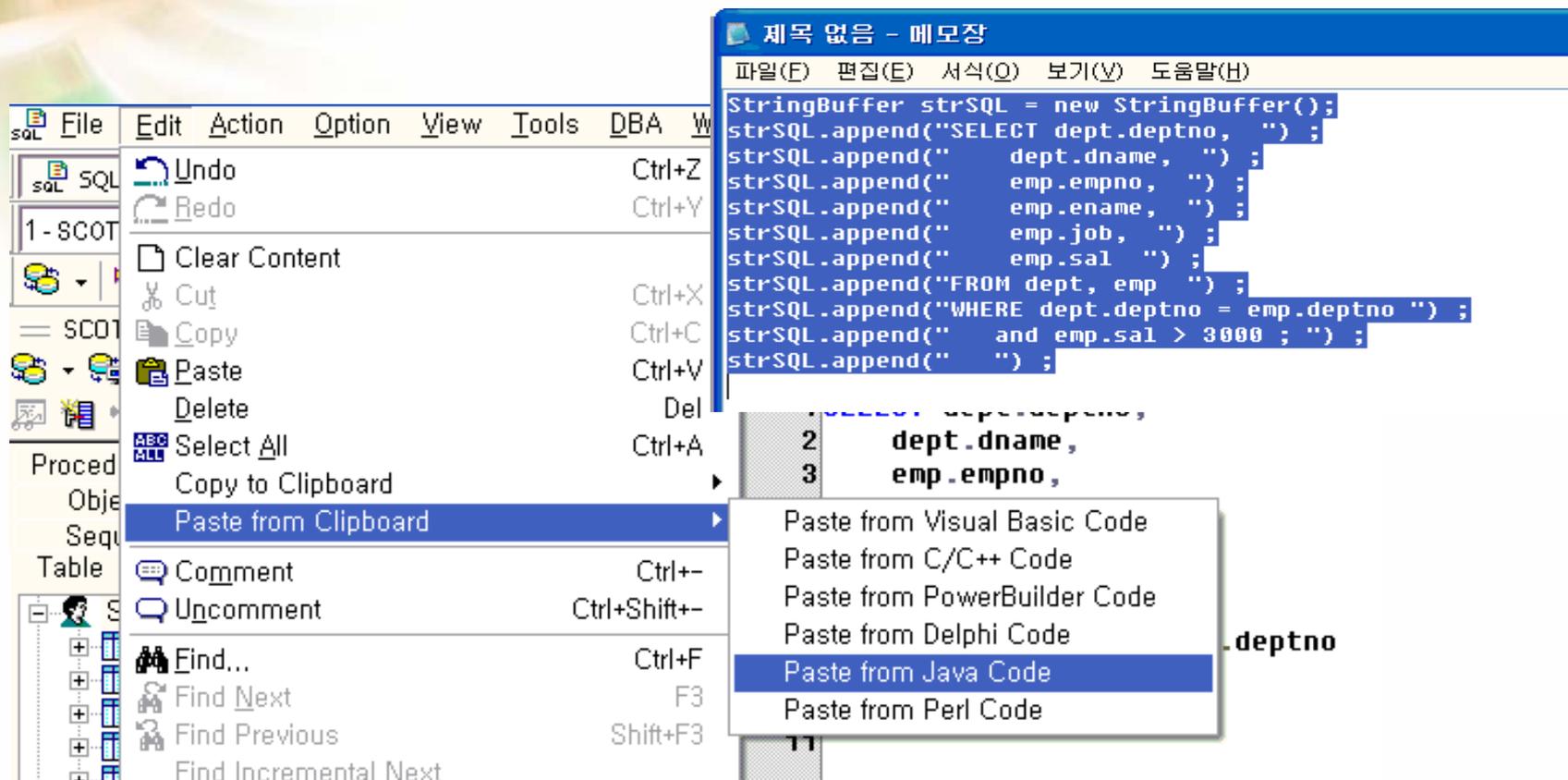
```
0 10 20 30
1 SELECT dept.deptno,
2     dept.dname,
3     emp.empno,
4     emp.ename,
5     emp.job,
6     emp.sal
7 FROM dept, emp
8 WHERE dept.deptno = emp.deptno
9     and emp.sal > 3000 ;
10
11
```

제목 없음 - 메모장

파일(F) 편집(E) 서식(O) 보기(V) 도움말(H)

```
StringBuffer strSQL = new StringBuffer();
strSQL.append("SELECT dept.deptno, ");
strSQL.append("    dept.dname, ");
strSQL.append("    emp.empno, ");
strSQL.append("    emp.ename, ");
strSQL.append("    emp.job, ");
strSQL.append("    emp.sal ");
strSQL.append("FROM dept, emp ");
strSQL.append("WHERE dept.deptno = emp.deptno ");
strSQL.append("    and emp.sal > 3000 ;");
strSQL.append(" ");
```

Code conversion



The screenshot shows the Oracle Application Developer interface. The main window displays a Java code snippet for a StringBuffer. A context menu is open over the code, and a sub-menu is open over the 'Paste from Clipboard' option, showing various code conversion options. The 'Paste from Java Code' option is highlighted.

제목 없음 - 메모장
파일(E) 편집(E) 서식(O) 보기(V) 도움말(H)

```
StringBuffer strSQL = new StringBuffer();  
strSQL.append("SELECT dept.deptno, ");  
strSQL.append("    dept.dname, ");  
strSQL.append("    emp.empno, ");  
strSQL.append("    emp.ename, ");  
strSQL.append("    emp.job, ");  
strSQL.append("    emp.sal ");  
strSQL.append("FROM dept, emp ");  
strSQL.append("WHERE dept.deptno = emp.deptno ");  
strSQL.append(" and emp.sal > 3000 ; ");  
strSQL.append(" ");
```

1 dept.deptno,
2 dept.dname,
3 emp.empno,
4 emp.ename,
5 emp.job,
6 emp.sal
7 FROM dept, emp
8 WHERE dept.deptno = emp.deptno
9 and emp.sal > 3000 ;
10 ;

11

12 deptno

File Edit Action Option View Tools DBA W
SQL SQL
1 - SCOT
SCOT
SCOT
Proced
Obj
Seq
Table
Find...
Find Next
Find Previous
Find Incremental Next

Undo Ctrl+Z
Redo Ctrl+Y
Clear Content
Cut Ctrl+X
Copy Ctrl+C
Paste Ctrl+V
Delete Del
Select All Ctrl+A
Copy to Clipboard
Paste from Clipboard
Comment Ctrl+-
Uncomment Ctrl+Shift+-
Find... Ctrl+F
Find Next F3
Find Previous Shift+F3
Find Incremental Next

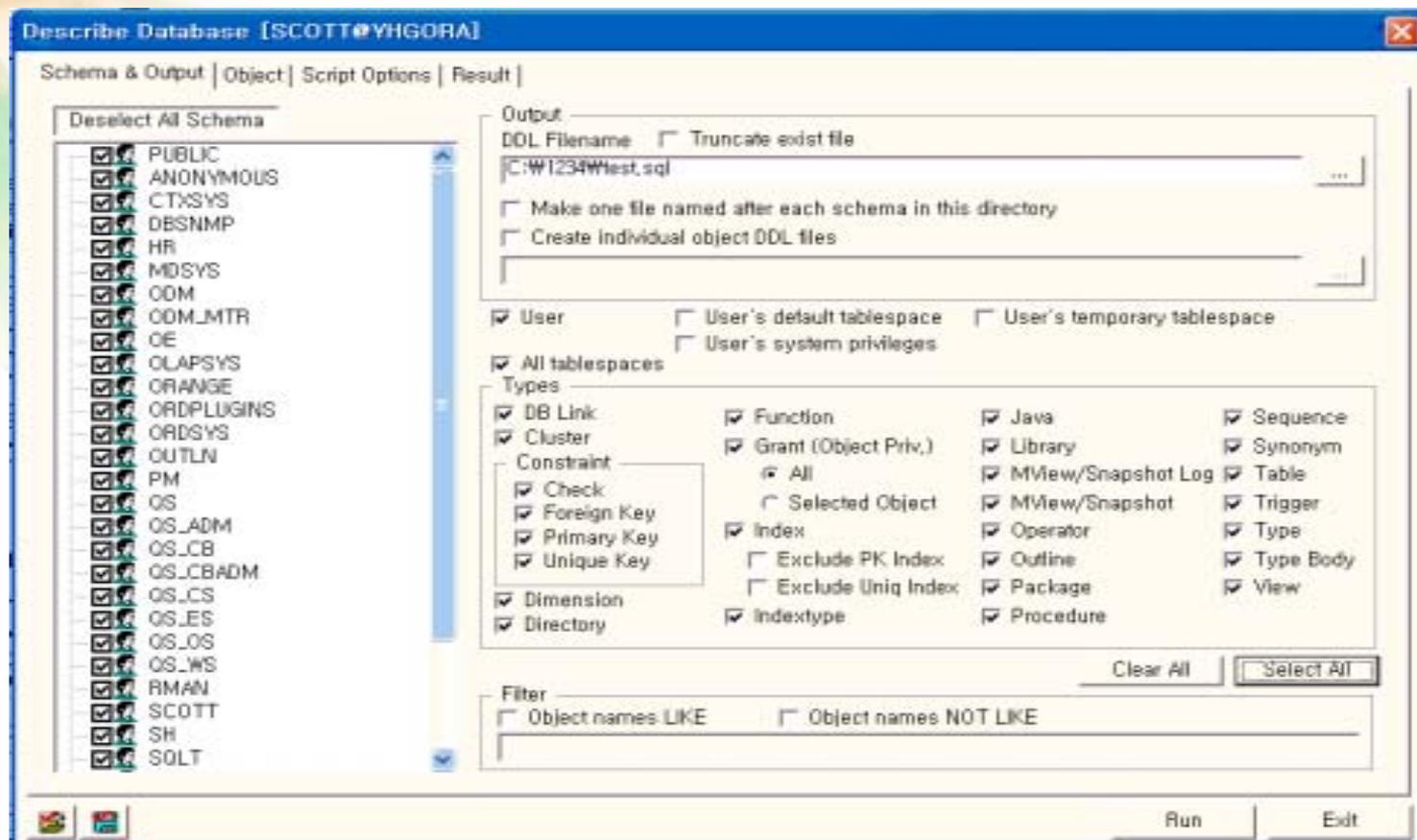
Paste from Visual Basic Code
Paste from C/C++ Code
Paste from PowerBuilder Code
Paste from Delphi Code
Paste from Java Code
Paste from Perl Code

Describe DB Objects

ORACLE APPLICATION DEVELOPMENT &
PERFORMANCE MANAGEMENT TOOL



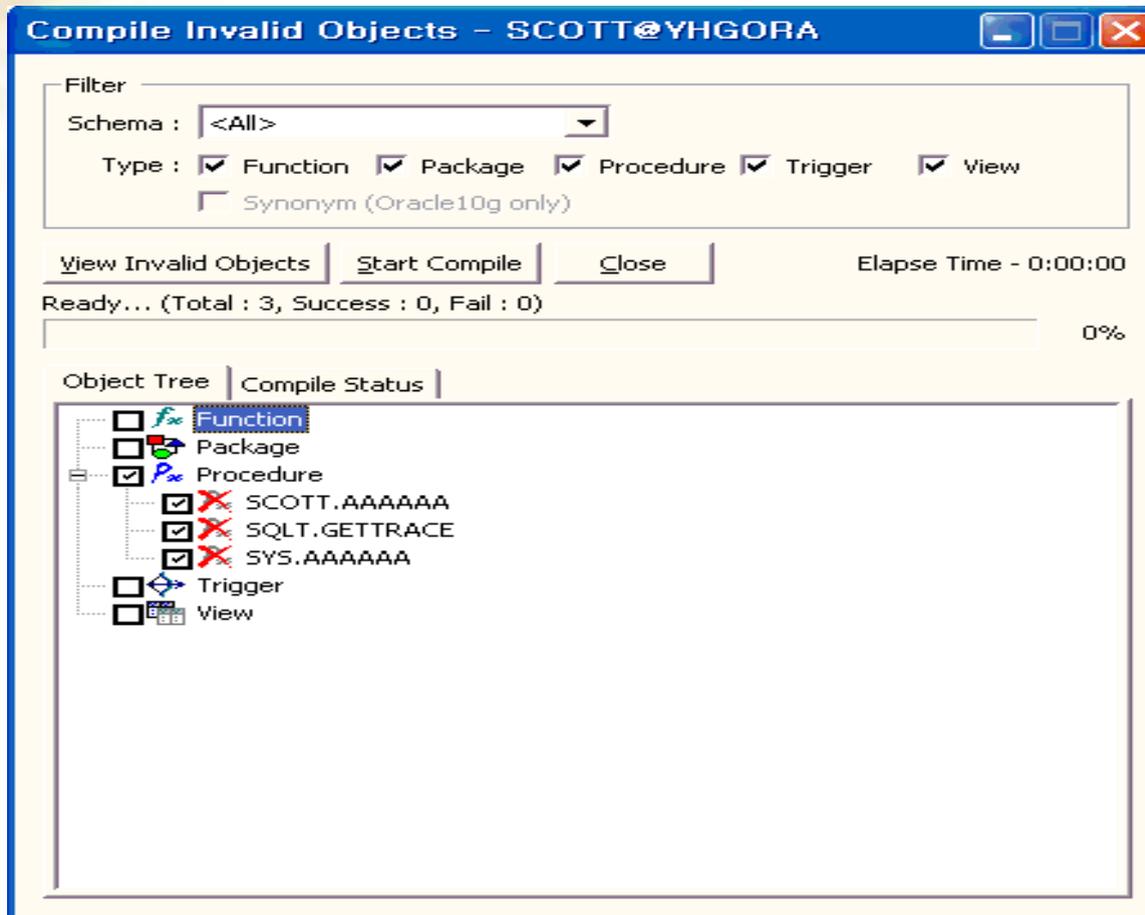
- Schema Objects Tablespace Script



Compile invalid objects

Invalid Object

Compile



The screenshot shows the 'Compile Invalid Objects' dialog box for user SCOTT@YHGORA. The 'Filter' section has 'Schema' set to '<All>' and 'Type' checked for Function, Package, Procedure, Trigger, and View, with Synonym (Oracle10g only) unchecked. The 'Elapse Time' is 0:00:00. The progress bar shows 'Ready... (Total : 3, Success : 0, Fail : 0)' at 0%. The 'Object Tree' shows a tree view with 'Function' selected, containing three items: SCOTT.AAAAAA, SQL.GETTRACE, and SYS.AAAAAA, all with red 'X' icons indicating they are invalid.

Compile Invalid Objects - SCOTT@YHGORA

Filter

Schema : <All>

Type : Function Package Procedure Trigger View
 Synonym (Oracle10g only)

View Invalid Objects Start Compile Close Elapse Time - 0:00:00

Ready... (Total : 3, Success : 0, Fail : 0) 0%

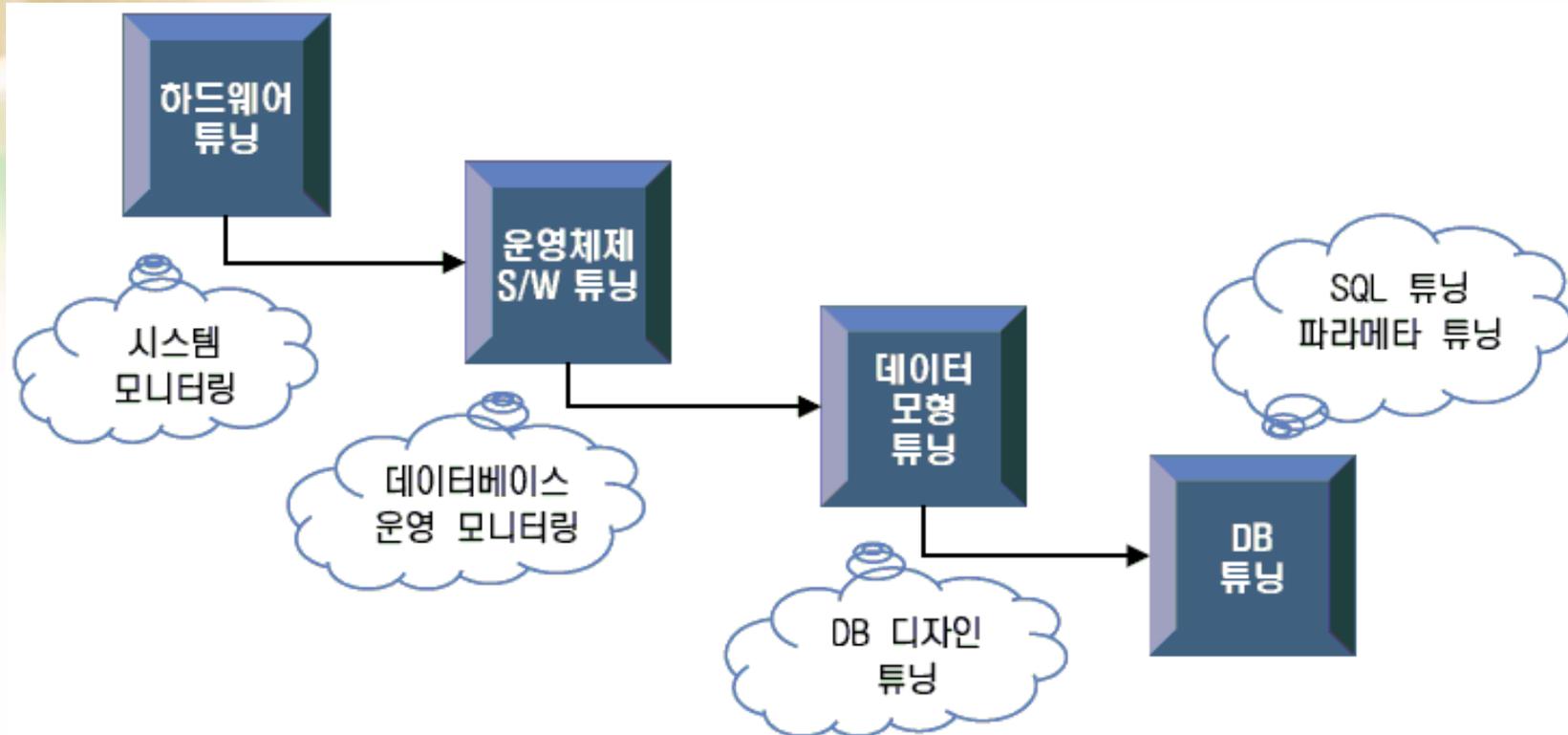
Object Tree | Compile Status

- Function
- Package
- Procedure
 - SCOTT.AAAAAA
 - SQL.GETTRACE
 - SYS.AAAAAA
- Trigger
- View

ORACLE APPLICATION DEVELOPMENT &
PERFORMANCE MANAGEMENT TOOL

OrangeTM
For ORACLE





- SQL Tuning

-

-

-

SQL

가

가

Application (SQL)

- A.
- B. SQL
- C. SQL
- D. SQL

튜닝의
최우선
대상은

“사용횟수가 많은 프로그램”
“사용자가 많이 사용하는 프로그램”
“빠른 프로그램을 더 빠르게”

Tool	
Plan Tool	SQL , ,
SQL Tool	SQL , , , , Server output
Trace Tool	Local Remote(FTP)
DBMS Information	
SQL Monitor	SQL Shared pool SQL
Session Monitor	
Health Check	DB 가
Analyze Manager	

SQL Tool

ORACLE APPLICATION DEVELOPMENT &
PERFORMANCE MANAGEMENT TOOL

Orange
for ORACLE



The screenshot shows the SQL Tool window with several annotations:

- 일괄실행 (F5)**: Points to the 'Execute All' icon (a green play button) in the toolbar.
- 현 위치부터 실행 (CTRL+M)**: Points to the 'Execute from here' icon (a green play button with a vertical line) in the toolbar.
- 순차실행 (CTRL+J)**: Points to the 'Execute sequentially' icon (a green play button with a vertical line) in the toolbar.
- 커서라인 실행 (CTRL+K)**: Points to the 'Execute at cursor' icon (a green play button with a vertical line) in the toolbar.
- 선택 실행 (CTRL+L)**: Points to the 'Execute selection' icon (a green play button with a vertical line) in the toolbar.
- 모든 탭 실행**: Points to the 'Execute all tabs' icon (a green play button with a vertical line) in the toolbar.
- SQL Tool 창**: Points to the entire SQL Tool window.

The toolbar icons are highlighted with a red box. The main text area contains the following Korean text:

순차실행 (CTRL+J) 커서라인 실행 (CTRL+K) 선택 실행 (CTRL+L) 모든 탭 실행

Below the toolbar, there is a section for 'Last Execute SQL:' and 'Query Result | Server Output | Text Output'. The status bar at the bottom shows 'Ready' and 'Ln 1, Col 1'.

SQL Tool

ORACLE APPLICATION DEVELOPMENT &
PERFORMANCE MANAGEMENT TOOL



SQL1 *

```
1 SELECT dept.deptno,  
2      dept.dname,  
3      emp.empno,  
4      emp.ename,  
5      emp.job,  
6      emp.sal  
7 FROM dept, emp  
8 WHERE dept.deptno = emp.deptno  
9      and emp.sal > 3000 ;
```

Last Execute SQL: SELECT dept.deptno, dept.dname, emp.empno,

Query Result | Server Output | Text Output | Explain Plan | Statistics |

```
2007/04/24 23:34:36 SQL> SELECT dept.deptno,  
      dept.dname,  
      emp.empno,  
      emp.ename,  
      emp.job,  
      emp.sal  
FROM dept, emp  
WHERE dept.deptno = emp.deptno  
      and emp.sal > 3000;
```

DEP	DNAME	EMPNO	ENAME	JOB	SAL
10	ACCOUNTING	7839	KING	PRESIDENT	5000

1 rows selected.

Execution Time: 00:00:00.70

Elapsed Time: 00:00:00.110

SQL Tool Options

Database	Editor	Result	Server Output
Text Output	Grid	File Save	SQL Formatter

Max. NUMBER Width(Min.

Clear Output

Never
 On Execution

Time Output

Set Time
 Set Timing

Display Limit

lines

OK

Cancel

PLAN Tool

ORACLE APPLICATION DEVELOPMENT &
PERFORMANCE MANAGEMENT TOOL



Plan Tool 실행버튼

Plan Tool 창

실행계획

스키마 정보

트레이스 실행

SQL 실행

```
SELECT STATEMENT Optimizer=CHOOSE
  NESTED LOOPS (Cost=4 Card=2 Bytes=42)
    TABLE ACCESS (BY INDEX ROWID) OF 'EMP' (Cost=2 Card=2 Bytes=20)
      INDEX (RANGE SCAN) OF 'IX_ENAME' (NON-UNIQUE) (Cost=1 Card=2)
    TABLE ACCESS (BY INDEX ROWID) OF 'DEPT' (Cost=1 Card=4 Bytes=44)
      INDEX (UNIQUE SCAN) OF 'PK_DEPT' (UNIQUE) (Card=4)
```

PLAN Tool

ORACLE APPLICATION DEVELOPMENT &
PERFORMANCE MANAGEMENT TOOL



The screenshot shows the Oracle PLAN tool interface. The main window displays a SQL query and its execution plan. A red box highlights the 'TABLE ACCESS (BY INDEX ROWID) OF 'DEPT'' step in the plan, with a red arrow pointing to it and the text 'Double Click'. The 'Table Information' window is open, showing details for the DEPT table.

DEPT 테이블 정보

DEPT

Rows-5
Empty Blocks-6
Chain Count-8
Avg Space Freelist Blocks-7,975
Sample Size-5
Partitioned=NO

Blocks-1
Avg Space-7,975
Avg Row Length-23
Freelist Blocks-1
Last Analyze=2004/05/18

Column Name	Nullable	Column Type	Distinct	Bucket
DEPTNO	NOT NULL	NUMBER(2)	5	
DNAME		VARCHAR2(14)	5	
LOC		VARCHAR2(13)	5	

INDEX

PK_DEPT : DEPTNO
Type=NORMAL, Uniq=YES, Distinct=5, Rows=5, Last Analyze=2004/05/18

SELECT STATEMENT Optimizer=CHOOSE

NESTED LOOPS (Cost=2 Card=1 Bytes=50)

TABLE ACCESS (BY INDEX ROWID) OF 'EMP' (Cost=1 Card=1 Bytes=50)

INDEX (UNIQUE SCAN) OF 'PK_EMP' (UNIQUE) (Card=1)

TABLE ACCESS (BY INDEX ROWID) OF 'DEPT' (Cost=1 Card=5 Bytes=90)

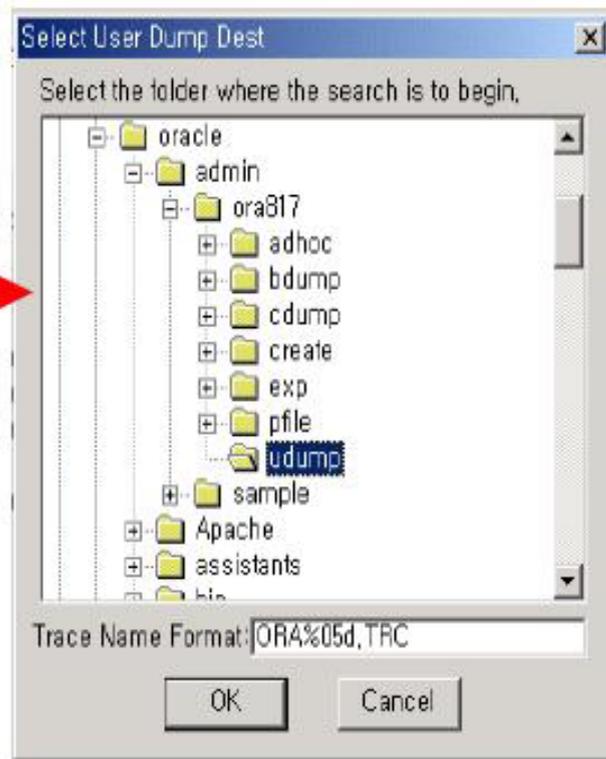
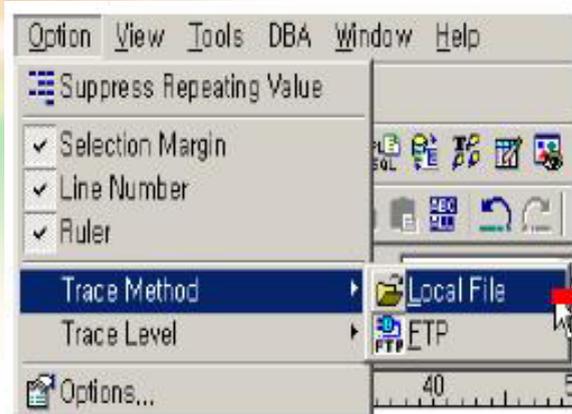
INDEX (UNIQUE SCAN) OF 'PK_DEPT' (UNIQUE) (Card=5)

Ln 4, Col 19 0.05 sec.

PLAN Tool

ORACLE APPLICATION DEVELOPMENT &
PERFORMANCE MANAGEMENT TOOL

Orange
for ORACLE



- DBMS가 **Local**인 경우
- **udump** 폴더가 공유
- 원격 파일 시스템 접근 가능

PLAN Tool

ORACLE APPLICATION DEVELOPMENT &
PERFORMANCE MANAGEMENT TOOL



The screenshot shows the Orange tool interface with a SQL query and its execution trace. The query is:

```
1 select *
2 from emp e, dept d
3 where e.deptno = d.deptno
4 and e.empno = 7369
```

The trace results are as follows:

Call	Count	CPU Time	Elapsed Time	Disk	Query	Current	Rows
Parse	1	0.00	0.00	0	0	0	0
Execute	1	0.00	0.00	0	0	0	0
Fetch	2	0.01	0.02	2	4	0	1
Total	4	0.01	0.02	2	4	0	1

Elapsed Time for Client(sec.): 0.02
Misses in library cache during parse: 1
Optimizer goal: RULE
Parsing user: SCOTT (10=20)

Rows	Row Source Operation
0	STATEMENT
1	NESTED LOOPS
1	TABLE ACCESS BY INDEX ROWID EMP
1	INDEX UNIQUE SCAN OF PK_EMP (UNIQUE)
1	TABLE ACCESS BY INDEX ROWID DEPT
1	INDEX UNIQUE SCAN OF PK_DEPT (UNIQUE)

1 rows selected | Ln: 4, Col: 19 | 0 sec.

Trace 결과 탭

Trace Tool

ORACLE APPLICATION DEVELOPMENT &
PERFORMANCE MANAGEMENT TOOL

Orange
for ORACLE



Orange - [SQL Trace Mew:SCOTT@HP817]

Trace

- Local Trace
- FTP Trace
- Refresh Trace
- Cancel Work

FTP Login Information

Server Name: 192.168.100.201

User Name: oracle8i

Password: *****

Port #: 21

Passive Mode

OK Cancel

FTP Browser

Current Directory : /home/oracle8i/admin/ORA816/udump

File Name	Size	Date	Owner	Permission
.	49,152	2002/10/02 01:33	oracle8i	drwxr-xr-x
..	4,096	2002/03/29 00:00	oracle8i	drwxr-xr-x
ora_22816.trc	4,096	2002/04/25 06:48	oracle8i	drwxr-xr-x
trace	4,096	2002/01/18 00:00	oracle8i	drwxr-xr-x
a.trc	389,170	2002/05/06 01:25	oracle8i	-rwe-r--
a.txt	20,284	2002/03/28 00:00	oracle8i	-rwe-r--
export.dmp	372,482,....	2002/04/25 13:11	oracle8i	-rwe-r--
ora_10009.trc	599	2002/08/28 08:57	oracle8i	-rwe-----
ora_10070.trc	571	2002/08/28 09:07	oracle8i	-rwe-----
ora_10097.trc	599	2002/08/28 09:14	oracle8i	-rwe-----
ora_10350.trc	4,904	2002/08/02 19:14	oracle8i	-rwe-----
ora_10429.trc	3,693	2002/08/05 03:33	oracle8i	-rwe-----
ora_11276.trc	2,884	2002/07/26 11:12	oracle8i	-rwe-----
ora_11311.trc	2,884	2002/07/26 11:14	oracle8i	-rwe-----
ora_11423.trc	1,728	2002/09/30 05:28	oracle8i	-rwe-----
ora_11683.trc	5,525	2002/04/09 00:00	oracle8i	-rwe-----
ora_11753.trc	586	2002/08/01 07:31	oracle8i	-rwe-----
ora_11771.trc	613	2002/08/01 07:33	oracle8i	-rwe-----
ora_11887.trc	600	2002/06/24 09:58	oracle8i	-rwe-----
ora_11916.trc	599	2002/06/24 10:00	oracle8i	-rwe-----

Open Remote Trace File via FTP

Trace Tool

ORACLE APPLICATION DEVELOPMENT &
PERFORMANCE MANAGEMENT TOOL



Creation file : 2002/04/23 17:45:00
Trace file : C:\oracle\ADMIN\ORADUMP\ORAD1248.TRC

select * from users where rownum < 100

Phase	Count	Elap. Time	Elapsed Time	Disk	Query	Current	Rows
10 Parse	1	0.01	0.10	0	0	0	0
11 Execute	1	0.00	0.00	0	0	0	0
12 Fetch	11	0.05	0.00	0	16	12	91
13							
14 Total	10	0.06	0.25	0	16	12	91
15							
16 Elapsed time for client(sec.): 0.51							
17 Misses in library cache during parse: 0							
18 Optimizer goal: CHOICE							
19 Parsing user: JOANN (10-AN)							
20							
Rows	Row Source	Operation					
23	0	STATEMENT					
24	00	COUNT STOPKEY					
25	00	TABLE ACCESS FULL USERS					
26							
Wait Event	Wait (sec)	Count					
27 SQL*Net message to client	0.00	11					
28 SQL*Net message from client	0.03	11					
29 SQL*Net more data to client	0.00	1					
30							
31 Total	0.03	23					
32							

Displaying lines 1500
Ready

트레이스 생성 정보

실행 SQL 문

SQL 수행 통계 정보

SQL 실행 계획

Wait 발생 내역

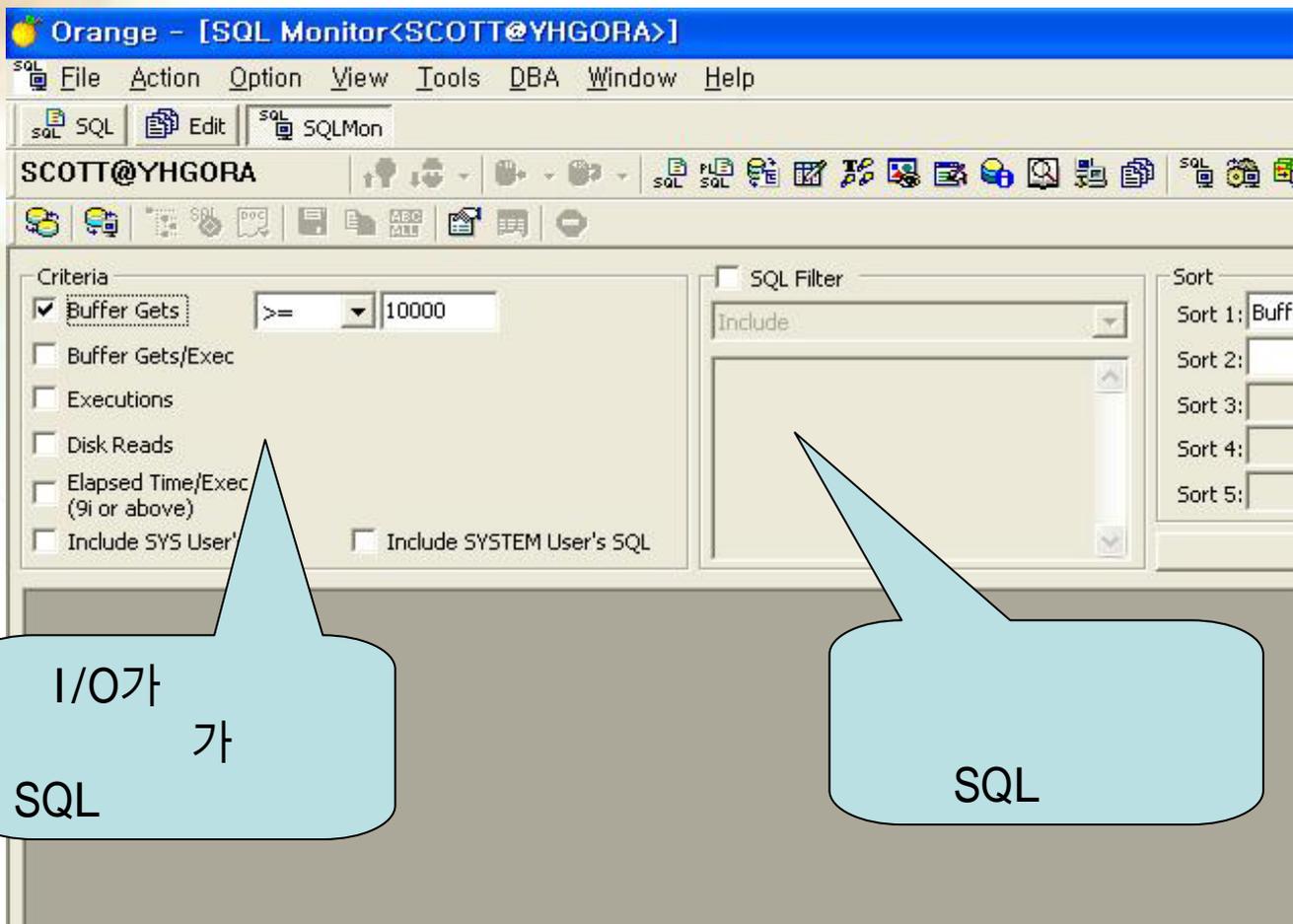
Trace Tool _

ORACLE APPLICATION DEVELOPMENT &
PERFORMANCE MANAGEMENT TOOL



Parse > 1	SQL
Parse=Execute=Fetch	rows
Parse=1, Execute=Fetch=10	SQL 10 :select... into...
Parse=Execute=1, Fetch=10	SQL 10
Fetch=10, Rows=200	20 Array Processing
CPU Elapsed	,
Rows CPU	(SQL)
rows	SQL
disk, query, current	

SQL Monitor



Orange - [SQL Monitor<SCOTT@YHGORA>]

File Action Option View Tools DBA Window Help

SQL Edit SQLMon

SCOTT@YHGORA

Criteria

- Buffer Gets >= 10000
- Buffer Gets/Exec
- Executions
- Disk Reads
- Elapsed Time/Exec (9i or above)
- Include SYS User's
- Include SYSTEM User's SQL

SQL Filter

Include

Sort

- Sort 1: Buff
- Sort 2:
- Sort 3:
- Sort 4:
- Sort 5:

I/O가 가 SQL

SQL

SQL Monitor

ORACLE APPLICATION DEVELOPMENT &
PERFORMANCE MANAGEMENT TOOL

Orange
for ORACLE



Orange - [SQL Monitor<SYS@HP817>]

File Action Option View Tools DBA Window Help

SQLMon SQL SessList PL/SQL

SYS@HP817

Criteria

- Buffer Gets
- Buffer Gets/Exec
- Executions
- Disk Reads
- Include SYS User's SQL
- Include SYSTEM User's SQL

User	Buffer Gets	Executions	Ratio	Disk Reads	Rows
1 SCOTT	0				

Find...
Select All
Copy
Copy As HTML Syntax
Copy/Save with Header
Copy/Save with Line Number
Print Setup...
Print Grid...
Save/Show grid as a excel file...
Save Grid...
Fix Column
UnFix Column
Refresh Top SQL List F5
Cancel Operation Ctrl+Break
Explain Plan
Sessions Using This SQL
Options...

Orange - [Plan Tool:SYS@HP817/]

File Edit Action Option View Tools DBA Window Help

SQLMon SQL SessList PL/SQL Plan

4 - SYS@HP817

Parsing Schema: SCOTT Refresh Optimizer Mode: <DEFAULT>

Original

```
1 select * from emp where empno > 1000
```

Plan Plan Plan Schema Trace Result

- SELECT STATEMENT Optimizer=CHOOSE
 - TABLE ACCESS (FULL) OF 'SCOTT.EMP' (Cost=1 Card=14 Bytes=448)

Session Monitor

ORACLE APPLICATION DEVELOPMENT &
PERFORMANCE MANAGEMENT TOOL



The screenshot shows the Oracle Session Monitor interface. The main window displays a table of active sessions. The selected session (SID 81, Serial# 269) is highlighted in blue. Below the table, a text box contains the label "Session List". At the bottom, a SQL query is displayed in a text area, with a text box below it containing the Korean text "해당 세션이 사용했던 Current SQL".

UserName	SID	Serial#	SPID	O/S User	Command	Status	Event	Machine	N
SYS	76	365	14675	pjlee	UNKNOWN	INACTIVE	SQL+Net m...	ORSOLUTIONS\WPJLEE	0
SYS	83	236	14714	pjlee	UNKNOWN	INACTIVE	SQL+Net m...	ORSOLUTIONS\WPJLEE	0
SYS	82	32	14691	pjlee	UNKNOWN	INACTIVE	SQL+Net m...	ORSOLUTIONS\WPJLEE	0
SYS	81	269	16501	jhhwang	SELECT	ACTIVE	SQL+Net m...	WAREVALLEY\WJHHW...	0
SYS	77	57	16458	jhhwang	UNKNOWN	INACTIVE	SQL+Net m...	WAREVALLEY\WJHHW...	0
SYS	84	67	14698	pjlee	UNKNOWN	INACTIVE	SQL+Net m...	ORSOLUTIONS\WPJLEE	0
SYS	86	120	14967	pjlee	UNKNOWN	INACTIVE	SQL+Net m...	ORSOLUTIONS\WPJLEE	0
SCOTT	42	1060	14045	jhhwang	UNKNOWN	INACTIVE	SQL+Net m...	WAREVALLEY\WJHHW...	0

Session List

```
SELECT /*+ ordered use_hash(s t) */ sql_text FROM v$session s, v$sqltext_with_newlines t WHERE s.sid = :sid AND s.serial# = :serial AND s.sql_address = t.address AND s.sql_hash_value = t.hash_value ORDER BY piece
```

해당 세션이 사용했던 Current SQL

Total:0 Active:1

Session Monitor

ORACLE APPLICATION DEVELOPMENT &
PERFORMANCE MANAGEMENT TOOL

Orange
for ORACLE

The image displays two instances of the Orange Session Monitor application. The left window shows a table of sessions with columns: Username, SID, Serial#, SPID, O/S User, Command, Status. The right window shows a similar table with a red box around the SCOTT user and a red arrow pointing to the SQL Trace menu option.

Username	SID	Serial#	SPID	O/S User	Command	Status
SYS	77	57	16458	jhhwang	UNKNOWN	INACTIVE
SYS	81	271	16523	jhhwang	SELECT	ACTIVE
jhhwang				jhhwang	UNKNOWN	INACTIVE

Username	SID	Serial#	SPID	O/S User
SYS	77	57	16458	jhhwang
SYS	81	271	16523	jhhwang
SCOTT	42	1060	14045	jhhwang

SQL Trace menu options:

- Level 1 - Default
- Level 4 - Bind Values
- Level 6 - Waits
- Level 12 - Bind Values And Waits

Session Monitor

ORACLE APPLICATION DEVELOPMENT &
PERFORMANCE MANAGEMENT TOOL



Orange - [Session Monitor<SYS@HP817>]

File Action Option View Tools DBA Window Help

SessMon

SYS@HP817

UserName	SID	Serial#	SPID	O/S
SYS	77	57	16458	jhhwa
SYS	81	271	16523	jhhwa
SCOTT	42	1060	14045	jhhwa

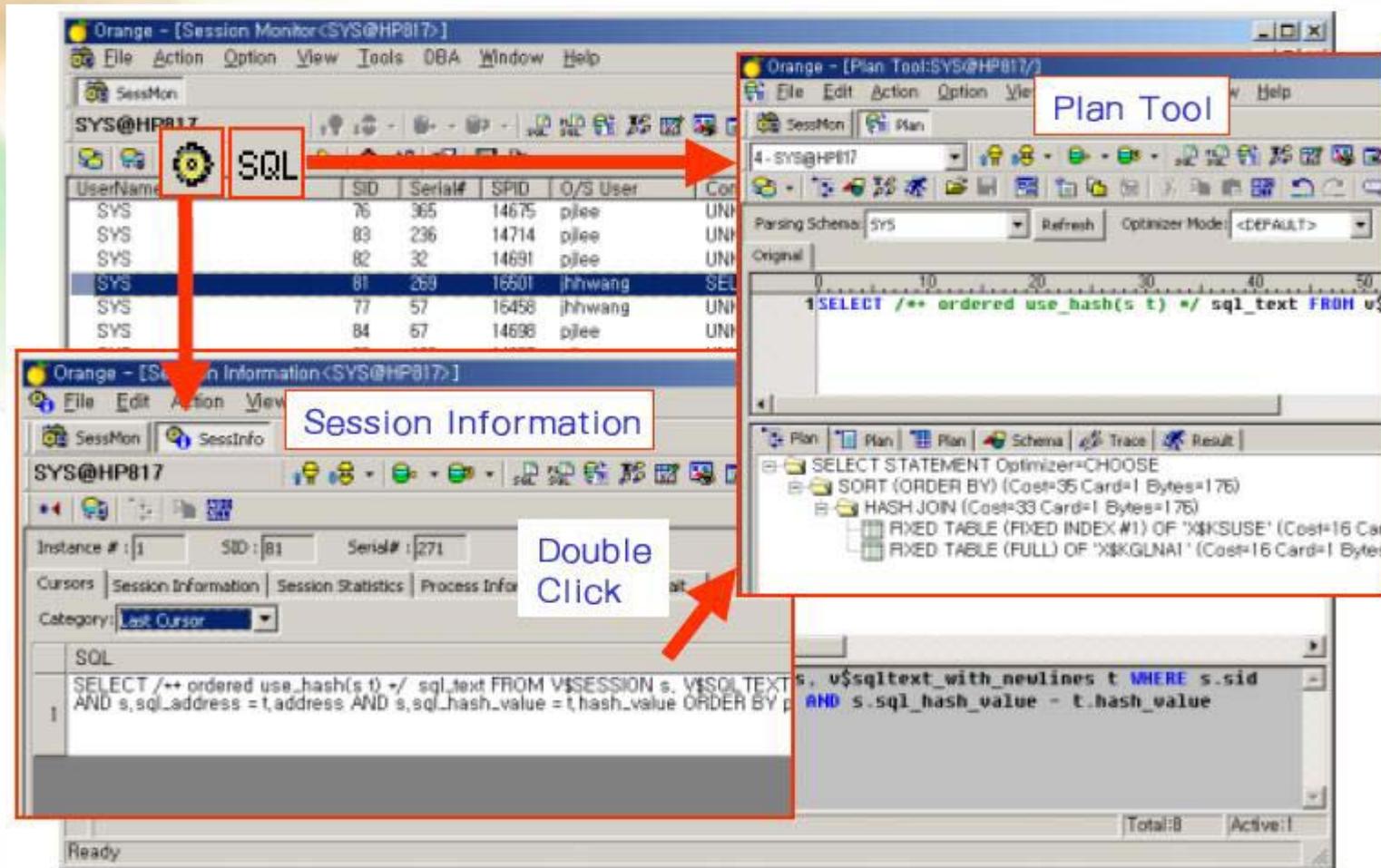
Trace Tool : FTP

FTP Browser

Current Directory :
|oracle|oracle3i|admin|ORA817|udump

File Name	Size	Date	Owner
.	2,048	2004/06/22 16:36	oracle8i
..	2,048	2004/03/10 18:08	oracle8i
ora_11851_ora817.trc	71,008,337	2004/05/31 21:04	oracle8i
ora_14045_ora817.trc	4,739	2004/06/23 11:35	oracle8i
ora_14996_ora817.trc	567	2004/06/02 10:35	oracle8i
ora_15939_ora817.trc	606	2004/06/15 14:46	oracle8i
ora_19706_ora817.trc	10,521	2004/06/04 11:40	oracle8i
ora_2047_ora817.trc	2,771	2004/06/09 15:17	oracle8i
ora_2049_ora817.trc	2,181	2004/06/09 15:17	oracle8i
ora_2076_ora817.trc	157,352	2004/06/09 15:32	oracle8i
ora_21842_ora817.trc	332,871	2004/05/21 21:20	oracle8i
ora_24159_ora817.trc	4,873	2004/05/25 11:25	oracle8i
ora_24459_ora817.trc	3,918	2004/05/25 13:19	oracle8i
ora_24462_ora817.trc	10,059	2004/05/25 13:21	oracle8i
ora_25394_ora817.trc	1,945	2004/05/25 16:14	oracle8i
ora_2583_ora817.trc	565	2004/04/20 10:50	oracle8i
ora_2660_ora817.trc	6,028	2004/05/13 15:00	oracle8i
ora_2918_ora817.trc	140,104	2004/05/13 15:17	oracle8i
ora_29286_ora817.trc	567	2004/06/08 13:45	oracle8i

Session Monitor



The screenshot illustrates the workflow in the Oracle Session Monitor and Plan Tool. It shows three windows:

- Session Monitor:** Displays a table of active sessions. A red box highlights the 'SQL' column, and a red arrow points from it to the Plan Tool window.
- Plan Tool:** Shows the execution plan for the selected SQL statement. A red box highlights the 'Plan Tool' title bar. The execution plan includes:
 - SELECT STATEMENT Optimizer=CHOOSE
 - SORT (ORDER BY) (Cost=35 Card=1 Bytes=176)
 - HASH JOIN (Cost=33 Card=1 Bytes=176)
 - FIXED TABLE (FIXED INDEX #1) OF 'X\$KSUSE' (Cost=16 Card=1 Bytes=176)
 - FIXED TABLE (FULL) OF 'X\$KGLN1' (Cost=16 Card=1 Bytes=176)
- Session Information:** Shows detailed information for a selected session. A red box highlights the 'Session Information' title bar. The 'SQL' section shows the full SQL text:

```
SELECT /*+ ordered use_hash(s t) */ sql_text FROM V$SESSION s, V$SQL_TEXT t
AND s.sql_address = t.address AND s.sql_hash_value = t.hash_value ORDER BY p
```

Red arrows indicate the flow: from the 'SQL' column in the Session Monitor to the Plan Tool, and from the Plan Tool to the Session Information window. A red box labeled 'Double Click' points to the 'SQL' section in the Session Information window.

Analyzer

ORACLE APPLICATION DEVELOPMENT &
PERFORMANCE MANAGEMENT TOOL

Orange
for ORACLE



Orange - [Analyze Manager<SCOTT@YHGORA>]

File View Tools DBA Window Help

Analyze

SCOTT@YHGORA

Schema: SCOTT

Analyzing Scope

- All objects in this schema
- Objects which have been analyzed
- Objects Elapsed days or more since last analysis
- Objects which are not analyzed yet

SCOTT

- Tables
- Indexes
- Clusters

Analyze Type

- Compute statistics
- Estimate statistics
- Auto-Determine Compute/Estimate
- Delete statistics
- Validate Ref Update
- Validate Structure
- List Chained Rows

Sample

Rows
 %

- Set Dangling To Null
- Cascade
- Into Table

For (Tables Only)

- Table
- All Columns
- All Indexed Columns
- All Indexes
- All Local Indexes

Histogram (Columns only)

Bucket Size

Parallel Analyze (8 or above, Tables Only)

Parallel Degree

Analyze Output | All Statistics Information

Analyzer

ORACLE APPLICATION DEVELOPMENT &
PERFORMANCE MANAGEMENT TOOL



Analyze Type

- Compute statistics
- Estimate statistics
- Auto-Determine Compute/Estimate Setting...
- Delete statistics
- Validate Ref Update
- Validate Structure
- List Chained Rows

Sample

1064 Rows %

Set Dangling To Null

Cascade

Into Table

- Compute Statistics
 -
- Estimate Statistics
 -
- Validate Ref update
 - Ref
- Validate Structure
 - , , , Ref
- List Chained Rows
 - Chained, Migrated
 - Row

A. Cost-based

가

Rule-based

.

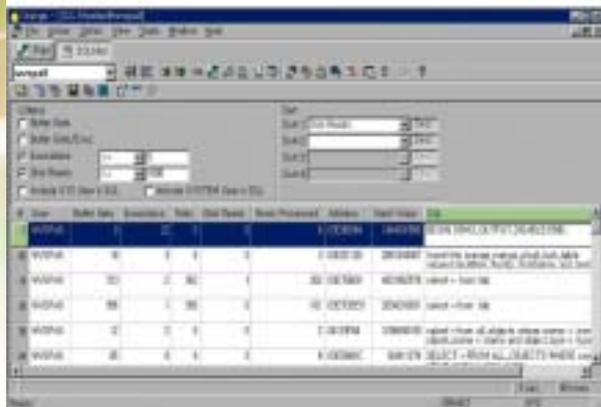
B.

,

Rule-based

.

■ SQL Monitor



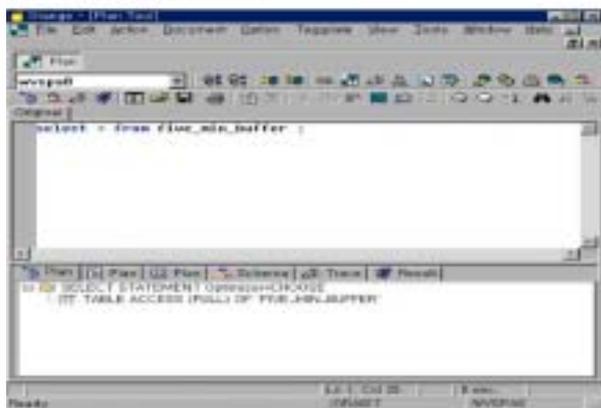
악성 SQL



■ Session List Using SQL



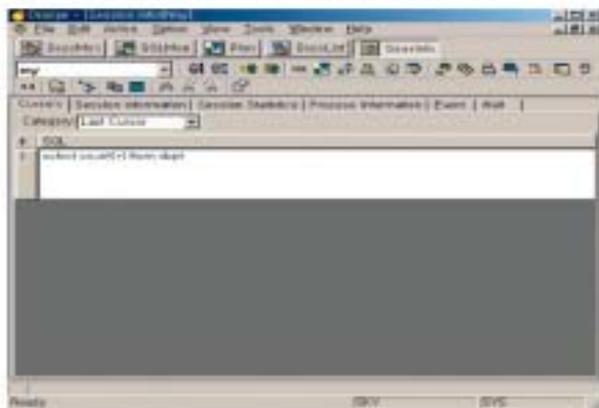
■ Plan Tool



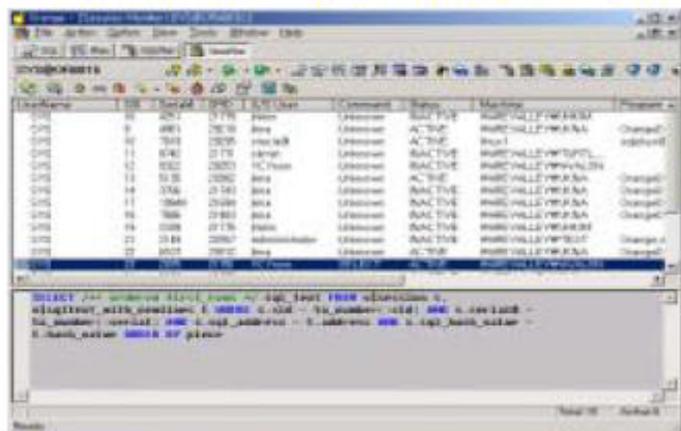
비효율성 분석
성능 개선
Tuning



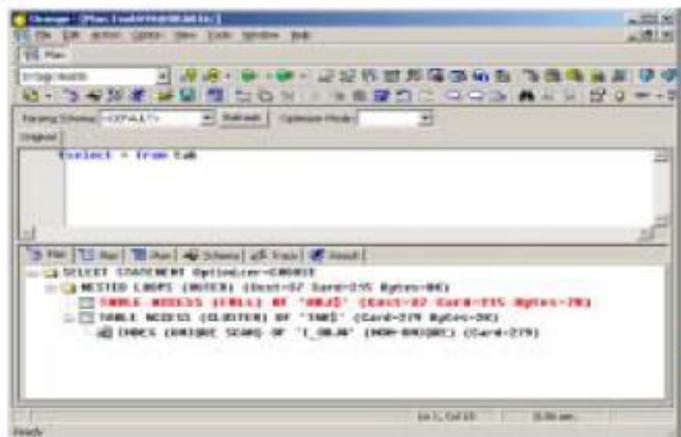
■ Session Information



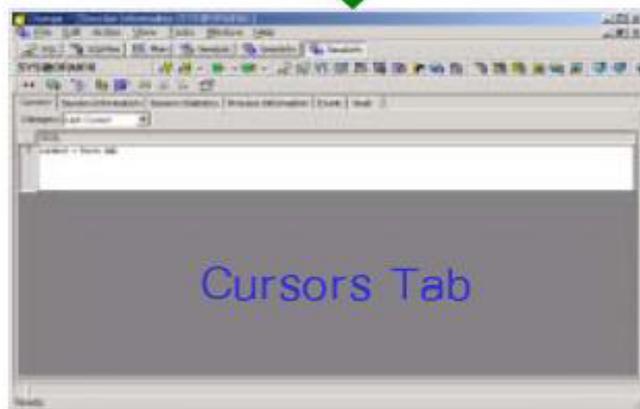
Session/Transaction/Lock/Latch Monitor



문제 세션 검출
문제 Transaction 검출
Lock/Latch 분석



문제 분석
성능 개선
튜닝



ORACLE APPLICATION DEVELOPMENT &
PERFORMANCE MANAGEMENT TOOL



4.0



Reorg

50 %



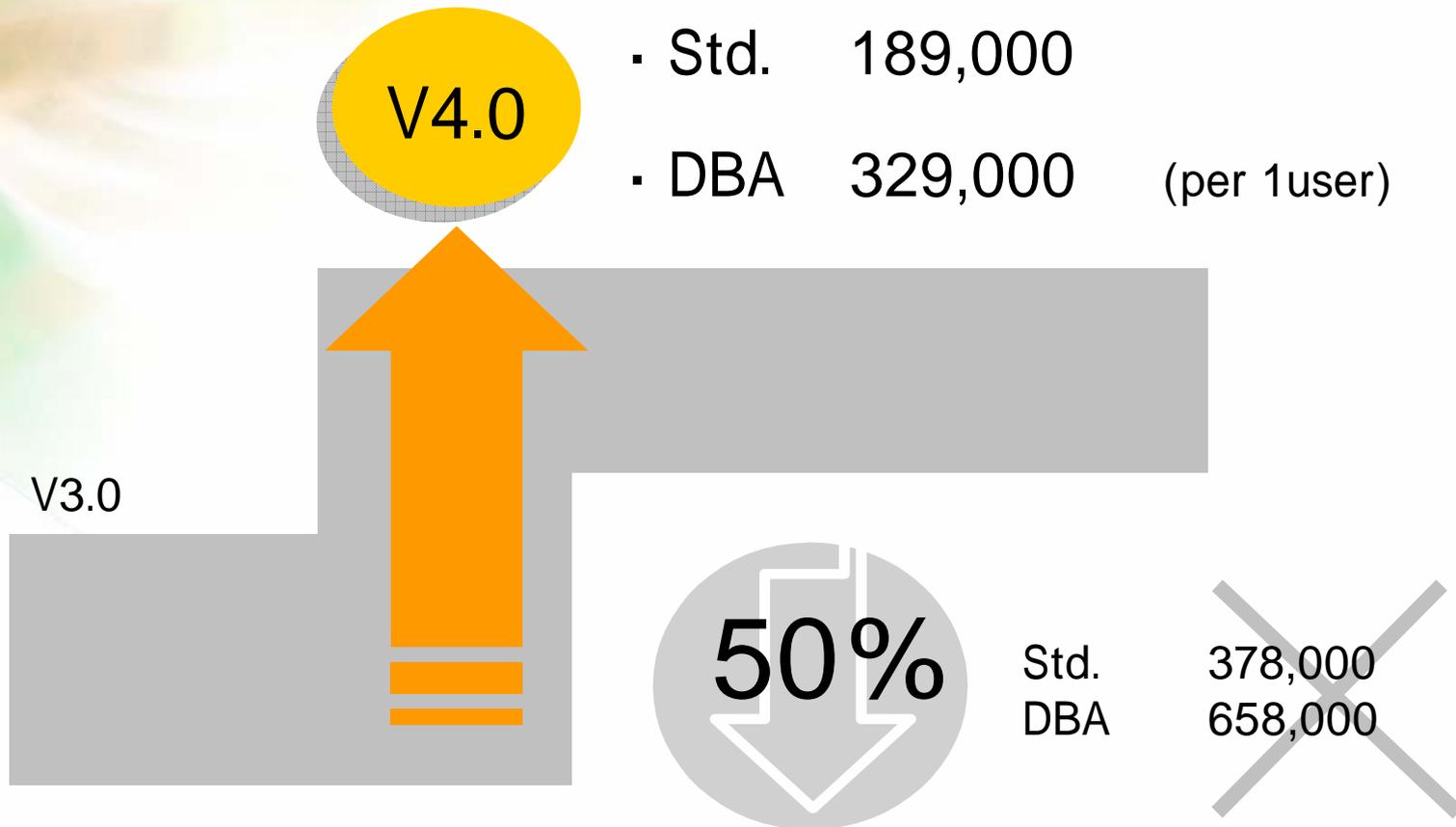
2007. 5. 2 ~ 2007. 6. 30



Standard	5
DBA	10
Reorg	20

(per 1user)





USB

ORACLE APPLICATION DEVELOPMENT & PERFORMANCE MANAGEMENT TOOL



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일 맛 나는 오렌지 4.0

일 맛 나는 오렌지 4.0 (11.11.01 ~ 11.30)
문의: 02-708-1838

주최: Oracle
주관:



일 맛 나는 오렌지



오렌지 구매시 본 부문을 제시하는 분께 **USB 2GB** 를 드립니다.

회사: _____

이름: _____

전화: _____

기간: 2007, 5, 7 ~ 2007, 6, 30