

215187.1 SQLT XTRACT 11.4.5.7 Report: sqlt_s60032_main.html

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This report may include some content provided by the Oracle Diagnostic and/or the Oracle Tuning Packs (in particular SQL Tuning Advisor "STA", SQL Tuning Sets "STS", SQL Monitoring and/or Automatic Workload Repository "AWR"). Be aware that using this extended functionality requires a license for the corresponding pack. If you need to disable SQLT access to one of these packages, please execute one of the following commands: SQL> EXEC sqltadmin.sqlt\$a.disable_tuning_pack_access; or SQL> EXEC sqltadmin.sqlt\$a.disable_diagnostic_pack_access;

sqlt_start: 2013-04-05/11:17:15

Observations

List of concerns identified by the health-check module. Please review. Some may require further attention.

#	Type	Name	Observation	Details
1	SYSTEM PARAMETER	MODIFIED	There are 2 system level initialization parameters with a modified value in AWR.	[+]
2	CBO PARAMETER	NON-DEFAULT	There are 3 CBO initialization parameters with a non-default value.	[+]
3	PLAN	PLAN_HASH_VALUE	6 plans were found for this SQL.	[+]
4	PLAN CONTROL	PLAN_CONTROL	None of the plans found was created using one of these: Stored Outline, SQL Profile, SQL Patch or SQL Plan Baseline.	
5	PLAN	OPTIMIZER_ENV	SQL Area references 3 distinct CBO Environments for this one SQL.	[+]
6	PLAN	PLAN_HASH_VALUE	Plan 142578110 has operations with Cost 0 and Card 1. Possible incorrect Selectivity.	[+]
7	PLAN	PLAN_HASH_VALUE	Plan 657302870 has operations with Cost 0 and Card 1. Possible incorrect Selectivity.	[+]
8	PLAN	PLAN_HASH_VALUE	Plan 2816325939 has operations with Cost 0 and Card 1. Possible incorrect Selectivity.	[+]
9	PLAN	PLAN_HASH_VALUE	Plan 3267771367 has operations with Cost 0 and Card 1. Possible incorrect Selectivity.	[+]
10	PLAN	PLAN_HASH_VALUE	Plan 3935795003 has operations with Cost 0 and Card 1. Possible incorrect Selectivity.	[+]
11	PLAN CONTROL	CARDINALITY_FEEDBACK	5 plans were created using Cardinality Feedback.	[+]
12	DBMS_STATS	SYSTEM STATISTICS	Workload CBO System Statistics are not gathered. CBO is using default values.	[+]
13	MAT_VIEW	REWRITE_ENABLED	There is/are 3 materialized view(s) with rewrite enabled.	[+]
14	TABLE	QTUNE.CUSTOMER	Table CBO statistics are 35 days old: 2013-03-01/16:27:57	[+]
15	TABLE	QTUNE.CUSTOMER	Table has 1 CBO statistics extension(s).	[+]
16	TABLE	QTUNE.ORDER_LINE	Table CBO statistics are 35 days old: 2013-03-01/16:28:20	[+]
17	TABLE	QTUNE.PART	Table CBO statistics are 35 days old: 2013-03-01/16:29:57	[+]
18	TABLE	QTUNE.PART	Table has 1 CBO statistics extension(s).	[+]
19	TABLE	QTUNE.SALES_ORDER	Table CBO statistics are 35 days old: 2013-03-01/16:30:11	[+]
20	TABLE	QTUNE.SALES_ORDER	Table has 1 CBO statistics extension(s).	[+]

21	TABLE COLUMN	SALES_ORDER.STATUS	Column is referenced in predicate(s) and it is not included in any index.	⊕
22	TABLE COLUMN	SALES_ORDER.STATUS	Column is candidate for NOT NULL constraint.	⊕

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SQL Text (f995z9antmhxn 2845426612 B2C3C4A8E292CBCAC2EB5F9482BA6514 1178211779310957485)

```
SELECT /*+ gather_plan_statistics monitor bind_aware */
v.customer_name,
v.orders_total,
v.credit_limit,
(orders_total - credit_limit) over_limit
FROM customer_v v
WHERE orders_total > credit_limit
AND customer_type = :b1
ORDER BY
over_limit DESC
```

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Stripped SQL Text ()

SQL Text: [\[⌵\]](#)

```
SELECT /*+ gather_plan_statistics monitor bind_aware */
v.customer_name,
v.orders_total,
v.credit_limit,
(orders_total - credit_limit) over_limit
FROM customer_v v
WHERE orders_total > credit_limit
AND customer_type = :b1
ORDER BY
over_limit DESC
```

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SQL Identification

SQL ID:	f995z9antmhxn
Hash Value:	2845426612
Signature for Stored Outlines:	B2C3C4A8E292CBCAC2EB5F9482BA6514
Signature for SQL Profiles (force match FALSE):	1178211779310957485
Signature for SQL Profiles (force match TRUE):	1178211779310957485
Command Type:	SELECT (3)
"EXPLAIN PLAN FOR" SQL ID for stripped sql_text:	0cnzdw rnxzfu6
Signature for Stored Outlines for unstripped sql_text:	B2C3C4A8E292CBCAC2EB5F9482BA6514
Signature for SQL Profiles for unstripped sql_text (force match FALSE):	1178211779310957485
Signature for SQL Profiles for unstripped sql_text (force match TRUE):	1178211779310957485

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Environment

Host Name:	host01.example.com
CPUs:	2
Exadata:	"null"
RAC:	FALSE
NLS Character set (database_properties):	WE8MSWIN1252
DB Time Zone (database_properties):	00:00
DB Block Size (db_block_size):	8192
Optim Peek User Binds (_optim_peek_user_binds):	TRUE
DB Size in Terabytes (dba_data_files):	0.007 TB

TC Data Size in Gigabytes (dba_segments):	0.394 GB
Platform:	Linux
Product Version:	Oracle Database 11g Enterprise Edition (Production)
RDBMS Version:	11.2.0.3.0
Language:	US:AMERICAN_AMERICA.WE8MSWIN1252
Database Name and ID:	V1123(4223793606)
Instance Name and ID:	V1123(1)
EBS:	NO
Siebel:	NO
PSFT:	NO
User Name and ID:	QTUNE(92)
STATID:	s60032_v1123_host01

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CBO Environment

Non-Default or Modified CBO Parameters

Non-default or modified CBO initialization parameters in effect for the session where SQLT XTRACT was executed. Includes all instances.

#	Is Default ¹	Is Modified ²	Name	Inst ID	Value	Display Value	Is Adjusted	Is Deprecated	Is Basic	Is Session Modifiable	Is System Modifiable	Is Instance Modifiable	Type	Description
1	FALSE	FALSE	_optimizer_use_feedback	1	"TRUE"		FALSE	FALSE	FALSE	TRUE	IMMEDIATE	TRUE	1	optimizer use feedback
2	FALSE	FALSE	pga_aggregate_target	1	"213909504"	"204M"	FALSE	FALSE	TRUE	FALSE	IMMEDIATE	TRUE	6	Target size for the aggregate PGA memory consumed by the instance
3	FALSE	FALSE	statistics_level	1	"ALL"		FALSE	FALSE	FALSE	TRUE	IMMEDIATE	TRUE	2	statistics level

(1) FALSE: Parameter value was specified in the parameter file.

(2) FALSE: Parameter has not been modified after instance startup. MODIFIED: Parameter has been modified with ALTER SESSION. SYSTEM_MOD: Parameter has been modified with ALTER SYSTEM.

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Default Unmodified CBO Parameters

Fix Control

Non-Default Fixes

Non-default fixes in effect for the session where SQLT XTRACT was executed.

Default Fixes

CBO System Statistics

- [Info System Statistics](#)
- [Current System Statistics](#)
- [Basis and Synthesized Values](#)
- [System Statistics History](#)

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Info System Statistics

#	Name	Value
1	STATUS	COMPLETED
2	DSTART	01-16-2013 04:59
3	DSTOP	01-16-2013 04:59
4	FLAGS	

Current System Statistics

#	Name	Value
1	CPUSPEEDNW	1796
2	IOSEEKTIM	10
3	IOTFRSPEED	4096
4	CPUSPEED	
5	MBRC	
6	SREADTIM	
7	MREADTIM	
8	MAXTHR	
9	SLAVETHR	

Basis and Synthesized Values

db_block_size:	8192
db_file_multiblock_read_count:	104
_db_file_optimizer_read_count:	8
_db_file_exec_read_count:	-1
Estimated CPUSPEED:	1796
Estimated MBRC:	104
Estimated SREADTIM:	12
Estimated MREADTIM:	218
CPU Cost Scaling Factor:	4.639941e-08
CPU Cost Scaling Factor (inverse):	21552000

System Statistics History

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DBMS_STATS Setup

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- [DBMS_STATS Table Preferences](#)
- [Auto Task "auto optimizer stats collection"](#)
- [Statistics for SYS Tables](#)
- [Statistics for Fixed Objects](#)
- [DBMS_STATS Operations History](#)

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DBMS_STATS System Preferences

Approximate NDV:	"null"
Auto Stats Target:	AUTO
Cascade:	DBMS_STATS.AUTO_CASCADE
Concurrent:	"null"
Degree:	NULL
Estimate Percent:	DBMS_STATS.AUTO_SAMPLE_SIZE
Granularity:	AUTO
Incremental Internal Control:	"null"
Incremental:	FALSE
Method Opt:	FOR ALL COLUMNS SIZE AUTO
No Invalidate:	DBMS_STATS.AUTO_INVALIDATE
Publish:	TRUE
Stale Percent:	10
Stats Retention:	"null"

DBMS_STATS Table Preferences

Auto Task "auto optimizer stats collection"

Client Name:	auto optimizer stats collection
Status:	DISABLED
Consumer Group:	ORA\$AUTOTASK_STATS_GROUP
Client Tag:	OS
Priority Override:	INVALID
Attributes:	ON BY DEFAULT, VOLATILE, SAFE TO KILL
Window Group:	ORA\$AT_WGRP_OS
Resource Percentage:	25
Use Resource Estimates:	FALSE
Mean Job Duration:	+0000000000 00:02:08.185714286
Mean Job CPU:	+0000000000 00:00:35.947428571

Statistics for SYS Tables

#	Last Analyzed	Tables
1	NO STATS	53
2	2013-04	20
3	2012-12	3
4	2012-06	1
5	2012-05	179
6	2012-04	24
7	2012-03	100
8	2011-09	607

Statistics for Fixed Objects

#	Last Analyzed	Fixed Objects
1	NO STATS	935

DBMS_STATS Operations History

List restricted up to 300 rows as per tool parameter "r_rows_table_m".

SQL: [+]

#	Start Time	End Time	Operation	Target
1	2013-04-05/11:18:05.662123 -04:00	2013-04-05/11:18:05.692351 -04:00	export_table_stats	QTUNE:"SALES_ORDER"
2	2013-04-05/11:18:05.652104 -04:00	2013-04-05/11:18:05.661303 -04:00	export_table_stats	QTUNE:"PART"
3	2013-04-05/11:18:05.638376 -04:00	2013-04-05/11:18:05.651287 -04:00	export_table_stats	QTUNE:"ORDER_LINE"
4	2013-04-05/11:18:05.220363 -04:00	2013-04-05/11:18:05.548824 -04:00	export_table_stats	QTUNE:"CUSTOMER"
5	2013-03-12/14:42:16.490105 -04:00	2013-03-12/14:42:16.502260 -04:00	export_table_stats	QTUNE:"SALES_ORDER"
6	2013-03-12/14:42:15.880713 -04:00	2013-03-12/14:42:16.489282 -04:00	export_table_stats	QTUNE:"PART"
7	2013-03-12/14:42:15.856983 -04:00	2013-03-12/14:42:15.879784 -04:00	export_table_stats	QTUNE:"ORDER_LINE"
8	2013-03-12/14:42:15.353546 -04:00	2013-03-12/14:42:15.787899 -04:00	export_table_stats	QTUNE:"CUSTOMER"

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Initialization Parameters

Non-Default or Modified Session Parameters

[+]

Non-default or modified initialization parameters in effect for the session where SQLT XTRACT was executed. Includes all instances. Excludes CBO parameters.

#	Is Default ¹	Is Modified ²	Name	Inst ID	Ordinal	Value	Display Value	Is Adjusted	Is Deprecated	Is Basic	Is Session Modifiable	Is System Modifiable	Is Instance Modifiable	Type	Description
1	FALSE	SYSTEM_MOD	_cursor_bind_capture_interval	1	1	"10"		FALSE	FALSE	FALSE	FALSE	IMMEDIATE	TRUE	3	interval (in seconds) between two bind capture for a cursor
2	FALSE	FALSE	audit_file_dest	1	1	"u01/app/oracle/admin/V1123/adump"		FALSE	FALSE	FALSE	FALSE	DEFERRED	TRUE	2	Directory in which auditing files are to reside
3	FALSE	FALSE	audit_trail	1	1	"DB"		FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	2	enable system auditing
4	FALSE	FALSE	compatible	1	1	"11.2.0.0.0"		FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	2	Database will be completely compatible with this software version
5	FALSE	FALSE	control_files	1	1	"u01/app/oracle/oradata/V1123/control01.ctl"		FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	2	control file names list
6	FALSE	FALSE	control_files	1	2	"u01/app/oracle/fast_recovery_area/V1123/control02.ctl"		FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	2	control file names list

7	FALSE	FALSE	db_block_size	1	1	"8192"		FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	3	Size of database block in bytes
8	FALSE	FALSE	db_name	1	1	"V1123"		FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	2	database name specified in CREATE DATABASE
9	FALSE	FALSE	db_recovery_file_dest	1	1	"/u01/app/oracle/fast_recovery_area"		FALSE	FALSE	TRUE	FALSE	IMMEDIATE	FALSE	2	default database recovery file location
10	FALSE	FALSE	db_recovery_file_dest_size	1	1	"4322230272"	"4122M"	FALSE	FALSE	TRUE	FALSE	IMMEDIATE	FALSE	6	database recovery files size limit
11	FALSE	FALSE	diagnostic_dest	1	1	"/u01/app/oracle"		FALSE	FALSE	FALSE	FALSE	IMMEDIATE	TRUE	2	diagnostic base directory
12	FALSE	FALSE	dispatchers	1	1	"(PROTOCOL=TCP) (SERVICE=V1123XDB)"		FALSE	FALSE	FALSE	FALSE	IMMEDIATE	TRUE	2	specifications of dispatchers
13	FALSE	FALSE	open_cursors	1	1	"300"		FALSE	FALSE	TRUE	FALSE	IMMEDIATE	TRUE	3	max # cursors per session
14	FALSE	FALSE	processes	1	1	"150"		FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	3	user processes
15	FALSE	FALSE	remote_login_password_file	1	1	"EXCLUSIVE"		FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	2	password file usage parameter
16	FALSE	FALSE	sga_target	1	1	"645922816"	"616M"	FALSE	FALSE	TRUE	FALSE	IMMEDIATE	TRUE	6	Target size of SGA
17	FALSE	FALSE	streams_pool_size	1	1	"41943040"	"40M"	FALSE	FALSE	FALSE	FALSE	IMMEDIATE	TRUE	6	size in bytes of the streams pool
18	FALSE	FALSE	undo_tablespace	1	1	"UNDOTBS1"		FALSE	FALSE	TRUE	FALSE	IMMEDIATE	TRUE	2	use/sw itch undo tablespace
19	TRUE	MODIFIED	max_dump_file_size	1	1	"UNLIMITED"		FALSE	FALSE	FALSE	TRUE	IMMEDIATE	TRUE	2	Maximum size (in bytes) of dump file
20	TRUE	MODIFIED	nls_numeric_characters	1	1	","		FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	2	NLS numeric characters
21	TRUE	MODIFIED	timed_statistics	1	1	"TRUE"		FALSE	FALSE	FALSE	TRUE	IMMEDIATE	TRUE	1	maintain internal timing statistics
22	TRUE	MODIFIED	tracefile_identifier	1	1	"S60032_SQLT_TRACE"		FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	2	trace file custom identifier

(1) FALSE: Parameter value was specified in the parameter file.

(2) FALSE: Parameter has not been modified after instance startup. MODIFIED: Parameter has been modified with ALTER SESSION. SYSTEM_MOD: Parameter has been modified with ALTER SYSTEM.

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Default Unmodified Session Parameters

[±]

Modified System Parameters

[−]

Historical values of modified initialization system-level parameters captured by AWR with no direct relation to the SQL being analyzed. Includes all instances. Excludes some parameters and all "___%" parameters

List restricted up to 300 rows as per tool parameter "r_rows_table_m".

SQL: [±]

#	Parameter Name	Inst ID	Snapshot Time	Snap ID	Is Default ¹	Is Modified ²	Value	Oldest Value ³
1	_cursor_bind_capture_interval	1	2013-04-05/11:07:18.530	7222	FALSE	MODIFIED	"10"	N
2	_cursor_bind_capture_interval	1	2013-03-27/21:00:53.600	7048	FALSE	FALSE	"900"	Y
3	db_file_multiblock_read_count	1	2013-03-31/13:04:12.479	7103	TRUE	FALSE	"104"	N
4	db_file_multiblock_read_count	1	2013-03-27/21:00:53.600	7048	TRUE	FALSE	"96"	Y

(1) FALSE: Parameter value was specified in the parameter file.

(2) FALSE: Parameter has not been modified after instance startup. MODIFIED or SYSTEM_MOD: Parameter has been modified with ALTER SYSTEM.

(3) Y: Oldest Value on AWR for this Parameter Name and Inst ID.

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Historical Non-Default or Modified System Parameters

[−]

Historical values of non-default or modified initialization system-level parameters, captured by AWR during snapshots of the SQL statement being analyzed. Includes all instances.

List restricted up to 300 rows as per tool parameter "r_rows_table_m".

#	Snapshot Time	Snap ID	Is Default ¹	Is Modified ²	Parameter Name	Inst ID	Value
1	2013-04-05/11:13:53.879	7223	FALSE	MODIFIED	_cursor_bind_capture_interval	1	"10"
2	2013-04-05/11:13:53.879	7223	FALSE	FALSE	__db_cache_size	1	"251658240"
3	2013-04-05/11:13:53.879	7223	FALSE	FALSE	__java_pool_size	1	"4194304"
4	2013-04-05/11:13:53.879	7223	FALSE	FALSE	__large_pool_size	1	"4194304"
5	2013-04-05/11:13:53.879	7223	FALSE	FALSE	__oracle_base	1	"/u01/app/oracle"
6	2013-04-05/11:13:53.879	7223	FALSE	FALSE	__pga_aggregate_target	1	"213909504"
7	2013-04-05/11:13:53.879	7223	FALSE	FALSE	__sga_target	1	"645922816"
8	2013-04-05/11:13:53.879	7223	FALSE	FALSE	__shared_io_pool_size	1	""
9	2013-04-05/11:13:53.879	7223	FALSE	FALSE	__shared_pool_size	1	"335544320"
10	2013-04-05/11:13:53.879	7223	FALSE	FALSE	__streams_pool_size	1	"41943040"
11	2013-04-05/11:13:53.879	7223	FALSE	FALSE	__optimizer_use_feedback	1	"TRUE"
12	2013-04-05/11:13:53.879	7223	FALSE	FALSE	audit_file_dest	1	"/u01/app/oracle/admin/V1123/adump"
13	2013-04-05/11:13:53.879	7223	FALSE	FALSE	audit_trail	1	"DB"
14	2013-04-05/11:13:53.879	7223	FALSE	FALSE	compatible	1	"11.2.0.0.0"
15	2013-04-05/11:13:53.879	7223	FALSE	FALSE	control_files	1	"/u01/app/oracle/oradata/V1123/control01.ctl, /u01/app/oracle/fast_recovery_area/V1123/control02.ctl"
16	2013-04-05/11:13:53.879	7223	FALSE	FALSE	db_block_size	1	"8192"
17	2013-04-05/11:13:53.879	7223	FALSE	FALSE	db_name	1	"V1123"

18	2013-04-05/11:13:53.879	7223	FALSE	FALSE	db_recovery_file_dest	1	"/u01/app/oracle/fast_recovery_area"
19	2013-04-05/11:13:53.879	7223	FALSE	FALSE	db_recovery_file_dest_size	1	"4322230272"
20	2013-04-05/11:13:53.879	7223	FALSE	FALSE	diagnostic_dest	1	"/u01/app/oracle"
21	2013-04-05/11:13:53.879	7223	FALSE	FALSE	dispatchers	1	"(PROTOCOL=TCP) (SERVICE=V1123XDB)"
22	2013-04-05/11:13:53.879	7223	FALSE	FALSE	open_cursors	1	"300"
23	2013-04-05/11:13:53.879	7223	FALSE	FALSE	pga_aggregate_target	1	"213909504"
24	2013-04-05/11:13:53.879	7223	FALSE	FALSE	processes	1	"150"
25	2013-04-05/11:13:53.879	7223	FALSE	FALSE	remote_login_password_file	1	"EXCLUSIVE"
26	2013-04-05/11:13:53.879	7223	FALSE	FALSE	sga_target	1	"645922816"
27	2013-04-05/11:13:53.879	7223	FALSE	FALSE	statistics_level	1	"ALL"
28	2013-04-05/11:13:53.879	7223	FALSE	FALSE	streams_pool_size	1	"41943040"
29	2013-04-05/11:13:53.879	7223	FALSE	FALSE	undo_tablespace	1	"UNDOTBS1"
30	2013-04-05/11:07:18.530	7222	FALSE	MODIFIED	_cursor_bind_capture_interval	1	"10"

#	Snapshot Time	Snap ID	Is Default ¹	Is Modified ²	Parameter Name	Inst ID	Value
31	2013-04-05/11:07:18.530	7222	FALSE	FALSE	__db_cache_size	1	"251658240"
32	2013-04-05/11:07:18.530	7222	FALSE	FALSE	__java_pool_size	1	"4194304"
33	2013-04-05/11:07:18.530	7222	FALSE	FALSE	__large_pool_size	1	"4194304"
34	2013-04-05/11:07:18.530	7222	FALSE	FALSE	__oracle_base	1	"/u01/app/oracle"
35	2013-04-05/11:07:18.530	7222	FALSE	FALSE	__pga_aggregate_target	1	"213909504"
36	2013-04-05/11:07:18.530	7222	FALSE	FALSE	__sga_target	1	"645922816"
37	2013-04-05/11:07:18.530	7222	FALSE	FALSE	__shared_io_pool_size	1	""
38	2013-04-05/11:07:18.530	7222	FALSE	FALSE	__shared_pool_size	1	"335544320"
39	2013-04-05/11:07:18.530	7222	FALSE	FALSE	__streams_pool_size	1	"41943040"
40	2013-04-05/11:07:18.530	7222	FALSE	FALSE	_optimizer_use_feedback	1	"TRUE"
41	2013-04-05/11:07:18.530	7222	FALSE	FALSE	audit_file_dest	1	"/u01/app/oracle/admin/V1123/adump"
42	2013-04-05/11:07:18.530	7222	FALSE	FALSE	audit_trail	1	"DB"
43	2013-04-05/11:07:18.530	7222	FALSE	FALSE	compatible	1	"11.2.0.0.0"
44	2013-04-05/11:07:18.530	7222	FALSE	FALSE	control_files	1	"/u01/app/oracle/oradata/V1123/control01.ctl, /u01/app/oracle/fast_recovery_area/V1123/control02.ctl"
45	2013-04-05/11:07:18.530	7222	FALSE	FALSE	db_block_size	1	"8192"
46	2013-04-05/11:07:18.530	7222	FALSE	FALSE	db_name	1	"V1123"
47	2013-04-05/11:07:18.530	7222	FALSE	FALSE	db_recovery_file_dest	1	"/u01/app/oracle/fast_recovery_area"
48	2013-04-05/11:07:18.530	7222	FALSE	FALSE	db_recovery_file_dest_size	1	"4322230272"
49	2013-04-05/11:07:18.530	7222	FALSE	FALSE	diagnostic_dest	1	"/u01/app/oracle"
50	2013-04-05/11:07:18.530	7222	FALSE	FALSE	dispatchers	1	"(PROTOCOL=TCP) (SERVICE=V1123XDB)"
51	2013-04-05/11:07:18.530	7222	FALSE	FALSE	open_cursors	1	"300"
52	2013-04-05/11:07:18.530	7222	FALSE	FALSE	pga_aggregate_target	1	"213909504"
53	2013-04-05/11:07:18.530	7222	FALSE	FALSE	processes	1	"150"
54	2013-04-05/11:07:18.530	7222	FALSE	FALSE	remote_login_password_file	1	"EXCLUSIVE"
55	2013-04-05/11:07:18.530	7222	FALSE	FALSE	sga_target	1	"645922816"
56	2013-04-05/11:07:18.530	7222	FALSE	FALSE	statistics_level	1	"ALL"
57	2013-04-05/11:07:18.530	7222	FALSE	FALSE	streams_pool_size	1	"41943040"
58	2013-04-05/11:07:18.530	7222	FALSE	FALSE	undo_tablespace	1	"UNDOTBS1"

(1) FALSE: Parameter value was specified in the parameter file.

(2) FALSE: Parameter has not been modified after instance startup. MODIFIED or SYSTEM_MOD: Parameter has been modified with ALTER SYSTEM.

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NLS Parameters

NLS Session Parameters

[]

Captured when SQLT was executed. Includes other instances if the value is different to this instance.

#	Name	Inst ID	Value
1	nls_calendar	1	GREGORIAN
2	nls_characterset	1	WE8MSWIN1252
3	nls_comp	1	BINARY
4	nls_currency	1	\$
5	nls_date_format	1	DD-MON-RR
6	nls_date_language	1	AMERICAN
7	nls_dual_currency	1	\$
8	nls_iso_currency	1	AMERICA

9	nls_language	1	AMERICAN
10	nls_length_semantics	1	BYTE
11	nls_nchar_characterset	1	AL16UTF16
12	nls_nchar_conv_excp	1	FALSE
13	nls_numeric_characters	1	..
14	nls_sort	1	BINARY
15	nls_territory	1	AMERICA
16	nls_timestamp_format	1	DD-MON-RR HH.MI.SSXF AM
17	nls_timestamp_tz_format	1	DD-MON-RR HH.MI.SSXF AM TZR
18	nls_time_format	1	HH.MI.SSXF AM
19	nls_time_tz_format	1	HH.MI.SSXF AM TZR

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NLS Instance Parameters

[-]

Captured when SQLT was executed. Includes other instances if the value is different to this instance.

#	Name	Inst ID	Value
1	nls_calendar	1	
2	nls_comp	1	BINARY
3	nls_currency	1	
4	nls_date_format	1	
5	nls_date_language	1	
6	nls_dual_currency	1	
7	nls_iso_currency	1	
8	nls_language	1	AMERICAN
9	nls_length_semantics	1	BYTE
10	nls_nchar_conv_excp	1	FALSE
11	nls_numeric_characters	1	
12	nls_sort	1	
13	nls_territory	1	AMERICA
14	nls_time_format	1	
15	nls_time_tz_format	1	
16	nls_timestamp_format	1	
17	nls_timestamp_tz_format	1	

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NLS Database Parameters

[-]

Captured when SQLT was executed.

#	Name	Value
1	nls_calendar	GREGORIAN
2	nls_characterset	WE8MSWIN1252
3	nls_comp	BINARY
4	nls_currency	\$
5	nls_date_format	DD-MON-RR
6	nls_date_language	AMERICAN
7	nls_dual_currency	\$
8	nls_iso_currency	AMERICA
9	nls_language	AMERICAN
10	nls_length_semantics	BYTE
11	nls_nchar_characterset	AL16UTF16
12	nls_nchar_conv_excp	FALSE
13	nls_numeric_characters	..
14	nls_rdbms_version	11.2.0.3.0
15	nls_sort	BINARY
16	nls_territory	AMERICA
17	nls_timestamp_format	DD-MON-RR HH.MI.SSXF AM
18	nls_timestamp_tz_format	DD-MON-RR HH.MI.SSXF AM TZR
19	nls_time_format	HH.MI.SSXF AM
20	nls_time_tz_format	HH.MI.SSXF AM TZR

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I/O Calibration

I/O calibration results for the latest calibration run

Status of I/O calibration in the instance

status: NOT AVAILABLE

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Tool Configuration Parameters

#	Is Default	Name	System Value ¹	Session Value ²	Default Value	Domain
1	TRUE	addm_reports	6	6	6	0-9999
2	TRUE	ash_reports	BOTH	BOTH	BOTH	BOTH, MEM, AWR, NONE
3	TRUE	automatic_workload_repository	Y	Y	Y	Y, N
4	TRUE	awr_reports	6	6	6	0-9999
5	TRUE	bde_chk_cbo	Y	Y	Y	Y, N
6	TRUE	c_awr_hist_days	31	31	31	0-999
7	TRUE	c_cbo_stats_vers_days	31	31	31	0-999
8	TRUE	c_dba_hist_parameter	Y	Y	Y	Y, N
9	TRUE	c_gran_cols	SUBPARTITION	SUBPARTITION	SUBPARTITION	SUBPARTITION, PARTITION, GLOBAL
10	TRUE	c_gran_hgrm	SUBPARTITION	SUBPARTITION	SUBPARTITION	SUBPARTITION, PARTITION, GLOBAL
11	TRUE	c_gran_segm	SUBPARTITION	SUBPARTITION	SUBPARTITION	SUBPARTITION, PARTITION, GLOBAL
12	TRUE	collect_perf_stats	Y	Y	Y	Y, N
13	TRUE	connect_identifier				Null, or @connect_identifier
14	TRUE	count_star_threshold	10000	10000	10000	0-1000000000
15	TRUE	custom_sql_profile	N	N	N	N, Y
16	TRUE	distributed_queries	Y	Y	Y	Y, N
17	TRUE	domain_index_metadata	Y	Y	Y	Y, N, E
18	TRUE	event_10046_level	12	12	12	12, 8, 4, 1, 0
19	TRUE	event_10053_level	1	1	1	1, 0
20	TRUE	event_10507_level	1023	1023	1023	0-1023
21	TRUE	event_others	N	N	N	N, Y
22	TRUE	export_repository	Y	Y	Y	Y, N
23	TRUE	export_utility	EXP	EXP	EXP	EXP, EXPDP
24	TRUE	generate_10053_xtract	Y	Y	Y	N, Y, E
25	TRUE	healthcheck_blevel	Y	Y	Y	Y, N
26	TRUE	healthcheck_endpoints	Y	Y	Y	Y, N
27	TRUE	healthcheck_ndv	Y	Y	Y	Y, N
28	TRUE	healthcheck_num_rows	Y	Y	Y	Y, N
29	TRUE	keep_trace_10046_open	Y	Y	Y	Y, N
30	TRUE	keyword_font_color	crimson	crimson	crimson	crimson, red, orange, green, none
#	Is Default	Name	System Value ¹	Session Value ²	Default Value	Domain
31	TRUE	mask_for_values	CLEAR	CLEAR	CLEAR	CLEAR, SECURE, COMPLETE
32	TRUE	plan_stats	BOTH	BOTH	BOTH	BOTH, LAST, ALL
33	TRUE	predicates_in_plan	Y	Y	Y	N, Y, E
34	TRUE	r_gran_cols	PARTITION	PARTITION	PARTITION	PARTITION, GLOBAL
35	TRUE	r_gran_hgrm	PARTITION	PARTITION	PARTITION	PARTITION, GLOBAL
36	TRUE	r_gran_segm	PARTITION	PARTITION	PARTITION	PARTITION, GLOBAL
37	TRUE	r_gran_vers	COLUMN	COLUMN	COLUMN	COLUMN, SEGMENT, HISTOGRAM
38	TRUE	r_rows_table_l	1000	1000	1000	100-10000
39	TRUE	r_rows_table_m	300	300	300	30-3000
40	TRUE	r_rows_table_s	100	100	100	10-1000
41	TRUE	r_rows_table_xs	10	10	10	1-100
42	TRUE	refresh_directories	Y	Y	Y	Y, N
43	TRUE	search_sql_by_sqltext	Y	Y	Y	Y, N
44	TRUE	show_binds_in_predicates	Y	Y	Y	Y, N

45	TRUE	skip_metadata_for_object				Null, or full/partial object name
46	TRUE	sql_monitor_reports	12	12	12	1-9999
47	TRUE	sql_monitoring	Y	Y	Y	Y, N
48	TRUE	sql_tuning_advisor	Y	Y	Y	Y, N
49	TRUE	sql_tuning_set	Y	Y	Y	Y, N
50	TRUE	sqldx_reports_format	BOTH	BOTH	BOTH	HTML, CSV, BOTH, NONE
51	TRUE	sqlt_max_file_size_mb	100	100	100	1-1024
52	TRUE	sta_time_limit_secs	1800	1800	1800	30-86400
53	TRUE	tcb_export_data	FALSE	FALSE	FALSE	FALSE, TRUE
54	TRUE	tcb_export_pkg_body	FALSE	FALSE	FALSE	FALSE, TRUE
55	TRUE	tcb_time_limit_secs	1800	1800	1800	30-86400
56	TRUE	test_case_builder	Y	Y	Y	Y, N
57	TRUE	trace_analyzer	Y	Y	Y	Y, N
58	TRUE	traces_directory_path				Null, valid directory path on server
59	TRUE	upload_trace_size_mb	100	100	100	1-1024
60	TRUE	validate_user	Y	Y	Y	Y, N
#	Is Default	Name	System Value ¹	Session Value ²	Default Value	Domain
61	TRUE	xecute_script_output	KEEP	KEEP	KEEP	KEEP, ZIP, DELETE

(1) To permanently set a tool parameter issue: SQL> EXEC sqltxadmin.sqlt\$a.set_param('Name', 'Value');

(2) To temporarily set a tool parameter for a session issue: SQL> EXEC sqltxadmin.sqlt\$a.set_sess_param('Name', 'Value');

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Cursor Sharing

- [Cursor Sharing Summary](#)
- [Reasons for not Sharing](#)
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Cursor Sharing Summary

List grouped by instance.

#	Inst ID	Sharable Cursors	Cursors not Shared	Total
1	1	8	1	9

Reasons for not Sharing

List grouped by instance, phv and reasons for not sharing and ordered by count.

#	Cursors	Inst ID	Plan Hash Value	Reasons for not Sharing
1	2	1	3267771367 [B]	BIND_EQUIV_FAILURE
2	1	1	142578110	BIND_EQUIV_FAILURE
3	1	1	657302870	BIND_EQUIV_FAILURE
4	1	1	1637264670	OPTIMIZER_MISMATCH
5	1	1	2816325939 [W]	BIND_EQUIV_FAILURE
6	1	1	2816325939 [W]	OPTIMIZER_MISMATCH
7	1	1	3935795003	BIND_EQUIV_FAILURE

List of Cursors

List restricted up to 300 rows as per tool parameter "r_rows_table_m".

SQL: [±]

#	Inst ID	Child	Child Address	Plan Hash Value	Elapsed Time in secs	CPU Time in secs	User IO Time in secs	Cluster Time in secs	Concurrency Time in secs	Application Time in secs	Buffer Gets	Disk Reads	Direct Writes	Rows Processed	Executions	Plan Timestamp	Last Active Time	Avg Elapsed Time in secs	Avg CPU Time in secs	Avg User IO Time in secs	Avg Cluster Time in secs	Avg Concurrency Time in secs	Avg Application Time in secs	Avg Buffer Gets
1	1	0	3B2C50CC	2816325939 [W]	80.657	27.974	50.027	0.000	0.000	0.000	21082	17361	0	922	1	2013-04-05/11:05:48	2013-04-05/11:07:27	80.657	27.974	50.027	0.000	0.000	0.000	21082
2	1	1	364B8348	142578110	65.467	64.068	0.486	0.000	0.000	0.000	222454	33984	0	56822	2	2013-04-05/11:07:27	2013-04-05/11:12:22	32.733	32.034	0.243	0.000	0.000	0.000	11227
3	1	2	3B3BAF50	657302870	55.618	52.231	0.459	0.000	0.000	0.000	103090	33984	0	18228	2	2013-04-05/11:12:23	2013-04-05/11:13:45	27.809	26.116	0.229	0.000	0.000	0.000	51545

4	1	3	342B4624	3935795003	7.717	2.076	5.301	0.000	0.000	0.000	13146	6230	0	84	2	2013-04-05/11:13:45	2013-04-05/11:13:53	3.859	1.038	2.651	0.000	0.000	0.000	6573
5	1	4	3417CC1C	3267771367 [B]	0.026	0.020	0.000	0.000	0.000	0.000	10	0	0	0	2	2013-04-05/11:13:53	2013-04-05/11:13:53	0.013	0.010	0.000	0.000	0.000	0.000	5
6	1	5	3428E4A8	1637264670	54.680	51.507	0.628	0.000	0.000	0.000	122566	33185	0	18228	2	2013-04-05/11:13:59	2013-04-05/11:15:49	27.340	25.754	0.314	0.000	0.000	0.000	61283
7	1	6	365F200C	3267771367 [B]	3.393	0.084	3.232	0.000	0.000	0.000	10304	232	0	84	2	2013-04-05/11:15:49	2013-04-05/11:15:52	1.696	0.042	1.616	0.000	0.000	0.000	5152
8	1	7	365FC9B8	2816325939 [W]	68.440	58.436	0.435	0.000	0.000	0.000	34320	32424	0	0	2	2013-04-05/11:15:52	2013-04-05/11:17:00	34.220	29.218	0.217	0.000	0.000	0.000	17160
9	1	8	38B73370	2816325939 [W]	27.094	25.850	0.179	0.000	0.000	0.000	19221	14872	0	0	1	2013-04-05/11:17:01	2013-04-05/11:17:28	27.094	25.850	0.179	0.000	0.000	0.000	19221

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Adaptive Cursor Sharing

- [Cursors List](#)
- [Histogram](#)
- [Selectivity](#)
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Cursors List

List restricted up to 300 rows as per tool parameter "r_rows_table_m".

SQL: [\[±\]](#)

#	Is Sharable	Inst ID	Child	Child Address	Plan Hash Value	Is Bind Sensitive	Is Bind Aware	Buffer Gets	Executions
1	Y	1	8	38B73370	2816325939 [W]	Y	Y	19221	1
2	Y	1	6	365F200C	3267771367 [B]	Y	Y	10304	2
3	Y	1	5	3428E4A8	1637264670	Y	Y	122566	2
4	Y	1	4	3417CC1C	3267771367 [B]	Y	Y	10	2
5	Y	1	3	342B4624	3935795003	Y	Y	13146	2
6	Y	1	2	3B3BAF50	657302870	Y	Y	103090	2
7	Y	1	1	364B8348	142578110	Y	Y	222454	2
8	Y	1	0	3B2C50CC	2816325939 [W]	Y	Y	21082	1
9	N	1	7	365FC9B8	2816325939 [W]	Y	Y	34320	2

Histogram

List restricted up to 1000 rows as per tool parameter "r_rows_table_l".

SQL: [\[±\]](#)

#	Is Sharable	Inst ID	Child	Bucket ID ¹	Count
1	Y	1	8	0	0
2	Y	1	8	1	0
3	Y	1	8	2	0
4	Y	1	6	0	0
5	Y	1	6	1	2
6	Y	1	6	2	0
7	Y	1	5	0	0
8	Y	1	5	1	0
9	Y	1	5	2	2
10	Y	1	4	0	2
11	Y	1	4	1	0
12	Y	1	4	2	0
13	Y	1	3	0	0
14	Y	1	3	1	2
15	Y	1	3	2	0
16	Y	1	2	0	0
17	Y	1	2	1	0
18	Y	1	2	2	2
19	Y	1	1	0	0
20	Y	1	1	1	0

21	Y	1	1	2	2
22	Y	1	0	0	0
23	Y	1	0	1	0
24	Y	1	0	2	1
25	N	1	7	0	0
26	N	1	7	1	0
27	N	1	7	2	2

(1) Rows Processed. 0:< 1K, 1:between 1K and 1M, 2:> 1M.

Selectivity

List restricted up to 1000 rows as per tool parameter "r_rows_table_l".

SQL: [\[+\]](#)

#	Is Sharable	Inst ID	Child	Predicate	Low	High	Range ID
1	Y	1	8	=B1	0.000137	0.013187	0
2	Y	1	6	=B1	0.000819	0.001002	0
3	Y	1	5	=B1	0.116904	0.142883	0
4	Y	1	4	=B1	0.000068	0.000083	0
5	Y	1	3	=B1	0.000819	0.001002	0
6	Y	1	2	=B1	0.116904	0.142883	0
7	Y	1	1	=B1	0.334188	0.408452	0
8	Y	1	0	=B1	0.010789	0.013187	0
9	N	1	7	=B1	0.000137	0.000167	0

Statistics

List restricted up to 300 rows as per tool parameter "r_rows_table_m".

SQL: [\[+\]](#)

#	Is Sharable	Inst ID	Child	Bind Set Hash Value	Peeked	Executions	Rows Processed	Buffer Gets	CPU Time
1	Y	1	6	2353780901	Y	1	17688	5155	0
2	Y	1	5	2220880161	Y	1	20245188	61286	0
3	Y	1	4	419004557	Y	1	0	8	0
4	Y	1	3	2353780901	Y	1	865405	6576	0
5	Y	1	2	2220880161	Y	1	20220962	51548	0
6	Y	1	1	201884475	Y	1	21981160	111230	0
7	Y	1	0	4215520196	Y	1	20234000	21082	0
8	N	1	7	3434993413	Y	1	20196400	17163	0

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Peeked Binds

Lists of peeked binds are restricted up to 1000 per phv as per tool parameter "r_rows_table_l".

#	Plan Hash Value
1	142578110
2	657302870
3	1637264670
4	2816325939 [W]
5	3267771367 [B]
6	3935795003

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Peeked Binds for 142578110

SQL Text: [\[+\]](#)

```
SELECT /*+ gather_plan_statistics monitor bind_aware */
       v.customer_name,
       v.orders_total,
```

```

v.credit_limit,
(orders_total - credit_limit) over_limit
FROM customer_v v
WHERE orders_total > credit_limit
AND customer_type = :b1
ORDER BY
over_limit DESC

```

Summary

SQL: [\[+\]](#)

#	Name	Type	Values Peeked	Non-null Values	Distinct Values	Minimum Value	Maximum Value ¹
1	:B1	VARCHAR2(32)	4	4	1	"1"	

(1) Only if different than Minimum Value.

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Source: GV\$SQL_PLAN

SQL: [\[+\]](#)

Details: [\[+\]](#)

Source: DBA_HIST_SQL_PLAN

SQL: [\[+\]](#)

Details: [\[+\]](#)

Peeked Binds for 657302870

SQL Text: [\[-\]](#)

```

SELECT /*+ gather_plan_statistics monitor bind_aware */
v.customer_name,
v.orders_total,
v.credit_limit,
(orders_total - credit_limit) over_limit
FROM customer_v v
WHERE orders_total > credit_limit
AND customer_type = :b1
ORDER BY
over_limit DESC

```

Summary

SQL: [\[+\]](#)

#	Name	Type	Values Peeked	Non-null Values	Distinct Values	Minimum Value	Maximum Value ¹
1	:B1	VARCHAR2(32)	4	4	1	"3"	

(1) Only if different than Minimum Value.

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Source: GV\$SQL_PLAN

SQL: [\[+\]](#)

Details: [\[+\]](#)

Source: DBA_HIST_SQL_PLAN

SQL: [\[+\]](#)

Details: [\[+\]](#)

Peeked Binds for 1637264670

SQL Text: [\[-\]](#)

```

SELECT /*+ gather_plan_statistics monitor bind_aware */
v.customer_name,
v.orders_total,
v.credit_limit,
(orders_total - credit_limit) over_limit
FROM customer_v v
WHERE orders_total > credit_limit
AND customer_type = :b1
ORDER BY
over_limit DESC

```

Summary

SQL: [\[+\]](#)

#	Name	Type	Values Peeked	Non-null Values	Distinct Values	Minimum Value	Maximum Value ¹
1	:B1	VARCHAR2(32)	2	2	1	"3"	

(1) Only if different than Minimum Value.

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Source: GV\$SQL_PLAN

SQL: [\[+\]](#)

Details: [\[+\]](#)

Peeked Binds for 2816325939 [W]

SQL Text: [⌵]

```
SELECT /*+ gather_plan_statistics monitor bind_aware */
       v.customer_name,
       v.orders_total,
       v.credit_limit,
       (orders_total - credit_limit) over_limit
FROM   customer_v v
WHERE  orders_total > credit_limit
AND    customer_type = :b1
ORDER BY
       over_limit DESC
```

Summary

SQL: [⌵]

#	Name	Type	Values Peeked	Non-null Values	Distinct Values	Minimum Value	Maximum Value ¹
1	:B1	VARCHAR2(32)	6	6	2	"4"	"6"

(1) Only if different than Minimum Value.

Source: GV\$SQL_PLAN

SQL: [⌵]

Details: [⌵]

Source: DBA_HIST_SQL_PLAN

SQL: [⌵]

Details: [⌵]

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[Go to Peeked Binds](#)

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Peeked Binds for 3267771367 [B]

SQL Text: [⌵]

```
SELECT /*+ gather_plan_statistics monitor bind_aware */
       v.customer_name,
       v.orders_total,
       v.credit_limit,
       (orders_total - credit_limit) over_limit
FROM   customer_v v
WHERE  orders_total > credit_limit
AND    customer_type = :b1
ORDER BY
       over_limit DESC
```

Summary

SQL: [⌵]

#	Name	Type	Values Peeked	Non-null Values	Distinct Values	Minimum Value	Maximum Value ¹
1	:B1	VARCHAR2(32)	5	5	2	"5"	"7"

(1) Only if different than Minimum Value.

Source: GV\$SQL_PLAN

SQL: [⌵]

Details: [⌵]

Source: DBA_HIST_SQL_PLAN

SQL: [⌵]

Details: [⌵]

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Peeked Binds for 3935795003

SQL Text: [⌵]

```
SELECT /*+ gather_plan_statistics monitor bind_aware */
       v.customer_name,
       v.orders_total,
       v.credit_limit,
       (orders_total - credit_limit) over_limit
FROM   customer_v v
WHERE  orders_total > credit_limit
AND    customer_type = :b1
ORDER BY
       over_limit DESC
```

Summary

SQL: [⌵]

#	Name	Type	Values Peeked	Non-null Values	Distinct Values	Minimum Value	Maximum Value ¹
1	:B1	VARCHAR2(32)	4	4	1	"5"	

(1) Only if different than Minimum Value.

Source: GV\$SQL_PLAN

SQL: [⌵]

Details: [⌵]

Source: DBA_HIST_SQL_PLAN

SQL: [⌵]

Details: [⌵]

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Captured Binds

Lists of captured binds are restricted up to 1000 per phv as per tool parameter "r_rows_table_1".

#	Plan Hash Value
1	142578110
2	657302870
3	1637264670
4	2816325939 [W]
5	3267771367 [B]
6	3935795003

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Captured Binds for 142578110

SQL Text: [±]

```
SELECT /*+ gather_plan_statistics monitor bind_aware */
v.customer_name,
v.orders_total,
v.credit_limit,
(orders_total - credit_limit) over_limit
FROM customer_v v
WHERE orders_total > credit_limit
AND customer_type = :b1
ORDER BY
over_limit DESC
```

Summary

SQL: [±]

#	Name	Type	Values Captured	Non-null Values	Distinct Values	Minimum Value	Maximum Value ¹
1	:B1	VARCHAR2(32)	1	1	1	"1"	

(1) Only if different than Minimum Value.

Source: GV\$SQL_PLAN

SQL: [±]

Details: [±]

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Captured Binds for 657302870

SQL Text: [±]

```
SELECT /*+ gather_plan_statistics monitor bind_aware */
v.customer_name,
v.orders_total,
v.credit_limit,
(orders_total - credit_limit) over_limit
FROM customer_v v
WHERE orders_total > credit_limit
AND customer_type = :b1
ORDER BY
over_limit DESC
```

Summary

SQL: [±]

#	Name	Type	Values Captured	Non-null Values	Distinct Values	Minimum Value	Maximum Value ¹
1	:B1	VARCHAR2(32)	1	1	1	"3"	

(1) Only if different than Minimum Value.

Source: GV\$SQL_PLAN

SQL: [±]

Details: [±]

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Captured Binds for 1637264670

SQL Text: [⌵]

```

SELECT /*+ gather_plan_statistics monitor bind_aware */
       v.customer_name,
       v.orders_total,
       v.credit_limit,
       (orders_total - credit_limit) over_limit
FROM   customer_v v
WHERE  orders_total > credit_limit
AND    customer_type = :b1
ORDER BY
       over_limit DESC

```

Summary

SQL: [⌵]

#	Name	Type	Values Captured	Non-null Values	Distinct Values	Minimum Value	Maximum Value ¹
1	:B1	VARCHAR2(32)	1	1	1	"3"	

(1) Only if different than Minimum Value.

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Source: GV\$SQL_PLAN

SQL: [⌵]

Details: [⌵]

Captured Binds for 2816325939 [W]

SQL Text: [⌵]

```

SELECT /*+ gather_plan_statistics monitor bind_aware */
       v.customer_name,
       v.orders_total,
       v.credit_limit,
       (orders_total - credit_limit) over_limit
FROM   customer_v v
WHERE  orders_total > credit_limit
AND    customer_type = :b1
ORDER BY
       over_limit DESC

```

Summary

SQL: [⌵]

#	Name	Type	Values Captured	Non-null Values	Distinct Values	Minimum Value	Maximum Value ¹
1	:B1	VARCHAR2(32)	4	4	2	"4"	"6"

(1) Only if different than Minimum Value.

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Source: GV\$SQL_PLAN

SQL: [⌵]

Details: [⌵]

Source: DBA_HIST_SQL_PLAN

SQL: [⌵]

Details: [⌵]

Captured Binds for 3267771367 [B]

SQL Text: [⌵]

```

SELECT /*+ gather_plan_statistics monitor bind_aware */
       v.customer_name,
       v.orders_total,
       v.credit_limit,
       (orders_total - credit_limit) over_limit
FROM   customer_v v
WHERE  orders_total > credit_limit
AND    customer_type = :b1
ORDER BY
       over_limit DESC

```

Summary

SQL: [⌵]

#	Name	Type	Values Captured	Non-null Values	Distinct Values	Minimum Value	Maximum Value ¹
1	:B1	VARCHAR2(32)	2	2	2	"5"	"7"

(1) Only if different than Minimum Value.

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Source: GV\$SQL_PLAN

SQL: [⌵]

Details: [⌵]

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Captured Binds for 3935795003

SQL Text: []

```
SELECT /*+ gather_plan_statistics monitor bind_aware */
       v.customer_name,
       v.orders_total,
       v.credit_limit,
       (orders_total - credit_limit) over_limit
FROM   customer_v v
WHERE  orders_total > credit_limit
AND    customer_type = :b1
ORDER BY
       over_limit DESC
```

Source: GV\$SQL_PLAN
 SQL: []
 Details: []

#	Name	Type	Values Captured	Non-null Values	Distinct Values	Minimum Value	Maximum Value ¹
1	:B1	VARCHAR2(32)	1	1	1	"5"	

(1) Only if different than Minimum Value.

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Plans Summary

List of plans found ordered by average elapsed time.

#	Plan Hash Value ¹	Avg Elapsed Time in secs	Avg CPU Time in secs	Avg User I/O Wait Time in secs	Avg Other Wait Time in secs ²	Avg Buffer Gets	Avg Disk Reads	Avg Direct Writes	Avg Rows Processed	Total Executions	Total Fetches	Total Version Count	Total Loads	Total Invalidations	Src	Source ³	Plan Info ³	Plan Stability ³	Is Bind Sensitive	Min Opt Env	Max Opt Env	Opt Cost	Esti Carc
1	3267771367 [B]	0.855	0.026	0.808	0.000	2579	58	0	21	4	10	9	2	0	MEM	GV\$SQLAREA_PLAN_HASH	cardinality_feedback	yes	Y	673058757	926113474	543	
2	3935795003	3.859	1.038	2.651	0.000	6573	3115	0	42	2	8	9	1	0	MEM	GV\$SQLAREA_PLAN_HASH	cardinality_feedback	yes	Y	673058757		7453	
3	1637264670	27.340	25.754	0.314	0.000	61283	16593	0	9114	2	1218	9	1	0	MEM	GV\$SQLAREA_PLAN_HASH			Y	926113474		19996	
4	657302870	27.809	26.116	0.229	0.000	51545	16992	0	9114	2	1218	9	1	0	MEM	GV\$SQLAREA_PLAN_HASH	cardinality_feedback	yes	Y	673058757		20124	
5	142578110	32.733	32.034	0.243	0.000	111227	16992	0	28411	2	3792	9	1	0	MEM	GV\$SQLAREA_PLAN_HASH	cardinality_feedback	yes	Y	673058757		21861	
6	2816325939 [W]	44.048	28.065	12.660	0.000	18656	16164	0	231	4	65	9	3	0	MEM	GV\$SQLAREA_PLAN_HASH	cardinality_feedback	yes	Y	673058757	2955803461	19559	

(1) [B]est and [W]orst according to average elapsed time if available and had fetches, else by optimizer cost. [X]ecute Plan (only on XECUTE method).

(2) Made of these wait times: application, concurrency, cluster, plsql and java execution.

(3) Shows accurate Plan Info when source is actually "GV\$SQLAREA_PLAN_HASH". For "DBA_HIST_SQLSTAT" source review "Plan Performance History" section. For "DBA_SQLTUNE_PLANS" or "EXPLAIN PLAN FOR" sources review Execution Plans section.

(4) For plans from DBA_HIST_SQLSTAT this is the time of the begin/end snapshot that first/last collected metrics for a phv as per current history.

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Plan Performance Statistics

List ordered by phv, source and instance.

#	Plan Hash Value	Src	Source	Plan Info	Plan Stability	Is Bind Sensitive	Inst ID	Stats	Total Elapsed Time in secs	Total CPU Time in secs	Total User I/O Wait Time in secs	Total Other Wait Time in secs ¹	Total Buffer Gets	Total Disk Reads	Total Direct Writes	Total Rows Processed	Total Executions	Total Fetches	Total Version Count	Total Loads	Total Invalidations	Opt Env Cnt	Min Opt Env	Max Opt Env	Cost	Plan Tr
1	142578110	MEM	GV\$SQLAREA_PLAN_HASH			Y	1	Stats	65.467	64.068	0.486	0.000	222454	33984	0	56822	2	3792	9	1	0	1	673058757		21861	2013-04-
2	142578110	AWR	DBA_HIST_SQLSTAT				1	Stats	65.467	64.068	0.486	0.000	222454	33984	0	56822	2	3792	5	1	0	1	673058757		21861	2013-04-

3	657302870	MEM	GV\$SQLAREA_PLAN_HASH		Y	1	Stats	55.618	52.231	0.459	0.000	103090	33984	0	18228	2	1218	9	1	0	1	673058757		20124	2013-04-
4	657302870	AWR	DBA_HIST_SQLSTAT			1	Stats	55.618	52.231	0.459	0.000	103090	33984	0	18228	2	1218	5	1	0	1	673058757		20124	2013-04-
5	1637264670	MEM	GV\$SQLAREA_PLAN_HASH		Y	1	Stats	54.680	51.507	0.628	0.000	122566	33185	0	18228	2	1218	9	1	0	1	926113474		19996	2013-04-
6	2816325939 [W]	MEM	GV\$SQLAREA_PLAN_HASH		Y	1	Stats	176.192	112.259	50.641	0.000	74623	64657	0	922	4	65	9	3	0	2	673058757	2955803461	19559	2013-04-
7	2816325939 [W]	AWR	DBA_HIST_SQLSTAT			1	Stats	80.657	27.974	50.027	0.000	21082	17361	0	922	1	63	5	1	0	1	673058757		19528	2013-04-
8	3267771367 [B]	MEM	GV\$SQLAREA_PLAN_HASH		Y	1	Stats	3.419	0.104	3.232	0.000	10314	232	0	84	4	10	9	2	0	2	673058757	926113474	543	2013-04-
9	3267771367 [B]	AWR	DBA_HIST_SQLSTAT			1	Stats	0.026	0.020	0.000	0.000	10	0	0	0	2	2	5	1	0	1	673058757		510	2013-04-
10	3935795003	MEM	GV\$SQLAREA_PLAN_HASH		Y	1	Stats	7.717	2.076	5.301	0.000	13146	6230	0	84	2	8	9	1	0	1	673058757		7453	2013-04-
11	3935795003	AWR	DBA_HIST_SQLSTAT			1	Stats	7.717	2.076	5.301	0.000	13146	6230	0	84	2	8	5	1	0	1	673058757		7453	2013-04-

(1) Made of these wait times: application, concurrency, cluster, plsql and java execution.

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Plan Performance Statistics for [142578110](#)

Plan Hash Value:	142578110
Src:	MEM
Source:	GV\$SQLAREA_PLAN_HASH
Is Bind Sensitive:	Y
Inst ID:	1
Version Count:	9
Executions:	2
Elapsed Time in secs:	65.467
CPU Time in secs:	64.068
User I/O Wait Time in secs:	0.486
Application Wait Time in secs:	0.000
Concurrency Wait Time in secs:	0.000
Cluster Wait Time in secs:	0.000
PL/SQL Exec Time in secs:	0.000
Java Exec Time in secs:	0.000
Buffer Gets:	222454
Disk Reads:	33984
Direct Writes:	0
Rows Processed:	56822
Parse Calls:	2
Fetches:	3792
End of Fetch count:	2
PX Servers Executions:	0
Loaded Versions:	1
Loads:	1
Invalidations:	0
Open Versions:	0
Kept Versions:	0
Users Executing:	0
Users Opening:	0
First Load Time:	2013-04-05/11:05:48
Last Load Time:	2013-04-05/11:07:27
Last Active Time:	2013-04-05/11:12:22
Plan Timestamp:	2013-04-05/11:07:27
Sharable Memory:	51953
Persistent Memory:	26584
Runtime Memory:	25796
Sorts:	2
Serializable Aborts:	0
Command Type:	3
Optimizer Mode:	ALL_ROWS
Optimizer Env:	673058757
Optimizer Cost:	21861
Parsing User ID:	92
Parsing Schema ID:	92
Parsing Schema Name:	QTUNE

Plan Hash Value:	142578110
Src:	AWR
Source:	DBA_HIST_SQLSTAT
Inst ID:	1
Version Count:	5
Executions:	2
Elapsed Time in secs:	65.467
CPU Time in secs:	64.068
User I/O Wait Time in secs:	0.486
Application Wait Time in secs:	0.000
Concurrency Wait Time in secs:	0.000
Cluster Wait Time in secs:	0.000
PL/SQL Exec Time in secs:	0.000
Java Exec Time in secs:	0.000
Buffer Gets:	222454
Disk Reads:	33984
Direct Writes:	0
Rows Processed:	56822
Parse Calls:	2
Fetches:	3792
End of Fetch count:	2
PX Servers Executions:	0
Loaded Versions:	1
Loads:	1
Invalidations:	0
First Load Time:	2013-04-05/11:07:18
Last Load Time:	2013-04-05/11:13:53
Snap ID:	7223
Snap Begin Date:	2013-04-05/11:07:18
Snap End Date:	2013-04-05/11:13:53
Plan Timestamp:	2013-04-05/11:07:27
Sharable Memory:	46973
Sorts:	2
Optimizer Mode:	ALL_ROWS
Optimizer Env:	673058757
Optimizer Cost:	21861
Parsing User ID:	92
Parsing Schema ID:	92
Parsing Schema Name:	QTUNE
Module:	SQL*Plus
SQL Profile:	"null"
Force Matching Signature:	1178211779310957485
Outline Category:	"null"
I/O Interconnect Bytes:	278396928
Physical Read Requests:	610
Physical Read Bytes:	278396928

Module:	SQL*Plus
SQL Profile:	"null"
Exact Matching Signature:	1178211779310957485
Force Matching Signature:	1178211779310957485
Outline Category:	"null"
Remote:	N
Object Status:	VALID
Program ID:	0
Program Line #:	0
Typecheck Memory:	0
I/O Interconnect Bytes:	278396928
Physical Read Requests:	610
Physical Read Bytes:	278396928
Physical Write Requests:	0
Physical Write Bytes:	0
Optimized Physical Read Requests:	0
I/O Cell Uncompressed Bytes:	0
I/O Cell Offload Eligible Bytes:	0
I/O Cell Offload Returned Bytes:	0

Physical Write Requests:	0
Physical Write Bytes:	0
Optimized Physical Read Requests:	0
I/O Cell Uncompressed Bytes:	0
I/O Cell Offload Eligible Bytes:	0
I/O Cell Offload Returned Bytes:	0

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Plan Performance Statistics for [657302870](#)

Plan Hash Value:	657302870
Src:	MEM
Source:	GV\$SQLAREA_PLAN_HASH
Is Bind Sensitive:	Y
Inst ID:	1
Version Count:	9
Executions:	2
Elapsed Time in secs:	55.618
CPU Time in secs:	52.231
User I/O Wait Time in secs:	0.459
Application Wait Time in secs:	0.000
Concurrency Wait Time in secs:	0.000
Cluster Wait Time in secs:	0.000
PL/SQL Exec Time in secs:	0.000
Java Exec Time in secs:	0.000
Buffer Gets:	103090
Disk Reads:	33984
Direct Writes:	0
Rows Processed:	18228
Parse Calls:	2
Fetches:	1218
End of Fetch count:	2
PX Servers Executions:	0
Loaded Versions:	1
Loads:	1
Invalidations:	0
Open Versions:	0
Kept Versions:	0
Users Executing:	0
Users Opening:	0
First Load Time:	2013-04-05/11:05:48
Last Load Time:	2013-04-05/11:12:23
Last Active Time:	2013-04-05/11:13:45
Plan Timestamp:	2013-04-05/11:12:23
Sharable Memory:	51953
Persistent Memory:	25932

Plan Hash Value:	657302870
Src:	AWR
Source:	DBA_HIST_SQLSTAT
Inst ID:	1
Version Count:	5
Executions:	2
Elapsed Time in secs:	55.618
CPU Time in secs:	52.231
User I/O Wait Time in secs:	0.459
Application Wait Time in secs:	0.000
Concurrency Wait Time in secs:	0.000
Cluster Wait Time in secs:	0.000
PL/SQL Exec Time in secs:	0.000
Java Exec Time in secs:	0.000
Buffer Gets:	103090
Disk Reads:	33984
Direct Writes:	0
Rows Processed:	18228
Parse Calls:	2
Fetches:	1218
End of Fetch count:	2
PX Servers Executions:	0
Loaded Versions:	1
Loads:	1
Invalidations:	0
First Load Time:	2013-04-05/11:07:18
Last Load Time:	2013-04-05/11:13:53
Snap ID:	7223
Snap Begin Date:	2013-04-05/11:07:18
Snap End Date:	2013-04-05/11:13:53
Plan Timestamp:	2013-04-05/11:12:23
Sharable Memory:	46973
Sorts:	2
Optimizer Mode:	ALL_ROWS
Optimizer Env:	673058757
Optimizer Cost:	20124

Runtime Memory:	25144
Sorts:	2
Serializable Aborts:	0
Command Type:	3
Optimizer Mode:	ALL_ROWS
Optimizer Env:	673058757
Optimizer Cost:	20124
Parsing User ID:	92
Parsing Schema ID:	92
Parsing Schema Name:	QTUNE
Module:	SQL*Plus
SQL Profile:	"null"
Exact Matching Signature:	1178211779310957485
Force Matching Signature:	1178211779310957485
Outline Category:	"null"
Remote:	N
Object Status:	VALID
Program ID:	0
Program Line #:	0
Typecheck Memory:	0
I/O Interconnect Bytes:	278396928
Physical Read Requests:	610
Physical Read Bytes:	278396928
Physical Write Requests:	0
Physical Write Bytes:	0
Optimized Physical Read Requests:	0
I/O Cell Uncompressed Bytes:	0
I/O Cell Offload Eligible Bytes:	0
I/O Cell Offload Returned Bytes:	0

Parsing User ID:	92
Parsing Schema ID:	92
Parsing Schema Name:	QTUNE
Module:	SQL*Plus
SQL Profile:	"null"
Force Matching Signature:	1178211779310957485
Outline Category:	"null"
I/O Interconnect Bytes:	278396928
Physical Read Requests:	610
Physical Read Bytes:	278396928
Physical Write Requests:	0
Physical Write Bytes:	0
Optimized Physical Read Requests:	0
I/O Cell Uncompressed Bytes:	0
I/O Cell Offload Eligible Bytes:	0
I/O Cell Offload Returned Bytes:	0

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Plan Performance Statistics for **1637264670**

Plan Hash Value:	1637264670
Src:	MEM
Source:	GV\$SQLAREA_PLAN_HASH
Is Bind Sensitive:	Y
Inst ID:	1
Version Count:	9
Executions:	2
Elapsed Time in secs:	54.680
CPU Time in secs:	51.507
User I/O Wait Time in secs:	0.628
Application Wait Time in secs:	0.000
Concurrency Wait Time in secs:	0.000
Cluster Wait Time in secs:	0.000
PL/SQL Exec Time in secs:	0.000
Java Exec Time in secs:	0.000
Buffer Gets:	122566
Disk Reads:	33185
Direct Writes:	0
Rows Processed:	18228
Parse Calls:	3
Fetches:	1218
End of Fetch count:	2
PX Servers Executions:	0
Loaded Versions:	1
Loads:	1
Invalidations:	0

Open Versions:	0
Kept Versions:	0
Users Executing:	0
Users Opening:	0
First Load Time:	2013-04-05/11:05:48
Last Load Time:	2013-04-05/11:13:59
Last Active Time:	2013-04-05/11:15:49
Plan Timestamp:	2013-04-05/11:13:59
Sharable Memory:	51953
Persistent Memory:	26340
Runtime Memory:	25552
Sorts:	2
Serializable Aborts:	0
Command Type:	3
Optimizer Mode:	ALL_ROWS
Optimizer Env:	926113474
Optimizer Cost:	19996
Parsing User ID:	92
Parsing Schema ID:	92
Parsing Schema Name:	QTUNE
Module:	SQL*Plus
SQL Profile:	"null"
Exact Matching Signature:	1178211779310957485
Force Matching Signature:	1178211779310957485
Outline Category:	"null"
Remote:	N
Object Status:	VALID
Program ID:	0
Program Line #:	0
Typecheck Memory:	0
I/O Interconnect Bytes:	271851520
Physical Read Requests:	1319
Physical Read Bytes:	271851520
Physical Write Requests:	0
Physical Write Bytes:	0
Optimized Physical Read Requests:	0
I/O Cell Uncompressed Bytes:	0
I/O Cell Offload Eligible Bytes:	0
I/O Cell Offload Returned Bytes:	0

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Plan Performance Statistics for [2816325939 \[W\]](#)

Plan Hash Value:	2816325939 [W]
Src:	MEM
Source:	GV\$SQLAREA_PLAN_HASH
Is Bind Sensitive:	Y
Inst ID:	1
Version Count:	9
Executions:	4
Elapsed Time in secs:	176.192
CPU Time in secs:	112.259
User I/O Wait Time in secs:	50.641
Application Wait Time in secs:	0.000
Concurrency Wait Time in secs:	0.000
Cluster Wait Time in secs:	0.000
PL/SQL Exec Time in secs:	0.000
Java Exec Time in secs:	0.000

Plan Hash Value:	2816325939 [W]
Src:	AWR
Source:	DBA_HIST_SQLSTAT
Inst ID:	1
Version Count:	5
Executions:	1
Elapsed Time in secs:	80.657
CPU Time in secs:	27.974
User I/O Wait Time in secs:	50.027
Application Wait Time in secs:	0.000
Concurrency Wait Time in secs:	0.000
Cluster Wait Time in secs:	0.000
PL/SQL Exec Time in secs:	0.000
Java Exec Time in secs:	0.000
Buffer Gets:	21082

Buffer Gets:	74623
Disk Reads:	64657
Direct Writes:	0
Rows Processed:	922
Parse Calls:	5
Fetches:	65
End of Fetch count:	3
PX Servers Executions:	0
Loaded Versions:	3
Loads:	3
Invalidations:	0
Open Versions:	1
Kept Versions:	0
Users Executing:	1
Users Opening:	0
First Load Time:	2013-04-05/11:05:48
Last Load Time:	2013-04-05/11:17:01
Last Active Time:	2013-04-05/11:17:28
Plan Timestamp:	2013-04-05/11:05:48
Sharable Memory:	121805
Persistent Memory:	75888
Runtime Memory:	73524
Sorts:	4
Serializable Aborts:	0
Command Type:	3
Optimizer Mode:	ALL_ROWS
Optimizer Env:	2955803461
Optimizer Cost:	19559
Parsing User ID:	92
Parsing Schema ID:	92
Parsing Schema Name:	QTUNE
Module:	SQL*Plus
SQL Profile:	"null"
Exact Matching Signature:	1178211779310957485
Force Matching Signature:	1178211779310957485
Outline Category:	"null"
Remote:	N
Object Status:	VALID
Program ID:	0
Program Line #:	0
Typecheck Memory:	0
I/O Interconnect Bytes:	529670144
Physical Read Requests:	1490
Physical Read Bytes:	529670144
Physical Write Requests:	0
Physical Write Bytes:	0
Optimized Physical Read Requests:	0
I/O Cell Uncompressed Bytes:	0
I/O Cell Offload Eligible Bytes:	0
I/O Cell Offload Returned Bytes:	0

Disk Reads:	17361
Direct Writes:	0
Rows Processed:	922
Parse Calls:	2
Fetches:	63
End of Fetch count:	1
PX Servers Executions:	0
Loaded Versions:	1
Loads:	1
Invalidations:	0
First Load Time:	2013-04-05/11:00:50
Last Load Time:	2013-04-05/11:13:53
Snap ID:	7223
Snap Begin Date:	2013-04-05/11:07:18
Snap End Date:	2013-04-05/11:13:53
Plan Timestamp:	2013-04-05/11:05:48
Sharable Memory:	42913
Sorts:	1
Optimizer Mode:	ALL_ROWS
Optimizer Env:	673058757
Optimizer Cost:	19528
Parsing User ID:	92
Parsing Schema ID:	92
Parsing Schema Name:	QTUNE
Module:	SQL*Plus
SQL Profile:	"null"
Force Matching Signature:	1178211779310957485
Outline Category:	"null"
I/O Interconnect Bytes:	142221312
Physical Read Requests:	674
Physical Read Bytes:	142221312
Physical Write Requests:	0
Physical Write Bytes:	0
Optimized Physical Read Requests:	0
I/O Cell Uncompressed Bytes:	0
I/O Cell Offload Eligible Bytes:	0
I/O Cell Offload Returned Bytes:	0

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Plan Performance Statistics for [3267771367](#) [B]

Plan Hash Value:	3267771367 [B]
Src:	MEM
Source:	GV\$SQLAREA_PLAN_HASH
Is Bind Sensitive:	Y
Inst ID:	1

Plan Hash Value:	3267771367 [B]
Src:	AWR
Source:	DBA_HIST_SQLSTAT
Inst ID:	1
Version Count:	5

Version Count:	9
Executions:	4
Elapsed Time in secs:	3.419
CPU Time in secs:	0.104
User I/O Wait Time in secs:	3.232
Application Wait Time in secs:	0.000
Concurrency Wait Time in secs:	0.000
Cluster Wait Time in secs:	0.000
PL/SQL Exec Time in secs:	0.000
Java Exec Time in secs:	0.000
Buffer Gets:	10314
Disk Reads:	232
Direct Writes:	0
Rows Processed:	84
Parse Calls:	2
Fetches:	10
End of Fetch count:	4
PX Servers Executions:	0
Loaded Versions:	2
Loads:	2
Invalidations:	0
Open Versions:	0
Kept Versions:	0
Users Executing:	0
Users Opening:	0
First Load Time:	2013-04-05/11:05:48
Last Load Time:	2013-04-05/11:15:49
Last Active Time:	2013-04-05/11:15:52
Plan Timestamp:	2013-04-05/11:13:53
Sharable Memory:	92985
Persistent Memory:	60536
Runtime Memory:	58960
Sorts:	4
Serializable Aborts:	0
Command Type:	3
Optimizer Mode:	ALL_ROWS
Optimizer Env:	926113474
Optimizer Cost:	543
Parsing User ID:	92
Parsing Schema ID:	92
Parsing Schema Name:	QTUNE
Module:	SQL*Plus
SQL Profile:	"null"
Exact Matching Signature:	1178211779310957485
Force Matching Signature:	1178211779310957485
Outline Category:	"null"
Remote:	N
Object Status:	VALID
Program ID:	0
Program Line #:	0
Typecheck Memory:	0
I/O Interconnect Bytes:	1900544
Physical Read Requests:	232
Physical Read Bytes:	1900544
Physical Write Requests:	0
Physical Write Bytes:	0
Optimized Physical Read Requests:	0
I/O Cell Uncompressed Bytes:	0
I/O Cell Offload Eligible Bytes:	0
I/O Cell Offload Returned Bytes:	0

Executions:	2
Elapsed Time in secs:	0.026
CPU Time in secs:	0.020
User I/O Wait Time in secs:	0.000
Application Wait Time in secs:	0.000
Concurrency Wait Time in secs:	0.000
Cluster Wait Time in secs:	0.000
PL/SQL Exec Time in secs:	0.000
Java Exec Time in secs:	0.000
Buffer Gets:	10
Disk Reads:	0
Direct Writes:	0
Rows Processed:	0
Parse Calls:	1
Fetches:	2
End of Fetch count:	2
PX Servers Executions:	0
Loaded Versions:	1
Loads:	1
Invalidations:	0
First Load Time:	2013-04-05/11:07:18
Last Load Time:	2013-04-05/11:13:53
Snap ID:	7223
Snap Begin Date:	2013-04-05/11:07:18
Snap End Date:	2013-04-05/11:13:53
Plan Timestamp:	2013-04-05/11:13:53
Sharable Memory:	46973
Sorts:	2
Optimizer Mode:	ALL_ROWS
Optimizer Env:	673058757
Optimizer Cost:	510
Parsing User ID:	92
Parsing Schema ID:	92
Parsing Schema Name:	QTUNE
Module:	SQL*Plus
SQL Profile:	"null"
Force Matching Signature:	1178211779310957485
Outline Category:	"null"
I/O Interconnect Bytes:	0
Physical Read Requests:	0
Physical Read Bytes:	0
Physical Write Requests:	0
Physical Write Bytes:	0
Optimized Physical Read Requests:	0
I/O Cell Uncompressed Bytes:	0
I/O Cell Offload Eligible Bytes:	0
I/O Cell Offload Returned Bytes:	0

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Plan Performance Statistics for **3935795003**

Plan Hash Value:	3935795003
Src:	MEM
Source:	GV\$SQLAREA_PLAN_HASH
Is Bind Sensitive:	Y
Inst ID:	1
Version Count:	9
Executions:	2
Elapsed Time in secs:	7.717
CPU Time in secs:	2.076
User I/O Wait Time in secs:	5.301
Application Wait Time in secs:	0.000
Concurrency Wait Time in secs:	0.000
Cluster Wait Time in secs:	0.000
PL/SQL Exec Time in secs:	0.000
Java Exec Time in secs:	0.000
Buffer Gets:	13146
Disk Reads:	6230
Direct Writes:	0
Rows Processed:	84
Parse Calls:	2
Fetches:	8
End of Fetch count:	2
PX Servers Executions:	0
Loaded Versions:	1
Loads:	1
Invalidations:	0
Open Versions:	0
Kept Versions:	0
Users Executing:	0
Users Opening:	0
First Load Time:	2013-04-05/11:05:48
Last Load Time:	2013-04-05/11:13:45
Last Active Time:	2013-04-05/11:13:53
Plan Timestamp:	2013-04-05/11:13:45
Sharable Memory:	51953
Persistent Memory:	27568
Runtime Memory:	26780
Sorts:	2
Serializable Aborts:	0
Command Type:	3
Optimizer Mode:	ALL_ROWS
Optimizer Env:	673058757
Optimizer Cost:	7453
Parsing User ID:	92
Parsing Schema ID:	92
Parsing Schema Name:	QTUNE
Module:	SQL*Plus
SQL Profile:	"null"
Exact Matching Signature:	1178211779310957485
Force Matching Signature:	1178211779310957485
Outline Category:	"null"
Remote:	N
Object Status:	VALID
Program ID:	0
Program Line #:	0

Plan Hash Value:	3935795003
Src:	AWR
Source:	DBA_HIST_SQLSTAT
Inst ID:	1
Version Count:	5
Executions:	2
Elapsed Time in secs:	7.717
CPU Time in secs:	2.076
User I/O Wait Time in secs:	5.301
Application Wait Time in secs:	0.000
Concurrency Wait Time in secs:	0.000
Cluster Wait Time in secs:	0.000
PL/SQL Exec Time in secs:	0.000
Java Exec Time in secs:	0.000
Buffer Gets:	13146
Disk Reads:	6230
Direct Writes:	0
Rows Processed:	84
Parse Calls:	2
Fetches:	8
End of Fetch count:	2
PX Servers Executions:	0
Loaded Versions:	1
Loads:	1
Invalidations:	0
First Load Time:	2013-04-05/11:07:18
Last Load Time:	2013-04-05/11:13:53
Snap ID:	7223
Snap Begin Date:	2013-04-05/11:07:18
Snap End Date:	2013-04-05/11:13:53
Plan Timestamp:	2013-04-05/11:13:45
Sharable Memory:	46973
Sorts:	2
Optimizer Mode:	ALL_ROWS
Optimizer Env:	673058757
Optimizer Cost:	7453
Parsing User ID:	92
Parsing Schema ID:	92
Parsing Schema Name:	QTUNE
Module:	SQL*Plus
SQL Profile:	"null"
Force Matching Signature:	1178211779310957485
Outline Category:	"null"
I/O Interconnect Bytes:	51036160
Physical Read Requests:	2984
Physical Read Bytes:	51036160
Physical Write Requests:	0
Physical Write Bytes:	0
Optimized Physical Read Requests:	0
I/O Cell Uncompressed Bytes:	0
I/O Cell Offload Eligible Bytes:	0
I/O Cell Offload Returned Bytes:	0

Typecheck Memory:	0
I/O Interconnect Bytes:	51036160
Physical Read Requests:	2984
Physical Read Bytes:	51036160
Physical Write Requests:	0
Physical Write Bytes:	0
Optimized Physical Read Requests:	0
I/O Cell Uncompressed Bytes:	0
I/O Cell Offload Eligible Bytes:	0
I/O Cell Offload Returned Bytes:	0

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Plan Performance History (delta)

List restricted up to 1000 rows as per tool parameter "r_rows_table_1".

SQL: [\[+\]](#)

#	Snap ID	Begin Time	End Time	Startup Time	Inst ID	Plan Hash Value	Opt Env Hash Value	Cost	Opt Mode	Vers Count	Sharable Mem	Loaded Versions	SQL Profile	Parsing Schema ID	Parsing Schema Name	Parsing User ID	Executions (delta)	Elapsed Time in secs (delta)	CPU Time in secs (delta)	I/O Wait Time in secs (delta)	Appl Wait Time in secs (delta)	Conc Wait Time in secs (delta)	Clust Wait Time in secs (delta)	PL/SQL Wait Time in secs (delta)
1	7223	2013-04-05/11:07:18	2013-04-05/11:13:53	2013-03-31/12:53:14.000	1	142578110	673058757	21861	ALL_ROWS	5	46973	1		92	QTUNE	92	2	65.467	64.068	0.486	0.000	0.000	0.000	0.000
2	7223	2013-04-05/11:07:18	2013-04-05/11:13:53	2013-03-31/12:53:14.000	1	657302870	673058757	20124	ALL_ROWS	5	46973	1		92	QTUNE	92	2	55.618	52.231	0.459	0.000	0.000	0.000	0.000
3	7223	2013-04-05/11:07:18	2013-04-05/11:13:53	2013-03-31/12:53:14.000	1	2816325939 [W]	673058757	19528	ALL_ROWS	5	42913	1		92	QTUNE	92	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	7223	2013-04-05/11:07:18	2013-04-05/11:13:53	2013-03-31/12:53:14.000	1	3267771367 [B]	673058757	510	ALL_ROWS	5	46973	1		92	QTUNE	92	2	0.026	0.020	0.000	0.000	0.000	0.000	0.000
5	7223	2013-04-05/11:07:18	2013-04-05/11:13:53	2013-03-31/12:53:14.000	1	3935795003	673058757	7453	ALL_ROWS	5	46973	1		92	QTUNE	92	2	7.717	2.076	5.301	0.000	0.000	0.000	0.000
6	7222	2013-04-05/11:00:50	2013-04-05/11:07:18	2013-03-31/12:53:14.000	1	2816325939 [W]	673058757	19528	ALL_ROWS	1	41065	1		92	QTUNE	92	1	80.657	27.974	50.027	0.000	0.000	0.000	0.000

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Plan Performance History (total)

List restricted up to 1000 rows as per tool parameter "r_rows_table_1".

SQL: [\[+\]](#)

#	Snap ID	Begin Time	End Time	Startup Time	Inst ID	Plan Hash Value	Opt Env Hash Value	Cost	Opt Mode	Vers Count	Sharable Mem	Loaded Versions	SQL Profile	Parsing Schema ID	Parsing Schema Name	Parsing User ID	Executions (total)	Elapsed Time in secs (total)	CPU Time in secs (total)	I/O Wait Time in secs (total)	Appl Wait Time in secs (total)	Conc Wait Time in secs (total)	Clust Wait Time in secs (total)	PL/SQL Wait Time in secs (total)
1	7223	2013-04-05/11:07:18	2013-04-05/11:13:53	2013-03-31/12:53:14.000	1	142578110	673058757	21861	ALL_ROWS	5	46973	1		92	QTUNE	92	2	65.467	64.068	0.486	0.000	0.000	0.000	0.000
2	7223	2013-04-05/11:07:18	2013-04-05/11:13:53	2013-03-31/12:53:14.000	1	657302870	673058757	20124	ALL_ROWS	5	46973	1		92	QTUNE	92	2	55.618	52.231	0.459	0.000	0.000	0.000	0.000
3	7223	2013-04-05/11:07:18	2013-04-05/11:13:53	2013-03-31/12:53:14.000	1	2816325939 [W]	673058757	19528	ALL_ROWS	5	42913	1		92	QTUNE	92	1	80.657	27.974	50.027	0.000	0.000	0.000	0.000
4	7223	2013-04-05/11:07:18	2013-04-05/11:13:53	2013-03-31/12:53:14.000	1	3267771367 [B]	673058757	510	ALL_ROWS	5	46973	1		92	QTUNE	92	2	0.026	0.020	0.000	0.000	0.000	0.000	0.000
5	7223	2013-04-05/11:07:18	2013-04-05/11:13:53	2013-03-31/12:53:14.000	1	3935795003	673058757	7453	ALL_ROWS	5	46973	1		92	QTUNE	92	2	7.717	2.076	5.301	0.000	0.000	0.000	0.000
6	7222	2013-04-05/11:00:50	2013-04-05/11:07:18	2013-03-31/12:53:14.000	1	2816325939 [W]	673058757	19528	ALL_ROWS	1	41065	1		92	QTUNE	92	1	80.657	27.974	50.027	0.000	0.000	0.000	0.000

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Execution Plans

List ordered by phv and source.

#	Plan Hash Value	SQL Plan Hash Value ¹	SQL Plan Hash Value ²	Src	Source	Plan Info	Plan Stability	Is Bind Sensitive	Optimizer	Optimizer Cost	Estimated Cardinality E-Rows	Rows Processed A-Rows	Plan Timestamp	Child Plans ²	Plan ID	Task ID	Attribute
1	142578110	33788	55604	MEM	GV\$SQL_PLAN	cardinality_feedback	yes	Y	ALL_ROWS	21861	1857	28411	2013-04-05/11:07:27	1			
2	142578110	33788	33788	AWR	DBA_HIST_SQL_PLAN	cardinality_feedback	yes		ALL_ROWS	21861	1857	28411	2013-04-05/11:07:27				

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Plan Info

#	Type	Value
1	cardinality_feedback	yes
2	db_version	11.2.0.3
3	parse_schema	"QTUNE"
4	plan_hash	142578110

Peeked Binds timestamp:2013-04-05/11:07:27

#	Name	Type	Value
1	:B1	VARCHAR2(32)	"1"

Captured Binds

List of captured binds is restricted up to 300 rows per Plan as per tool parameter "r_rows_table_m".

SQL: [\[+\]](#)

#	Last Captured	Name	Type	Value
1	2013-04-05/11:10:16	:B1	VARCHAR2(32)	"1"

Optimizer Environment

#	Name	Value
1	sqlstat_enabled	true
2	statistics_level	all

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Execution Plan phv:142578110 sqlt_phv:33788 sqlt_phv2:33788 source:DBA_HIST_SQL_PLAN timestamp:2013-04-05/11:07:27 oldest_snapshot:2013-04-05/11:07:18

SQL Text: [\[-\]](#)

```
SELECT /*+ gather_plan_statistics monitor bind_aware */
v.customer_name,
v.orders_total,
v.credit_limit,
  (orders_total - credit_limit) over_limit
FROM customer_v v
WHERE orders_total > credit_limit
AND customer_type = :b1
ORDER BY
  over_limit DESC
```

SQL: [\[±\]](#)

ID	Exec Ord	Operation	Go To	More	Cost ²	Estim	Card
0	19	SELECT STATEMENT			21861		1857
1	18	SORT ORDER BY			21861		1857
2	17	HASH JOIN		[±]	21860		1857
3	2	.. JOIN FILTER CREATE :BF0000			220		37132
4	1	... TABLE ACCESS FULL <u>CUSTOMER</u>		[±]	220		37132
5	16	.. VIEW			21388		95936
6	15	... HASH GROUP BY			21388		95936
7	14	.... JOIN FILTER USE :BF0000			21388		95936
8	13	....+ NESTED LOOPS			21388		95936
9	11	....+. VIEW VW_GBC_10			21380		95936
10	10	....+. HASH GROUP BY		[±]	21380		95936
11	9	....+. HASH JOIN		[±]	20057		281573
12	3	....+. TABLE ACCESS FULL <u>SALES_ORDER</u>		[±]	465		281573

13	8	....+.... VIEW				18836	302976
14	7	....+....+ HASH GROUP BY			[+]	18836	302976
15	6	....+....+ HASH JOIN			[+]	8648	3416582
16	4	....+....+ TABLE ACCESS FULL PART			[+]	392	200000
17	5	....+....+ TABLE ACCESS FULL ORDER_LINE			[+]	3609	3450201
18	12	....+ INDEX UNIQUE SCAN CUSTOMER_PK			[+]	[+]	0 1

(1) If estim_card * starts < output_rows then under-estimate. If estim_card * starts > output_rows then over-estimate. Color highlights when exceeding * 10x, ** 100x and *** 1000x over/under-estimates.
(2) Largest contributors for cumulative-statistics columns are shown in red.

Other XML (id=1): [+]
Outline Data (id=1): [+]
Leading (id=1): [+]

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Plan Info

#	Type	Value
1	cardinality_feedback	yes
2	db_version	11.2.0.3
3	parse_schema	"QTUNE"
4	plan_hash	142578110

Peeked Binds timestamp:2013-04-05/11:07:27

#	Name	Type	Value
1	:B1	VARCHAR2(32)	"1"

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Execution Plan phv:657302870 sqlt_phv:92811 sqlt_phv2:23794 source:GV\$SQL_PLAN inst:1 child:2(3B3BAF50) executions:2 is_sharable:Y timestamp:2013-04-05/11:12:23

SQL Text: [-]

```
SELECT /*+ gather_plan_statistics monitor bind_aware */
v.customer_name,
v.orders_total,
v.credit_limit,
FROM (orders_total - credit_limit) over_limit
customer_v v
WHERE orders_total > credit_limit
AND customer_type = :b1
ORDER BY
over_limit DESC
```

SQL: [+]

ID	Exec Ord	Operation	Go To	More	Peek Bind	Capt Bind	Cost ²	Estim Card	LAST Starts	LAST Output Rows	LAST Over/Under Estimate ¹	LAST CR Buffer Gets ²	LAST CU Buffer Gets ²	LAST Disk Reads ²	LAST Elapsed Time in secs ²	ALL Starts	ALL Output Rows	ALL Over/Under Estimate ¹	ALL CR Buffer Gets ²	ALL CU Buffer Gets ²	ALL Disk Reads ²	ALL Elapsed Time in secs ²	Work Area
0	17	SELECT STATEMENT					20124 1634	1	9114	6x under													
1	16	SORT ORDER BY			[+]		20124 1634	1	9114	6x under		51541	1	16992	27.269	2	18228	6x under	103082	2	33984	55.524	[+]
2	15	FILTER			[+]		20124	1	9114			51541	1	16992	27.241	2	18228		103082	2	33984	55.470	
3	14	.. HASH GROUP BY			[+]		20124 1634	1	11388	7x under		51541	1	16992	27.223	2	22776	7x under	103082	2	33984	55.432	[+]
4	13	... NESTED LOOPS			[+]		20120 38124	1	34390	1x		51541	1	16992	27.141	2	68780	1x	103082	2	33984	55.276	
5	11	.... HASH JOIN			[+]		20116 38124	1	34390	1x		17149	1	16992	26.797	2	68780	1x	34298	2	33984	54.608	[+]
6	4	....+ JOIN FILTER CREATE :BF0000			[+]		687 38124	1	34390	1x		2441	0	2437	1.372	2	68780	1x	4882	0	4874	3.212	
7	3	....+ HASH JOIN			[+]		687 38124	1	34390	1x		2441	0	2437	1.297	2	68780	1x	4882	0	4874	3.056	[+]
8	1	....+.. TABLE ACCESS FULL CUSTOMER		[+]	[+]	[+]	220 12989	1	12113	1x		782	0	780	0.033	2	24226	1x	1564	0	1560	0.065	
9	2	....+.. TABLE ACCESS FULL SALES_ORDER		[+]	[+]		465 281573	1	281792	1x		1659	0	1657	0.328	2	563584	1x	3318	0	3314	0.809	
10	10	....+ VIEW			[+]		18836 302976	1	38728	8x over		14708	1	14555	25.127	2	77456	8x over	29416	2	29110	50.742	
11	9	....+ HASH GROUP BY			[+]		18836 302976	1	38728	8x over		14708	1	14555	25.048	2	77456	8x over	29416	2	29110	50.591	[+]

12	8	....+..	JOIN FILTER USE :BF0000	[±]			8648	3416582	1	445735	8x over	14708	1	14555	23.901	2	891470	8x over	29416	2	29110	48.272	
13	7	....+..	HASH JOIN	[±]			8648	3416582	1	3450201	1x	14708	1	14555	19.667	2	6900402	1x	29416	2	29110	39.720	[±]
14	5	....+....	TABLE ACCESS FULL PART	[±]	[±]		392	200000	1	200000	1x	1400	0	1398	0.224	2	400000	1x	2800	0	2796	0.448	
15	6	....+....	TABLE ACCESS FULL ORDER_LINE	[±]	[±]		3609	3450201	1	3450201	1x	13308	1	13157	3.745	2	6900402	1x	26616	2	26314	7.502	
16	12	....	INDEX UNIQUE SCAN CUSTOMER_PK	[±]	[±]		0	1	34390	34390	1x	34392	0	0	0.176	68780	68780	1x	68784	0	0	0.344	

Performance statistics is only available when parameter "statistics_level" was set to "ALL" at hard-parse time, or SQL contains "gather_plan_statistics" hint.

(1) If estim_card * starts < output_rows then under-estimate. If estim_card * starts > output_rows then over-estimate. Color highlights when exceeding * 10x, ** 100x and *** 1000x over/under-estimates.

(2) Largest contributors for cumulative-statistics columns are shown in red.

Other XML (id=1): [±]

Outline Data (id=1): [±]

Leading (id=1): [±]

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Plan Info

#	Type	Value
1	cardinality_feedback	yes
2	db_version	11.2.0.3
3	parse_schema	"QTUNE"
4	plan_hash	657302870

Peeked Binds timestamp:2013-04-05/11:12:23

#	Name	Type	Value
1	:B1	VARCHAR2(32)	"3"

Captured Binds

List of captured binds is restricted up to 300 rows per Plan as per tool parameter "r_rows_table_m".

SQL: [±]

#	Last Captured	Name	Type	Value
1	2013-04-05/11:13:08	:B1	VARCHAR2(32)	"3"

Optimizer Environment

#	Name	Value
1	sqlstat_enabled	true
2	statistics_level	all

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Execution Plan phv:657302870 sqlt_phv:92811 sqlt_phv2:92811 source:DBA_HIST_SQL_PLAN timestamp:2013-04-05/11:12:23 oldest_snapshot:2013-04-05/11:07:18

SQL Text: [±]

```

SELECT /*+ gather_plan_statistics monitor bind_aware */
  v.customer_name,
  v.orders_total,
  v.credit_limit,
  (orders_total - credit_limit) over_limit
FROM customer_v v
WHERE orders_total > credit_limit
AND customer_type = :b1
ORDER BY
  over_limit DESC

```

SQL: [±]

ID	Exec Ord	Operation	Go To	More	Cost ²	Estim Card
0	17	SELECT STATEMENT			20124	1634

1	16	SORT ORDER BY			20124	1634
2	15	. FILTER			20124	
3	14	.. HASH GROUP BY			20124	1634
4	13	... NESTED LOOPS			20120	38124
5	11	.... HASH JOIN		[+]	20116	38124
6	4	....+ JOIN FILTER CREATE :BF0000			687	38124
7	3	....+. HASH JOIN			687	38124
8	1	....+.. TABLE ACCESS FULL <u>CUSTOMER</u>		[+]	220	12989
9	2	....+.. TABLE ACCESS FULL <u>SALES_ORDER</u>		[+]	465	281573
10	10	....+ VIEW			18836	302976
11	9	....+. HASH GROUP BY		[+]	18836	302976
12	8	....+.. JOIN FILTER USE :BF0000			8648	3416582
13	7	....+... HASH JOIN		[+]	8648	3416582
14	5	....+.... TABLE ACCESS FULL <u>PART</u>		[+]	392	200000
15	6	....+.... TABLE ACCESS FULL <u>ORDER_LINE</u>		[+]	3609	3450201
16	12	.... INDEX UNIQUE SCAN <u>CUSTOMER_PK</u>		[+]	0	1

(1) If estim_card * starts < output_rows then under-estimate. If estim_card * starts > output_rows then over-estimate. Color highlights when exceeding * 10x, ** 100x and *** 1000x over/under-estimates.

(2) Largest contributors for cumulative-statistics columns are shown in red.

Other XML (id=1): [\[+\]](#)

Outline Data (id=1): [\[+\]](#)

Leading (id=1): [\[+\]](#)

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Plan Info

#	Type	Value
1	cardinality_feedback	yes
2	db_version	11.2.0.3
3	parse_schema	"QTUNE"
4	plan_hash	657302870

Peeked Binds timestamp:2013-04-05/11:12:23

#	Name	Type	Value
1	:B1	VARCHAR2(32)	"3"

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Execution Plan phv:657302870 sqlt_phv:92811 sqlt_phv2:38096 source:PLAN_TABLE timestamp:2013-04-05/11:17:22

SQL Text: [\[-\]](#)

```

SELECT /*+ gather_plan_statistics monitor bind_aware */
v.customer_name,
v.orders_total,
v.credit_limit,
v.credit_limit,
(orders_total - credit_limit) over_limit
FROM customer_v v
WHERE orders_total > credit_limit
AND customer_type = :b1
ORDER BY
over_limit DESC

```

SQL: [\[+\]](#)

ID	Exec Ord	Operation	Go To	More	Cost ²	Estim Card
0	17	SELECT STATEMENT			21391	2097
1	16	SORT ORDER BY		[+]	21391	2097
2	15	. FILTER		[+]	21391	

9	1	....+...	INDEX RANGE SCAN	<u>CUSTOMER_N2</u>	[+]	[+]	[+]	[+]	1	12989	1	12113	1x	29	0	0	0.014	2	24226	1x	58	0	28	0.178
10	3	....+..	TABLE ACCESS FULL	<u>SALES_ORDER</u>	[+]	[+]			465	281573	1	281792	1x	1659	0	1657	0.309	2	563584	1x	3318	0	3314	0.615
11	11	....+	VIEW		[+]				18836	302976	1	38728	8x over	14708	1	14555	26.259	2	77456	8x over	29416	2	29110	50.242
12	10	....+	HASH GROUP BY		[+]				18836	302976	1	38728	8x over	14708	1	14555	26.173	2	77456	8x over	29416	2	29110	50.078
13	9	....+	JOIN FILTER USE	:BF0000	[+]				8648	3416582	1	445735	8x over	14708	1	14555	24.902	2	891470	8x over	29416	2	29110	47.723
14	8	....+...	HASH JOIN		[+]				8648	3416582	1	3450201	1x	14708	1	14555	20.395	2	6900402	1x	29416	2	29110	39.177
15	6	....+....	TABLE ACCESS FULL	<u>PART</u>	[+]	[+]			392	200000	1	200000	1x	1400	0	1398	0.218	2	400000	1x	2800	0	2796	0.453
16	7	....+....	TABLE ACCESS FULL	<u>ORDER_LINE</u>	[+]	[+]			3609	3450201	1	3450201	1x	13308	1	13157	3.892	2	6900402	1x	26616	2	26314	7.439
17	13	....	INDEX UNIQUE SCAN	<u>CUSTOMER_PK</u>	[+]	[+]			1	1	34390	34390	1x	34392	0	0	0.178	68780	68780	1x	68784	0	0	0.347

Performance statistics is only available when parameter "statistics_level" was set to "ALL" at hard-parse time, or SQL contains "gather_plan_statistics" hint.

(1) If estim_card * starts < output_rows then under-estimate. If estim_card * starts > output_rows then over-estimate. Color highlights when exceeding * 10x, ** 100x and *** 1000x over/under-estimates.

(2) Largest contributors for cumulative-statistics columns are shown in red.

Other XML (id=1): [+]

Outline Data (id=1): [+]

Leading (id=1): [+]

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Plan Info

#	Type	Value
1	db_version	11.2.0.3
2	parse_schema	"QTUNE"
3	plan_hash	1637264670

Peeked Binds timestamp:2013-04-05/11:13:59

#	Name	Type	Value
1	:B1	VARCHAR2(32)	"3"

Captured Binds

List of captured binds is restricted up to 300 rows per Plan as per tool parameter "r_rows_table_m".

SQL: [+]

#	Last Captured	Name	Type	Value
1	2013-04-05/11:14:49	:B1	VARCHAR2(32)	"3"

Optimizer Environment

#	Name	Value
1	sqlstat_enabled	true
2	optimizer_index_cost_adj	1
3	statistics_level	all

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Execution Plan phv:2816325939 [W] sqlt_phv:25354 sqlt_phv2:56337 source:GV\$SQL_PLAN inst:1 child:8(38B73370) executions:1 is_sharable:Y timestamp:2013-04-05/11:17:01

SQL Text: [-]

```

SELECT /*+ gather_plan_statistics monitor bind_aware */
       v.customer_name,
       v.orders_total,
       v.credit_limit,
       (orders_total - credit_limit) over_limit
FROM   customer_v v
WHERE  orders_total > credit_limit
AND    customer_type = :b1
ORDER BY
       over_limit DESC

```

SQL: [\[+\]](#)

ID	Exec Ord	Operation	Go To	More	Peek Bind	Capt Bind	Cost ²	Estim Card	LAST Starts	LAST Output Rows	LAST Over/Under Estimate ¹	Work Area
0	15	SELECT STATEMENT					19559	151	1	0		
1	14	SORT ORDER BY		[+]			19559	151	1	0		[+]
2	13	. FILTER		[+]			19559		1	0		
3	12	.. HASH GROUP BY		[+]			19559	151	1	0		[+]
4	11	... HASH JOIN		[+]			19557	3518	1	2074	2x over	[+]
5	5	.... NESTED LOOPS		[+]			719	3518	1	3484		1x
6	3	....+ HASH JOIN		[+]			687	3518	1	3484		1x [+]
7	1	....+. TABLE ACCESS FULL <u>CUSTOMER</u>	[+]	[+]	[+]	[+]	220	1199	1	1239		1x
8	2	....+. TABLE ACCESS FULL <u>SALES_ORDER</u>	[+]	[+]			465	281573	1	281792		1x
9	4	....+ INDEX UNIQUE SCAN <u>CUSTOMER_PK</u>	[+]	[+]			1	1	3484	3484		1x
10	10	.... VIEW		[+]			18836	302976	1	174211		2x over
11	9	....+ HASH GROUP BY		[+]			18836	302976	1	174211		2x over [+]
12	8	....+. HASH JOIN		[+]			8648	3416582	1	3450201		1x [+]
13	6	....+. TABLE ACCESS FULL <u>PART</u>	[+]	[+]			392	200000	1	200000		1x
14	7	....+. TABLE ACCESS FULL <u>ORDER_LINE</u>	[+]	[+]			3609	3450201	1	3450201		1x

Performance statistics is only available when parameter "statistics_level" was set to "ALL" at hard-parse time, or SQL contains "gather_plan_statistics" hint.

Last Starts and Last Output Rows were captured by SQL Plan Monitor. SQL Exec Start is "2013-04-05/11:17:00". SQL Exec ID is "16777231". Status is "EXECUTING". Key is "377957122127".

(1) If estim_card * starts < output_rows then under-estimate. If estim_card * starts > output_rows then over-estimate. Color highlights when exceeding * 10x, ** 100x and *** 1000x over/under-estimates.

(2) Largest contributors for cumulative-statistics columns are shown in red.

Other XML (id=1): [\[+\]](#)

Outline Data (id=1): [\[+\]](#)

Leading (id=1): [\[+\]](#)

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Plan Info

#	Type	Value
1	cardinality_feedback	yes
2	db_version	11.2.0.3
3	parse_schema	"QTUNE"
4	plan_hash	2816325939

Peeked Binds timestamp:2013-04-05/11:17:01

#	Name	Type	Value
1	:B1	VARCHAR2(32)	"4"

Captured Binds

List of captured binds is restricted up to 300 rows per Plan as per tool parameter "r_rows_table_m".

SQL: [\[+\]](#)

#	Last Captured	Name	Type	Value
1	2013-04-05/11:17:00	:B1	VARCHAR2(32)	"4"

Optimizer Environment

#	Name	Value
1	sqlstat_enabled	true
2	optimizer_index_cost_adj	10000
3	statistics_level	all

Execution Plan phv:2816325939 [W] sqlt_phv:25354 sqlt_phv2:56337 source:GV\$SQL_PLAN inst:1 child:7(365FC9B8) executions:2 is_sharable:N timestamp:2013-04-05/11:15:52

SQL: [\[+\]](#)

ID	Exec Ord	Operation	Go To	More	Peek Bind	Capt Bind	Cost ²	Estim Card	LAST Starts	LAST Output Rows	LAST Over/Under Estimate ¹	LAST CR Buffer Gets ²	LAST CU Buffer Gets ²	LAST Disk Reads ²	LAST Elapsed Time in secs ²	ALL Starts	ALL Output Rows	ALL Over/Under Estimate ¹	ALL CR Buffer Gets ²	ALL CU Buffer Gets ²	ALL Disk Reads ²	ALL Elapsed Time in secs ²	Work Area
----	----------	-----------	-------	------	-----------	-----------	-------------------	------------	-------------	------------------	---------------------------------------	----------------------------------	----------------------------------	------------------------------	--	------------	-----------------	--------------------------------------	---------------------------------	---------------------------------	-----------------------------	---------------------------------------	-----------

ID	Exec Ord	Operation	Go To	More	Peek Bind	Capt Bind	Cost ²	Estim Card	LAST Starts	LAST Output Rows	LAST Over/Under Estimate ¹	LAST CR Buffer Gets ²	LAST CU Buffer Gets ²	LAST Disk Reads ²	LAST Elapsed Time in secs ²	Work Area							
0	15	SELECT STATEMENT					19559	151	1	0													
1	14	SORT ORDER BY		[+]			19559	151	1	0	17156	1	16212	30.514	2	0	34312	2	32424	68.410	[+]		
2	13	.FILTER		[+]			19559		1	0	17156	1	16212	30.514	2	0	34312	2	32424	68.410			
3	12	.. HASH GROUP BY		[+]			19559	151	1	1	** 151x over	17156	1	16212	30.514	2	2	** 151x over	34312	2	32424	68.410	[+]
4	11	... HASH JOIN		[+]			19557	3518	1	3	*** 1173x over	17156	1	16212	30.514	2	6	*** 1173x over	34312	2	32424	68.410	[+]
5	5	.... NESTED LOOPS		[+]			719	3518	1	3	*** 1173x over	2448	0	1657	1.245	2	6	*** 1173x over	4896	0	3314	2.980	
6	3	....+ HASH JOIN		[+]			687	3518	1	3	*** 1173x over	2443	0	1657	1.245	2	6	*** 1173x over	4886	0	3314	2.980	[+]
7	1	.....+. TABLE ACCESS FULL CUSTOMER	[+]	[+]	[+]	[+]	220	1199	1	1	*** 1199x over	784	0	0	0.006	2	2	*** 1199x over	1568	0	0	0.012	
8	2	.....+. TABLE ACCESS FULL SALES_ORDER	[+]	[+]			465	281573	1	281792	1x	1659	0	1657	0.378	2	563584	1x	3318	0	3314	0.914	
9	4	.....+ INDEX UNIQUE SCAN CUSTOMER_PK	[+]	[+]			1	1	3	3	1x	5	0	0	0.000	6	6	1x	10	0	0	0.000	
10	10	.... VIEW		[+]			18836	302976	1	299998	1x	14708	1	14555	28.436	2	599996	1x	29416	2	29110	63.073	
11	9	....+ HASH GROUP BY		[+]			18836	302976	1	299998	1x	14708	1	14555	27.894	2	599996	1x	29416	2	29110	61.907	[+]
12	8	....+. HASH JOIN		[+]			8648	3416582	1	3450201	1x	14708	1	14555	19.457	2	6900402	1x	29416	2	29110	43.391	[+]
13	6	.....+. TABLE ACCESS FULL PART	[+]	[+]			392	200000	1	200000	1x	1400	0	1398	0.210	2	400000	1x	2800	0	2796	0.571	
14	7	.....+. TABLE ACCESS FULL ORDER_LINE	[+]	[+]			3609	3450201	1	3450201	1x	13308	1	13157	3.826	2	6900402	1x	26616	2	26314	9.064	

Performance statistics is only available when parameter "statistics_level" was set to "ALL" at hard-parse time, or SQL contains "gather_plan_statistics" hint.

(1) If estim_card * starts < output_rows then under-estimate. If estim_card * starts > output_rows then over-estimate. Color highlights when exceeding * 10x, ** 100x and *** 1000x over/under-estimates.

(2) Largest contributors for cumulative-statistics columns are shown in red.

Other XML (id=1): [+]

Outline Data (id=1): [+]

Leading (id=1): [+]

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Plan Info

#	Type	Value
1	db_version	11.2.0.3
2	parse_schema	"QTUNE"
3	plan_hash	2816325939

Peeked Binds timestamp:2013-04-05/11:15:52

#	Name	Type	Value
1	:B1	VARCHAR2(32)	"6"

Captured Binds

List of captured binds is restricted up to 300 rows per Plan as per tool parameter "r_rows_table_m".

SQL: [+]

#	Last Captured	Name	Type	Value
1	2013-04-05/11:16:30	:B1	VARCHAR2(32)	"6"

Optimizer Environment

#	Name	Value
1	sqlstat_enabled	true
2	optimizer_index_cost_adj	10000
3	statistics_level	all

Execution Plan phv:2816325939 [W] sqlt_phv:25354 sqlt_phv2:56337 source:GV\$SQL_PLAN inst:1 child:0(3B2C50CC) executions:1 is_sharable:Y timestamp:2013-04-05/11:05:48

SQL: [+]

ID	Exec Ord	Operation	Go To	More	Peek Bind	Capt Bind	Cost ²	Estim Card	LAST Starts	LAST Output Rows	LAST Over/Under Estimate ¹	LAST CR Buffer Gets ²	LAST CU Buffer Gets ²	LAST Disk Reads ²	LAST Elapsed Time in secs ²	Work Area
0	15	SELECT STATEMENT					19559	151	1	922	6x under					
1	14	SORT ORDER BY		[+]			19559	151	1	922	6x under	20635	1	17351	80.174	[+]
2	13	.FILTER		[+]			19559		1	922		20635	1	17351	80.171	

3	12	.. HASH GROUP BY		[+]			19559	151	1	1176	8x under	20635	1	17351	80.170	[+]
4	11	... HASH JOIN		[+]			19557	3518	1	3484	1x	20635	1	17351	80.161	[+]
5	5	.... NESTED LOOPS		[+]			719	3518	1	3484	1x	5927	0	2648	10.454	
6	3	....+ HASH JOIN		[+]			687	3518	1	3484	1x	2441	0	2439	8.818	[+]
7	1	....+. TABLE ACCESS FULL CUSTOMER	[+]	[+]	[+]	[+]	220	1199	1	1239	1x	782	0	781	2.663	
8	2	....+. TABLE ACCESS FULL SALES_ORDER	[+]	[+]			465	281573	1	281792	1x	1659	0	1658	5.336	
9	4	....+ INDEX UNIQUE SCAN CUSTOMER_PK	[+]	[+]			1	1	3484	3484	1x	3486	0	209	1.619	
10	10	.... VIEW		[+]			18836	302976	1	299998	1x	14708	1	14703	68.857	
11	9	....+ HASH GROUP BY		[+]			18836	302976	1	299998	1x	14708	1	14703	68.297	[+]
12	8	....+. HASH JOIN		[+]			8648	3416582	1	3450201	1x	14708	1	14703	59.812	[+]
13	6	....+. TABLE ACCESS FULL PART	[+]	[+]			392	200000	1	200000	1x	1400	0	1399	4.713	
14	7	....+. TABLE ACCESS FULL ORDER_LINE	[+]	[+]			3609	3450201	1	3450201	1x	13308	1	13304	39.729	

Performance statistics is only available when parameter "statistics_level" was set to "ALL" at hard-parse time, or SQL contains "gather_plan_statistics" hint.

(1) If estim_card * starts < output_rows then under-estimate. If estim_card * starts > output_rows then over-estimate. Color highlights when exceeding * 10x, ** 100x and *** 1000x over/under-estimates.

(2) Largest contributors for cumulative-statistics columns are shown in red.

Other XML (id=1): [+]

Outline Data (id=1): [+]

Leading (id=1): [+]

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Plan Info

#	Type	Value
1	db_version	11.2.0.3
2	parse_schema	"QTUNE"
3	plan_hash	2816325939

Peeked Binds timestamp:2013-04-05/11:05:48

#	Name	Type	Value
1	:B1	VARCHAR2(32)	"4"

Captured Binds

List of captured binds is restricted up to 300 rows per Plan as per tool parameter "r_rows_table_m".

SQL: [+]

#	Last Captured	Name	Type	Value
1	2013-04-05/11:05:49	:B1	VARCHAR2(32)	"4"

Optimizer Environment

#	Name	Value
1	sqlstat_enabled	true
2	statistics_level	all

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Execution Plan phv:2816325939 [W] sqlt_phv:25354 sqlt_phv2:25354 source:DBA_HIST_SQL_PLAN timestamp:2013-04-05/11:05:48 oldest_snapshot:2013-04-05/11:00:50

SQL Text: [-]

```
SELECT /*+ gather_plan_statistics monitor bind_aware */
v.customer_name,
v.orders_total,
v.credit_limit,
v.credit_limit,
(orders_total - credit_limit) over_limit
FROM customer_v v
WHERE orders_total > credit_limit
AND customer_type = :b1
```

ORDER BY
over_limit DESC

SQL: [\[+\]](#)

ID	Exec Ord	Operation	Go To	More	Cost ²	Estim Card
0	15	SELECT STATEMENT			19528	151
1	14	SORT ORDER BY			19528	151
2	13	. FILTER			19528	
3	12	.. HASH GROUP BY			19528	151
4	11	... HASH JOIN			19526	3518
5	5	.... NESTED LOOPS			688	3518
6	3	....+ HASH JOIN			687	3518
7	1	....+. TABLE ACCESS FULL <u>CUSTOMER</u>	[+]		220	1199
8	2	....+. TABLE ACCESS FULL <u>SALES_ORDER</u>	[+]		465	281573
9	4	....+ INDEX UNIQUE SCAN <u>CUSTOMER_PK</u>	[+]	[+]	0	1
10	10	.... VIEW			18836	302976
11	9	....+ HASH GROUP BY		[+]	18836	302976
12	8	....+. HASH JOIN		[+]	8648	3416582
13	6	....+.. TABLE ACCESS FULL <u>PART</u>	[+]		392	200000
14	7	....+.. TABLE ACCESS FULL <u>ORDER_LINE</u>	[+]		3609	3450201

(1) If estim_card * starts < output_rows then under-estimate. If estim_card * starts > output_rows then over-estimate. Color highlights when exceeding * 10x, ** 100x and *** 1000x over/under-estimates.
(2) Largest contributors for cumulative-statistics columns are shown in red.

Other XML (id=1): [\[+\]](#)

Outline Data (id=1): [\[+\]](#)

Leading (id=1): [\[+\]](#)

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Plan Info

#	Type	Value
1	db_version	11.2.0.3
2	parse_schema	"QTUNE"
3	plan_hash	2816325939

Peeked Binds timestamp:2013-04-05/11:05:48

#	Name	Type	Value
1	:B1	VARCHAR2(32)	"4"

Captured Binds

List of captured binds is restricted up to 300 rows per Plan as per tool parameter "r_rows_table_m".

SQL: [\[+\]](#)

#	Last Captured	Name	Type	Value
1	2013-04-05/11:05:49	:B1	VARCHAR2(32)	"4"

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Execution Plan [phv:3267771367](#) [B] [sqlt_phv:65842](#) [sqlt_phv2:11910](#) source:GV\$SQL_PLAN inst:1 child:6(365F200C) executions:2 is_sharable:Y timestamp:2013-04-05/11:15:49

SQL Text: [\[-\]](#)

```
SELECT /*+ gather_plan_statistics monitor bind_aware */
       v.customer_name,
       v.orders_total,
       v.credit_limit,
       (orders_total - credit_limit) over_limit
FROM   customer_v v
WHERE  orders_total > credit_limit
```

```

AND customer_type = :b1
ORDER BY
over_limit DESC

```

SQL: [±]

ID	Exec Ord	Operation	Go To	More	Peek Bind	Capt Bind	Cost ²	Estim Card	LAST Starts	LAST Output Rows	LAST Over/Under Estimate ¹	LAST CR Buffer Gets ²	LAST Elapsed Time in secs ²	ALL Starts	ALL Output Rows	ALL Over/Under Estimate ¹	ALL CR Buffer Gets ²	ALL Disk Reads ²	ALL Elapsed Time in secs ²	Work Area
0	21	SELECT STATEMENT					543	12	1	42	4x under									
1	20	SORT ORDER BY		[±]			543	12	1	42	4x under	5149	0.062	2	84	4x under	10298	232	3.366	[±]
2	19	FILTER		[±]			543	1	1	42		5149	0.062	2	84		10298	232	3.366	
3	18	HASH GROUP BY		[±]			543	12	1	46	4x under	5149	0.062	2	92	4x under	10298	232	3.366	[±]
4	17	... NESTED LOOPS		[±]			541	267	1	129	2x over	5149	0.059	2	258	2x over	10298	232	3.358	
5	7	... NESTED LOOPS		[±]			7	267	1	129	2x over	418	0.004	2	258	2x over	836	180	3.018	
6	5	...+ NESTED LOOPS		[±]			6	267	1	129	2x over	283	0.003	2	258	2x over	566	180	3.015	
7	2	...+. TABLE ACCESS BY INDEX ROWID <u>CUSTOMER</u>	[±]	[±]			1	91	1	47	2x over	49	0.000	2	94	2x over	98	0	0.001	
8	1	...+. INDEX RANGE SCAN <u>CUSTOMER_N2</u>	[±]	[±]	[±]	[±]	1	91	1	47	2x over	2	0.000	2	94	2x over	4	0	0.000	
9	4	...+. TABLE ACCESS BY INDEX ROWID <u>SALES_ORDER</u>	[±]	[±]			1	3	47	129	1x	234	0.002	94	258	1x	468	180	3.013	
10	3	...+. INDEX RANGE SCAN <u>SALES_ORDER_N2</u>	[±]	[±]			1	3	47	138	1x	96	0.001	94	276	1x	192	50	2.453	
11	6	...+ INDEX UNIQUE SCAN <u>CUSTOMER_PK</u>	[±]	[±]			1	1	129	129	1x	135	0.001	258	258	1x	270	0	0.002	
12	16	... VIEW PUSHED PREDICATE		[±]			2	1	129	129	1x	4731	0.055	258	258	1x	9462	52	0.339	
13	15	...+ FILTER		[±]			3		129	129		4731	0.054	258	258		9462	52	0.338	
14	14	...+. SORT AGGREGATE		[±]			3	1	129	129	1x	4731	0.053	258	258	1x	9462	52	0.336	
15	13	...+. NESTED LOOPS		[±]			3		129	1488		4731	0.048	258	2976		9462	52	0.325	
16	11	...+. NESTED LOOPS		[±]			2	11	129	1488	1x	3243	0.032	258	2976	1x	6486	36	0.081	
17	9	...+. TABLE ACCESS BY INDEX ROWID <u>ORDER_LINE</u>	[±]	[±]			1	11	129	1488	1x	1753	0.017	258	2976	1x	3506	32	0.049	
18	8	...+. INDEX RANGE SCAN <u>ORDER_LINE_N1</u>	[±]	[±]			1	11	129	1488	1x	267	0.004	258	2976	1x	534	4	0.008	
19	10	...+. INDEX UNIQUE SCAN <u>PART_PK</u>	[±]	[±]			1	1	1488	1488	1x	1490	0.008	2976	2976	1x	2980	4	0.017	
20	12	...+. TABLE ACCESS BY INDEX ROWID <u>PART</u>	[±]	[±]			1	1	1488	1488	1x	1488	0.008	2976	2976	1x	2976	16	0.229	

Performance statistics is only available when parameter "statistics_level" was set to "ALL" at hard-parse time, or SQL contains "gather_plan_statistics" hint.

(1) If estim_card * starts < output_rows then under-estimate. If estim_card * starts > output_rows then over-estimate. Color highlights when exceeding * 10x, ** 100x and *** 1000x over/under-estimates.

(2) Largest contributors for cumulative-statistics columns are shown in red.

Other XML (id=1): [±]

Outline Data (id=1): [±]

Leading (id=1): [±]

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Plan Info

#	Type	Value
1	cardinality_feedback	yes
2	db_version	11.2.0.3
3	parse_schema	"QTUNE"
4	plan_hash	3267771367

Peeked Binds timestamp:2013-04-05/11:15:49

#	Name	Type	Value
1	:B1	VARCHAR2(32)	"5"

Captured Binds

List of captured binds is restricted up to 300 rows per Plan as per tool parameter "r_rows_table_m".

SQL: [±]

#	Last Captured	Name	Type	Value
1	2013-04-05/11:15:49	:B1	VARCHAR2(32)	"5"

Optimizer Environment

#	Name	Value
1	sqlstat_enabled	true

2	optimizer_index_cost_adj	1
3	statistics_level	all

Execution Plan phv:3267771367 [B] sqlt_phv:65842 sqlt_phv2:11910 source:GV\$SQL_PLAN inst:1 child:4(3417CC1C) executions:2 is_sharable:Y timestamp:2013-04-05/11:13:53

SQL: [±]

ID	Exec Ord	Operation	Go To	More	Peek Bind	Capt Bind	Cost ²	Estim Card	LAST Starts	LAST Output Rows	LAST CR Buffer Gets ²	LAST Elapsed Time in secs ²	ALL Starts	ALL Output Rows	ALL CR Buffer Gets ²	ALL Elapsed Time in secs ²	Work Area
0	21	SELECT STATEMENT					543	12	1	0							
1	20	SORT ORDER BY		[±]			543	12	1	0	2	0.000	2	0	4	0.000	[±]
2	19	. FILTER		[±]			543		1	0	2	0.000	2	0	4	0.000	
3	18	.. HASH GROUP BY		[±]			543	12	1	0	2	0.000	2	0	4	0.000	[±]
4	17	... NESTED LOOPS		[±]			541	267	1	0	2	0.000	2	0	4	0.000	
5	7	... NESTED LOOPS		[±]			7	267	1	0	2	0.000	2	0	4	0.000	
6	5	...+ NESTED LOOPS		[±]			6	267	1	0	2	0.000	2	0	4	0.000	
7	2	...+. TABLE ACCESS BY INDEX ROWID <u>CUSTOMER</u>	[±]	[±]			1	91	1	0	2	0.000	2	0	4	0.000	
8	1	...+.. INDEXTABLE ACCESS BY INDEX RANGE SCAN <u>CUSTOMER_N2</u>	[±]	[±]	[±]	[±]	1	91	1	0	2	0.000	2	0	4	0.000	
9	4	...+. TABLE ACCESS BY INDEX ROWID <u>SALES_ORDER</u>	[±]	[±]			1	3	0	0	0	0.000	0	0	0	0.000	
10	3	...+.. INDEXTABLE ACCESS BY INDEX RANGE SCAN <u>SALES_ORDER_N2</u>	[±]	[±]			1	3	0	0	0	0.000	0	0	0	0.000	
11	6	...+ INDEXTABLE ACCESS BY INDEX UNIQUE SCAN <u>CUSTOMER_PK</u>	[±]	[±]			1	1	0	0	0	0.000	0	0	0	0.000	
12	16	... VIEW PUSHED PREDICATE		[±]			2	1	0	0	0	0.000	0	0	0	0.000	
13	15	...+ FILTER		[±]			3		0	0	0	0.000	0	0	0	0.000	
14	14	...+. SORT AGGREGATE		[±]			3	1	0	0	0	0.000	0	0	0	0.000	
15	13	...+.. NESTED LOOPS		[±]			3		0	0	0	0.000	0	0	0	0.000	
16	11	...+... NESTED LOOPS		[±]			2	11	0	0	0	0.000	0	0	0	0.000	
17	9	...+...+ TABLE ACCESS BY INDEX ROWID <u>ORDER_LINE</u>	[±]	[±]			1	11	0	0	0	0.000	0	0	0	0.000	
18	8	...+...+ INDEXTABLE ACCESS BY INDEX RANGE SCAN <u>ORDER_LINE_N1</u>	[±]	[±]			1	11	0	0	0	0.000	0	0	0	0.000	
19	10	...+...+ INDEXTABLE ACCESS BY INDEX UNIQUE SCAN <u>PART_PK</u>	[±]	[±]			1	1	0	0	0	0.000	0	0	0	0.000	
20	12	...+...+ TABLE ACCESS BY INDEX ROWID <u>PART</u>	[±]	[±]			1	1	0	0	0	0.000	0	0	0	0.000	

Performance statistics is only available when parameter "statistics_level" was set to "ALL" at hard-parse time, or SQL contains "gather_plan_statistics" hint.

(1) If estim_card * starts < output_rows then under-estimate. If estim_card * starts > output_rows then over-estimate. Color highlights when exceeding * 10x, ** 100x and *** 1000x over/under-estimates.

(2) Largest contributors for cumulative-statistics columns are shown in red.

Other XML (id=1): [±]

Outline Data (id=1): [±]

Leading (id=1): [±]

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Plan Info

#	Type	Value
1	cardinality_feedback	yes
2	db_version	11.2.0.3
3	parse_schema	"QTUNE"
4	plan_hash	3267771367

Peeked Binds timestamp:2013-04-05/11:13:53

#	Name	Type	Value
1	:B1	VARCHAR2(32)	"7"

Captured Binds

List of captured binds is restricted up to 300 rows per Plan as per tool parameter "r_rows_table_m".

SQL: [±]

#	Last Captured	Name	Type	Value
1	2013-04-05/11:13:53	:B1	VARCHAR2(32)	"7"

Optimizer Environment

#	Name	Value

1 sqlstat_enabled true
 2 statistics_level all

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Execution Plan phv:3267771367 [B] sqlt_phv:65842 sqlt_phv2:65842 source:DBA_HIST_SQL_PLAN timestamp:2013-04-05/11:13:53 oldest_snapshot:2013-04-05/11:07:18

SQL Text: []

```

SELECT /*+ gather_plan_statistics monitor bind_aware */
v.customer name,
v.orders_total,
v.credit_limit,
  (orders_total - credit_limit) over_limit
FROM customer_v v
WHERE orders_total > credit_limit
AND customer_type = :b1
ORDER BY
  over_limit DESC
  
```

SQL: [±]

ID	Exec Ord	Operation	Go To	More	Cost ²	Estim Card
0	21	SELECT STATEMENT			510	1
1	20	SORT ORDER BY			510	1
2	19	FILTER			510	
3	18	HASH GROUP BY			510	1
4	17	... NESTED LOOPS			508	18
5	7	... NESTED LOOPS			42	18
6	5	...+ NESTED LOOPS			42	18
7	2	...+. TABLE ACCESS BY INDEX ROWID <u>CUSTOMER</u>	[+]		7	6
8	1	...+. INDEX RANGE SCAN <u>CUSTOMER_N2</u>	[+]	[+]	2	6
9	4	...+. TABLE ACCESS BY INDEX ROWID <u>SALES_ORDER</u>	[+]		6	3
10	3	...+. INDEX RANGE SCAN <u>SALES_ORDER_N2</u>	[+]	[+]	2	3
11	6	...+ INDEX UNIQUE SCAN <u>CUSTOMER_PK</u>	[+]	[+]	0	1
12	16	... VIEW PUSHED PREDICATE			26	1
13	15	...+ FILTER			27	
14	14	...+. SORT AGGREGATE			27	1
15	13	...+. NESTED LOOPS			27	
16	11	...+. NESTED LOOPS			26	11
17	9	...+. TABLE ACCESS BY INDEX ROWID <u>ORDER_LINE</u>	[+]		15	11
18	8	...+. INDEX RANGE SCAN <u>ORDER_LINE_N1</u>	[+]	[+]	3	11
19	10	...+. INDEX UNIQUE SCAN <u>PART_PK</u>	[+]	[+]	0	1
20	12	...+. TABLE ACCESS BY INDEX ROWID <u>PART</u>	[+]		1	1

(1) If estim_card * starts < output_rows then under-estimate. If estim_card * starts > output_rows then over-estimate. Color highlights when exceeding * 10x, ** 100x and *** 1000x over/under-estimates.

(2) Largest contributors for cumulative-statistics columns are shown in red.

Other XML (id=1): [±]

Outline Data (id=1): [±]

Leading (id=1): [±]

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Plan Info

#	Type	Value
1	cardinality_feedback	yes
2	db_version	11.2.0.3
3	parse_schema	"QTUNE"
4	plan_hash	3267771367

Peeked Binds timestamp:2013-04-05/11:13:53

#	Name	Type	Value
1	:b1	VARCHAR2(32)	"7"

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Execution Plan phv:3935795003 sqlt_phv:93006 sqlt_phv2:39074 source:GV\$SQL_PLAN inst:1 child:3(342B4624) executions:2 is_sharable:Y timestamp:2013-04-05/11:13:45

SQL Text: [⌵]

```

SELECT /*+ gather_plan_statistics monitor bind_aware */
       v.customer_name,
       v.orders_total,
       v.credit_limit,
       (orders_total - credit_limit) over_limit
FROM   customer_v v
WHERE  orders_total > credit_limit
AND    customer_type = :b1
ORDER BY
       over_limit DESC

```

SQL: [⌵]

ID	Exec Ord	Operation	Go To	More	Peek Bind	Capt Bind	Cost ²	Estim Card	LAST Starts	LAST Output Rows	LAST Over/Under Estimate ¹	LAST CR Buffer Gets ²	LAST Disk Reads ²	LAST Elapsed Time in secs ²	ALL Starts	ALL Output Rows	ALL Over/Under Estimate ¹	ALL CR Buffer Gets ²	ALL Disk Reads ²	ALL Elapsed Time in secs ²	Work Area	
0	20	SELECT STATEMENT					7453	12	1	42	4x under											
1	19	SORT ORDER BY		[⌵]			7453	12	1	42	4x under	6570	1657	1.137	2	84	4x under	13140	6230	7.691	[⌵]	
2	18	. FILTER		[⌵]			7453		1	42		6570	1657	1.137	2	84		13140	6230	7.690		
3	17	.. HASH GROUP BY		[⌵]			7453	12	1	46	4x under	6570	1657	1.137	2	92	4x under	13140	6230	7.690	[⌵]	
4	16	... NESTED LOOPS		[⌵]			7451	267	1	129	2x over	6570	1657	1.132	2	258	2x over	13140	6230	7.680		
5	14	.... NESTED LOOPS		[⌵]			7451	267	1	129	2x over	6439	1657	1.130	2	258	2x over	12878	6230	7.677	
6	4	....+ HASH JOIN		[⌵]			535	267	1	129	2x over	1708	1657	1.079	2	258	2x over	3416	3363	2.248	[⌵]
7	2	....+. TABLE ACCESS BY INDEX ROWID <u>CUSTOMER</u>	[⌵]	[⌵]			68	91	1	47	2x over	49	0	0.000	2	94	2x over	98	49	0.052	
8	1	....+. INDE RANGE SCAN <u>CUSTOMER_N2</u>	[⌵]	[⌵]	[⌵]	[⌵]	2	91	1	47	2x over	2	0	0.000	2	94	2x over	4	2	0.048	
9	3	....+. TABLE ACCESS FULL <u>SALES_ORDER</u>	[⌵]	[⌵]			465	281573	1	281792	1x	1659	1657	0.300	2	563584	1x	3318	3314	0.609	
10	13	....+ VIEW PUSHED PREDICATE		[⌵]			26	1	129	129	1x	4731	0	0.051	258	258	1x	9462	2867	5.428	
11	12	....+. FILTER		[⌵]			27		129	129		4731	0	0.050	258	258		9462	2867	5.426	
12	11	....+. SORT AGGREGATE		[⌵]			27	1	129	129	1x	4731	0	0.049	258	258	1x	9462	2867	5.424	
13	10	....+... NESTED LOOPS		[⌵]			27		129	1488		4731	0	0.044	258	2976		9462	2867	5.412	
14	8	....+... NESTED LOOPS		[⌵]			26	11	129	1488	1x	3243	0	0.030	258	2976	1x	6486	1959	5.328	
15	6	....+...+ TABLE ACCESS BY INDEX ROWID <u>ORDER_LINE</u>	[⌵]	[⌵]			15	11	129	1488	1x	1753	0	0.014	258	2976	1x	3506	1555	2.097	
16	5	....+...+. INDE RANGE SCAN <u>ORDER_LINE_N1</u>	[⌵]	[⌵]			3	11	129	1488	1x	267	0	0.004	258	2976	1x	534	150	1.977	
17	7	....+...+ INDE UNIQUE SCAN <u>PART_PK</u>	[⌵]	[⌵]			0	1	1488	1488	1x	1490	0	0.009	2976	2976	1x	2980	404	3.215	
18	9	....+... TABLE ACCESS BY INDEX ROWID <u>PART</u>	[⌵]	[⌵]			1	1	1488	1488	1x	1488	0	0.007	2976	2976	1x	2976	908	0.068	
19	15	.... INDE UNIQUE SCAN <u>CUSTOMER_PK</u>	[⌵]	[⌵]			0	1	129	129	1x	131	0	0.001	258	258	1x	262	0	0.002	

Performance statistics is only available when parameter "statistics_level" was set to "ALL" at hard-parse time, or SQL contains "gather_plan_statistics" hint.

(1) If estim_card * starts < output_rows then under-estimate. If estim_card * starts > output_rows then over-estimate. Color highlights when exceeding * 10x, ** 100x and *** 1000x over/under-estimates.

(2) Largest contributors for cumulative-statistics columns are shown in red.

Other XML (id=1): [⌵]

Outline Data (id=1): [⌵]

Leading (id=1): [⌵]

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Plan Info

#	Type	Value
1	cardinality_feedback	yes
2	db_version	11.2.0.3
3	parse_schema	"QTUNE"

4 plan_hash 3935795003

Peeked Binds timestamp:2013-04-05/11:13:45

#	Name	Type	Value
1	:B1	VARCHAR2(32)	"5"

Captured Binds

List of captured binds is restricted up to 300 rows per Plan as per tool parameter "r_rows_table_m".

SQL: [±]

#	Last Captured	Name	Type	Value
1	2013-04-05/11:13:45	:B1	VARCHAR2(32)	"5"

Optimizer Environment

#	Name	Value
1	sqlstat_enabled	true
2	statistics_level	all

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Execution Plan phv:3935795003 sqft_phv:93006 sqft_phv2:93006 source:DBA_HIST_SQL_PLAN timestamp:2013-04-05/11:13:45 oldest_snapshot:2013-04-05/11:07:18

SQL Text: [±]

```

SELECT /*+ gather_plan_statistics monitor bind_aware */
v.customer_name,
v.orders_total,
v.credit_limit,
v.credit_limit,
(orders_total - credit_limit) over_limit
FROM customer_v v
WHERE orders_total > credit_limit
AND customer_type = :b1
ORDER BY
over_limit DESC

```

SQL: [±]

ID	Exec Ord	Operation	Go To	More	Cost ²	Estim Card
0	20	SELECT STATEMENT			7453	12
1	19	SORT ORDER BY			7453	12
2	18	. FILTER			7453	
3	17	.. HASH GROUP BY			7453	12
4	16	... NESTED LOOPS			7451	267
5	14	... NESTED LOOPS			7451	267
6	4	....+ HASH JOIN			535	267
7	2	....+. TABLE ACCESS BY INDEX ROWID <u>CUSTOMER</u>	[±]		68	91
8	1	....+. INDEX RANGE SCAN <u>CUSTOMER_N2</u>	[±]	[±]	2	91
9	3	....+. TABLE ACCESS FULL <u>SALES_ORDER</u>	[±]		465	281573
10	13	....+ VIEW PUSHED PREDICATE			26	1
11	12	....+. FILTER			27	
12	11	....+. SORT AGGREGATE			27	1
13	10	....+. NESTED LOOPS			27	
14	8	....+. NESTED LOOPS			26	11
15	6	....+.+. TABLE ACCESS BY INDEX ROWID <u>ORDER_LINE</u>	[±]		15	11
16	5	....+.+. INDEX RANGE SCAN <u>ORDER_LINE_N1</u>	[±]	[±]	3	11
17	7	....+.+. INDEX UNIQUE SCAN <u>PART_PK</u>	[±]	[±]	0	1
18	9	....+.+. TABLE ACCESS BY INDEX ROWID <u>PART</u>	[±]		1	1
19	15	... INDEX UNIQUE SCAN <u>CUSTOMER_PK</u>	[±]	[±]	0	1

(1) If estim_card * starts < output_rows then under-estimate. If estim_card * starts > output_rows then over-estimate. Color highlights when exceeding * 10x, ** 100x and *** 1000x over/under-estimates.

(2) Largest contributors for cumulative-statistics columns are shown in red.

Other XML (id=1): [\[±\]](#)

Outline Data (id=1): [\[±\]](#)

Leading (id=1): [\[±\]](#)

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Plan Info

#	Type	Value
1	cardinality_feedback	yes
2	db_version	11.2.0.3
3	parse_schema	"QTUNE"
4	plan_hash	3935795003

Peeked Binds timestamp:2013-04-05/11:13:45

#	Name	Type	Value
1	:B1	VARCHAR2(32)	"5"

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Active Session History

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- [Active Session History by Plan Line](#)
- [Active Session History by Session](#)

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Active Session History by Plan

List below is restricted up to 300 recent plan lines (as per tool parameter "r_rows_table_m").

SQL: [\[±\]](#)

#	Plan Hash Value	Session State	Wait Class	Event	Snaps Count
1	142578110	ON CPU			62
2	142578110	WAITING	User I/O	direct path read	2
3	657302870	ON CPU			56
4	1637264670	ON CPU			54
5	2816325939	ON CPU			134
6	2816325939	WAITING	User I/O	direct path read	40
7	2816325939	WAITING	User I/O	db file parallel read	4
8	2816325939	WAITING	User I/O	db file sequential read	1
9	3267771367	WAITING	User I/O	db file sequential read	3
10	3935795003	ON CPU			4
11	3935795003	WAITING	User I/O	db file sequential read	4

Active Session History by Plan Line

List below is restricted up to 1000 recent plan lines (as per tool parameter "r_rows_table_l").

SQL: [\[±\]](#)

#	Plan Hash Value	Plan Line ID	Plan Operation	Plan Options	Plan Object Owner	Plan Object Name	Session State	Wait Class	Event	Curr Obj ID	Curr Object Name	Snaps Count
1	142578110	8	NESTED LOOPS				ON CPU					2
2	142578110	10	HASH	GROUP BY			ON CPU					4
3	142578110	11	HASH JOIN				ON CPU					3

10	1	147	5673	2013-04-05/11:17:22.659	2013-04-05/11:17:00	Y	8	1178211779310957485	2816325939	12	HASH JOIN			file number	4	first dba	116800	block cnt	64		803	ON CPU	0	NOT IN WAIT				
11	1	147	5673	2013-04-05/11:17:21.649	2013-04-05/11:17:00	Y	8	1178211779310957485	2816325939	14	TABLE ACCESS	FULL		file number	4	first dba	111360	block cnt	64		744	ON CPU	0	NOT IN WAIT				
12	1	147	5673	2013-04-05/11:17:20.649	2013-04-05/11:17:00	Y	8	1178211779310957485	2816325939	11	HASH	GROUP BY		file number	4	first dba	110912	block cnt	64		738	ON CPU	0	NOT IN WAIT				
13	1	147	5673	2013-04-05/11:17:19.649	2013-04-05/11:17:00	Y	8	1178211779310957485	2816325939	11	HASH	GROUP BY		file number	4	first dba	110400	block cnt	64		737	ON CPU	0	NOT IN WAIT				
14	1	147	5673	2013-04-05/11:17:18.649	2013-04-05/11:17:00	Y	8	1178211779310957485	2816325939	12	HASH JOIN			file number	4	first dba	109954	block cnt	62		713	ON CPU	0	NOT IN WAIT				
15	1	147	5673	2013-04-05/11:17:17.649	2013-04-05/11:17:00	Y	8	1178211779310957485	2816325939	12	HASH JOIN			file number	4	first dba	109442	block cnt	62		718	ON CPU	0	NOT IN WAIT				
16	1	147	5673	2013-04-05/11:17:16.649	2013-04-05/11:17:00	Y	8	1178211779310957485	2816325939	12	HASH JOIN			file number	4	first dba	108992	block cnt	64		739	ON CPU	0	NOT IN WAIT				
17	1	147	5673	2013-04-05/11:17:15.649	2013-04-05/11:17:00	Y	8	1178211779310957485	2816325939	12	HASH JOIN			file number	4	first dba	108480	block cnt	64		837	ON CPU	0	NOT IN WAIT				
18	1	147	5673	2013-04-05/11:17:14.649	2013-04-05/11:17:00	Y	8	1178211779310957485	2816325939	12	HASH JOIN			file number	4	first dba	108034	block cnt	62		767	ON CPU	0	NOT IN WAIT				
19	1	147	5673	2013-04-05/11:17:13.649	2013-04-05/11:17:00	Y	8	1178211779310957485	2816325939	14	TABLE ACCESS	FULL	direct path read	file number	4	first dba	107584	block cnt	64	User I/O	0	WAITING	811	UNKNOWN				
20	1	147	5673	2013-04-05/11:17:12.649	2013-04-05/11:17:00	Y	8	1178211779310957485	2816325939	11	HASH	GROUP BY		file number	4	first dba	107010	block cnt	62		706	ON CPU	0	NOT IN WAIT				

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AWR Active Session History

- [AWR Active Session History by Plan](#)
- [AWR Active Session History by Plan Line](#)
- [AWR Active Session History by Session](#)

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AWR Active Session History by Plan

List below is restricted up to 300 recent plan lines (as per tool parameter "r_rows_table_m").

SQL: [±]

#	Plan Hash Value	Session State	Wait Class	Event	Snaps Count
1	142578110	ON CPU			5
2	142578110	WAITING	User I/O	direct path read	1
3	657302870	ON CPU			6
4	2816325939	WAITING	User I/O	direct path read	5
5	2816325939	ON CPU			3

AWR Active Session History by Plan Line

List below is restricted up to 1000 recent plan lines (as per tool parameter "r_rows_table_l").

SQL: [±]

#	Plan Hash Value	Plan Line ID	Plan Operation	Plan Options	Plan Object Owner	Plan Object Name	Session State	Wait Class	Event	Curr Obj ID	Curr Object Name	Snaps Count
1	142578110	14	HASH	GROUP BY			ON CPU					1
2	142578110	15	HASH JOIN				ON CPU					4
3	142578110	17	TABLE ACCESS	FULL	QTUNE	ORDER_LINE	WAITING	User I/O	direct path read	107094	QTUNE.ORDER_LINE	1
4	657302870	12	JOIN FILTER	USE	SYS	:BF0000	ON CPU					2
5	657302870	13	HASH JOIN				ON CPU					4
6	2816325939	7	TABLE ACCESS	FULL	QTUNE	CUSTOMER	WAITING	User I/O	direct path read	107082	QTUNE.CUSTOMER	1
7	2816325939	11	HASH	GROUP BY			ON CPU					2
8	2816325939	12	HASH JOIN				ON CPU					1
9	2816325939	13	TABLE ACCESS	FULL	QTUNE	PART	WAITING	User I/O	direct path read	107087	QTUNE.PART	1
10	2816325939	14	TABLE ACCESS	FULL	QTUNE	ORDER_LINE	WAITING	User I/O	direct path read	107094	QTUNE.ORDER_LINE	3

AWR Active Session History by Session

List below is restricted up to 20 historical sessions (as per 2x tool parameter "r_rows_table_xs") and up to 20 snapshots per session (as per 2x tool parameter "r_rows_table_xs").
 SQL: [+]

#	Inst ID	SID	Serial#	Sample Time	SQL Exec Start	Is SQL_ID Current	SQL Child Num	Force Matching Signature	SQL Plan Hash Value	SQL Plan Line ID	SQL Plan Operation	SQL Plan Options	Event	P1 Text	P1	P2 Text	P2	P3 Text	P3	Wait Class	Wait Time	Session State	Time Waited	Blocking Session Status	Blocking SID	Blocking Serial#	Blocking Inst ID
1	1	147	5673	2013-04-05/11:13:31.130	2013-04-05/11:13:08	Y	2	1178211779310957485	657302870	13	HASH JOIN			file number	4	first dba	118400	block cnt	64		743	ON CPU	0	NOT IN WAIT			
2	1	147	5673	2013-04-05/11:13:21.096	2013-04-05/11:13:08	Y	2	1178211779310957485	657302870	12	JOIN FILTER	USE		file number	4	first dba	107906	block cnt	62		701	ON CPU	0	NOT IN WAIT			
3	1	147	5673	2013-04-05/11:13:11.076	2013-04-05/11:13:08	Y	2	1178211779310957485	657302870	13	HASH JOIN			file number	4	first dba	102658	block cnt	62		817	ON CPU	0	NOT IN WAIT			
4	1	147	5673	2013-04-05/11:12:51.056	2013-04-05/11:12:22	Y	2	1178211779310957485	657302870	12	JOIN FILTER	USE		file number	4	first dba	120704	block cnt	64		745	ON CPU	0	NOT IN WAIT			
5	1	147	5673	2013-04-05/11:12:41.046	2013-04-05/11:12:22	Y	2	1178211779310957485	657302870	13	HASH JOIN			file number	4	first dba	110144	block cnt	64		764	ON CPU	0	NOT IN WAIT			
6	1	147	5673	2013-04-05/11:12:31.036	2013-04-05/11:12:22	Y	2	1178211779310957485	657302870	13	HASH JOIN			file number	4	first dba	104706	block cnt	62		741	ON CPU	0	NOT IN WAIT			
7	1	147	5673	2013-04-05/11:10:40.939	2013-04-05/11:10:16	Y	1	1178211779310957485	142578110	15	HASH JOIN			file number	4	first dba	118336	block cnt	64		759	ON CPU	0	NOT IN WAIT			
8	1	147	5673	2013-04-05/11:10:30.919	2013-04-05/11:10:16	Y	1	1178211779310957485	142578110	17	TABLE ACCESS	FULL	direct path read	file number	4	first dba	108290	block cnt	62	User I/O	0	WAITING	972	UNKNOWN			
9	1	147	5673	2013-04-05/11:10:20.919	2013-04-05/11:10:16	Y	1	1178211779310957485	142578110	15	HASH JOIN			file number	4	first dba	103232	block cnt	64		815	ON CPU	0	NOT IN WAIT			
10	1	147	5673	2013-04-05/11:07:50.879	2013-04-05/11:07:27	Y	1	1178211779310957485	142578110	15	HASH JOIN			file number	4	first dba	117696	block cnt	64		755	ON CPU	0	NOT IN WAIT			
11	1	147	5673	2013-04-05/11:07:40.879	2013-04-05/11:07:27	Y	1	1178211779310957485	142578110	15	HASH JOIN			file number	4	first dba	107778	block cnt	62		742	ON CPU	0	NOT IN WAIT			
12	1	147	5673	2013-04-05/11:07:30.869	2013-04-05/11:07:27	Y	1	1178211779310957485	142578110	14	HASH	GROUP BY		file number	4	first dba	102786	block cnt	62		752	ON CPU	0	NOT IN WAIT			
13	1	147	5673	2013-04-05/11:07:00.852	2013-04-05/11:05:49	Y	0	1178211779310957485	2816325939	14	TABLE ACCESS	FULL	direct path read	file number	4	first dba	119168	block cnt	64	User I/O	0	WAITING	130521	UNKNOWN			
14	1	147	5673	2013-04-05/11:06:50.852	2013-04-05/11:05:49	Y	0	1178211779310957485	2816325939	14	TABLE ACCESS	FULL	direct path read	file number	4	first dba	116992	block cnt	64	User I/O	0	WAITING	133034	UNKNOWN			
15	1	147	5673	2013-04-05/11:06:40.842	2013-04-05/11:05:49	Y	0	1178211779310957485	2816325939	12	HASH JOIN			file number	4	first dba	109698	block cnt	62		226529	ON CPU	0	NOT IN WAIT			
16	1	147	5673	2013-04-05/11:06:30.832	2013-04-05/11:05:49	Y	0	1178211779310957485	2816325939	11	HASH	GROUP BY		file number	4	first dba	107456	block cnt	64		159322	ON CPU	0	NOT IN WAIT			
17	1	147	5673	2013-04-05/11:06:20.822	2013-04-05/11:05:49	Y	0	1178211779310957485	2816325939	11	HASH	GROUP BY		file number	4	first dba	105090	block cnt	62		155673	ON CPU	0	NOT IN WAIT			
18	1	147	5673	2013-04-05/11:06:10.822	2013-04-05/11:05:49	Y	0	1178211779310957485	2816325939	14	TABLE ACCESS	FULL	direct path read	file number	4	first dba	102848	block cnt	64	User I/O	0	WAITING	155084	UNKNOWN			
19	1	147	5673	2013-04-05/11:06:00.822	2013-04-05/11:05:49	Y	0	1178211779310957485	2816325939	13	TABLE ACCESS	FULL	direct path read	file number	4	first dba	94528	block cnt	64	User I/O	0	WAITING	135775	UNKNOWN			
20	1	147	5673	2013-04-05/11:05:50.822	2013-04-05/11:05:49	Y	0	1178211779310957485	2816325939	7	TABLE ACCESS	FULL	direct path read	file number	4	first dba	88322	block cnt	62	User I/O	0	WAITING	179583	UNKNOWN			

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SQL Statistics

List of child cursors is restricted up to 100 per phv as per tool parameter "r_rows_table_s".

#	Plan Hash Value	Child Cursors
1	142578110	1
2	657302870	1
3	1637264670	1
4	2816325939 [W]	3
5	3267771367 [B]	2
6	3935795003	1

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SQL Statistics for 142578110

Inst ID:	1
Child Number:	1
Child Address:	364B8348
Executions:	2
Elapsed Time in secs:	65.467
CPU Time in secs:	64.068
User I/O Wait Time in secs:	0.486
Application Wait Time in secs:	0.000
Concurrency Wait Time in secs:	0.000
Cluster Wait Time in secs:	0.000
PL/SQL Exec Time in secs:	0.000
Java Exec Time in secs:	0.000
Buffer Gets:	222454
Disk Reads:	33984
Direct Writes:	0
Rows Processed:	56822
Parse Calls:	2
Fetches:	3792
End of Fetch count:	2
PX Servers Executions:	0
Loaded Versions:	1
Loads:	1
Invalidations:	0
Open Versions:	0
Kept Versions:	0
Users Executing:	0
Users Opening:	0
Locked Total:	7
Pinned Total:	8
First Load Time:	2013-04-05/11:05:48
Last Load Time:	2013-04-05/11:07:27
Last Active Time:	2013-04-05/11:12:22
Sharable Memory:	51953
Persistent Memory:	26584
Runtime Memory:	25796
Sorts:	2
Serializable Aborts:	0
SQL Type:	6
Command Type:	3
Optimizer Mode:	ALL_ROWS
Optimizer Env:	673058757
Optimizer Cost:	21861
Parsing User ID:	92
Parsing Schema ID:	92
Parsing Schema Name:	QTUNE
Service:	SY\$\$USERS
Module:	SQL*Plus
Is Binds Aware:	Y
Is Bind Sensitive:	Y
Is Obsolete:	N
Is Sharable:	Y
Literal Hash Value:	0
SQL Patch:	"null"
SQL Plan Baseline:	"null"
SQL Profile:	"null"
Exact Matching Signature:	1178211779310957485
Force Matching Signature:	1178211779310957485
Outline Category:	"null"

Remote:	N
Object Status:	VALID
Program ID:	0
Program Line #:	0
Type Check Memory:	0
Type Check Heap:	00
I/O Interconnect Bytes:	278396928
Physical Read Requests:	610
Physical Read Bytes:	278396928
Physical Write Requests:	0
Physical Write Bytes:	0
Optimized Physical Read Requests:	0
I/O Cell Uncompressed Bytes:	0
I/O Cell Offload Eligible Bytes:	0
I/O Cell Offload Returned Bytes:	0

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SQL Statistics for [657302870](#)

Inst ID:	1
Child Number:	2
Child Address:	3B3BAF50
Executions:	2
Elapsed Time in secs:	55.618
CPU Time in secs:	52.231
User I/O Wait Time in secs:	0.459
Application Wait Time in secs:	0.000
Concurrency Wait Time in secs:	0.000
Cluster Wait Time in secs:	0.000
PL/SQL Exec Time in secs:	0.000
Java Exec Time in secs:	0.000
Buffer Gets:	103090
Disk Reads:	33984
Direct Writes:	0
Rows Processed:	18228
Parse Calls:	2
Fetches:	1218
End of Fetch count:	2
PX Servers Executions:	0
Loaded Versions:	1
Loads:	1
Invalidations:	0
Open Versions:	0
Kept Versions:	0
Users Executing:	0
Users Opening:	0
Locked Total:	6
Pinned Total:	7
First Load Time:	2013-04-05/11:05:48
Last Load Time:	2013-04-05/11:12:23
Last Active Time:	2013-04-05/11:13:45
Sharable Memory:	51953
Persistent Memory:	25932
Runtime Memory:	25144
Sorts:	2
Serializable Aborts:	0
SQL Type:	6
Command Type:	3
Optimizer Mode:	ALL_ROWS

Optimizer Env:	673058757
Optimizer Cost:	20124
Parsing User ID:	92
Parsing Schema ID:	92
Parsing Schema Name:	QTUNE
Service:	SYS\$USERS
Module:	SQL*Plus
Is Binds Aware:	Y
Is Bind Sensitive:	Y
Is Obsolete:	N
Is Sharable:	Y
Literal Hash Value:	0
SQL Patch:	"null"
SQL Plan Baseline:	"null"
SQL Profile:	"null"
Exact Matching Signature:	1178211779310957485
Force Matching Signature:	1178211779310957485
Outline Category:	"null"
Remote:	N
Object Status:	VALID
Program ID:	0
Program Line #:	0
Type Check Memory:	0
Type Check Heap:	00
I/O Interconnect Bytes:	278396928
Physical Read Requests:	610
Physical Read Bytes:	278396928
Physical Write Requests:	0
Physical Write Bytes:	0
Optimized Physical Read Requests:	0
I/O Cell Uncompressed Bytes:	0
I/O Cell Offload Eligible Bytes:	0
I/O Cell Offload Returned Bytes:	0

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SQL Statistics for 1637264670

Inst ID:	1
Child Number:	5
Child Address:	3428E4A8
Executions:	2
Elapsed Time in secs:	54.680
CPU Time in secs:	51.507
User I/O Wait Time in secs:	0.628
Application Wait Time in secs:	0.000
Concurrency Wait Time in secs:	0.000
Cluster Wait Time in secs:	0.000
PL/SQL Exec Time in secs:	0.000
Java Exec Time in secs:	0.000
Buffer Gets:	122566
Disk Reads:	33185
Direct Writes:	0
Rows Processed:	18228
Parse Calls:	3
Fetches:	1218
End of Fetch count:	2
PX Servers Executions:	0
Loaded Versions:	1
Loads:	1
Invalidations:	0

Open Versions:	0
Kept Versions:	0
Users Executing:	0
Users Opening:	0
Locked Total:	5
Pinned Total:	6
First Load Time:	2013-04-05/11:05:48
Last Load Time:	2013-04-05/11:13:59
Last Active Time:	2013-04-05/11:15:49
Sharable Memory:	51953
Persistent Memory:	26340
Runtime Memory:	25552
Sorts:	2
Serializable Aborts:	0
SQL Type:	6
Command Type:	3
Optimizer Mode:	ALL_ROWS
Optimizer Env:	926113474
Optimizer Cost:	19996
Parsing User ID:	92
Parsing Schema ID:	92
Parsing Schema Name:	QTUNE
Service:	SYS\$USERS
Module:	SQL*Plus
Is Binds Aware:	Y
Is Bind Sensitive:	Y
Is Obsolete:	N
Is Sharable:	Y
Literal Hash Value:	0
SQL Patch:	"null"
SQL Plan Baseline:	"null"
SQL Profile:	"null"
Exact Matching Signature:	1178211779310957485
Force Matching Signature:	1178211779310957485
Outline Category:	"null"
Remote:	N
Object Status:	VALID
Program ID:	0
Program Line #:	0
Type Check Memory:	0
Type Check Heap:	00
I/O Interconnect Bytes:	271851520
Physical Read Requests:	1319
Physical Read Bytes:	271851520
Physical Write Requests:	0
Physical Write Bytes:	0
Optimized Physical Read Requests:	0
I/O Cell Uncompressed Bytes:	0
I/O Cell Offload Eligible Bytes:	0
I/O Cell Offload Returned Bytes:	0

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SQL Statistics for **2816325939** [W]

Inst ID:	1
Child Number:	0
Child Address:	3B2C50CC
Executions:	1
Elapsed Time in secs:	80.657
CPU Time in secs:	27.974

Inst ID:	1
Child Number:	7
Child Address:	365FC9B8
Executions:	2
Elapsed Time in secs:	68.440
CPU Time in secs:	58.436

Inst ID:	1
Child Number:	8
Child Address:	38B73370
Executions:	1
Elapsed Time in secs:	27.094
CPU Time in secs:	25.850

User I/O Wait Time in secs:	50.027
Application Wait Time in secs:	0.000
Concurrency Wait Time in secs:	0.000
Cluster Wait Time in secs:	0.000
PL/SQL Exec Time in secs:	0.000
Java Exec Time in secs:	0.000
Buffer Gets:	21082
Disk Reads:	17361
Direct Writes:	0
Rows Processed:	922
Parse Calls:	2
Fetches:	63
End of Fetch count:	1
PX Servers Executions:	0
Loaded Versions:	1
Loads:	1
Invalidations:	0
Open Versions:	0
Kept Versions:	0
Users Executing:	0
Users Opening:	0
Locked Total:	7
Pinned Total:	8
First Load Time:	2013-04-05/11:05:48
Last Load Time:	2013-04-05/11:05:48
Last Active Time:	2013-04-05/11:07:27
Sharable Memory:	47893
Persistent Memory:	25296
Runtime Memory:	24508
Sorts:	1
Serializable Aborts:	0
SQL Type:	6
Command Type:	3
Optimizer Mode:	ALL_ROWS
Optimizer Env:	673058757
Optimizer Cost:	19528
Parsing User ID:	92
Parsing Schema ID:	92
Parsing Schema Name:	QTUNE
Service:	SYSS\$USERS
Module:	SQL*Plus
Is Binds Aware:	Y
Is Bind Sensitive:	Y
Is Obsolete:	N
Is Sharable:	Y
Literal Hash Value:	0
SQL Patch:	"null"
SQL Plan Baseline:	"null"
SQL Profile:	"null"
Exact Matching Signature:	1178211779310957485
Force Matching Signature:	1178211779310957485
Outline Category:	"null"
Remote:	N
Object Status:	VALID
Program ID:	0
Program Line #:	0
Type Check Memory:	0
Type Check Heap:	00
I/O Interconnect Bytes:	142221312
Physical Read Requests:	674
Physical Read Bytes:	142221312

User I/O Wait Time in secs:	0.435
Application Wait Time in secs:	0.000
Concurrency Wait Time in secs:	0.000
Cluster Wait Time in secs:	0.000
PL/SQL Exec Time in secs:	0.000
Java Exec Time in secs:	0.000
Buffer Gets:	34320
Disk Reads:	32424
Direct Writes:	0
Rows Processed:	0
Parse Calls:	3
Fetches:	2
End of Fetch count:	2
PX Servers Executions:	0
Loaded Versions:	1
Loads:	1
Invalidations:	0
Open Versions:	0
Kept Versions:	0
Users Executing:	0
Users Opening:	0
Locked Total:	5
Pinned Total:	5
First Load Time:	2013-04-05/11:05:48
Last Load Time:	2013-04-05/11:15:52
Last Active Time:	2013-04-05/11:17:00
Sharable Memory:	47877
Persistent Memory:	25296
Runtime Memory:	24508
Sorts:	2
Serializable Aborts:	0
SQL Type:	6
Command Type:	3
Optimizer Mode:	ALL_ROWS
Optimizer Env:	2955803461
Optimizer Cost:	19529
Parsing User ID:	92
Parsing Schema ID:	92
Parsing Schema Name:	QTUNE
Service:	SYSS\$USERS
Module:	SQL*Plus
Is Binds Aware:	Y
Is Bind Sensitive:	Y
Is Obsolete:	N
Is Sharable:	N
Literal Hash Value:	0
SQL Patch:	"null"
SQL Plan Baseline:	"null"
SQL Profile:	"null"
Exact Matching Signature:	1178211779310957485
Force Matching Signature:	1178211779310957485
Outline Category:	"null"
Remote:	N
Object Status:	VALID
Program ID:	0
Program Line #:	0
Type Check Memory:	0
Type Check Heap:	00
I/O Interconnect Bytes:	265617408
Physical Read Requests:	558
Physical Read Bytes:	265617408

User I/O Wait Time in secs:	0.179
Application Wait Time in secs:	0.000
Concurrency Wait Time in secs:	0.000
Cluster Wait Time in secs:	0.000
PL/SQL Exec Time in secs:	0.000
Java Exec Time in secs:	0.000
Buffer Gets:	19221
Disk Reads:	14872
Direct Writes:	0
Rows Processed:	0
Parse Calls:	0
Fetches:	0
End of Fetch count:	0
PX Servers Executions:	0
Loaded Versions:	1
Loads:	1
Invalidations:	0
Open Versions:	1
Kept Versions:	0
Users Executing:	1
Users Opening:	1
Locked Total:	1
Pinned Total:	2
First Load Time:	2013-04-05/11:05:48
Last Load Time:	2013-04-05/11:17:01
Last Active Time:	2013-04-05/11:17:28
Sharable Memory:	47877
Persistent Memory:	25296
Runtime Memory:	24508
Sorts:	1
Serializable Aborts:	0
SQL Type:	6
Command Type:	3
Optimizer Mode:	ALL_ROWS
Optimizer Env:	2955803461
Optimizer Cost:	19559
Parsing User ID:	92
Parsing Schema ID:	92
Parsing Schema Name:	QTUNE
Service:	SYSS\$USERS
Module:	SQL*Plus
Is Binds Aware:	Y
Is Bind Sensitive:	Y
Is Obsolete:	N
Is Sharable:	Y
Literal Hash Value:	0
SQL Patch:	"null"
SQL Plan Baseline:	"null"
SQL Profile:	"null"
Exact Matching Signature:	1178211779310957485
Force Matching Signature:	1178211779310957485
Outline Category:	"null"
Remote:	N
Object Status:	VALID
Program ID:	0
Program Line #:	0
Type Check Memory:	0
Type Check Heap:	00
I/O Interconnect Bytes:	121831424
Physical Read Requests:	258
Physical Read Bytes:	121831424

Physical Write Requests:	0
Physical Write Bytes:	0
Optimized Physical Read Requests:	0
I/O Cell Uncompressed Bytes:	0
I/O Cell Offload Eligible Bytes:	0
I/O Cell Offload Returned Bytes:	0

Physical Write Requests:	0
Physical Write Bytes:	0
Optimized Physical Read Requests:	0
I/O Cell Uncompressed Bytes:	0
I/O Cell Offload Eligible Bytes:	0
I/O Cell Offload Returned Bytes:	0

Physical Write Requests:	0
Physical Write Bytes:	0
Optimized Physical Read Requests:	0
I/O Cell Uncompressed Bytes:	0
I/O Cell Offload Eligible Bytes:	0
I/O Cell Offload Returned Bytes:	0

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SQL Statistics for [326771367](#) [B]

Inst ID:	1
Child Number:	4
Child Address:	3417CC1C
Executions:	2
Elapsed Time in secs:	0.026
CPU Time in secs:	0.020
User I/O Wait Time in secs:	0.000
Application Wait Time in secs:	0.000
Concurrency Wait Time in secs:	0.000
Cluster Wait Time in secs:	0.000
PL/SQL Exec Time in secs:	0.000
Java Exec Time in secs:	0.000
Buffer Gets:	10
Disk Reads:	0
Direct Writes:	0
Rows Processed:	0
Parse Calls:	1
Fetches:	2
End of Fetch count:	2
PX Servers Executions:	0
Loaded Versions:	1
Loads:	1
Invalidations:	0
Open Versions:	0
Kept Versions:	0
Users Executing:	0
Users Opening:	0
Locked Total:	3
Pinned Total:	4
First Load Time:	2013-04-05/11:05:48
Last Load Time:	2013-04-05/11:13:53
Last Active Time:	2013-04-05/11:13:53
Sharable Memory:	51953
Persistent Memory:	31580
Runtime Memory:	30792
Sorts:	2
Serializable Aborts:	0
SQL Type:	6
Command Type:	3
Optimizer Mode:	ALL_ROWS
Optimizer Env:	673058757
Optimizer Cost:	510
Parsing User ID:	92
Parsing Schema ID:	92
Parsing Schema Name:	QTUNE
Service:	SYSSUSERS
Module:	SQL*Plus
Is Binds Aware:	Y
Is Bind Sensitive:	Y
Is Obsolete:	N

Inst ID:	1
Child Number:	6
Child Address:	365F200C
Executions:	2
Elapsed Time in secs:	3.393
CPU Time in secs:	0.084
User I/O Wait Time in secs:	3.232
Application Wait Time in secs:	0.000
Concurrency Wait Time in secs:	0.000
Cluster Wait Time in secs:	0.000
PL/SQL Exec Time in secs:	0.000
Java Exec Time in secs:	0.000
Buffer Gets:	10304
Disk Reads:	232
Direct Writes:	0
Rows Processed:	84
Parse Calls:	1
Fetches:	8
End of Fetch count:	2
PX Servers Executions:	0
Loaded Versions:	1
Loads:	1
Invalidations:	0
Open Versions:	0
Kept Versions:	0
Users Executing:	0
Users Opening:	0
Locked Total:	3
Pinned Total:	4
First Load Time:	2013-04-05/11:05:48
Last Load Time:	2013-04-05/11:15:49
Last Active Time:	2013-04-05/11:15:52
Sharable Memory:	51953
Persistent Memory:	28956
Runtime Memory:	28168
Sorts:	2
Serializable Aborts:	0
SQL Type:	6
Command Type:	3
Optimizer Mode:	ALL_ROWS
Optimizer Env:	926113474
Optimizer Cost:	543
Parsing User ID:	92
Parsing Schema ID:	92
Parsing Schema Name:	QTUNE
Service:	SYSSUSERS
Module:	SQL*Plus
Is Binds Aware:	Y
Is Bind Sensitive:	Y
Is Obsolete:	N

Is Sharable:	Y
Literal Hash Value:	0
SQL Patch:	"null"
SQL Plan Baseline:	"null"
SQL Profile:	"null"
Exact Matching Signature:	1178211779310957485
Force Matching Signature:	1178211779310957485
Outline Category:	"null"
Remote:	N
Object Status:	VALID
Program ID:	0
Program Line #:	0
Type Check Memory:	0
Type Check Heap:	00
I/O Interconnect Bytes:	0
Physical Read Requests:	0
Physical Read Bytes:	0
Physical Write Requests:	0
Physical Write Bytes:	0
Optimized Physical Read Requests:	0
I/O Cell Uncompressed Bytes:	0
I/O Cell Offload Eligible Bytes:	0
I/O Cell Offload Returned Bytes:	0

Is Sharable:	Y
Literal Hash Value:	0
SQL Patch:	"null"
SQL Plan Baseline:	"null"
SQL Profile:	"null"
Exact Matching Signature:	1178211779310957485
Force Matching Signature:	1178211779310957485
Outline Category:	"null"
Remote:	N
Object Status:	VALID
Program ID:	0
Program Line #:	0
Type Check Memory:	0
Type Check Heap:	00
I/O Interconnect Bytes:	1900544
Physical Read Requests:	232
Physical Read Bytes:	1900544
Physical Write Requests:	0
Physical Write Bytes:	0
Optimized Physical Read Requests:	0
I/O Cell Uncompressed Bytes:	0
I/O Cell Offload Eligible Bytes:	0
I/O Cell Offload Returned Bytes:	0

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SQL Statistics for 3935795003

Inst ID:	1
Child Number:	3
Child Address:	342B4624
Executions:	2
Elapsed Time in secs:	7.717
CPU Time in secs:	2.076
User I/O Wait Time in secs:	5.301
Application Wait Time in secs:	0.000
Concurrency Wait Time in secs:	0.000
Cluster Wait Time in secs:	0.000
PL/SQL Exec Time in secs:	0.000
Java Exec Time in secs:	0.000
Buffer Gets:	13146
Disk Reads:	6230
Direct Writes:	0
Rows Processed:	84
Parse Calls:	2
Fetches:	8
End of Fetch count:	2
PX Servers Executions:	0
Loaded Versions:	1
Loads:	1
Invalidations:	0
Open Versions:	0
Kept Versions:	0
Users Executing:	0
Users Opening:	0
Locked Total:	5
Pinned Total:	6
First Load Time:	2013-04-05/11:05:48
Last Load Time:	2013-04-05/11:13:45
Last Active Time:	2013-04-05/11:13:53

Sharable Memory:	51953
Persistent Memory:	27568
Runtime Memory:	26780
Sorts:	2
Serializable Aborts:	0
SQL Type:	6
Command Type:	3
Optimizer Mode:	ALL_ROWS
Optimizer Env:	673058757
Optimizer Cost:	7453
Parsing User ID:	92
Parsing Schema ID:	92
Parsing Schema Name:	QTUNE
Service:	SYS\$USERS
Module:	SQL*Plus
Is Binds Aware:	Y
Is Bind Sensitive:	Y
Is Obsolete:	N
Is Sharable:	Y
Literal Hash Value:	0
SQL Patch:	"null"
SQL Plan Baseline:	"null"
SQL Profile:	"null"
Exact Matching Signature:	1178211779310957485
Force Matching Signature:	1178211779310957485
Outline Category:	"null"
Remote:	N
Object Status:	VALID
Program ID:	0
Program Line #:	0
Type Check Memory:	0
Type Check Heap:	00
I/O Interconnect Bytes:	51036160
Physical Read Requests:	2984
Physical Read Bytes:	51036160
Physical Write Requests:	0
Physical Write Bytes:	0
Optimized Physical Read Requests:	0
I/O Cell Uncompressed Bytes:	0
I/O Cell Offload Eligible Bytes:	0
I/O Cell Offload Returned Bytes:	0

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SQL Monitor Statistics

List of monitored executions is restricted up to 100 per phv as per tool parameter "r_rows_table_s".

#	Plan Hash Value	Monitored Executions
1	142578110	2
2	657302870	2
3	1637264670	2
4	2816325939 [W]	4
5	3267771367 [B]	4
6	3935795003	2

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SQL Monitoring for [142578110](#) DONE (ALL ROWS) 2013-04-05/11:10:16

Status:	DONE (ALL ROWS)
SQL Exec Start Time:	2013-04-05/11:10:16

SQL Exec ID:	16777218
Inst ID:	1
Process Name:	ora
Key:	270582939707
Child Address:	364B8348
Child Number:	1
Elapsed Time in secs:	32.497
Queuing Time in secs:	0.000
CPU Time in secs:	31.886
User I/O Wait Time in secs:	0.269
Application Wait Time in secs:	0.000
Concurrency Wait Time in secs:	0.000
Cluster Wait Time in secs:	0.000
PL/SQL Exec Time in secs:	0.000
Java Exec Time in secs:	0.000
Buffer Gets:	111224
Disk Reads:	305
Direct Writes:	0
Fetches:	1896
PX is Cross Instance:	N
Refresh Count:	1915
First Refresh Time:	2013-04-05/11:10:16
Last Refresh Time:	2013-04-05/11:12:22
User #:	92
User Name:	QTUNE
Service Name:	SYSSUSERS
Module:	SQL*Plus
SID:	147
Session Serial#:	5673
Exact Matching Signature:	1178211779310957485
Force Matching Signature:	1178211779310957485
Program:	sqlplus@host01.example.com (TNS V1-V3)
I/O Interconnect Bytes:	139198464
Physical Read Requests:	305
Physical Read Bytes:	139198464
Physical Write Requests:	0
Physical Write Bytes:	0

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SQL Monitoring for [142578110](#) DONE (ALL ROWS) 2013-04-05/11:07:27

Status:	DONE (ALL ROWS)
SQL Exec Start Time:	2013-04-05/11:07:27
SQL Exec ID:	16777217
Inst ID:	1
Process Name:	ora
Key:	42949673018
Child Address:	364B8348
Child Number:	1
Elapsed Time in secs:	32.970
Queuing Time in secs:	0.000
CPU Time in secs:	32.182
User I/O Wait Time in secs:	0.217
Application Wait Time in secs:	0.000
Concurrency Wait Time in secs:	0.000
Cluster Wait Time in secs:	0.000
PL/SQL Exec Time in secs:	0.000
Java Exec Time in secs:	0.000
Buffer Gets:	111230

Disk Reads:	305
Direct Writes:	0
Fetches:	1896
PX is Cross Instance:	N
Refresh Count:	1915
First Refresh Time:	2013-04-05/11:07:27
Last Refresh Time:	2013-04-05/11:10:16
User #:	92
User Name:	QTUNE
Service Name:	SYSSUSERS
Module:	SQL*Plus
SID:	147
Session Serial#:	5673
Exact Matching Signature:	1178211779310957485
Force Matching Signature:	1178211779310957485
Program:	sqlplus@host01.example.com (TNS V1-V3)
I/O Interconnect Bytes:	139198464
Physical Read Requests:	305
Physical Read Bytes:	139198464
Physical Write Requests:	0
Physical Write Bytes:	0

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SQL Monitoring for **657302870** DONE (ALL ROWS) 2013-04-05/11:13:08

Status:	DONE (ALL ROWS)
SQL Exec Start Time:	2013-04-05/11:13:08
SQL Exec ID:	16777220
Inst ID:	1
Process Name:	ora
Key:	197568495679
Child Address:	3B3BAF50
Child Number:	2
Elapsed Time in secs:	27.301
Queuing Time in secs:	0.000
CPU Time in secs:	26.506
User I/O Wait Time in secs:	0.244
Application Wait Time in secs:	0.000
Concurrency Wait Time in secs:	0.000
Cluster Wait Time in secs:	0.000
PL/SQL Exec Time in secs:	0.000
Java Exec Time in secs:	0.000
Buffer Gets:	51542
Disk Reads:	305
Direct Writes:	0
Fetches:	609
PX is Cross Instance:	N
Refresh Count:	625
First Refresh Time:	2013-04-05/11:13:08
Last Refresh Time:	2013-04-05/11:13:45
User #:	92
User Name:	QTUNE
Service Name:	SYSSUSERS
Module:	SQL*Plus
SID:	147
Session Serial#:	5673
Exact Matching Signature:	1178211779310957485
Force Matching Signature:	1178211779310957485
Program:	sqlplus@host01.example.com (TNS V1-V3)
I/O Interconnect Bytes:	139198464

Physical Read Requests:	305
Physical Read Bytes:	139198464
Physical Write Requests:	0
Physical Write Bytes:	0

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SQL Monitoring for [657302870](#) DONE (ALL ROWS) 2013-04-05/11:12:22

Status:	DONE (ALL ROWS)
SQL Exec Start Time:	2013-04-05/11:12:22
SQL Exec ID:	16777219
Inst ID:	1
Process Name:	ora
Key:	47244640317
Child Address:	3B3BAF50
Child Number:	2
Elapsed Time in secs:	28.317
Queuing Time in secs:	0.000
CPU Time in secs:	25.726
User I/O Wait Time in secs:	0.215
Application Wait Time in secs:	0.000
Concurrency Wait Time in secs:	0.000
Cluster Wait Time in secs:	0.000
PL/SQL Exec Time in secs:	0.000
Java Exec Time in secs:	0.000
Buffer Gets:	51548
Disk Reads:	305
Direct Writes:	0
Fetches:	609
PX is Cross Instance:	N
Refresh Count:	626
First Refresh Time:	2013-04-05/11:12:22
Last Refresh Time:	2013-04-05/11:13:08
User #:	92
User Name:	QTUNE
Service Name:	SYSSUSERS
Module:	SQL*Plus
SID:	147
Session Serial#:	5673
Exact Matching Signature:	1178211779310957485
Force Matching Signature:	1178211779310957485
Program:	sqlplus@host01.example.com (TNS V1-V3)
I/O Interconnect Bytes:	139198464
Physical Read Requests:	305
Physical Read Bytes:	139198464
Physical Write Requests:	0
Physical Write Bytes:	0

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SQL Monitoring for [1637264670](#) DONE (ALL ROWS) 2013-04-05/11:14:49

Status:	DONE (ALL ROWS)
SQL Exec Start Time:	2013-04-05/11:14:49
SQL Exec ID:	16777226
Inst ID:	1
Process Name:	ora
Key:	416611827784
Child Address:	3428E4A8

Child Number:	5
Elapsed Time in secs:	28.359
Queuing Time in secs:	0.000
CPU Time in secs:	26.046
User I/O Wait Time in secs:	0.232
Application Wait Time in secs:	0.000
Concurrency Wait Time in secs:	0.000
Cluster Wait Time in secs:	0.000
PL/SQL Exec Time in secs:	0.000
Java Exec Time in secs:	0.000
Buffer Gets:	61280
Disk Reads:	279
Direct Writes:	0
Fetches:	609
PX is Cross Instance:	N
Refresh Count:	626
First Refresh Time:	2013-04-05/11:14:49
Last Refresh Time:	2013-04-05/11:15:49
User #:	92
User Name:	QTUNE
Service Name:	SYSSUSERS
Module:	SQL*Plus
SID:	147
Session Serial#:	5673
Exact Matching Signature:	1178211779310957485
Force Matching Signature:	1178211779310957485
Program:	sqlplus@host01.example.com (TNS V1-V3)
I/O Interconnect Bytes:	132808704
Physical Read Requests:	279
Physical Read Bytes:	132808704
Physical Write Requests:	0
Physical Write Bytes:	0

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SQL Monitoring for 1637264670 DONE (ALL ROWS) 2013-04-05/11:13:59

Status:	DONE (ALL ROWS)
SQL Exec Start Time:	2013-04-05/11:13:59
SQL Exec ID:	16777225
Inst ID:	1
Process Name:	ora
Key:	120259084358
Child Address:	3428E4A8
Child Number:	5
Elapsed Time in secs:	26.321
Queuing Time in secs:	0.000
CPU Time in secs:	25.462
User I/O Wait Time in secs:	0.396
Application Wait Time in secs:	0.000
Concurrency Wait Time in secs:	0.000
Cluster Wait Time in secs:	0.000
PL/SQL Exec Time in secs:	0.000
Java Exec Time in secs:	0.000
Buffer Gets:	61286
Disk Reads:	1040
Direct Writes:	0
Fetches:	609
PX is Cross Instance:	N
Refresh Count:	625

First Refresh Time:	2013-04-05/11:13:59
Last Refresh Time:	2013-04-05/11:14:49
User #:	92
User Name:	QTUNE
Service Name:	SYSSUSERS
Module:	SQL*Plus
SID:	147
Session Serial#:	5673
Exact Matching Signature:	1178211779310957485
Force Matching Signature:	1178211779310957485
Program:	sqlplus@host01.example.com (TNS V1-V3)
I/O Interconnect Bytes:	139042816
Physical Read Requests:	1040
Physical Read Bytes:	139042816
Physical Write Requests:	0
Physical Write Bytes:	0

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SQL Monitoring for 2816325939 [W] EXECUTING 2013-04-05/11:17:00

Status:	EXECUTING
SQL Exec Start Time:	2013-04-05/11:17:00
SQL Exec ID:	16777231
Inst ID:	1
Process Name:	ora
Key:	377957122127
Child Address:	38B73370
Child Number:	8
Elapsed Time in secs:	31.106
Queuing Time in secs:	0.000
CPU Time in secs:	29.302
User I/O Wait Time in secs:	0.195
Application Wait Time in secs:	0.000
Concurrency Wait Time in secs:	0.000
Cluster Wait Time in secs:	0.000
PL/SQL Exec Time in secs:	0.000
Java Exec Time in secs:	0.000
Buffer Gets:	20644
Disk Reads:	279
Direct Writes:	0
Fetches:	0
PX is Cross Instance:	N
Refresh Count:	18
First Refresh Time:	2013-04-05/11:17:00
Last Refresh Time:	2013-04-05/11:17:32
User #:	92
User Name:	QTUNE
Service Name:	SYSSUSERS
Module:	SQL*Plus
SID:	147
Session Serial#:	5673
Exact Matching Signature:	1178211779310957485
Force Matching Signature:	1178211779310957485
Program:	sqlplus@host01.example.com (TNS V1-V3)
I/O Interconnect Bytes:	132808704
Physical Read Requests:	279
Physical Read Bytes:	132808704
Physical Write Requests:	0
Physical Write Bytes:	0

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SQL Monitoring for **2816325939** [W] DONE (ALL ROWS) 2013-04-05/11:16:30

Status:	DONE (ALL ROWS)
SQL Exec Start Time:	2013-04-05/11:16:30
SQL Exec ID:	16777230
Inst ID:	1
Process Name:	ora
Key:	339302416462
Child Address:	365FC9B8
Child Number:	7
Elapsed Time in secs:	30.514
Queuing Time in secs:	0.000
CPU Time in secs:	29.042
User I/O Wait Time in secs:	0.203
Application Wait Time in secs:	0.000
Concurrency Wait Time in secs:	0.000
Cluster Wait Time in secs:	0.000
PL/SQL Exec Time in secs:	0.000
Java Exec Time in secs:	0.000
Buffer Gets:	17157
Disk Reads:	279
Direct Writes:	0
Fetches:	1
PX is Cross Instance:	N
Refresh Count:	19
First Refresh Time:	2013-04-05/11:16:30
Last Refresh Time:	2013-04-05/11:17:00
User #:	92
User Name:	QTUNE
Service Name:	SYSSUSERS
Module:	SQL*Plus
SID:	147
Session Serial#:	5673
Exact Matching Signature:	1178211779310957485
Force Matching Signature:	1178211779310957485
Program:	sqlplus@host01.example.com (TNS V1-V3)
I/O Interconnect Bytes:	132808704
Physical Read Requests:	279
Physical Read Bytes:	132808704
Physical Write Requests:	0
Physical Write Bytes:	0

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SQL Monitoring for **2816325939** [W] DONE (ALL ROWS) 2013-04-05/11:15:52

Status:	DONE (ALL ROWS)
SQL Exec Start Time:	2013-04-05/11:15:52
SQL Exec ID:	16777229
Inst ID:	1
Process Name:	ora
Key:	133143986253
Child Address:	365FC9B8
Child Number:	7
Elapsed Time in secs:	37.926
Queuing Time in secs:	0.000
CPU Time in secs:	29.394
User I/O Wait Time in secs:	0.231

Application Wait Time in secs:	0.000
Concurrency Wait Time in secs:	0.000
Cluster Wait Time in secs:	0.000
PL/SQL Exec Time in secs:	0.000
Java Exec Time in secs:	0.000
Buffer Gets:	17163
Disk Reads:	279
Direct Writes:	0
Fetches:	1
PX is Cross Instance:	N
Refresh Count:	23
First Refresh Time:	2013-04-05/11:15:52
Last Refresh Time:	2013-04-05/11:16:30
User #:	92
User Name:	QTUNE
Service Name:	SYSSUSERS
Module:	SQL*Plus
SID:	147
Session Serial#:	5673
Exact Matching Signature:	1178211779310957485
Force Matching Signature:	1178211779310957485
Program:	sqlplus@host01.example.com (TNS V1-V3)
I/O Interconnect Bytes:	132808704
Physical Read Requests:	279
Physical Read Bytes:	132808704
Physical Write Requests:	0
Physical Write Bytes:	0

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SQL Monitoring for **2816325939 [W]** DONE (ALL ROWS) 2013-04-05/11:05:49

Status:	DONE (ALL ROWS)
SQL Exec Start Time:	2013-04-05/11:05:49
SQL Exec ID:	16777216
Inst ID:	1
Process Name:	ora
Key:	515396075577
Child Address:	3B2C50CC
Child Number:	0
Elapsed Time in secs:	80.656
Queuing Time in secs:	0.000
CPU Time in secs:	27.974
User I/O Wait Time in secs:	50.027
Application Wait Time in secs:	0.000
Concurrency Wait Time in secs:	0.000
Cluster Wait Time in secs:	0.000
PL/SQL Exec Time in secs:	0.000
Java Exec Time in secs:	0.000
Buffer Gets:	21082
Disk Reads:	674
Direct Writes:	0
Fetches:	63
PX is Cross Instance:	N
Refresh Count:	105
First Refresh Time:	2013-04-05/11:05:49
Last Refresh Time:	2013-04-05/11:07:13
User #:	92
User Name:	QTUNE
Service Name:	SYSSUSERS
Module:	SQL*Plus

SID:	147
Session Serial#:	5673
Exact Matching Signature:	1178211779310957485
Force Matching Signature:	1178211779310957485
Program:	sqlplus@host01.example.com (TNS V1-V3)
I/O Interconnect Bytes:	142221312
Physical Read Requests:	674
Physical Read Bytes:	142221312
Physical Write Requests:	0
Physical Write Bytes:	0

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SQL Monitoring for [3267771367](#) [B] DONE (ALL ROWS) 2013-04-05/11:15:52

Status:	DONE (ALL ROWS)
SQL Exec Start Time:	2013-04-05/11:15:52
SQL Exec ID:	16777228
Inst ID:	1
Process Name:	ora
Key:	532575944780
Child Address:	365F200C
Child Number:	6
Elapsed Time in secs:	0.063
Queuing Time in secs:	0.000
CPU Time in secs:	0.052
User I/O Wait Time in secs:	0.000
Application Wait Time in secs:	0.000
Concurrency Wait Time in secs:	0.000
Cluster Wait Time in secs:	0.000
PL/SQL Exec Time in secs:	0.000
Java Exec Time in secs:	0.000
Buffer Gets:	5149
Disk Reads:	0
Direct Writes:	0
Fetches:	4
PX is Cross Instance:	N
Refresh Count:	7
First Refresh Time:	2013-04-05/11:15:52
Last Refresh Time:	2013-04-05/11:15:52
User #:	92
User Name:	QTUNE
Service Name:	SYSSUSERS
Module:	SQL*Plus
SID:	147
Session Serial#:	5673
Exact Matching Signature:	1178211779310957485
Force Matching Signature:	1178211779310957485
Program:	sqlplus@host01.example.com (TNS V1-V3)
I/O Interconnect Bytes:	0
Physical Read Requests:	0
Physical Read Bytes:	0
Physical Write Requests:	0
Physical Write Bytes:	0

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SQL Monitoring for [3267771367](#) [B] DONE (ALL ROWS) 2013-04-05/11:15:49

Status:	DONE (ALL ROWS)
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SQL Exec Start Time:	2013-04-05/11:15:49
SQL Exec ID:	16777227
Inst ID:	1
Process Name:	ora
Key:	51539607627
Child Address:	365F200C
Child Number:	6
Elapsed Time in secs:	3.330
Queuing Time in secs:	0.000
CPU Time in secs:	0.032
User I/O Wait Time in secs:	3.232
Application Wait Time in secs:	0.000
Concurrency Wait Time in secs:	0.000
Cluster Wait Time in secs:	0.000
PL/SQL Exec Time in secs:	0.000
Java Exec Time in secs:	0.000
Buffer Gets:	5155
Disk Reads:	232
Direct Writes:	0
Fetches:	4
PX is Cross Instance:	N
Refresh Count:	8
First Refresh Time:	2013-04-05/11:15:49
Last Refresh Time:	2013-04-05/11:15:52
User #:	92
User Name:	QTUNE
Service Name:	SYSSUSERS
Module:	SQL*Plus
SID:	147
Session Serial#:	5673
Exact Matching Signature:	1178211779310957485
Force Matching Signature:	1178211779310957485
Program:	sqlplus@host01.example.com (TNS V1-V3)
I/O Interconnect Bytes:	1900544
Physical Read Requests:	232
Physical Read Bytes:	1900544
Physical Write Requests:	0
Physical Write Bytes:	0

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SQL Monitoring for [3267771367](#) [B] DONE (ALL ROWS) 2013-04-05/11:13:53

Status:	DONE (ALL ROWS)
SQL Exec Start Time:	2013-04-05/11:13:53
SQL Exec ID:	16777223
Inst ID:	1
Process Name:	ora
Key:	408021893188
Child Address:	3417CC1C
Child Number:	4
Elapsed Time in secs:	0.025
Queuing Time in secs:	0.000
CPU Time in secs:	0.020
User I/O Wait Time in secs:	0.000
Application Wait Time in secs:	0.000
Concurrency Wait Time in secs:	0.000
Cluster Wait Time in secs:	0.000
PL/SQL Exec Time in secs:	0.000
Java Exec Time in secs:	0.000

Buffer Gets:	8
Disk Reads:	0
Direct Writes:	0
Fetches:	1
PX is Cross Instance:	N
Refresh Count:	4
First Refresh Time:	2013-04-05/11:13:53
Last Refresh Time:	2013-04-05/11:13:53
User #:	92
User Name:	QTUNE
Service Name:	SYSSUSERS
Module:	SQL*Plus
SID:	147
Session Serial#:	5673
Exact Matching Signature:	1178211779310957485
Force Matching Signature:	1178211779310957485
Program:	sqlplus@host01.example.com (TNS V1-V3)
I/O Interconnect Bytes:	0
Physical Read Requests:	0
Physical Read Bytes:	0
Physical Write Requests:	0
Physical Write Bytes:	0

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SQL Monitoring for [326771367](#) [B] DONE (ALL ROWS) 2013-04-05/11:13:53

Status:	DONE (ALL ROWS)
SQL Exec Start Time:	2013-04-05/11:13:53
SQL Exec ID:	16777224
Inst ID:	1
Process Name:	ora
Key:	304942678085
Child Address:	341CC1C
Child Number:	4
Elapsed Time in secs:	0.000
Queuing Time in secs:	0.000
CPU Time in secs:	0.000
User I/O Wait Time in secs:	0.000
Application Wait Time in secs:	0.000
Concurrency Wait Time in secs:	0.000
Cluster Wait Time in secs:	0.000
PL/SQL Exec Time in secs:	0.000
Java Exec Time in secs:	0.000
Buffer Gets:	2
Disk Reads:	0
Direct Writes:	0
Fetches:	1
PX is Cross Instance:	N
Refresh Count:	4
First Refresh Time:	2013-04-05/11:13:53
Last Refresh Time:	2013-04-05/11:13:53
User #:	92
User Name:	QTUNE
Service Name:	SYSSUSERS
Module:	SQL*Plus
SID:	147
Session Serial#:	5673
Exact Matching Signature:	1178211779310957485
Force Matching Signature:	1178211779310957485
Program:	sqlplus@host01.example.com (TNS V1-V3)

I/O Interconnect Bytes:	0
Physical Read Requests:	0
Physical Read Bytes:	0
Physical Write Requests:	0
Physical Write Bytes:	0

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SQL Monitoring for **3935795003** DONE (ALL ROWS) 2013-04-05/11:13:52

Status:	DONE (ALL ROWS)
SQL Exec Start Time:	2013-04-05/11:13:52
SQL Exec ID:	16777222
Inst ID:	1
Process Name:	ora
Key:	429496729667
Child Address:	342B4624
Child Number:	3
Elapsed Time in secs:	1.137
Queuing Time in secs:	0.000
CPU Time in secs:	1.120
User I/O Wait Time in secs:	0.021
Application Wait Time in secs:	0.000
Concurrency Wait Time in secs:	0.000
Cluster Wait Time in secs:	0.000
PL/SQL Exec Time in secs:	0.000
Java Exec Time in secs:	0.000
Buffer Gets:	6570
Disk Reads:	34
Direct Writes:	0
Fetches:	4
PX is Cross Instance:	N
Refresh Count:	7
First Refresh Time:	2013-04-05/11:13:52
Last Refresh Time:	2013-04-05/11:13:53
User #:	92
User Name:	QTUNE
Service Name:	SYSSUSERS
Module:	SQL*Plus
SID:	147
Session Serial#:	5673
Exact Matching Signature:	1178211779310957485
Force Matching Signature:	1178211779310957485
Program:	sqlplus@host01.example.com (TNS V1-V3)
I/O Interconnect Bytes:	13574144
Physical Read Requests:	34
Physical Read Bytes:	13574144
Physical Write Requests:	0
Physical Write Bytes:	0

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SQL Monitoring for **3935795003** DONE (ALL ROWS) 2013-04-05/11:13:45

Status:	DONE (ALL ROWS)
SQL Exec Start Time:	2013-04-05/11:13:45
SQL Exec ID:	16777221
Inst ID:	1
Process Name:	ora
Key:	77309411393
Child Address:	342B4624

Child Number:	3
Elapsed Time in secs:	6.580
Queuing Time in secs:	0.000
CPU Time in secs:	0.956
User I/O Wait Time in secs:	5.280
Application Wait Time in secs:	0.000
Concurrency Wait Time in secs:	0.000
Cluster Wait Time in secs:	0.000
PL/SQL Exec Time in secs:	0.000
Java Exec Time in secs:	0.000
Buffer Gets:	6576
Disk Reads:	2950
Direct Writes:	0
Fetches:	4
PX is Cross Instance:	N
Refresh Count:	10
First Refresh Time:	2013-04-05/11:13:45
Last Refresh Time:	2013-04-05/11:13:52
User #:	92
User Name:	QTUNE
Service Name:	SYSSUSERS
Module:	SQL*Plus
SID:	147
Session Serial#:	5673
Exact Matching Signature:	1178211779310957485
Force Matching Signature:	1178211779310957485
Program:	sqlplus@host01.example.com (TNS V1-V3)
I/O Interconnect Bytes:	37462016
Physical Read Requests:	2950
Physical Read Bytes:	37462016
Physical Write Requests:	0
Physical Write Bytes:	0

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Parallel Processing

- [PX Instance Groups](#)
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PX Instance Groups

Parallel-execution instance groups available to current session (SID=139).

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Active PX Servers

Statistics for active parallel-execution servers.

SQL: [\[+\]](#)

PX Processes

Parallel-execution processes, and sessions running on them.

SQL: [\[+\]](#)

PX Sessions

Sessions running on parallel-execution servers.

SQL: [±]

PX System Statistics - Summary

System statistics for parallel-execution servers.

Statistic	Inst ID	Value
Servers Busy :	1	0
Servers Idle :	1	0
Servers Highwater :	1	2
Server Sessions :	1	2
Servers Started :	1	2
Servers Shutdown :	1	2
Servers Cleaned Up :	1	0
Queries Queued :	1	0
Queries Initiated :	1	0
Queries Initiated (IPQ) :	1	0
DML Initiated :	1	0
DML Initiated (IPQ) :	1	0
DDL Initiated :	1	0
DDL Initiated (IPQ) :	1	0
DFO Trees :	1	0
Sessions Active :	1	0
Local Msgs Sent :	1	24
Distr Msgs Sent :	1	0
Local Msgs Recv'd :	1	24
Distr Msgs Recv'd :	1	0

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PX Process System Statistics - Summary

Process system statistics for parallel-execution servers.

Statistic	Inst ID	Value
Servers In Use :	1	0
Servers Available :	1	0
Servers Started :	1	2
Servers Shutdown :	1	2
Servers Highwater :	1	2
Servers Cleaned Up :	1	0
Server Sessions :	1	2
Memory Chunks Allocated :	1	4
Memory Chunks Freed :	1	0
Memory Chunks Current :	1	4
Memory Chunks HWM :	1	4
Buffers Allocated :	1	8
Buffers Freed :	1	8
Buffers Current :	1	0
Buffers HWM :	1	8

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Tables

#	Table Name	Owner	Count ¹	Num Rows ²	Sample Size ²	Blocks ²	Last Analyzed ²	Table Stats	Table Stats Extn	Table Prop	Table Phys Prop	Table Cons	Table Cols	Idxed Cols	Table Hgrm	Indexes	Table Meta
1	CUSTOMER	QTUNE	97600	100000	100000	802	01-MAR-13	Stats	1	Prop	Phys	3	5	5	2	4	Meta
2	ORDER_LINE	QTUNE	3560000	3450201	3450201	13157	01-MAR-13	Stats		Prop	Phys	8	6	3		3	Meta
3	PART	QTUNE	193200	200000	200000	1430	01-MAR-13	Stats	1	Prop	Phys	4	6	2		2	Meta

4 SALES_ORDER QTUNE 306700 300000 300000 1693 01-MAR-13 Stats 1 Prop Phys 4 6 4 1 3 Meta

(1) SELECT COUNT(*) performed in Table as per tool parameter "count_star_threshold" with current value of 10000.

(2) CBO Statistics.

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Table Statistics

#	Table Name	Owner	Part	Temp	Count ¹	Num Rows ²	Sample Size ²	Perc	Last Analyzed ²	Segment Extents	Segment Blocks	Total Segment Blocks ³	DBMS_SPACE Allocated Blocks ⁴	Blocks ²	Empty Blocks	Avg Space	Avg Row Len ²	Chain Cnt	Global Stats ²	User Stats ²	Stat Type Locked	Stat Stats	Avg Space Freelist Blocks	Num Freelist Blocks	Avg Cached Blocks	Avg Cache Hit Ratio	Full Table Scan Cost
1	CUSTOMER	QTUNE	NO	N	97600	100000	100000	100.0	2013-03-01/16:27:57	22	896	896	1408	802	0	0	92	0	YES	NO		NO	0	0			220
2	ORDER_LINE	QTUNE	NO	N	3560000	3450201	3450201	100.0	2013-03-01/16:28:20	84	13312	13312	13312	13157	0	0	23	0	YES	NO		NO	0	0			3609
3	PART	QTUNE	NO	N	193200	200000	200000	100.0	2013-03-01/16:29:57	27	1536	1536	1664	1430	0	0	58	0	YES	NO		NO	0	0			392
4	SALES_ORDER	QTUNE	NO	N	306700	300000	300000	100.0	2013-03-01/16:30:11	29	1792	1792	1792	1693	0	0	38	0	YES	NO		NO	0	0			464

(1) SELECT COUNT(*) performed in Table as per tool parameter "count_star_threshold" with current value of 10000.

(2) CBO Statistics.

(3) It considers the blocks from all partitions (if the table is partitioned).

(4) This is the estimated size of the table if it were rebuilt, as computed by DBMS_SPACE.CREATE_TABLE_COST.

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Table Statistics Extensions

#	Table Name	Owner	Extension Name	Creator	Droppable	Extension
1	CUSTOMER	QTUNE	SYS_NC00005\$	SYSTEM	NO	(LOWER("CUSTOMER_NAME"))
2	PART	QTUNE	SYS_STUUS4P4NZTNB5ELB\$CFTBUVDQ	USER	YES	("PART_TYPE","ON_HAND")
3	SALES_ORDER	QTUNE	SYS_STUK0XJTEZVXUTGW1H0VTZ#WQA	USER	YES	(SUBSTR("ORDER_NUM",1,2))

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Table Properties

#	Table Name	Owner	Part	Degree	Instances	Temp	Duration	IOT Name	IOT Type	Cluster Name	Cluster Owner	Nested	Secondary	Cache	Result Cache	Table Lock	Read Only	Row Movement	Skip Corrupt	Dependencies	Monitoring	Status	Dropped	Segment Created
1	CUSTOMER	QTUNE	NO	1	1	N						NO	N	N	DEFAULT	ENABLED	NO	DISABLED	DISABLED	DISABLED	YES	VALID	NO	YES
2	ORDER_LINE	QTUNE	NO	1	1	N						NO	N	N	DEFAULT	ENABLED	NO	DISABLED	DISABLED	DISABLED	YES	VALID	NO	YES
3	PART	QTUNE	NO	1	1	N						NO	N	N	DEFAULT	ENABLED	NO	DISABLED	DISABLED	DISABLED	YES	VALID	NO	YES
4	SALES_ORDER	QTUNE	NO	1	1	N						NO	N	N	DEFAULT	ENABLED	NO	DISABLED	DISABLED	DISABLED	YES	VALID	NO	YES

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Table Physical Properties

#	Table Name	Owner	Pct Free	Pct Used	Ini Trans	Max Trans	Initial Extent	Next Extent	Min Extents	Max Extents	Pct Increase	Free Lists	Free List Groups	Logging	Backed Up	Buffer Pool	Flash Cache	Cell Flash Cache	TableSpace Name	Compression	Compress for
1	CUSTOMER	QTUNE	10		1	255	65536	1048576	1	2147483645				YES	N	DEFAULT	DEFAULT	DEFAULT	USERS	DISABLED	
2	ORDER_LINE	QTUNE	10		1	255	65536	1048576	1	2147483645				YES	N	DEFAULT	DEFAULT	DEFAULT	USERS	DISABLED	
3	PART	QTUNE	10		1	255	65536	1048576	1	2147483645				YES	N	DEFAULT	DEFAULT	DEFAULT	USERS	DISABLED	
4	SALES_ORDER	QTUNE	10		1	255	65536	1048576	1	2147483645				YES	N	DEFAULT	DEFAULT	DEFAULT	USERS	DISABLED	

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Table Constraints

- [CUSTOMER](#)
- [ORDER_LINE](#)
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QTUNE.CUSTOMER - Table Constraints

#	Type	Constraint Name	Search Condition	Last Change	Status	Deferrable	Deferred	Validated	Generated	Refer Owner	Refer Constr Name	Refer Table	Delete Rule	Index Owner	Index Name	Bad	Rely	Invalid	View Related
1	C	SYS_C0024028	"CUSTOMER_ID" IS NOT NULL	2012-11-20/06:46:39	ENABLED	NOT DEFERRABLE	IMMEDIATE	VALIDATED	GENERATED NAME										
2	C	SYS_C0024029	"CUSTOMER_TYPE" IS NOT NULL	2012-11-20/06:46:39	ENABLED	NOT DEFERRABLE	IMMEDIATE	VALIDATED	GENERATED NAME										
3	P	CUSTOMER_PK		2012-11-20/06:46:41	ENABLED	NOT DEFERRABLE	IMMEDIATE	VALIDATED	USER NAME					QTUNE	<u>CUSTOMER_PK</u>				

[Go to Table Constraints](#)

QTUNE.ORDER_LINE - Table Constraints

#	Type	Constraint Name	Search Condition	Last Change	Status	Deferrable	Deferred	Validated	Generated	Refer Owner	Refer Constr Name	Refer Table	Delete Rule	Index Owner	Index Name	Bad	Rely	Invalid	View Related
1	C	SYS_C0024039	"LINE_ID" IS NOT NULL	2012-11-20/06:48:23	ENABLED	NOT DEFERRABLE	IMMEDIATE	VALIDATED	GENERATED NAME										
2	C	SYS_C0024040	"ORDER_ID" IS NOT NULL	2012-11-20/06:48:23	ENABLED	NOT DEFERRABLE	IMMEDIATE	VALIDATED	GENERATED NAME										
3	C	SYS_C0024041	"LINE_NUM" IS NOT NULL	2012-11-20/06:48:23	ENABLED	NOT DEFERRABLE	IMMEDIATE	VALIDATED	GENERATED NAME										
4	C	SYS_C0024042	"PART_ID" IS NOT NULL	2012-11-20/06:48:23	ENABLED	NOT DEFERRABLE	IMMEDIATE	VALIDATED	GENERATED NAME										
5	C	SYS_C0024043	"QUANTITY" IS NOT NULL	2012-11-20/06:48:23	ENABLED	NOT DEFERRABLE	IMMEDIATE	VALIDATED	GENERATED NAME										
6	P	ORDER_LINE_PK		2012-11-20/06:58:08	ENABLED	NOT DEFERRABLE	IMMEDIATE	VALIDATED	USER NAME					QTUNE	<u>ORDER_LINE_PK</u>				
7	R	ORDER_FK		2012-11-20/06:59:44	ENABLED	NOT DEFERRABLE	IMMEDIATE	VALIDATED	USER NAME	QTUNE	<u>SALES_ORDER_PK</u>	SALES_ORDER	NO ACTION						
8	R	PART_FK		2012-11-20/07:00:19	ENABLED	NOT DEFERRABLE	IMMEDIATE	VALIDATED	USER NAME	QTUNE	<u>PART_PK</u>	PART	NO ACTION						

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QTUNE.PART - Table Constraints

#	Type	Constraint Name	Search Condition	Last Change	Status	Deferrable	Deferred	Validated	Generated	Refer Owner	Refer Constr Name	Refer Table	Delete Rule	Index Owner	Index Name	Bad	Rely	Invalid	View Related
1	C	SYS_C0024031	"PART_ID" IS NOT NULL	2012-11-20/06:47:21	ENABLED	NOT DEFERRABLE	IMMEDIATE	VALIDATED	GENERATED NAME										
2	C	SYS_C0024032	"PART_TYPE" IS NOT NULL	2012-11-20/06:47:21	ENABLED	NOT DEFERRABLE	IMMEDIATE	VALIDATED	GENERATED NAME										
3	C	SYS_C0024033	"PART_PRICE" IS NOT NULL	2012-11-20/06:47:21	ENABLED	NOT DEFERRABLE	IMMEDIATE	VALIDATED	GENERATED NAME										
4	P	PART_PK		2012-11-20/06:47:24	ENABLED	NOT DEFERRABLE	IMMEDIATE	VALIDATED	USER NAME					QTUNE	<u>PART_PK</u>				

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QTUNE.SALES_ORDER - Table Constraints

#	Type	Constraint Name	Search Condition	Last Change	Status	Deferrable	Deferred	Validated	Generated	Refer Owner	Refer Constr Name	Refer Table	Delete Rule	Index Owner	Index Name	Bad	Rely	Invalid	View Related
1	C	SYS_C0024035	"ORDER_ID" IS NOT NULL	2012-11-20/06:48:01	ENABLED	NOT DEFERRABLE	IMMEDIATE	VALIDATED	GENERATED NAME										
2	C	SYS_C0024036	"ORDER_NUM" IS NOT NULL	2012-11-20/06:48:01	ENABLED	NOT DEFERRABLE	IMMEDIATE	VALIDATED	GENERATED NAME										
3	C	SYS_C0024037	"CUSTOMER_ID" IS NOT NULL	2012-11-20/06:48:01	ENABLED	NOT DEFERRABLE	IMMEDIATE	VALIDATED	GENERATED NAME										
4	P	SALES_ORDER_PK		2012-11-20/06:48:05	ENABLED	NOT DEFERRABLE	IMMEDIATE	VALIDATED	USER NAME					QTUNE	<u>SALES_ORDER_PK</u>				

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Table Columns

#	Table Name	Owner	Count ¹	Num Rows ²	Sample Size ²	Blocks ²	Last Analyzed ²	Column Stats	Column Usage	Column Prop	Hgrm
1	CUSTOMER	QTUNE	97600	100000	100000	802	01-MAR-13	5	3	Prop	2
2	ORDER_LINE	QTUNE	3560000	3450201	3450201	13157	01-MAR-13	6	2	Prop	
3	PART	QTUNE	193200	200000	200000	1430	01-MAR-13	6	3	Prop	
4	SALES_ORDER	QTUNE	306700	300000	300000	1693	01-MAR-13	6	4	Prop	1

(1) SELECT COUNT(*) performed in Table as per tool parameter "count_star_threshold" with current value of 10000.

(2) CBO Statistics.

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QTUNE.CUSTOMER - Table Column

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QTUNE.CUSTOMER - Column Statistics

#	In Pred	In Index	In Proj	Col ID	Column Name	Data Default	Not Null with Default Value	Num Rows	Num Nulls	Sample Size	Perc	Num Distinct	Fluctuating NDV ¹	Low Value ²	High Value ²	Last Analyzed	Avg Col Len	Density
1	<input type="checkbox"/>	<input type="checkbox"/>	TRUE	1	CUSTOMER_ID			100000	0	100000	100.0	100000	FALSE	"1"	"100000"	2013-03-01/16:27:55	5	1.000000e-05
2	<input type="checkbox"/>	<input type="checkbox"/>	TRUE	4	CREDIT_LIMIT			100000	14285	5667	6.6	101	FALSE	"1000"	"101000"	2013-03-01/16:27:55	4	5.661385e-06
3	<input type="checkbox"/>	<input type="checkbox"/>	FALSE	3	CUSTOMER_TYPE			100000	0	6590	6.6	6	FALSE	"1"	"6"	2013-03-01/16:27:55	2	4.868447e-06
4	FALSE	<input type="checkbox"/>	TRUE	2	CUSTOMER_NAME			100000	0	100000	100.0	99624	FALSE	"AAAEJQPRNJLYOSWRLICMZRKJVANFMQA"	"ZZZVQZYROVBCEZLJJJRAIXVRNKAMEXA"	2013-03-01/16:27:55	41	1.003774e-05
5	FALSE	<input type="checkbox"/>	FALSE		SYS_NC00005\$ LOWER("CUSTOMER_NAME")			100000	0	100000	100.0	99728	FALSE	"aaegjqprnjlyoswrlcmzrkjvanpmqa"	"zzzvqzyrvbcezljjjraixvrnkamexa"	2013-03-01/16:27:55	41	1.002727e-05

(1) A value of TRUE means that section "Column Statistics Versions" shows "Number of Distinct Values" changing more than 10% between two consecutive versions.

(2) The display of values in this column is controlled by tool parameter "s_mask_for_values". Its current value is "CLEAR".

(3) A value of TRUE means that section "Column Statistics Versions" shows "Endpoint Count" changing more than 10% between two consecutive versions.

QTUNE.CUSTOMER - Column Usage

#	In Pred	In Index	In Proj	Col ID	Column Name	Data Default	Equality Preds	Equijoin Preds	Non-equijoin Preds	Range Preds	LIKE Preds	NULL Preds	Timestamp
1	TRUE	TRUE	TRUE	1	CUSTOMER_ID		84	92	0	0	0	1	2013-04-05/11:12:24
2	TRUE	TRUE	TRUE	4	CREDIT_LIMIT		0	0	0	86	0	0	2013-04-05/11:12:24
3	TRUE	TRUE	FALSE	3	CUSTOMER_TYPE		91	0	0	0	0	1	2013-04-05/11:12:24

QTUNE.CUSTOMER - Column Properties

#	In Pred	In Index	In Proj	Col ID	Column Name	Data Type	Data Type Modifier	Data Type Owner	Data Length	Data Precision	Data Scale	Nullable	Default Length	Data Default	Not Null with Default Value	Character Set Name	Char Col Decl Length	Char Length	Char Used	V80 Fmt Image	Data Upgraded	Hidden Column	Virtual Column	Segment Column ID	Internal Column ID	Qual
1	TRUE	TRUE	TRUE	1	CUSTOMER_ID	NUMBER			22			N						0		NO	YES	NO	NO	1	1	CUSTC
2	TRUE	TRUE	TRUE	4	CREDIT_LIMIT	NUMBER			22			Y						0		NO	YES	NO	NO	4	4	CREDIT
3	TRUE	TRUE	FALSE	3	CUSTOMER_TYPE	VARCHAR2			40			N			CHAR_CS	40	40	B	NO	YES	NO	NO	3	3	CUSTC	
4	FALSE	TRUE	TRUE	2	CUSTOMER_NAME	VARCHAR2			4000			Y			CHAR_CS	4000	4000	B	NO	YES	NO	NO	2	2	CUSTC	
5	FALSE	TRUE	FALSE		SYS_NC00005\$	VARCHAR2			4000			Y	22	LOWER("CUSTOMER_NAME")		CHAR_CS	4000	4000	B	NO	YES	YES	YES	5	SYS_N	

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QTUNE.ORDER_LINE - Table Column

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QTUNE.ORDER_LINE - Column Statistics

#	In Pred	In Index	In Proj	Col ID	Column Name	Data Default	Not Null with Default Value	Num Rows	Num Nulls	Sample Size	Perc	Num Distinct	Fluctuating NDV ¹	Low Value ²	High Value ²	Last Analyzed	Avg Col Len	Density	Num Buckets	Histogram	Fluctuating Endpoint Count ³	Popular Values	Global Stats	User Stats	Equality Predicate Selectivity	Equality Predicate Cardinality
1	[+]	[+]	TRUE	2	ORDER_ID			3450201	0	3450201	100.0	302976	FALSE	"1"	"300000"	2013-03-01/16:28:05	5	3.300591e-06	1	NONE	FALSE		YES	NO	0.000003	12
2	[+]	[+]	TRUE	4	PART_ID			3450201	0	3450201	100.0	201968	FALSE	"1"	"200000"	2013-03-01/16:28:05	5	4.951279e-06	1	NONE	FALSE		YES	NO	0.000005	18
3	FALSE	[+]	FALSE	1	LINE_ID			3450201	0	3450201	100.0	3450201	FALSE	"1"	"3450201"	2013-03-01/16:28:05	6	2.898382e-07	1	NONE	FALSE		YES	NO	0.000000	1
4	FALSE	FALSE	TRUE	5	QUANTITY			3450201	0	3450201	100.0	52	FALSE	"0"	"51"	2013-03-01/16:28:05	3	1.923077e-02	1	NONE	FALSE		YES	NO	0.019231	66351
5	FALSE	FALSE	TRUE	6	DISCOUNT_PERC			3450201	2760161	690040	100.0	11	FALSE	"5"	"55"	2013-03-01/16:28:05	2	9.090909e-02	1	NONE	FALSE		YES	NO	0.018182	62731
6	FALSE	FALSE	FALSE	3	LINE_NUM			3450201	0	3450201	100.0	21	FALSE	"1"	"21"	2013-03-01/16:28:05	3	4.761905e-02	1	NONE	FALSE		YES	NO	0.047619	164296

(1) A value of TRUE means that section "Column Statistics Versions" shows "Number of Distinct Values" changing more than 10% between two consecutive versions.

(2) The display of values in this column is controlled by tool parameter "s_mask_for_values". Its current value is "CLEAR".

(3) A value of TRUE means that section "Column Statistics Versions" shows "Endpoint Count" changing more than 10% between two consecutive versions.

QTUNE.ORDER_LINE - Column Usage

#	In Pred	In Index	In Proj	Col ID	Column Name	Data Default	Equality Preds	Equijoin Preds	Non-equijoin Preds	Range Preds	LIKE Preds	NULL Preds	Timestamp
1	TRUE	TRUE	TRUE	2	ORDER_ID		84	88	0	0	0	0	2013-04-05/11:12:24
2	TRUE	TRUE	TRUE	4	PART_ID		0	88	0	0	0	0	2013-04-05/11:12:24

QTUNE.ORDER_LINE - Column Properties

#	In Pred	In Index	In Proj	Col ID	Column Name	Data Type	Data Type Modifier	Data Type Owner	Data Length	Data Precision	Data Scale	Nullable	Default Length	Data Default	Not Null with Default Value	Character Set Name	Char Col Decl Length	Char Length	Char Used	V80 Fmt Image	Data Upgraded	Hidden Column	Virtual Column	Segment Column ID	Internal Column ID	Qualified Col Name
1	TRUE	TRUE	TRUE	2	ORDER_ID	NUMBER			22			N						0		NO	YES	NO	NO	2	2	ORDER_ID
2	TRUE	TRUE	TRUE	4	PART_ID	NUMBER			22			N						0		NO	YES	NO	NO	4	4	PART_ID
3	FALSE	TRUE	FALSE	1	LINE_ID	NUMBER			22			N						0		NO	YES	NO	NO	1	1	LINE_ID
4	FALSE	FALSE	TRUE	5	QUANTITY	NUMBER			22			N						0		NO	YES	NO	NO	5	5	QUANTITY
5	FALSE	FALSE	TRUE	6	DISCOUNT_PERC	NUMBER			22			Y						0		NO	YES	NO	NO	6	6	DISCOUNT_PERC
6	FALSE	FALSE	FALSE	3	LINE_NUM	NUMBER			22			N						0		NO	YES	NO	NO	3	3	LINE_NUM

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QTUNE.PART - Table Column

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QTUNE.PART - Column Statistics

#	In Pred	In Index	In Proj	Col ID	Column Name	Data Default	Not Null with Default Value	Num Rows	Num Nulls	Sample Size	Perc	Num Distinct	Fluctuating NDV ¹	Low Value ²	High Value ²
---	---------	----------	---------	--------	-------------	--------------	-----------------------------	----------	-----------	-------------	------	--------------	------------------------------	------------------------	-------------------------

1	+	+	TRUE	1	PART_ID					200000	0	200000	100.0	200000	FALSE	"1"	"200000"	20
2	FALSE	+	FALSE	2	PART_NAME					200000	0	200000	100.0	200000	FALSE	"0004S6EOFFEEV/RMBSW3NQ791PV/PZ3R"	"ZZZUCN4U8VWW9FLMGPB99E5QH4745"	20
3	FALSE	FALSE	TRUE	4	PART_PRICE					200000	0	200000	100.0	124536	FALSE	"0"	"4875.71"	20
4	FALSE	FALSE	FALSE	3	PART_TYPE					200000	0	200000	100.0	10	FALSE	"A"	"J"	20
5	FALSE	FALSE	FALSE	5	ON_HAND					200000	0	200000	100.0	6	FALSE	"0"	"5"	20
6	FALSE	FALSE	FALSE		SYS_STUUS4P4NZTNB5ELB\$CFTBUDQ	SYS_OP_COMBINED_HASH("PART_TYPE","ON_HAND")				200000	0	200000	100.0	46	FALSE	"842114462060574410"	"18358508360126232577"	20

(1) A value of TRUE means that section "Column Statistics Versions" shows "Number of Distinct Values" changing more than 10% between two consecutive versions.

(2) The display of values in this column is controlled by tool parameter "s_mask_for_values". Its current value is "CLEAR".

(3) A value of TRUE means that section "Column Statistics Versions" shows "Endpoint Count" changing more than 10% between two consecutive versions.

QTUNE.PART - Column Usage

#	In Pred	In Index	In Proj	Col ID	Column Name	Data Default	Equality Preds	Equijoin Preds	Non-equijoin Preds	Range Preds	LIKE Preds	NULL Preds	Timestamp
1	TRUE	TRUE	TRUE	1	PART_ID		0	93	0	0	0	1	2013-04-05/11:12:24
2	FALSE	FALSE	TRUE	4	PART_PRICE		0	0	0	0	0	1	2012-11-20/06:47:33
3	FALSE	FALSE	FALSE	3	PART_TYPE		0	0	0	0	0	1	2012-11-20/06:47:33

QTUNE.PART - Column Properties

#	In Pred	In Index	In Proj	Col ID	Column Name	Data Type	Data Type Modifier	Data Type Owner	Data Length	Data Precision	Data Scale	Nullable	Default Length	Data Default	Not Null with Default Value	Character Set Name	Char Col Decl Length	Char Length	Char Used	V80 Fmt Image	Data Upgraded	Hi Co
1	TRUE	TRUE	TRUE	1	PART_ID	NUMBER			22			N						0		NO	YES	
2	FALSE	TRUE	FALSE	2	PART_NAME	VARCHAR2			4000			Y				CHAR_CS	4000	4000	B	NO	YES	
3	FALSE	FALSE	TRUE	4	PART_PRICE	NUMBER			22			N						0		NO	YES	
4	FALSE	FALSE	FALSE	3	PART_TYPE	VARCHAR2			1			N				CHAR_CS	1	1	B	NO	YES	
5	FALSE	FALSE	FALSE	5	ON_HAND	NUMBER			22			Y						0		NO	YES	
6	FALSE	FALSE	FALSE		SYS_STUUS4P4NZTNB5ELB\$CFTBUDQ	NUMBER			22			Y	43	SYS_OP_COMBINED_HASH("PART_TYPE","ON_HAND")				0		NO	YES	

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QTUNE.SALES_ORDER - Table Column

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QTUNE.SALES_ORDER - Column Statistics

#	In Pred	In Index	In Proj	Col ID	Column Name	Data Default	Not Null with Default Value	Num Rows	Num Nulls	Sample Size	Perc	Num Distinct	Fluctuating NDV ¹	Low Value ²	High Value ²	Last Analyzed	Avg Col Len	Density	Num Buckets	Histogram
1	+	+	TRUE	1	ORDER_ID			300000	0	300000	100.0	300000	FALSE	"1"	"300000"	2013-03-01/16:30:09	5	3.333333e-06	1	NONE
2	+	+	TRUE	4	CUSTOMER_ID			300000	0	300000	100.0	95952	FALSE	"1"	"99999"	2013-03-01/16:30:09	5	1.042188e-05	1	NONE
3	+	FALSE	FALSE	5	STATUS			300000	0	5503	1.8	10	FALSE	"Q"	"Z"	2013-03-01/16:30:09	2	1.665758e-06	10	FREQUENCY
4	FALSE	+	FALSE	2	ORDER_NUM			300000	0	300000	100.0	299840	FALSE	"AA003667020574"	"ZZ999041716303"	2013-03-01/16:30:09	15	3.335112e-06	1	NONE
5	FALSE	+	FALSE	3	ORDER_DATE			300000	0	300000	100.0	1002	FALSE	" 2010/02/23 00:00:00"	" 2012/11/20 00:00:00"	2013-03-01/16:30:09	8	9.980040e-04	1	NONE
6	FALSE	FALSE	FALSE		SYS_STUK0XJTEZVXUTGW1H0VTZ#WQA	SUBSTR("ORDER_NUM",1,2)		300000	0	300000	100.0	676	FALSE	"AA"	"ZZ"	2013-03-01/16:30:09	3	1.479290e-03	1	NONE

(1) A value of TRUE means that section "Column Statistics Versions" shows "Number of Distinct Values" changing more than 10% between two consecutive versions.

(2) The display of values in this column is controlled by tool parameter "s_mask_for_values". Its current value is "CLEAR".

(3) A value of TRUE means that section "Column Statistics Versions" shows "Endpoint Count" changing more than 10% between two consecutive versions.

QTUNE.SALES_ORDER - Column Usage

#	In Pred	In Index	In Proj	Col ID	Column Name	Data Default	Equality Preds	Equijoin Preds	Non-equijoin Preds	Range Preds	LIKE Preds	NULL Preds	Timestamp
---	---------	----------	---------	--------	-------------	--------------	----------------	----------------	--------------------	-------------	------------	------------	-----------

1	TRUE	TRUE	TRUE	1	ORDER_ID			0	88	0	0	0	1	2013-04-05/11:12:24
2	TRUE	TRUE	TRUE	4	CUSTOMER_ID			84	87	0	0	0	1	2013-04-05/11:12:24
3	TRUE	FALSE	FALSE	5	STATUS			87	0	0	0	0	0	2013-04-05/11:12:24
4	FALSE	TRUE	FALSE	2	ORDER_NUM			0	0	0	0	0	1	2012-11-20/06:48:17

QTUNE.SALES_ORDER - Column Properties

#	In Pred	In Index	In Proj	Col ID	Column Name	Data Type	Data Type Modifier	Data Type Owner	Data Length	Data Precision	Data Scale	Nullable	Default Length	Data Default	Not Null with Default Value	Character Set Name	Char Col Decl Length	Char Length	Char Used	V80 Fmt Image	Data Upgraded	Hidden Column	Virtual Column	Segm Colu ID
1	TRUE	TRUE	TRUE	1	ORDER_ID	NUMBER			22			N						0		NO	YES	NO	NO	1
2	TRUE	TRUE	TRUE	4	CUSTOMER_ID	NUMBER			22			N						0		NO	YES	NO	NO	4
3	TRUE	FALSE	FALSE	5	STATUS	VARCHAR2			1			Y				CHAR_CS	1	1	B	NO	YES	NO	NO	5
4	FALSE	TRUE	FALSE	2	ORDER_NUM	VARCHAR2			4000			N				CHAR_CS	4000	4000	B	NO	YES	NO	NO	2
5	FALSE	TRUE	FALSE	3	ORDER_DATE	DATE			7			Y						0		NO	YES	NO	NO	3
6	FALSE	FALSE	FALSE		SYS_STUK0XJTEZVXUTGW1H0VTZ#WQA	VARCHAR2			2			Y	23	SUBSTR("ORDER_NUM",1,2)		CHAR_CS	2	2	B	NO	YES	YES	YES	

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Indexed Columns

#	Table Name	Owner	Count ¹	Num Rows ²	Sample Size ²	Blocks ²	Last Analyzed ²	Indexes
1	CUSTOMER	QTUNE	97600	100000	100000	802	01-MAR-13	4
2	ORDER_LINE	QTUNE	3560000	3450201	3450201	13157	01-MAR-13	3
3	PART	QTUNE	193200	200000	200000	1430	01-MAR-13	2
4	SALES_ORDER	QTUNE	306700	300000	300000	1693	01-MAR-13	3

(1) SELECT COUNT(*) performed in Table as per tool parameter "count_star_threshold" with current value of 10000.

(2) CBO Statistics.

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QTUNE.CUSTOMER - Single-Column Indexes

#	In Pred	In Proj	Col ID	Column Name	Data Default	Not Null with Default Value	Descend	Index Name	Index Owner	Index Type	Uniqueness	In Plan
1	[+]	TRUE	1	CUSTOMER_ID			ASC	CUSTOMER_PK	QTUNE	NORMAL	UNIQUE	TRUE
2	FALSE	TRUE	2	CUSTOMER_NAME			ASC	CUSTOMER_N1	QTUNE	NORMAL	NONUNIQUE	FALSE
3	FALSE	FALSE		SYS_NC00005\$	LOWER("CUSTOMER_NAME")		ASC	CUSTOMER_F1	QTUNE	FUNCTION-BASED NORMAL	NONUNIQUE	FALSE

QTUNE.CUSTOMER - Multi-Column Indexes

#	In Pred	In Proj	Col ID	Column Name	Data Default	Not Null with Default Value	In Plan	Column Name
1	[+]	TRUE	4	CREDIT_LIMIT			2	CREDIT_LIMIT
2	[+]	FALSE	3	CUSTOMER_TYPE			1	CUSTOMER_TYPE

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QTUNE.ORDER_LINE - Single-Column Indexes

#	In Pred	In Proj	Col ID	Column Name	Data Default	Not Null with Default Value	Descend	Index Name	Index Owner	Index Type	Uniqueness	In Plan
1	[+]	TRUE	2	ORDER_ID			ASC	ORDER_LINE_N1	QTUNE	NORMAL	NONUNIQUE	TRUE
2	[+]	TRUE	4	PART_ID			ASC	ORDER_LINE_N2	QTUNE	NORMAL	NONUNIQUE	FALSE
3	FALSE	FALSE	1	LINE_ID			ASC	ORDER_LINE_PK	QTUNE	NORMAL	UNIQUE	FALSE

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QTUNE.PART - Single-Column Indexes

#	In Pred	In Proj	Col ID	Column Name	Data Default	Not Null with Default Value	Descend	Index Name	Index Owner	Index Type	Uniqueness	In Plan
1	[+]	TRUE	1	PART_ID			ASC	PART_PK	QTUNE	NORMAL	UNIQUE	TRUE
2	FALSE	FALSE	2	PART_NAME			ASC	PART_N1	QTUNE	NORMAL	NONUNIQUE	FALSE

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QTUNE.SALES_ORDER - Single-Column Indexes

#	In Pred	In Proj	Col ID	Column Name	Data Default	Not Null with Default Value	Descend	Index Name	Index Owner	Index Type	Uniqueness	In Plan
1	[+]	TRUE	1	ORDER_ID			ASC	SALES_ORDER_PK	QTUNE	NORMAL	UNIQUE	FALSE
2	FALSE	FALSE	2	ORDER_NUM			ASC	SALES_ORDER_N1	QTUNE	NORMAL	NONUNIQUE	FALSE

QTUNE.SALES_ORDER - Multi-Column Indexes

#	In Pred	In Proj	Col ID	Column Name	Data Default	Not Null with Default Value	In Plan	Column Name
1	[+]	TRUE	4	CUSTOMER_ID			SALES_ORDER_N2	CUSTOMER_ID

2	FALSE	FALSE	3	ORDER_DATE			2	ORDER_DATE
---	-------	-------	---	------------	--	--	---	------------

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QTUNE.CUSTOMER.CREDIT_LIMIT - Histogram

"Frequency" histogram with 101 buckets. Number of rows in this table is 100000. Number of nulls in this column is 14285 and its sample size was 5667.

SQL: [±]

#	Endpoint Number	Endpoint Value ¹	Endpoint Actual Value ¹	Estimated Endpoint Value ¹	Estimated Cardinality	Estimated Selectivity
1	32	1000	***	"1000"	484	0.004840
2	81	2000	***	"2000"	741	0.007411
3	129	3000	***	"3000"	726	0.007260
4	188	4000	***	"4000"	892	0.008924
5	244	5000	***	"5000"	847	0.008470
6	296	6000	***	"6000"	787	0.007865
7	359	7000	***	"7000"	953	0.009529
8	410	8000	***	"8000"	771	0.007714
9	465	9000	***	"9000"	832	0.008319
10	514	10000	***	"10000"	741	0.007411
11	562	11000	***	"11000"	726	0.007260
12	623	12000	***	"12000"	923	0.009226
13	674	13000	***	"13000"	771	0.007714
14	737	14000	***	"14000"	953	0.009529
15	791	15000	***	"15000"	817	0.008168
16	833	16000	***	"16000"	635	0.006353
17	885	17000	***	"17000"	787	0.007865
18	951	18000	***	"18000"	998	0.009983
19	1001	19000	***	"19000"	756	0.007563
20	1065	20000	***	"20000"	968	0.009680
21	1129	21000	***	"21000"	968	0.009680
22	1191	22000	***	"22000"	938	0.009378
23	1240	23000	***	"23000"	741	0.007411
24	1303	24000	***	"24000"	953	0.009529
25	1367	25000	***	"25000"	968	0.009680
26	1440	26000	***	"26000"	1104	0.011041
27	1491	27000	***	"27000"	771	0.007714
28	1531	28000	***	"28000"	605	0.006050
29	1598	29000	***	"29000"	1013	0.010134
30	1652	30000	***	"30000"	817	0.008168
#	Endpoint Number	Endpoint Value ¹	Endpoint Actual Value ¹	Estimated Endpoint Value ¹	Estimated Cardinality	Estimated Selectivity
31	1717	31000	***	"31000"	983	0.009831

32	1774	32000	""	"32000"	862	0.008621
33	1843	33000	""	"33000"	1044	0.010436
34	1900	34000	""	"34000"	862	0.008621
35	1961	35000	""	"35000"	923	0.009226
36	2018	36000	""	"36000"	862	0.008621
37	2073	37000	""	"37000"	832	0.008319
38	2127	38000	""	"38000"	817	0.008168
39	2187	39000	""	"39000"	908	0.009075
40	2240	40000	""	"40000"	802	0.008016
41	2312	41000	""	"41000"	1089	0.010890
42	2381	42000	""	"42000"	1044	0.010436
43	2430	43000	""	"43000"	741	0.007411
44	2485	44000	""	"44000"	832	0.008319
45	2544	45000	""	"45000"	892	0.008924
46	2595	46000	""	"46000"	771	0.007714
47	2646	47000	""	"47000"	771	0.007714
48	2698	48000	""	"48000"	787	0.007865
49	2754	49000	""	"49000"	847	0.008470
50	2809	50000	""	"50000"	832	0.008319
51	2872	51000	""	"51000"	953	0.009529
52	2923	52000	""	"52000"	771	0.007714
53	2980	53000	""	"53000"	862	0.008621
54	3027	54000	""	"54000"	711	0.007109
55	3085	55000	""	"55000"	877	0.008773
56	3141	56000	""	"56000"	847	0.008470
57	3199	57000	""	"57000"	877	0.008773
58	3248	58000	""	"58000"	741	0.007411
59	3310	59000	""	"59000"	938	0.009378
60	3368	60000	""	"60000"	877	0.008773
#	Endpoint Number	Endpoint Value ¹	Endpoint Actual Value ¹	Estimated Endpoint Value ¹	Estimated Cardinality	Estimated Selectivity
61	3437	61000	""	"61000"	1044	0.010436
62	3492	62000	""	"62000"	832	0.008319
63	3540	63000	""	"63000"	726	0.007260
64	3609	64000	""	"64000"	1044	0.010436
65	3667	65000	""	"65000"	877	0.008773
66	3715	66000	""	"66000"	726	0.007260
67	3761	67000	""	"67000"	696	0.006958
68	3811	68000	""	"68000"	756	0.007563
69	3864	69000	""	"69000"	802	0.008016
70	3920	70000	""	"70000"	847	0.008470
71	3977	71000	""	"71000"	862	0.008621
72	4034	72000	""	"72000"	862	0.008621
73	4080	73000	""	"73000"	696	0.006958
74	4132	74000	""	"74000"	787	0.007865
75	4191	75000	""	"75000"	892	0.008924
76	4255	76000	""	"76000"	968	0.009680
77	4311	77000	""	"77000"	847	0.008470
78	4381	78000	""	"78000"	1059	0.010588
79	4438	79000	""	"79000"	862	0.008621
80	4495	80000	""	"80000"	862	0.008621
81	4547	81000	""	"81000"	787	0.007865
82	4586	82000	""	"82000"	590	0.005899
83	4655	83000	""	"83000"	1044	0.010436
84	4729	84000	""	"84000"	1119	0.011193
85	4788	85000	""	"85000"	892	0.008924
86	4854	86000	""	"86000"	998	0.009983
87	4910	87000	""	"87000"	847	0.008470
88	4960	88000	""	"88000"	756	0.007563
89	5027	89000	""	"89000"	1013	0.010134
90	5082	90000	""	"90000"	832	0.008319

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Indexes

#	Table Name	Owner	Count ¹	Num Rows ²	Sample Size ²	Blocks ²	Last Analyzed ²	Indexes
1	CUSTOMER	QTUNE	97600	100000	100000	802	01-MAR-13	4
2	ORDER_LINE	QTUNE	3560000	3450201	3450201	13157	01-MAR-13	3
3	PART	QTUNE	193200	200000	200000	1430	01-MAR-13	2
4	SALES_ORDER	QTUNE	306700	300000	300000	1693	01-MAR-13	3

(1) SELECT COUNT(*) performed in Table as per tool parameter "count_star_threshold" with current value of 10000.

(2) CBO Statistics.

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QTUNE.CUSTOMER - Indexes

#	In Plan	Index Name	Owner	Index Type	Uniqueness	Col ID	Column Name	Column Name ¹	Num Rows ²	Sample Size ²	Last Analyzed ²	Index Stats	Index Prop	Index Phys Prop	Index Cols	Index Meta
1	TRUE	CUSTOMER_N2	QTUNE	NORMAL	NONUNIQUE	3	CUSTOMER_TYPE	CUSTOMER_TYPE	100000	100000	01-MAR-13	Stats	Prop	Phys	Cols	Meta
						4	CREDIT_LIMIT	CREDIT_LIMIT								
2	TRUE	CUSTOMER_PK	QTUNE	NORMAL	UNIQUE	1	CUSTOMER_ID	CUSTOMER_ID	100000	100000	01-MAR-13	Stats	Prop	Phys	Cols	Meta
3	FALSE	CUSTOMER_F1	QTUNE	FUNCTION-BASED NORMAL	NONUNIQUE	5	LOWER(CUSTOMER_NAME)	SYS_NC00005\$	100000	100000	01-MAR-13	Stats	Prop	Phys	Cols	Meta
4	FALSE	CUSTOMER_N1	QTUNE	NORMAL	NONUNIQUE	2	CUSTOMER_NAME	CUSTOMER_NAME	100000	100000	01-MAR-13	Stats	Prop	Phys	Cols	Meta

(1) Column names including system-generated names.

(2) CBO Statistics.

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QTUNE.CUSTOMER - Index Statistics

#	In Plan	Index Name	Owner	Index Type	Part	Temp	Num Rows ¹	Sample Size ¹	Perc	Last Analyzed ¹	Distinct Keys ¹	Blevel ¹	Segment Extents	Segment Blocks	Total Segment Blocks ²	DBMS_SPACE Allocated Blocks ³	Leaf Blocks ¹	Leaf Estimate Target Size ⁴	Avg Leaf Blocks per Key ¹	Avg Data Blocks per Key ¹	Clustering Factor ¹	Global Stats ¹	User Stats ¹	Stat Type Locked	State Stats
1	TRUE	CUSTOMER_N2	QTUNE	NORMAL	NO	N	100000	100000	100.0	2013-03-01/16:28:01	446	1	17	256	256	384	229		1	162	72410	YES	NO		NO
2	TRUE	CUSTOMER_PK	QTUNE	NORMAL	NO	N	100000	100000	100.0	2013-03-01/16:27:58	100000	1	17	256	256	384	208		1	1	780	YES	NO		NO
3	FALSE	CUSTOMER_F1	QTUNE	FUNCTION-BASED NORMAL	NO	N	100000	100000	100.0	2013-03-01/16:28:05	99728	2	21	768	768	768	725		1	1	99881	YES	NO		NO
4	FALSE	CUSTOMER_N1	QTUNE	NORMAL	NO	N	100000	100000	100.0	2013-03-01/16:28:01	99624	2	21	768	768	768	725		1	1	99881	YES	NO		NO

(1) CBO Statistics.

(2) It considers the blocks from all partitions (if the index is partitioned).

(3) This is the estimated size of the index if it were rebuilt, as computed by DBMS_SPACE.CREATE_INDEX_COST.

(4) Estimated leaf blocks with a 90% index efficiency. Only evaluated for non-partitioned normal indexes with more than 10000 leaf blocks.

(5) BEST:less than 25602. GOOD:between 25602 and 50401. POOR:between 50401 and 75201. WORST:greater than 75201.

(6) It assumes default CBO environment, including optimizer_index_cost_adj=100 and optimizer_index_caching=0 among others.

(7) Index Selectivity where Full Index Scan Cost meets Full Table Scan Cost. A value of 0.02 means that if selecting 2% of the rows or less, an index scan is cheaper than a FTS.

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QTUNE.CUSTOMER - Index Properties

#	In Plan	Index Name	Owner	Index Type	Uniqueness	Table Type	Part	Degree	Instances	Temp	Duration	Incl Col	Pct Direct Access	IOT Redundant PKey Elim	Join Index	Secondary	Domain Index Type Owner	Domain Index Type Name	Domain Index Params	Domain Index Status	Domain Index Oper Status	Domain Index Mgmt	Function Based Index Status	Generated	Visibility
1	TRUE	CUSTOMER_N2	QTUNE	NORMAL	NONUNIQUE	TABLE	NO	1	1	N				NO	NO	N								N	VISIBLE

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QTUNE.CUSTOMER_PK - Index Columns

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QTUNE.CUSTOMER_PK - Column Statistics

Index type:NORMAL rows:100000 smpl:100000 Ms:1 #b:208 #dk:100000 cluf:780 anlz:2013-03-01/16:27:58

#	Col Pos	In Pred	In Proj	Col ID	Column Name	Data Default	Not Null with Default Value	Descend	Num Rows	Num Nulls	Sample Size	Perc	Num Distinct	Fluctuating NDV ¹	Low Value ²	High Value ²	Last Analyzed	Avg Col Len	Density	Num Buckets	Histogram	Fluctuating Endpoint Count ³	Popular Values	Global Stats	User Stats	Equality Predicate Selectivity	Equality Predicate Cardinality
1	1	TRUE	TRUE	1	CUSTOMER_ID			ASC	100000	0	100000	100.0	100000	FALSE	"1"	"100000"	2013-03-01/16:27:55	5	1.000000e-05	1	NONE	FALSE		YES	NO	0.000010	1

(1) A value of TRUE means that section "Column Statistics Versions" shows "Number of Distinct Values" changing more than 10% between two consecutive versions.

(2) The display of values in this column is controlled by tool parameter "s_mask_for_values". Its current value is "CLEAR".

(3) A value of TRUE means that section "Column Statistics Versions" shows "Endpoint Count" changing more than 10% between two consecutive versions.

QTUNE.CUSTOMER_PK - Column Usage

#	Col Pos	In Pred	In Proj	Col ID	Column Name	Data Default	Equality Preds	Equijoin Preds	Non-equijoin Preds	Range Preds	LIKE Preds	NULL Preds	Timestamp
1	1	TRUE	TRUE	1	CUSTOMER_ID		84	92	0	0	0	1	2013-04-05/11:12:24

QTUNE.CUSTOMER_PK - Column Properties

#	Col Pos	In Pred	In Proj	Col ID	Column Name	Data Type	Data Type Modifier	Data Type Owner	Data Length	Data Precision	Data Scale	Nullable	Default Length	Data Default	Not Null with Default Value	Character Set Name	Char Col Decl Length	Char Length	Char Used	V80 Fmt Image	Data Upgraded	Hidden Column	Virtual Column	Segment Column ID	Internal Column ID	Qualified Col Name
1	1	TRUE	TRUE	1	CUSTOMER_ID	NUMBER			22			N						0		NO	YES	NO	NO	1	1	CUSTOMER_ID

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QTUNE.CUSTOMER_F1 - Index Columns

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QTUNE.CUSTOMER_F1 - Column Statistics

Index type:FUNCTION-BASED NORMAL rows:100000 smpl:100000 Ms:2 #b:725 #dk:99728 cluf:99881 anlz:2013-03-01/16:28:05

#	Col Pos	In Pred	In Proj	Col ID	Column Name	Data Default	Not Null with Default Value	Descend	Num Rows	Num Nulls	Sample Size	Perc	Num Distinct	Fluctuating NDV ¹	Low Value ²	High Value ²	Last Analyzed	Avg Col Len	Density	Num Buckets	Histogram
1	1	FALSE	FALSE		SYS_NC00005\$	LOWER("CUSTOMER_NAME")		ASC	100000	0	100000	100.0	99728	FALSE	"aaagjqprnjyoswrflcnzrkjvanpmqa"	"zzzvqzryrqvbczljijraikvrnkamexa"	2013-03-01/16:27:55	41	1.002727e-05	1	NONE

(1) A value of TRUE means that section "Column Statistics Versions" shows "Number of Distinct Values" changing more than 10% between two consecutive versions.

(2) The display of values in this column is controlled by tool parameter "s_mask_for_values". Its current value is "CLEAR".
 (3) A value of TRUE means that section "Column Statistics Versions" shows "Endpoint Count" changing more than 10% between two consecutive versions.

QTUNE.CUSTOMER_F1 - Column Properties

#	Col Pos	In Pred	In Proj	Col ID	Column Name	Data Type	Data Type Modifier	Data Type Owner	Data Length	Data Precision	Data Scale	Nullable	Default Length	Data Default	Not Null with Default Value	Character Set Name	Char Col Decl Length	Char Length	Char Used	V80 Fmt Image	Data Upgraded	Hidden Column	Virtual Column	Segment Column ID	Internal Column ID	Qualified Name
1	1	FALSE	FALSE		SYS_NC00005\$	VARCHAR2			4000			Y	22	LOWER('CUSTOMER_NAME')		CHAR_CS	4000	4000	B	NO	YES	YES	YES		5	SYS_NC00

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QTUNE.CUSTOMER_N1 - Column Statistics

Index type:NORMAL rows:100000 smpl:100000 Ms:2 #b:725 #dk:99624 cluf:99881 anzl:2013-03-01/16:28:01

#	Col Pos	In Pred	In Proj	Col ID	Column Name	Data Default	Not Null with Default Value	Descend	Num Rows	Num Nulls	Sample Size	Perc	Num Distinct	Fluctuating NDV ¹	Low Value ²	High Value ²	Last Analyzed	Avg Col Len	Density	Num Buckets
1	1	FALSE	TRUE	2	CUSTOMER_NAME			ASC	100000	0	100000	100.0	99624	FALSE	"AAAEGJQPRNLYOSWRLICMZRKJVANPMQA"	"ZZZVQZYRQVBCEZLJJJRAKVRNKAMEXA"	2013-03-01/16:27:55	41	1.003774e-05	1

(1) A value of TRUE means that section "Column Statistics Versions" shows "Number of Distinct Values" changing more than 10% between two consecutive versions.
 (2) The display of values in this column is controlled by tool parameter "s_mask_for_values". Its current value is "CLEAR".
 (3) A value of TRUE means that section "Column Statistics Versions" shows "Endpoint Count" changing more than 10% between two consecutive versions.

QTUNE.CUSTOMER_N1 - Column Properties

#	Col Pos	In Pred	In Proj	Col ID	Column Name	Data Type	Data Type Modifier	Data Type Owner	Data Length	Data Precision	Data Scale	Nullable	Default Length	Data Default	Not Null with Default Value	Character Set Name	Char Col Decl Length	Char Length	Char Used	V80 Fmt Image	Data Upgraded	Hidden Column	Virtual Column	Segment Column ID	Internal Column ID	Qualified Col Name
1	1	FALSE	TRUE	2	CUSTOMER_NAME	VARCHAR2			4000			Y				CHAR_CS	4000	4000	B	NO	YES	NO	NO	2	2	CUSTOMER_NAME

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QTUNE.ORDER_LINE - Indexes

#	In Plan	Index Name	Owner	Index Type	Uniqueness	Col ID	Column Name	Column Name ¹	Num Rows ²	Sample Size ²	Last Analyzed ²	Index Stats	Index Prop	Index Phys Prop	Index Cols	Index Meta
1	TRUE	ORDER_LINE_N1	QTUNE	NORMAL	NONUNIQUE	2	ORDER_ID	ORDER_ID	3601830	528632	01-MAR-13	Stats	Prop	Phys	Cols	Meta
2	FALSE	ORDER_LINE_N2	QTUNE	NORMAL	NONUNIQUE	4	PART_ID	PART_ID	3448594	506595	01-MAR-13	Stats	Prop	Phys	Cols	Meta
3	FALSE	ORDER_LINE_PK	QTUNE	NORMAL	UNIQUE	1	LINE_ID	LINE_ID	3435363	513316	01-MAR-13	Stats	Prop	Phys	Cols	Meta

(1) Column names including system-generated names.
 (2) CBO Statistics.

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QTUNE.ORDER_LINE - Index Statistics

#	In Plan	Index Name	Owner	Index Type	Part	Temp	Num Rows ¹	Sample Size ¹	Perc	Last Analyzed ¹	Distinct Keys ¹	Blevel ¹	Segment Extents	Segment Blocks	Total Segment Blocks ²	DBMS_SPACE Allocated Blocks ³	Leaf Blocks ¹	Leaf Estimate Target Size ⁴	Avg Leaf Blocks per Key ¹	Avg Data Blocks per Key ¹	Clustering Factor ¹	Global Stats ¹	User Stats ¹	Stat Type Locked	Stale Stats	Avg Cached Blocks	Avg Cache Hit Ratio
1	TRUE	ORDER_LINE_N1	QTUNE	NORMAL	NO	N	3601830	528632	14.7	2013-03-01/16:29:31	302976	2	77	7936	7936	10240	8019		1	11	3600141	YES	NO		NO		
2	FALSE	ORDER_LINE_N2	QTUNE	NORMAL	NO	N	3448594	506595	14.7	2013-03-01/16:29:56	201968	2	77	7936	7936	10240	7672		1	17	3446287	YES	NO		NO		
3	FALSE	ORDER_LINE_FK	QTUNE	NORMAL	NO	N	3435363	513316	14.9	2013-03-01/16:29:04	3435363	2	76	7808	7808	10240	7522		1	1	19141	YES	NO		NO		

(1) CBO Statistics.

(2) It considers the blocks from all partitions (if the index is partitioned).

(3) This is the estimated size of the index if it were rebuilt, as computed by DBMS_SPACE.CREATE_INDEX_COST.

(4) Estimated leaf blocks with a 90% index efficiency. Only evaluated for non-partitioned normal indexes with more than 10000 leaf blocks.

(5) BEST:less than 872418. GOOD:between 872418 and 1731679. POOR:between 1731679 and 2590940. WORST:greater than 2590940.

(6) It assumes default CBO environment, including optimizer_index_cost_adj=100 and optimizer_index_caching=0 among others.

(7) Index Selectivity where Full Index Scan Cost meets Full Table Scan Cost. A value of 0.02 means that if selecting 2% of the rows or less, an index scan is cheaper than a FTS.

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QTUNE.ORDER_LINE - Index Properties

#	In Plan	Index Name	Owner	Index Type	Uniqueness	Table Type	Part	Degree	Instances	Temp	Duration	Incl Col	Pct Direct Access	IOT Redundant PKey Elim	Join Index	Secondary	Domain Index Type Owner	Domain Index Type Name	Domain Index Params	Domain Index Status	Domain Index Oper Status	Domain Index Mgmt	Function Based Index Status	Generated	Visibility	Status	Dropped	
1	TRUE	ORDER_LINE_N1	QTUNE	NORMAL	NONUNIQUE	TABLE	NO	1	1	N				NO	NO	N									N	VISIBLE	VALID	NO
2	FALSE	ORDER_LINE_N2	QTUNE	NORMAL	NONUNIQUE	TABLE	NO	1	1	N				NO	NO	N									N	VISIBLE	VALID	NO
3	FALSE	ORDER_LINE_FK	QTUNE	NORMAL	UNIQUE	TABLE	NO	1	1	N				NO	NO	N									N	VISIBLE	VALID	NO

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QTUNE.ORDER_LINE - Index Physical Properties

#	In Plan	Index Name	Owner	Index Type	Part	Temp	Pct Free	Ini Trans	Max Trans	Initial Extent	Next Extent	Min Extents	Max Extents	Pct Increase	Pct Threshold	Free Lists	Free List Groups	Logging	Buffer Pool	Flash Cache	Cell Flash Cache	TableSpace Name	Compression	Prefix Length
1	TRUE	ORDER_LINE_N1	QTUNE	NORMAL	NO	N	10	2	255	65536	1048576	1	2147483645					YES	DEFAULT	DEFAULT	DEFAULT	USERS	DISABLED	
2	FALSE	ORDER_LINE_N2	QTUNE	NORMAL	NO	N	10	2	255	65536	1048576	1	2147483645					YES	DEFAULT	DEFAULT	DEFAULT	USERS	DISABLED	
3	FALSE	ORDER_LINE_FK	QTUNE	NORMAL	NO	N	10	2	255	65536	1048576	1	2147483645					YES	DEFAULT	DEFAULT	DEFAULT	USERS	DISABLED	

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QTUNE.ORDER_LINE_N1 - Column Statistics

Index type:NORMAL rows:3601830 smpl:528632 Ms:2 #lb:8019 #dk:302976 cluf:3600141 anlz:2013-03-01/16:29:31

#	Col Pos	In Pred	In Proj	Col ID	Column Name	Data Default	Not Null with Default Value	Descend	Num Rows	Num Nulls	Sample Size	Perc	Num Distinct	Fluctuating NDV ¹	Low Value ²	High Value ²	Last Analyzed	Avg Col Len	Density	Num Buckets	Histogram	Fluctuating Endpoint Count ³	Popular Values	Global Stats	User Stats	Equality Predicate Selectivity	Equality Predicate Cardinality
1	1	<input checked="" type="checkbox"/>	TRUE	2	ORDER_ID		ASC		3450201	0	3450201	100.0	302976	FALSE	"1"	"300000"	2013-03-01/16:28:05	5	3.300591e-06	1	NONE	FALSE	YES	NO	0.000003	12	

(1) A value of TRUE means that section "Column Statistics Versions" shows "Number of Distinct Values" changing more than 10% between two consecutive versions.

(2) The display of values in this column is controlled by tool parameter "s_mask_for_values". Its current value is "CLEAR".

(3) A value of TRUE means that section "Column Statistics Versions" shows "Endpoint Count" changing more than 10% between two consecutive versions.

QTUNE.ORDER_LINE_N1 - Column Usage

#	Col Pos	In Pred	In Proj	Col ID	Column Name	Data Default	Equality Preds	Equijoin Preds	Non-equijoin Preds	Range Preds	LIKE Preds	NULL Preds	Timestamp
1	1	TRUE	TRUE	2	ORDER_ID		84	88	0	0	0	0	2013-04-05/11:12:24

QTUNE.ORDER_LINE_N1 - Column Properties

#	Col Pos	In Pred	In Proj	Col ID	Column Name	Data Type	Data Type Modifier	Data Type Owner	Data Length	Data Precision	Data Scale	Nullable	Default Length	Data Default	Not Null with Default Value	Character Set Name	Char Col Decl Length	Char Length	Char Used	V80 Fmt Image	Data Upgraded	Hidden Column	Virtual Column	Segment Column ID	Internal Column ID	Qualified Col Name
1	1	TRUE	TRUE	2	ORDER_ID	NUMBER			22			N						0		NO	YES	NO	NO	2	2	ORDER_ID

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QTUNE.ORDER_LINE_N2 - Index Columns

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QTUNE.ORDER_LINE_N2 - Column Statistics

Index type:NORMAL rows:3448594 smpl:506595 Ms:2 #b:7672 #dk:201968 cluf:3446287 anlz:2013-03-01/16:29:56

#	Col Pos	In Pred	In Proj	Col ID	Column Name	Data Default	Not Null with Default Value	Descend	Num Rows	Num Nulls	Sample Size	Perc	Num Distinct	Fluctuating NDV ¹	Low Value ²	High Value ²	Last Analyzed	Avg Col Len	Density	Num Buckets	Histogram	Fluctuating Endpoint Count ³	Popular Values	Global Stats	User Stats	Equality Predicate Selectivity	Equality Predicate Cardinality
1	1	<input checked="" type="checkbox"/>	TRUE	4	PART_ID		ASC		3450201	0	3450201	100.0	201968	FALSE	"1"	"200000"	2013-03-01/16:28:05	5	4.951279e-06	1	NONE	FALSE		YES	NO	0.000005	18

(1) A value of TRUE means that section "Column Statistics Versions" shows "Number of Distinct Values" changing more than 10% between two consecutive versions.

(2) The display of values in this column is controlled by tool parameter "s_mask_for_values". Its current value is "CLEAR".

(3) A value of TRUE means that section "Column Statistics Versions" shows "Endpoint Count" changing more than 10% between two consecutive versions.

QTUNE.ORDER_LINE_N2 - Column Usage

#	Col Pos	In Pred	In Proj	Col ID	Column Name	Data Default	Equality Preds	Equijoin Preds	Non-equijoin Preds	Range Preds	LIKE Preds	NULL Preds	Timestamp
1	1	TRUE	TRUE	4	PART_ID		0	88	0	0	0	0	2013-04-05/11:12:24

QTUNE.ORDER_LINE_N2 - Column Properties

#	Col Pos	In Pred	In Proj	Col ID	Column Name	Data Type	Data Type Modifier	Data Type Owner	Data Length	Data Precision	Data Scale	Nullable	Default Length	Data Default	Not Null with Default Value	Character Set Name	Char Col Decl Length	Char Length	Char Used	V80 Fmt Image	Data Upgraded	Hidden Column	Virtual Column	Segment Column ID	Internal Column ID	Qualified Col Name
1	1	TRUE	TRUE	4	PART_ID	NUMBER			22			N						0		NO	YES	NO	NO	4	4	PART_ID

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QTUNE.ORDER_LINE_PK - Index Columns

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QTUNE.PART_N1 - Column Statistics

Index type:NORMAL rows:200000 smpl:200000 lms:2 #b:1177 #dk:200000 cluf:199846 anlz:2013-03-01/16:30:04

#	Col Pos	In Pred	In Proj	Col ID	Column Name	Data Default	Not Null with Default Value	Descend	Num Rows	Num Nulls	Sample Size	Perc	Num Distinct	Fluctuating NDV ¹	Low Value ²	High Value ²	Last Analyzed	Avg Col Len	Density	Num Buckets	Histogram
1	1	FALSE	FALSE	2	PART_NAME			ASC	200000	0	200000	100.0	200000	FALSE	"0004S6EOFFEEV/RMBSW3NQ791P/PZ3R"	"ZZZUCN4UBVWW9FLMGPB99E5QH4745"	2013-03-01/16:29:56	31	5.000000e-06	1	NONE

(1) A value of TRUE means that section "Column Statistics Versions" shows "Number of Distinct Values" changing more than 10% between two consecutive versions.

(2) The display of values in this column is controlled by tool parameter "s_mask_for_values". Its current value is "CLEAR".

(3) A value of TRUE means that section "Column Statistics Versions" shows "Endpoint Count" changing more than 10% between two consecutive versions.

QTUNE.PART_N1 - Column Properties

#	Col Pos	In Pred	In Proj	Col ID	Column Name	Data Type	Data Type Modifier	Data Type Owner	Data Length	Data Precision	Data Scale	Nullable	Default Length	Data Default	Not Null with Default Value	Character Set Name	Char Col Decl Length	Char Length	Char Used	V80 Fmt Image	Data Upgraded	Hidden Column	Virtual Column	Segment Column ID	Internal Column ID	Qualified Col Name
1	1	FALSE	FALSE	2	PART_NAME	VARCHAR2			4000			Y				CHAR_CS	4000	4000	B	NO	YES	NO	NO	2	2	PART_NAME

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QTUNE.SALES_ORDER - Indexes

#	In Plan	Index Name	Owner	Index Type	Uniqueness	Col ID	Column Name	Column Name ¹	Num Rows ²	Sample Size ²	Last Analyzed ²	Index Stats	Index Prop	Index Phys Prop	Index Cols	Index Meta
1	TRUE	SALES_ORDER_N2	QTUNE	NORMAL	NONUNIQUE	4	CUSTOMER_ID ORDER_DATE	CUSTOMER_ID ORDER_DATE	300000	300000	01-MAR-13	Stats	Prop	Phys	Cols	Meta
2	FALSE	SALES_ORDER_N1	QTUNE	NORMAL	NONUNIQUE	2	ORDER_NUM ORDER_NUM	ORDER_NUM ORDER_NUM	300000	300000	01-MAR-13	Stats	Prop	Phys	Cols	Meta
3	FALSE	SALES_ORDER_PK	QTUNE	NORMAL	UNIQUE	1	ORDER_ID	ORDER_ID	300000	300000	01-MAR-13	Stats	Prop	Phys	Cols	Meta

(1) Column names including system-generated names.

(2) CBO Statistics.

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QTUNE.SALES_ORDER - Index Statistics

#	In Plan	Index Name	Owner	Index Type	Part	Temp	Num Rows ¹	Sample Size ¹	Perc	Last Analyzed ¹	Distinct Keys ¹	Blevel ¹	Segment Extents	Segment Blocks	Total Segment Blocks ²	DBMS_SPACE Allocated Blocks ³	Leaf Blocks ¹	Leaf Estimate Target Size ⁴	Avg Leaf Blocks per Key ¹	Avg Data Blocks per Key ¹	Clustering Factor ¹	Global Stats ¹	User Stats ¹	Stat Type Locked	Stat Stale	Avg Cached Blocks
1	TRUE	SALES_ORDER_N2	QTUNE	NORMAL	NO	N	300000	300000	100.0	2013-03-01/16:30:19	299546	2	24	1152	1152	1024	1000		1	1	299799	YES	NO		NO	
2	FALSE	SALES_ORDER_N1	QTUNE	NORMAL	NO	N	300000	300000	100.0	2013-03-01/16:30:15	299840	2	24	1152	1152	1152	1087		1	1	299837	YES	NO		NO	
3	FALSE	SALES_ORDER_PK	QTUNE	NORMAL	NO	N	300000	300000	100.0	2013-03-01/16:30:21	300000	1	21	768	768	896	626		1	1	1657	YES	NO		NO	

(1) CBO Statistics.

(2) It considers the blocks from all partitions (if the index is partitioned).

(3) This is the estimated size of the index if it were rebuilt, as computed by DBMS_SPACE.CREATE_INDEX_COST.

(4) Estimated leaf blocks with a 90% index efficiency. Only evaluated for non-partitioned normal indexes with more than 10000 leaf blocks.

(5) BEST:less than 76270. GOOD:between 76270 and 150847. POOR:between 150847 and 225423. WORST:greater than 225423.

(6) It assumes default CBO environment, including optimizer_index_cost_adj=100 and optimizer_index_caching=0 among others.

(7) Index Selectivity where Full Index Scan Cost meets Full Table Scan Cost. A value of 0.02 means that if selecting 2% of the rows or less, an index scan is cheaper than a FTS.

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QTUNE.SALES_ORDER - Index Properties

Domain	Domain	Domain	Function

#	In Plan	Index Name	Owner	Index Type	Uniqueness	Table Type	Part	Degree	Instances	Temp	Duration	Incl Col	Pct Direct Access	IOT Redundant PKey Elim	Join Index	Secondary	Index Type Owner	Index Type Name	Domain Index Params	Domain Index Status	Index Oper Status	Domain Index Mgmt	Based Index Status	Generated	Visibility	Status	Drop
1	TRUE	SALES_ORDER_N2	QTUNE	NORMAL	NONUNIQUE	TABLE	NO	1	1	N				NO	NO	N								N	VISIBLE	VALID	NO
2	FALSE	SALES_ORDER_N1	QTUNE	NORMAL	NONUNIQUE	TABLE	NO	1	1	N				NO	NO	N								N	VISIBLE	VALID	NO
3	FALSE	SALES_ORDER_PK	QTUNE	NORMAL	UNIQUE	TABLE	NO	1	1	N				NO	NO	N								N	VISIBLE	VALID	NO

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QTUNE.SALES_ORDER - Index Physical Properties

#	In Plan	Index Name	Owner	Index Type	Part	Temp	Pct Free	Ini Trans	Max Trans	Initial Extent	Next Extent	Min Extents	Max Extents	Pct Increase	Pct Threshold	Free Lists	Free List Groups	Logging	Buffer Pool	Flash Cache	Cell Flash Cache	TableSpace Name	Compression	Prefix Length
1	TRUE	SALES_ORDER_N2	QTUNE	NORMAL	NO	N	10	2	255	65536	1048576	1	2147483645					YES	DEFAULT	DEFAULT	DEFAULT	USERS	DISABLED	
2	FALSE	SALES_ORDER_N1	QTUNE	NORMAL	NO	N	10	2	167	65536	1048576	1	2147483645					YES	DEFAULT	DEFAULT	DEFAULT	USERS	DISABLED	
3	FALSE	SALES_ORDER_PK	QTUNE	NORMAL	NO	N	10	2	255	65536	1048576	1	2147483645					YES	DEFAULT	DEFAULT	DEFAULT	USERS	DISABLED	

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QTUNE.SALES_ORDER_N2 - Index Columns

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QTUNE.SALES_ORDER_N2 - Column Statistics

Index type:NORMAL rows:300000 smpl:300000 lms:2 #b:1000 #dk:299546 cluf:299799 anlz:2013-03-01/16:30:19

#	Col Pos	In Pred	In Proj	Col ID	Column Name	Data Default	Not Null with Default Value	Descend	Num Rows	Num Nulls	Sample Size	Perc	Num Distinct	Fluctuating NDV ¹	Low Value ²	High Value ²	Last Analyzed	Avg Col Len	Density	Num Buckets	Histogram	Fluctuating Endpoint Count ³	Popular Values	Global Stats	Use Stat
1	1	<input checked="" type="checkbox"/>	TRUE	4	CUSTOMER_ID			ASC	300000	0	300000	100.0	95952	FALSE	"1"	"99999"	2013-03-01/16:30:09	5	1.042188e-05	1	NONE	FALSE		YES	NC
2	2	FALSE	FALSE	3	ORDER_DATE			ASC	300000	0	300000	100.0	1002	FALSE	" 2010/02/23 00:00:00"	" 2012/11/20 00:00:00"	2013-03-01/16:30:09	8	9.980040e-04	1	NONE	FALSE		YES	NC

(1) A value of TRUE means that section "Column Statistics Versions" shows "Number of Distinct Values" changing more than 10% between two consecutive versions.
(2) The display of values in this column is controlled by tool parameter "s_mask_for_values". Its current value is "CLEAR".
(3) A value of TRUE means that section "Column Statistics Versions" shows "Endpoint Count" changing more than 10% between two consecutive versions.

QTUNE.SALES_ORDER_N2 - Column Usage

#	Col Pos	In Pred	In Proj	Col ID	Column Name	Data Default	Equality Preds	Equijoin Preds	Non-equijoin Preds	Range Preds	LIKE Preds	NULL Preds	Timestamp
1	1	TRUE	TRUE	4	CUSTOMER_ID		84	87	0	0	0	1	2013-04-05/11:12:24

QTUNE.SALES_ORDER_N2 - Column Properties

#	Col Pos	In Pred	In Proj	Col ID	Column Name	Data Type	Data Type Modifier	Data Type Owner	Data Length	Data Precision	Data Scale	Nullable	Default Length	Data Default	Not Null with Default Value	Character Set Name	Char Col Decl Length	Char Length	Char Used	V80 Fmt Image	Data Upgraded	Hidden Column	Virtual Column	Segment Column ID	Internal Column ID	Qualified Col Name
1	1	TRUE	TRUE	4	CUSTOMER_ID	NUMBER			22			N						0		NO	YES	NO	NO	4	4	CUSTOMER_ID
2	2	FALSE	FALSE	3	ORDER_DATE	DATE			7			Y						0		NO	YES	NO	NO	3	3	ORDER_DATE

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QTUNE.SALES_ORDER_N1 - Index Columns

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QTUNE.SALES_ORDER_N1 - Column Statistics

Index type:NORMAL rows:300000 smpl:300000 lms:2 #b:1087 #dk:299840 cluf:299837 anlz:2013-03-01/16:30:15

#	Col Pos	In Pred	In Proj	Col ID	Column Name	Data Default	Not Null with Default Value	Descend	Num Rows	Num Nulls	Sample Size	Perc	Num Distinct	Fluctuating NDV ¹	Low Value ²	High Value ²	Last Analyzed	Avg Col Len	Density	Num Buckets	Histogram	Fluctuating Endpoint Count ³	Popular Values	Global Stats	User Stats	Eq Pre Sel
1	1	FALSE	FALSE	2	ORDER_NUM			ASC	300000	0	300000	100.0	299840	FALSE	"AA003667020574"	"ZZ999041716303"	2013-03-01/16:30:09	15	3.335112e-06	1	NONE	FALSE		YES	NO	0.

(1) A value of TRUE means that section "Column Statistics Versions" shows "Number of Distinct Values" changing more than 10% between two consecutive versions.

(2) The display of values in this column is controlled by tool parameter "s_mask_for_values". Its current value is "CLEAR".

(3) A value of TRUE means that section "Column Statistics Versions" shows "Endpoint Count" changing more than 10% between two consecutive versions.

QTUNE.SALES_ORDER_N1 - Column Usage

#	Col Pos	In Pred	In Proj	Col ID	Column Name	Data Default	Equality Preds	Equijoin Preds	Non-equijoin Preds	Range Preds	LIKE Preds	NULL Preds	Timestamp
1	1	FALSE	FALSE	2	ORDER_NUM		0	0	0	0	0	1	2012-11-20/06:48:17

QTUNE.SALES_ORDER_N1 - Column Properties

#	Col Pos	In Pred	In Proj	Col ID	Column Name	Data Type	Data Type Modifier	Data Type Owner	Data Length	Data Precision	Data Scale	Nullable	Default Length	Data Default	Not Null with Default Value	Character Set Name	Char Col Decl Length	Char Length	Char Used	V80 Fmt Image	Data Upgraded	Hidden Column	Virtual Column	Segment Column ID	Internal Column ID	Qualified Col Name
1	1	FALSE	FALSE	2	ORDER_NUM	VARCHAR2			4000			N				CHAR_CS	4000	4000	B	NO	YES	NO	NO	2	2	ORDER_NUM

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QTUNE.SALES_ORDER_PK - Index Columns

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QTUNE.SALES_ORDER_PK - Column Statistics

Index type:NORMAL rows:300000 smpl:300000 lms:1 #b:626 #dk:300000 cluf:1657 anlz:2013-03-01/16:30:21

#	Col Pos	In Pred	In Proj	Col ID	Column Name	Data Default	Not Null with Default Value	Descend	Num Rows	Num Nulls	Sample Size	Perc	Num Distinct	Fluctuating NDV ¹	Low Value ²	High Value ²	Last Analyzed	Avg Col Len	Density	Num Buckets	Histogram	Fluctuating Endpoint Count ³	Popular Values	Global Stats	User Stats	Equality Predicate Selectivity	Equality Predicate Cardinality
1	1	<input checked="" type="checkbox"/>	TRUE	1	ORDER_ID			ASC	300000	0	300000	100.0	300000	FALSE	"1"	"300000"	2013-03-01/16:30:09	5	3.333333e-06	1	NONE	FALSE		YES	NO	0.000003	1

(1) A value of TRUE means that section "Column Statistics Versions" shows "Number of Distinct Values" changing more than 10% between two consecutive versions.

(2) The display of values in this column is controlled by tool parameter "s_mask_for_values". Its current value is "CLEAR".

(3) A value of TRUE means that section "Column Statistics Versions" shows "Endpoint Count" changing more than 10% between two consecutive versions.

QTUNE.SALES_ORDER_PK - Column Usage

#	Col Pos	In Pred	In Proj	Col ID	Column Name	Data Default	Equality Preds	Equijoin Preds	Non-equijoin Preds	Range Preds	LIKE Preds	NULL Preds	Timestamp
1	1	TRUE	TRUE	1	ORDER_ID		0	88	0	0	0	1	2013-04-05/11:12:24

QTUNE.SALES_ORDER_PK - Column Properties

#	Col Pos	In Pred	In Proj	Col ID	Column Name	Data Type	Data Type Modifier	Data Type Owner	Data Length	Data Precision	Data Scale	Nullable	Default Length	Data Default	Not Null with Default Value	Character Set Name	Char Col Decl Length	Char Length	Char Used	V80 Fmt Image	Data Upgraded	Hidden Column	Virtual Column	Segment Column ID	Internal Column ID	Qualified Col Name
1	1	TRUE	TRUE	1	ORDER_ID	NUMBER			22			N						0		NO	YES	NO	NO	1	1	ORDER_ID

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Objects

Restricted list of objects related to the SQL being analyzed. Partitions and Subpartitions are excluded.

Further restricted up to 1000 rows as per tool parameter "r_rows_table_1".

SQL: [\[±\]](#)

#	Object Type	Object Name	Object Owner	Object ID	Data Object ID	Created	Last DDL Time	Timestamp	Status	T	G	S	Name Space	Edition Name	Metadata	Metadata Error
1	INDEX	CUSTOMER_F1	QTUNE	107086	107086	2012-11-20/06:46:46	2012-11-20/06:46:46	2012-11-20/06:46:46	VALID	N	N	N	4		Metadata	
2	INDEX	CUSTOMER_N1	QTUNE	107084	107084	2012-11-20/06:46:41	2012-11-20/06:46:41	2012-11-20/06:46:41	VALID	N	N	N	4		Metadata	
3	INDEX	CUSTOMER_N2	QTUNE	107085	107085	2012-11-20/06:46:45	2012-11-20/06:46:45	2012-11-20/06:46:45	VALID	N	N	N	4		Metadata	
4	INDEX	CUSTOMER_PK	QTUNE	107083	107083	2012-11-20/06:46:39	2012-11-20/06:46:39	2012-11-20/06:46:39	VALID	N	N	N	4		Metadata	
5	INDEX	ORDER_LINE_N1	QTUNE	107096	107096	2012-11-20/06:58:08	2012-11-20/06:58:08	2012-11-20/06:58:08	VALID	N	N	N	4		Metadata	
6	INDEX	ORDER_LINE_N2	QTUNE	107097	107097	2012-11-20/06:58:55	2012-11-20/06:58:55	2012-11-20/06:58:55	VALID	N	N	N	4		Metadata	
7	INDEX	ORDER_LINE_PK	QTUNE	107095	107095	2012-11-20/06:57:22	2012-11-20/06:57:22	2012-11-20/06:57:22	VALID	N	N	N	4		Metadata	
8	INDEX	PART_N1	QTUNE	107089	107089	2012-11-20/06:47:24	2012-11-20/06:47:24	2012-11-20/06:47:24	VALID	N	N	N	4		Metadata	
9	INDEX	PART_PK	QTUNE	107088	107088	2012-11-20/06:47:21	2012-11-20/06:47:21	2012-11-20/06:47:21	VALID	N	N	N	4		Metadata	
10	INDEX	SALES_ORDER_N1	QTUNE	107092	107092	2012-11-20/06:48:05	2012-11-20/06:48:05	2012-11-20/06:48:05	VALID	N	N	N	4		Metadata	
11	INDEX	SALES_ORDER_N2	QTUNE	107093	107093	2012-11-20/06:48:12	2012-11-20/06:48:12	2012-11-20/06:48:12	VALID	N	N	N	4		Metadata	
12	INDEX	SALES_ORDER_PK	QTUNE	107091	107091	2012-11-20/06:48:01	2012-11-20/06:48:01	2012-11-20/06:48:01	VALID	N	N	N	4		Metadata	
13	TABLE	CUSTOMER	QTUNE	107082	107082	2012-11-20/06:46:20	2012-11-20/06:46:50	2012-11-20/06:46:40	VALID	N	N	N	1		Metadata	
14	TABLE	ORDER_LINE	QTUNE	107094	107094	2012-11-20/06:48:23	2012-11-20/07:00:19	2012-11-20/06:48:23	VALID	N	N	N	1		Metadata	
15	TABLE	PART	QTUNE	107087	107087	2012-11-20/06:46:50	2012-11-20/06:47:32	2012-11-20/06:47:32	VALID	N	N	N	1		Metadata	
16	TABLE	SALES_ORDER	QTUNE	107090	107090	2012-11-20/06:47:37	2012-11-20/06:48:17	2012-11-20/06:48:17	VALID	N	N	N	1		Metadata	
17	VIEW	CUSTOMER_V	QTUNE	78539		2012-04-05/15:52:52	2012-11-20/07:00:57	2012-04-05/15:52:52	VALID	N	N	N	1		Metadata	
18	VIEW	SALES_ORDER_V	QTUNE	78538		2012-04-05/15:52:52	2012-11-20/07:00:57	2012-11-20/07:00:57	VALID	N	N	N	1		Metadata	

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Object Dependency

#	Object Type	Object Name	Object Owner	Metadata
1	TABLE	CUSTOMER	QTUNE	Metadata
2	TABLE	ORDER_LINE	QTUNE	Metadata
3	TABLE	PART	QTUNE	Metadata
4	TABLE	SALES_ORDER	QTUNE	Metadata
5	VIEW	CUSTOMER_V	QTUNE	Metadata
6	VIEW	SALES_ORDER_V	QTUNE	Metadata

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Tablespaces

#	Tablespace Name	Block Size	Initial Extent	Next Extent	Min Extents	Max Extents	Max Size	Pct Increase	Min Extent Length	Status	Contents	Logging	Force Logging	Extent Management	Allocation Type	Plugged in	Segment Space Management	Default Table Compression	Retention	Big File	Predicate Evaluation	Encrypted	Compress for
1	SYSAUX	8192	65536		1	2147483645	2147483645		65536	ONLINE	PERMANENT	LOGGING	NO	LOCAL	SYSTEM	NO	AUTO	DISABLED	NOT APPLY	NO	HOST	NO	
2	SYSTEM	8192	65536		1	2147483645	2147483645		65536	ONLINE	PERMANENT	LOGGING	NO	LOCAL	SYSTEM	NO	MANUAL	DISABLED	NOT APPLY	NO	HOST	NO	
3	TEMP	8192	1048576	1048576	1		2147483645	0	1048576	ONLINE	TEMPORARY	NOLOGGING	NO	LOCAL	UNIFORM	NO	MANUAL	DISABLED	NOT APPLY	NO	HOST	NO	
4	UNDOTBS1	8192	65536		1	2147483645	2147483645		65536	ONLINE	UNDO	LOGGING	NO	LOCAL	SYSTEM	NO	MANUAL	DISABLED	NOGUARANTEE	NO	HOST	NO	
5	USERS	8192	65536		1	2147483645	2147483645		65536	ONLINE	PERMANENT	LOGGING	NO	LOCAL	SYSTEM	NO	AUTO	DISABLED	NOT APPLY	NO	HOST	NO	

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QTUNE.CUSTOMER_F1 - Index Metadata

```
CREATE INDEX "QTUNE"."CUSTOMER_F1" ON "QTUNE"."CUSTOMER" (LOWER("CUSTOMER_NAME"))
PCTFREE 10 INITRANS 2 MAXTRANS 167 COMPUTE STATISTICS
STORAGE(INITIAL 65536 NEXT 1048576 MINEXTENTS 1 MAXEXTENTS 2147483645
PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1
BUFFER_POOL DEFAULT FLASH_CACHE DEFAULT CELL_FLASH_CACHE DEFAULT)
TABLESPACE "USERS"
```

QTUNE.CUSTOMER_N1 - Index Metadata

```
CREATE INDEX "QTUNE"."CUSTOMER_N1" ON "QTUNE"."CUSTOMER" ("CUSTOMER_NAME")
PCTFREE 10 INITRANS 2 MAXTRANS 167 COMPUTE STATISTICS
STORAGE(INITIAL 65536 NEXT 1048576 MINEXTENTS 1 MAXEXTENTS 2147483645
PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1
BUFFER_POOL DEFAULT FLASH_CACHE DEFAULT CELL_FLASH_CACHE DEFAULT)
TABLESPACE "USERS"
```

QTUNE.CUSTOMER_N2 - Index Metadata

```
CREATE INDEX "QTUNE"."CUSTOMER_N2" ON "QTUNE"."CUSTOMER" ("CUSTOMER_TYPE", "CREDIT_LIMIT")
PCTFREE 10 INITRANS 2 MAXTRANS 255 COMPUTE STATISTICS
STORAGE(INITIAL 65536 NEXT 1048576 MINEXTENTS 1 MAXEXTENTS 2147483645
PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1
BUFFER_POOL DEFAULT FLASH_CACHE DEFAULT CELL_FLASH_CACHE DEFAULT)
TABLESPACE "USERS"
```

QTUNE.CUSTOMER_PK - Index Metadata

```
CREATE UNIQUE INDEX "QTUNE"."CUSTOMER_PK" ON "QTUNE"."CUSTOMER" ("CUSTOMER_ID")
PCTFREE 10 INITRANS 2 MAXTRANS 255 COMPUTE STATISTICS
STORAGE(INITIAL 65536 NEXT 1048576 MINEXTENTS 1 MAXEXTENTS 2147483645
PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1
BUFFER_POOL DEFAULT FLASH_CACHE DEFAULT CELL_FLASH_CACHE DEFAULT)
TABLESPACE "USERS"
```

QTUNE.ORDER_LINE_N1 - Index Metadata

```
CREATE INDEX "QTUNE"."ORDER_LINE_N1" ON "QTUNE"."ORDER_LINE" ("ORDER_ID")
PCTFREE 10 INITRANS 2 MAXTRANS 255 COMPUTE STATISTICS
STORAGE(INITIAL 65536 NEXT 1048576 MINEXTENTS 1 MAXEXTENTS 2147483645
PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1
BUFFER_POOL DEFAULT FLASH_CACHE DEFAULT CELL_FLASH_CACHE DEFAULT)
TABLESPACE "USERS"
```

QTUNE.ORDER_LINE_N2 - Index Metadata

```
CREATE INDEX "QTUNE"."ORDER_LINE_N2" ON "QTUNE"."ORDER_LINE" ("PART_ID")
PCTFREE 10 INITRANS 2 MAXTRANS 255 COMPUTE STATISTICS
STORAGE(INITIAL 65536 NEXT 1048576 MINEXTENTS 1 MAXEXTENTS 2147483645
PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1
BUFFER_POOL DEFAULT FLASH_CACHE DEFAULT CELL_FLASH_CACHE DEFAULT)
TABLESPACE "USERS"
```

QTUNE.ORDER_LINE_PK - Index Metadata

```
CREATE UNIQUE INDEX "QTUNE"."ORDER_LINE_PK" ON "QTUNE"."ORDER_LINE" ("LINE_ID")
PCTFREE 10 INITRANS 2 MAXTRANS 255 COMPUTE STATISTICS
STORAGE(INITIAL 65536 NEXT 1048576 MINEXTENTS 1 MAXEXTENTS 2147483645
PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1
BUFFER_POOL DEFAULT FLASH_CACHE DEFAULT CELL_FLASH_CACHE DEFAULT)
TABLESPACE "USERS"
```

QTUNE.PART_N1 - Index Metadata

```
CREATE INDEX "QTUNE"."PART_N1" ON "QTUNE"."PART" ("PART_NAME")
PCTFREE 10 INITRANS 2 MAXTRANS 167 COMPUTE STATISTICS
STORAGE(INITIAL 65536 NEXT 1048576 MINEXTENTS 1 MAXEXTENTS 2147483645
PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1
BUFFER_POOL DEFAULT FLASH_CACHE DEFAULT CELL_FLASH_CACHE DEFAULT)
TABLESPACE "USERS"
```

QTUNE.PART_PK - Index Metadata

```
CREATE UNIQUE INDEX "QTUNE"."PART_PK" ON "QTUNE"."PART" ("PART_ID")
PCTFREE 10 INITRANS 2 MAXTRANS 255 COMPUTE STATISTICS
STORAGE(INITIAL 65536 NEXT 1048576 MINEXTENTS 1 MAXEXTENTS 2147483645
PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1
BUFFER_POOL DEFAULT FLASH_CACHE DEFAULT CELL_FLASH_CACHE DEFAULT)
TABLESPACE "USERS"
```

QTUNE.SALES_ORDER_N1 - Index Metadata

```
CREATE INDEX "QTUNE"."SALES_ORDER_N1" ON "QTUNE"."SALES_ORDER" ("ORDER_NUM")
PCTFREE 10 INITRANS 2 MAXTRANS 167 COMPUTE STATISTICS
STORAGE(INITIAL 65536 NEXT 1048576 MINEXTENTS 1 MAXEXTENTS 2147483645
PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1
BUFFER_POOL DEFAULT FLASH_CACHE DEFAULT CELL_FLASH_CACHE DEFAULT)
TABLESPACE "USERS"
```

QTUNE.SALES_ORDER_N2 - Index Metadata

```
CREATE INDEX "QTUNE"."SALES_ORDER_N2" ON "QTUNE"."SALES_ORDER" ("CUSTOMER_ID", "ORDER_DATE")
PCTFREE 10 INITRANS 2 MAXTRANS 255 COMPUTE STATISTICS
STORAGE(INITIAL 65536 NEXT 1048576 MINEXTENTS 1 MAXEXTENTS 2147483645
PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1
BUFFER_POOL DEFAULT FLASH_CACHE DEFAULT CELL_FLASH_CACHE DEFAULT)
TABLESPACE "USERS"
```

QTUNE.SALES_ORDER_PK - Index Metadata

```
CREATE UNIQUE INDEX "QTUNE"."SALES_ORDER_PK" ON "QTUNE"."SALES_ORDER" ("ORDER_ID")
PCTFREE 10 INITRANS 2 MAXTRANS 255 COMPUTE STATISTICS
STORAGE(INITIAL 65536 NEXT 1048576 MINEXTENTS 1 MAXEXTENTS 2147483645
PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1
BUFFER_POOL DEFAULT FLASH_CACHE DEFAULT CELL_FLASH_CACHE DEFAULT)
TABLESPACE "USERS"
```

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Table - Metadata

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QTUNE.CUSTOMER - Table Metadata

```
CREATE TABLE "QTUNE"."CUSTOMER"  
(  
  "CUSTOMER_ID" NUMBER NOT NULL ENABLE,  
  "CUSTOMER_NAME" VARCHAR2(4000),  
  "CUSTOMER_TYPE" VARCHAR2(40) NOT NULL ENABLE,  
  "CREDIT_LIMIT" NUMBER,  
  CONSTRAINT "CUSTOMER_PK" PRIMARY KEY ("CUSTOMER_ID")  
USING INDEX PCTFREE 10 INITRANS 2 MAXTRANS 255 COMPUTE STATISTICS  
STORAGE(INITIAL 65536 NEXT 1048576 MINEXTENTS 1 MAXEXTENTS 2147483645  
PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1  
BUFFER_POOL DEFAULT FLASH_CACHE DEFAULT CELL_FLASH_CACHE DEFAULT)  
TABLESPACE "USERS" ENABLE  
) SEGMENT CREATION IMMEDIATE  
PCTFREE 10 PCTUSED 40 INITRANS 1 MAXTRANS 255  
NOCOMPRESS LOGGING  
STORAGE(INITIAL 65536 NEXT 1048576 MINEXTENTS 1 MAXEXTENTS 2147483645  
PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1  
BUFFER_POOL DEFAULT FLASH_CACHE DEFAULT CELL_FLASH_CACHE DEFAULT)  
TABLESPACE "USERS"
```

QTUNE.ORDER_LINE - Table Metadata

```
CREATE TABLE "QTUNE"."ORDER_LINE"  
(  
  "LINE_ID" NUMBER NOT NULL ENABLE,  
  "ORDER_ID" NUMBER NOT NULL ENABLE,  
  "LINE_NUM" NUMBER NOT NULL ENABLE,  
  "PART_ID" NUMBER NOT NULL ENABLE,  
  "QUANTITY" NUMBER NOT NULL ENABLE,  
  "DISCOUNT_PERC" NUMBER,  
  CONSTRAINT "ORDER_LINE_PK" PRIMARY KEY ("LINE_ID")  
USING INDEX PCTFREE 10 INITRANS 2 MAXTRANS 255 COMPUTE STATISTICS  
STORAGE(INITIAL 65536 NEXT 1048576 MINEXTENTS 1 MAXEXTENTS 2147483645  
PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1  
BUFFER_POOL DEFAULT FLASH_CACHE DEFAULT CELL_FLASH_CACHE DEFAULT)  
TABLESPACE "USERS" ENABLE,  
  CONSTRAINT "ORDER_FK" FOREIGN KEY ("ORDER_ID")  
  REFERENCES "QTUNE"."SALES_ORDER" ("ORDER_ID") ENABLE,  
  CONSTRAINT "PART_FK" FOREIGN KEY ("PART_ID")  
  REFERENCES "QTUNE"."PART" ("PART_ID") ENABLE  
) SEGMENT CREATION IMMEDIATE  
PCTFREE 10 PCTUSED 40 INITRANS 1 MAXTRANS 255  
NOCOMPRESS LOGGING  
STORAGE(INITIAL 65536 NEXT 1048576 MINEXTENTS 1 MAXEXTENTS 2147483645  
PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1  
BUFFER_POOL DEFAULT FLASH_CACHE DEFAULT CELL_FLASH_CACHE DEFAULT)  
TABLESPACE "USERS"
```

QTUNE.PART - Table Metadata

```
CREATE TABLE "QTUNE"."PART"  
(  
  "PART_ID" NUMBER NOT NULL ENABLE,  
  "PART_NAME" VARCHAR2(4000),  
  "PART_TYPE" VARCHAR2(1) NOT NULL ENABLE,  
  "PART_PRICE" NUMBER NOT NULL ENABLE,  
  "ON_HAND" NUMBER,  
  CONSTRAINT "PART_PK" PRIMARY KEY ("PART_ID")  
USING INDEX PCTFREE 10 INITRANS 2 MAXTRANS 255 COMPUTE STATISTICS  
STORAGE(INITIAL 65536 NEXT 1048576 MINEXTENTS 1 MAXEXTENTS 2147483645  
PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1  
BUFFER_POOL DEFAULT FLASH_CACHE DEFAULT CELL_FLASH_CACHE DEFAULT)  
TABLESPACE "USERS" ENABLE  
) SEGMENT CREATION IMMEDIATE  
PCTFREE 10 PCTUSED 40 INITRANS 1 MAXTRANS 255  
NOCOMPRESS LOGGING  
STORAGE(INITIAL 65536 NEXT 1048576 MINEXTENTS 1 MAXEXTENTS 2147483645  
PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1  
BUFFER_POOL DEFAULT FLASH_CACHE DEFAULT CELL_FLASH_CACHE DEFAULT)  
TABLESPACE "USERS"
```

QTUNE.SALES_ORDER - Table Metadata

```
CREATE TABLE "QTUNE"."SALES_ORDER"  
(  
  "ORDER_ID" NUMBER NOT NULL ENABLE,
```

```

"ORDER_NUM" VARCHAR2(4000) NOT NULL ENABLE,
"ORDER_DATE" DATE,
"CUSTOMER_ID" NUMBER NOT NULL ENABLE,
"STATUS" VARCHAR2(1),
CONSTRAINT "SALES_ORDER_PK" PRIMARY KEY ("ORDER_ID")
USING INDEX PCTFREE 10 INITRANS 2 MAXTRANS 255 COMPUTE STATISTICS
STORAGE (INITIAL 65536 NEXT 1048576 MINEXTENTS 1 MAXEXTENTS 2147483645
PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1
BUFFER_POOL DEFAULT FLASH_CACHE DEFAULT CELL_FLASH_CACHE DEFAULT)
TABLESPACE "USERS" ENABLE
) SEGMENT CREATION IMMEDIATE
PCTFREE 10 PCTUSED 40 INITRANS 1 MAXTRANS 255
NOCOMPRESS LOGGING
STORAGE (INITIAL 65536 NEXT 1048576 MINEXTENTS 1 MAXEXTENTS 2147483645
PCTINCREASE 0 FREELISTS 1 FREELIST GROUPS 1
BUFFER_POOL DEFAULT FLASH_CACHE DEFAULT CELL_FLASH_CACHE DEFAULT)
TABLESPACE "USERS"

```

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View - Metadata

- [CUSTOMER_V](#)
- [SALES_ORDER_V](#)

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QTUNE.CUSTOMER_V - View Metadata

```

CREATE OR REPLACE FORCE VIEW "QTUNE"."CUSTOMER_V" ("CUSTOMER_ID", "CUSTOMER_NAME", "CUSTOMER_TYPE", "CREDIT_LIMIT", "ORDERS_COUNT", "ORDERS_TOTAL") AS
SELECT c.customer_id,
       c.customer_name,
       c.customer_type,
       c.credit_limit,
       orders.orders_count,
       orders.orders_total
FROM   customer c,
       (SELECT /*+ QB_NAME (open_orders_rollup_qb) */
          o.customer_id,
          COUNT(*) orders_count,
          SUM(o.order_total) orders_total
        FROM sales_order_v o
        WHERE o.status NOT IN ('C', 'S')
        GROUP BY
              o.customer_id) orders
WHERE  c.customer_id = orders.customer_id

```

QTUNE.SALES_ORDER_V - View Metadata

```

CREATE OR REPLACE FORCE VIEW "QTUNE"."SALES_ORDER_V" ("CUSTOMER_ID", "CUSTOMER_NAME", "CUSTOMER_TYPE", "CREDIT_LIMIT", "ORDER_NUM", "ORDER_DATE", "STATUS", "ORDER_LINES", "ITEMS_TOTAL", "ORDER_TOTAL") AS
SELECT o.customer_id,
       o.customer_name,
       o.customer_type,
       o.credit_limit,
       o.order_num,
       o.order_date,
       o.status,
       lines_total.order_lines,
       lines_total.items_total,
       lines_total.order_total
FROM   sales_order o,
       customer c,
       (SELECT /*+ QB_NAME (lines_rollup_qb) */
          l.order_id,
          COUNT(*) order_lines,
          SUM(l.quantity) items_total,
          SUM(ROUND(l.quantity * p.part_price * (100 - NVL(l.discount_perc, 0)) / 100, 2)) order_total
        FROM order_line l,
             part p
        WHERE l.part_id = p.part_id
        GROUP BY
              l.order_id) lines_total
WHERE  o.customer_id = c.customer_id
AND    o.order_id = lines_total.order_id

```

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[215187.1](#) SQLT XTRACT 11.4.5.7 secs: 1141.000 sql_end: 2013-04-05/11:36:16 tool_date: 2013-04-05 install_date: 2013-04-05/11:03:55