

Index

Note to the Reader: Throughout this index **boldfaced** page numbers indicate primary discussions of a topic. *Italicized* page numbers indicate illustrations.

A

- accent-insensitive queries in SQL, **456–457**
- access path analysis, 326–327
- Active Session History, 135, **137–138**
- ADD PARTITION command, 226, 228
 - and unusable index, 224
- ADD_FILE parameter, 79
- ADDM. *See* Automatic Database Diagnostic Monitor (ADDM)
- administration tasks, automating, 179
- administrative users
 - passwords, 10
 - during install, 11
 - privileges for scheduler, 120
- ADVISOR system privilege, 349
- advisory framework, 171, **171–179**
- alert queue, 151–152
- alerts
 - from ADDM, 327
 - building your own mechanism, **156–157**
 - for file deletion from flash recovery area, 356
 - server-generated, **151–156**
 - architecture, 152
 - for space problems, 245, 246
- alias names for ASM, 292
- allocation policy for bigfile tablespaces, 205
- ALTER DATABASE command, 206
 - BEGIN BACKUP and END BACKUP clauses, **368–369**
 - to define default permanent tablespace, 214
 - to enable Flashback Database, 378
- ALTER DISKGROUP ADD ALIAS
 - command, 292
- ALTER INDEX command, with SHRINK SPACE clause, 260
- ALTER MATERIALIZED VIEW
 - statement, 461, 463
- ALTER SESSION statement, ENABLE RESUMABLE clause, 459
- ALTER SYSTEM statement, 158
 - FLUSH BUFFER_CACHE clause, 459
- ALTER TABLE command, with SHRINK SPACE clause, 260
- ANY privileges, 120
- archive logs for ASM, 293
- archived log files, in flash recovery area, 353
- ARCHIVELOG template, 294
- ARGUMENT_NAME parameter, for DEFINE_PROGRAM_ARGUMENT procedure, 98
- ARGUMENT_POSITION
 - parameter, for DEFINE_PROGRAM_ARGUMENT procedure, 99
- ARGUMENT_TYPE parameter, for DEFINE_PROGRAM_ARGUMENT procedure, 99
- ASM. *See* Automatic Storage Management (ASM)
- ASM_DISKGROUPS initialization parameter, 289, 492
- ASM_DISKSTRING parameter, 289, 297, 492
- ASM_POWER_LIMIT parameter, 289, 301, 492
- ATO (Automatic Tuning Optimizer), 325
- ATTACH parameter, for expdp utility, 68

516 ATTRIBUTE_NAME parameter – awrrpt.sql script

- ATTRIBUTE_NAME parameter, 333
- AUDIT_FILE_DEST parameter, 418
- auditing, 418–426
 - DBA dictionaries with information, 422–423
 - exam essentials, 476
 - fine-grained, 419–422
 - uniform audit trail, 422–426
- AUDIT_TRAIL parameter, 418, 420
- auto backup file type for ASM, 294
- AUTOBACKUP template, 295
- AUTO_DROP parameter, for
 - CREATE_JOB procedure, 102
- autoextensible tablespaces, 246
- automated backups, 9
- Automatic Checkpoint Tuning, 193
- Automatic Database Diagnostic Monitor (ADDM), 134, 146, 147–151, 148, 171, 193
- attributes, 150–151
- EM to view results, 147–148
- exam essentials, 186
- querying data dictionary, 148–150
- automatic rebalancing, 284
- automatic session switchback, 180–181
- Automatic Shared Memory Management (ASMM), 157–160
- Automatic Storage Management (ASM), 8, 244, 284–306
 - architecture, 284–286, 285
 - and bigfile tablespaces, 205
 - database migration to, 305–306
 - disk groups, 284
 - altering, 300–303
 - architecture, 296
 - creating and deleting, 297–300
 - dynamic rebalancing, 297
 - EM Database Control for, 303, 304, 305
 - failure groups and mirroring, 296–297
 - dynamic performance views, 290
 - exam essentials, 307
 - file types and templates, 293–295
 - filenames, 291–293
 - alias names, 292
 - alias with template names, 292
 - fully qualified names, 291
 - incomplete names, 293
 - incomplete names with template, 293
 - numeric names, 292
 - instance, 316
 - accessing, 289
 - creating, 286–287
 - initialization parameters, 288–289
 - startup and shutdown, 289–290
 - specifying for database file storage, 286
- Automatic Tuning Optimizer (ATO), 325
- automatic undo retention, 160–163
- Automatic Workload Repository (AWR), 23, 33, 53, 135–144
 - Active Session History, 137–138
 - baseline creation, 140–141
 - changing snapshot settings, 142–143
 - data types collected, 137
 - dropping baselines, 141
 - dropping snapshots, 139–140
 - exam essentials, 186
 - screen display, 143
 - snapshot creation, 138–139
 - statistics on space usage, 245
 - statistics purged from, 169
 - viewing reports, 143–144
- AWR (Automatic Workload Repository), 23, 53
- awrinfo.sql script, 144
- awrrpti.sql script, 143–144
- awrrpt.sql script, 143–144

B

background job, 108
 backup. *See also* Recovery Manager (RMAN); recovery of data
 exam essentials, 399
 fast incremental, 363–366
 of flash recovery area, 358, 359
 Legato Single Server Version (LSSV)
 for, 12
 online mode, 368–369
 options, 9, 9
 recovery with incrementally updated,
 361–363
 setup by DBUA, 36–37
 BACKUP AS COPY command,
 370–371, 406
 BACKUPSET template, 295
 base statistics, 145–146
 baselines for AWR
 creation, 140–141
 dropping, 141
 BEGIN BACKUP clause, for ALTER
 DATABASE command, 368–369
 bigfile tablespaces, 196–197,
 204–211, 240
 creation, 205–206
 data dictionary changes, 208
 DBVERIFY use with, 208–210
 initialization parameter changes, 208
 ROWID management, 206–207
 binary files, copying, 215–217
 BINARY_DOUBLE data type, 454–455
 arithmetic operations, 455–456
 BINARY_FLOAT data type, 454–455
 arithmetic operations, 455–456
 bitmap indexes, 224, 240
 performance, 231
 storage enhancements, 230

bottlenecks
 detecting, 147
 from SYSTEM tablespace, 197
 broker config file type, for ASM, 294
 buffer cache, flushing, 459
 BUFFER_POOL_KEEP parameter, 495
 BUFFER_POOL_RECYCLE
 parameter, 495
 BUILD DEFERRED option, for materi-
 alized views, 461

C

calendar expressions, 105–106
 CANCEL_TASK procedure
 (DBMS_ADVISOR), 173, 273
 Cartesian join, 330
 CASCADE keyword
 for ALTER TABLE command,
 260–261
 for DROP USER command, 389
 case-insensitive queries in SQL, 456–457
 cell references for SQL MODEL clause,
 441–444
 change tracking bitmap for ASM, 294
 change-tracking file, 363
 CHANGETRACKING template, 295
 changing snapshot settings, 142–143
 clean removal, 11
 client process, tracking, 467
 CLIENT_IDENTIFIER attribute, 467
 _CLIENT_IDENTIFIER variable, 488
 CLIENT_ID_STAT_DISABLE
 procedure, 473
 CLIENT_ID_STAT_ENABLE
 procedure, 473
 CLIENT_ID_TRACE_DISABLE
 procedure, 469, 470
 CLIENT_ID_TRACE_ENABLE
 procedure, 469, 470

518 clients for Data Pump – CREATE_SCHEDULE procedure

- clients for Data Pump, 58, 61–83
 - data and metadata filters, 77–79
 - dump location setup, 61–62
 - expdp utility, 64–69
 - export and import modes, 62–64
 - impdp utility, 69–75
 - managing jobs, 79–83
 - network mode import, 76–77
- CLOB data type, conversion between NLOB and, 453–454
- cloning database
 - with DBCA, 14–17, 53
 - with Enterprise Manager, 22–23
- cloning home directory, 22–23
- CLOSE_WINDOW procedure, 120
- CMI. *See* Common Manageability Infrastructure (CMI)
- cmpdbmig.sql script, 35
- COALESCE PARTITION
 - command, 226
- coarse striping, 296, 315
- column-level virtual private database, 412–416
- column-masking behavior, 414
- command line, for Database Upgrade Utility (DBUA), 39–40
- COMMENTS parameter
 - for CREATE_JOB procedure, 102
 - for CREATE_PROGRAM
 - procedure, 97
 - for CREATE_SCHEDULE
 - procedure, 100
- Common Manageability Infrastructure (CMI), 134, 135
 - advisory framework, 171, 171–179
 - architecture, 135
 - server-generated alerts, 151–156
- COMPATIBLE parameter, 18, 54, 240
 - for cross-platform tablespaces, 88
 - and downgrading, 44
- comprehensive mode, for SQL Access Advisor, 335
- compression of backup sets, 373–375
- configuration files, database connections
 - without, 464
- configuring Oracle 10g, 13–26
- connections
 - to ASM instance, 287
 - improvements, 464–466
- CONTENT parameter, 77
 - for expdp utility, 68
 - for impdp utility, 74
- context-sensitive policy type, for virtual private database, 417
- CONTINUE_CLIENT parameter, for Data Pump, 79
- control files
 - for ASM, 293
 - backup, 372–373
 - in flash recovery area, 353
- CONTROLFILE template, 294
- COPY_FILE procedure, 215–217
- COPY_JOB procedure, 109
- cost models, CPU issues, 320
- crash recovery time, 163
- CREATE ANY JOB privilege, 107
- CREATE DATABASE command, 33, 197, 240
 - to define default permanent
 - tablespace, 214
- CREATE INDEX command, 225
- CREATE JOB privilege, 97, 99, 107
- CREATE TABLE command (SQL), 92, 93
- CREATE_BASELINE procedure, 140
- CREATE_FILE procedure
 - (DBMS_ADVISOR), 174
- CREATE_JOB procedure, parameters, 101–103
- CREATE_JOB_CLASS procedure, 114
- CREATE_OBJECT procedure
 - (DBMS_ADVISOR), 174, 272–273
- CREATE_SCHEDULE procedure,
 - parameters, 100

CREATE_SNAPSHOT procedure,
138–139

CREATE_STORED_OUTLINE
parameter, 492

CREATE_TASK procedure
(DBMS_ADVISOR), 173, 174, 272

CREATE_WINDOW procedure, 117

CREATE_WINDOW_GROUP
procedure, 119

critical level, for disk space usage, 245

cross-platform datafiles for ASM, 294

cross-platform transportable
tablespaces, 87–89
limitations, 88
steps, 88–89

CTWR (Change Tracking Writer), 363

current value function, 443–444

CV() function, 443–444

D

data dictionary
ASM instance and, 288
changes for bigfile tablespaces, 208
statistics gathering, 322–323

data dictionary views
advisor-related, 178–179
for flash recovery area, 358–360
with metric information, 145
related to scheduler, 121–123
temporary tablespace groups, 213

Data Pump, 56–86, 130
advantages, 60
architecture, 57, 57–59
clients, 61–83
data and metadata filters, 77–79
dump location setup, 61–62
expdp utility, 64–69
export and import modes, 62–64
impdp utility, 69–75
managing jobs, 79–83
network mode import, 76–77

data access methods, 59–60

dumpset, 294

exam essentials, 125

wizard, 83–86

data types in SQL, 453–457
implicit LOB conversion, 453–454
native floating-point, 454–456
for regular expression vs. search
string, 449

Data Warehouse database, 5

database
migration to ASM, 305–306
viewing usage, 23–26

database buffer cache, 157

Database Configuration Assistant
(DBCA) tool, 5, 53
to clone database, 14–17
enhancements, 14
location of database related files, 16
and SYSAUX tablespace
creation, 199
templates, 14–15

Database Control. *See* Enterprise
Manager (EM), Database Control

database enhancements, 458–474
connectivity improvements, 464–466
flushing buffer cache, 459
LogMiner enhancements, 466
materialized views, 460–463
dependent refreshes, 461
join view fast refresh, 461
partition change tracking, 460
refresh using trusted
constraints, 461
tuning, 462–463

MAXTRANS ignored, 458–459

resumable space allocation, 459

statistics aggregation, 472–474

- tracing, 467–474
 - with DBMS_MONITOR, 469–470
 - end-to-end application, 467
 - end-to-end application with EM, 468
 - with trcsess utility, 471–472
 - transaction rollback monitoring, 466–467
- database management. *See also* upgrading database
- database management automation, 157–179
 - administration tasks, 179
 - advisory framework, 171–179
 - Automatic Shared Memory Management (ASMM), 157–160
 - automatic undo retention, 160–163
 - Mean Time to Recovery Advisor (MTTR Advisor), 163
 - optimizer statistics, 164–170
 - on dictionary objects, 165–166
 - history, 168–170
 - locking statistics, 167
 - maintaining current, 164–165
 - managing, 166–170
- Database mode for Data Pump, 63
- database policy
 - configuration, 20–22
 - managing, 21
 - violations, 20
- Database Resource Manager, 179–185
 - automatic session switchback, 180–181
 - idle timeout setting, 181
 - mapping, 181–184
 - resource allocation method changes, 185
- Database Upgrade Utility (DBUA), 26, 36–38
 - command line, 39–40
 - progress screen, 38
 - summary screen, 37
 - and SYSAUX tablespace creation, 198
 - Upgrade Results screen, 39
- DATABASE_PROPERTIES data dictionary view, 208, 214
- DATAFILE template, 294
- datafiles
 - for ASM, 293
 - backup, 372–373
- DATAFILES parameter for imp utility, 72
- DATAGUARDCONFIG template, 295
- _DATE variable, 488
- DBA dictionary views, with auditing information, 422–423
- DBA_ADVISOR dictionary views, 178–179
- DBA_ADVISOR_ACTIONS data dictionary view, 276, 315
- DBA_ADVISOR_DEFINITIONS dictionary view, 173
- DBA_ADVISOR_FINDINGS database dictionary view, 148, 275
- DBA_ADVISOR_RECOMMENDATIONS view, 150
- DBA_ALERT_HISTORY view, 152
- DBA_AUDIT_TRAIL view, 425
 - new columns, 423
- DBA_COMMON_AUDIT_TRAIL view, 424, 425
- DBA_DATAPUMP_JOBS data dictionary view, 80
- DBA_DATAPUMP_SESSION data dictionary view, 80
- DBA_ENABLED_AGGREGATIONS view, 473
- DBA_ENABLED_TRACES view, 469–470
- DBA_EXTERNAL_LOCATIONS data dictionary views, 94

- DBA_EXTERNAL_TABLES data dictionary view, 94
- DBA_FGA_AUDIT_TRAIL view, 425
 - new columns, 424
- DBA_HIGH_WATER_MARK_STATISTICS view, 25–26
- DBA_HIST_ACTIVE_SESS_HISTORY view, 138
- DBA_HIST_SNAPSHOT dictionary view, 139
- DBA_IND_PARTITIONS data dictionary view, 224, 226, 228, 229
- DBA_OPTSTAT_OPERATIONS dictionary view, 168
- DBA_OUTSTANDING_ALERTS view, 152
- DBA_RECYCLEBIN data dictionary view, 386–387
- DBA_SCHEDULER_JOB_RUN_DETAILS view, 122
- DBA_TABLESPACE_GROUPS view, 213
- DBA_TABLESPACES view, 161, 208
- DBA_TAB_STATS_HISTORY view, 168
- DBA_THRESHOLDS dictionary view, 155
- DBA_TUNE_MVIEW dictionary view, 462
- .dbc file extension, 15
- DB_CREATE_FILE_DEST parameter, 361
- DB_CREATE_ONLINE_LOG_DEST_n parameter, 361
- DBFAULT_TBS_TYPE property, 208
- DB_FILES parameter, 204, 208
- DB_FLASHBACK_RETENTION_TARGET GET parameter, 378, 492
- dblink_encrypt_login parameter, 493
- DBMS_ADVISOR package, 173–178, 272
 - programs, 173–174
- SET_DEFAULT_TASK_PARAMETER procedure, 150
- TUNE_MVIEW procedure, 462, 482
- DBMS_DATAPUMP API, 57, 130
 - parameters for, 61
- DBMS_FGA package, ADD_POLICY procedure, 419
- DBMS_FILE_TRANSFER package, 215
- DBMS_JOB program, 95–96
- DBMS_LOB package, 453
- DBMS_METADATA API, 57, 130
- DBMS_MONITOR package, 469–470
 - for statistics aggregation, 473–474
- DBMS_MVIEW package
 - EXPLAIN_MVIEW procedure, 462
 - EXPLAIN_REWRITE procedure, 463
- DBMS_REGISTRY package, 35, 54
- DBMS_RESOURCE_MANAGER package, 179
 - CREATE_PLAN_DIRECTIVE procedure, 180
 - SET_CONSUMER_GROUP_MAPPING procedure, 181–182
 - SET_CONSUMER_GROUP_MAPPING_PRI procedure, 183
- DBMS_RESOURCE_MANAGER_PRIVS package, 179
- DBMS_RLS package, 482
 - ADD_POLICY procedure, 412
 - ALL_ROWS option, 414
 - POLICY_TYPE parameter, 416–418
- DBMS_ROWID package, 206–207
- DBMS_SCHEDULER. *See* Scheduler
- DBMS_SCHEDULER.DEFINE_PROG_RAM_ARGUMENT procedure, 98
- DBMS_SERVER_ALERT package, 155, 244, 252–257
 - EXPAND_MESSAGE procedure, 256

522 DBMS_SQLTUNE package – disk drives

- GET_TASK_REPORT procedure, 254–255
- SET_THRESHOLD procedure, 252–254, 316
- DBMS_SQLTUNE package, 332–333
- DBMS_STATS package, 165
 - ALTER_STATS_HISTORY_RETENTION procedure, 169, 192
 - GATHER_DATABASE_STATS program, 165, 322
 - GATHER_DATABASE_STATS_JOB_PROC procedure, 164, 192, 349
 - GATHER_DICTIONARY_STATS program, 165, 322
 - GATHER_SCHEMA_STATS program, 165, 322
 - GET_STATS_HISTORY_AVAILABILITY function, 169
 - GET_STATUS_HISTORY_RETENTION function, 169
 - PURGE_STATS procedure, 169
- DBMS_TTS.TRANSPORT_SET_CHECK procedure, 89
- DBMS_WORKLOAD_REPOSITORY package, 138
 - CREATE_BASELINE procedure, 140
 - CREATE_SNAPSHOT procedure, 138–139
 - DROP_BASELINE procedure, 141
 - DROP_SNAPSHOT procedure, 139–140
 - MODIFY_SNAPSHOT_SETTINGS procedure, 142
- DB_RECOVERY_FILE_DEST parameter, 354, 492
- DB_RECOVERY_FILE_DEST_SIZE parameter, 354, 492
- .dbt file extension, 15
- DBtime, 147
- DBUA. *See* Database Upgrade Utility (DBUA)
- DB_UNIQUE_NAME parameter, 492
 - for ASM instance, 288
- dbv command, 209
- DBVERIFY utility, 241
 - with bigfile tablespaces, 208–210
- DDL_WAIT_FOR_LOCKS parameter, 492
 - default time zone, for scheduler, 110
- DEFAULT_JOB_CLASS, 114
- DEFAULT_VALUE parameter, for DEFINE_PROGRAM_ARGUMENT procedure, 99
- DEFINE_PROGRAM_ARGUMENT procedure, 98–99
- DEGREE parameter, 323
- DELETE operations, with SQL MERGE, 427, 431–432
- DELETE_TASK procedure (DBMS_ADVISOR), 173, 273
- dependent refreshes, for materialized views, 461
- DESCRIBE command, 486
- DESTROY parameter, for imp utility, 72
- dictionary-managed tablespaces, 246
- dictionary objects, optimizer statistics on, 165–166
- DIMENSION BY clause, 442
- dimensions, mapping from query columns, 438
- direct path export, 59
- directory
 - for Data Pump, 61
 - for installing Oracle 10g, 2
 - structure for flash recovery area, 356–358
 - for templates, 15
- DIRECTORY parameter, for expdp utility, 68
- DISABLE procedure, 107–108, 109
- disk drives. *See also* space management as backup, 353

mixed, and performance levels, 303
 for Oracle 10g install, 11
 disk groups, 284
 altering, 300–303
 architecture, 296
 creating and deleting, 297–300
 dynamic rebalancing, 297
 EM Database Control for, 303,
 304, 305
 failure groups and mirroring,
 296–297
 DISPLAY variable, 4
 DML locks, for Flashback Table
 operations, 396
 DML table monitoring, 323–324
 downgrading database, 44
 after upgrade, 32
 DROP DATABASE command (RMAN),
 366–367
 DROP TABLE command, PURGE
 keyword, 389
 DROP USER...CASCADE
 command, 389
 DROP_BASELINE procedure, 141
 DROP_JOB procedure, 108
 DROP_JOB_CLASS procedure, 116
 dropped tables
 retrieving from recycle bin,
 384–386, 386
 and user quota, 406
 dropping
 baselines, 141
 database, by Recovery Manager
 (RMAN), 366–367
 snapshots, 139–140
 DROP_PROGRAM procedure, 109
 DROP_PROGRAM_ARGUMENT
 procedure, 110
 DROP_SCHEDULE procedure, 110
 DROP_SNAPSHOT procedure,
 139–140
 DRS_START parameter, 496

dump files, 61, 62
 DUMPFIL parameter
 for expdp utility, 67, 69
 for impdp utility, 72
 DUMPSET template, 295
 duration, for backup operation, 367
 dynamic performance views, for
 ASM, 290
 dynamic policy type, for virtual private
 database, 416
 dynamic rebalancing, 297
 dynamic sampling, 321

E

_EDITOR variable, 488
 EM. *See* Oracle Enterprise
 Manager (EM)
 EMPHASIS method, 185
 ENABLE procedure, 107–108, 109
 ENABLED parameter
 for CREATE_JOB procedure, 102
 for CREATE_PROGRAM
 procedure, 97
 encoded block number, 206
 END BACKUP clause, for ALTER
 DATABASE command, 368–369
 end-to-end application tracing, 467–472
 END_DATE parameter
 for CREATE_JOB procedure, 103
 for CREATE_SCHEDULE
 procedure, 100
 enterprise configuration, 18
 Enterprise Edition, 4
 virtual private database, 411–418
 column-level, 412–416
 enhancements, 418
 policy types, 416–417
 Enterprise Manager (EM)
 to clone Oracle home and database,
 22–23
 Create Program screen, 100

- Create Window screen, 118, 118
 - Database Control, 7, 18–23, 19, 53
 - Advisor Central page, 172, 172
 - to create hash-partitioned indexes, 226, 227
 - for disk groups, 303, 304, 305
 - to edit thresholds, 246, 247, 249, 251
 - to enable/disable ASMM, 158, 159
 - export options, 85
 - and flash recovery area, 355, 355
 - with Flashback Database, 381, 381–382
 - import job run status, 86
 - Maintenance tab, 83
 - Manage Metrics, 154
 - merging partitions, 223
 - partitioned table creation, 219–220, 220
 - performance pages, 339–340, 340, 341
 - Schedule Backup: Strategy, 359
 - and Segment Advisor, 263
 - segment shrink with, 261, 262
 - SQL Access Advisor, 335
 - SQL Tuning and, 328–330, 329, 330, 331
 - View Data for Table page, 388, 388
 - Database Feature usage, 24, 25
 - database policy configuration, 20–22
 - Manage Policy Library, 21
 - policy violations, 20
 - for end-to-end application tracing, 468, 468
 - Scheduler Jobs screen, 109
 - for statistics aggregation, 472
 - to view ADDM results, 147–148
 - to view SYSAUX tablespace, 201
 - environment variables, 41
 - ESTIMATE parameter
 - for expdp utility, 68
 - for impdp utility, 77
 - ESTIMATE_ONLY parameter, for expdp utility, 68
 - event-based alerts, 152
 - EXCLUDE parameter, 77–78
 - for expdp utility, 68
 - for impdp utility, 74
 - executable program, for scheduler, 97
 - EXECUTE_TASK procedure (DBMS_ADVISOR), 173, 175, 273
 - EXIT_CLIENT parameter, for Data Pump, 79
 - exp/imp tools, Data Pump advantages over, 60
 - exp utility, vs. expdp, 66–67
 - EXPAND_MESSAGE procedure, 256
 - expdp utility, 57, 61, 64–69
 - EXPLAIN PLAN of query, 279
 - export/import method for database upgrade, 27
 - export job, detaching from and attaching to, 59
 - extents, 284
 - mirroring, 297
 - external redundancy, 296
 - external tables, 59, 90–95
 - exam essentials, 125
 - loading using, 90–91
 - projected columns, 94–95
 - unloading using, 91–94
-
- F**
- failure groups, and mirroring, 296–297
 - fast incremental backup, 363–366
 - FAST_START_IO_TARGET parameter, 496
 - FAST_START_MTTR_TARGET parameter, 163, 315
 - and sizing redo logs, 281–282

- FEEDBACK parameter
 - for exp utility, 67
 - for imp utility, 72
- FGA. *See* fine-grained auditing (FGA)
- FILE parameter
 - for exp utility, 67
 - for imp utility, 72
- file system, for data storage, 8
- file types and templates, 293–295
- FILEIO_NETWORK_ADAPTERS parameter, 492
- filenames
 - for ASM, 291–293
 - alias names, 292
 - alias with template names, 292
 - fully qualified names, 291
 - incomplete names, 293
 - incomplete names with template, 293
 - numeric names, 292
 - whitespace in, 487
- FILESIZE parameter, for exp and expdp, 66, 69
- fine-grained auditing (FGA), 418, 419–422
 - and recycle bin, 390
- fine-grained object selection, 82
- fine striping, 296, 315
- fixed data dictionary tables, statistics on, 322–323
- fixed-SGA area, 158
- fixed table, 322
- flash recovery area, 352, 353–361
 - backup, 358, 359
 - best practices, 361
 - data dictionary views, 358–360
 - datafiles in, 376
 - directory structure, 356–358
 - and EM Database Control, 355, 355
 - exam essentials, 399
 - managing, 356
 - occupants, 353–354
 - and SQL commands, 354–355
- flashback
 - exam essentials, 399
 - required privileges, 398
- flashback buffer, 377
- Flashback Database, 352, 377–383
 - disabling, 379
 - excluding tablespaces from, 383
 - limitations, 383
 - SQL command to use, 380
 - SQL to configure, 378–379
- Flashback Drop, 377, 383–390
 - vs. Flashback Table, 395
- flashback logs, 352, 377
 - for ASM, 294
 - in flash recovery area, 353
- Flashback Query, 377, 390–395
- Flashback Table, 377, 395–397
- FLASHBACK TABLE...TO BEFORE DROP command, 384
- FLASHBACK template, 295
- Flashback Transaction Query, 377, 393–395
- Flashback Versions Query, 352, 377, 390–392, 407
- FLASHBACK_SCN parameter
 - for exp and expdp, 66
 - for impdp utility, 73, 77
- FLASHBACK_TIME parameter
 - for exp and expdp, 66
 - for impdp utility, 73, 77
- FLASHBACK_TRANSACTION_QUE
RY dictionary view, 393
- floating-point data types
 - native, 454–456
 - arithmetic operations, 455–456
- flushing buffer cache, 459
- FOR loop, in MODEL clause, 444
- frequency, in calendaring
 - expression, 105

FROMUSER parameter, for imp utility, 72
 full database backup, 371
 FULL parameter
 for exp and expdp, 66
 for imp and impdp, 71
 full workload, for SQL Access Advisor, 334–335
 fully qualified names, 315
 for ASM, 291

G

GATHER_DATABASE_STATS program, 165, 322
 GATHER_DATABASE_STATS_JOB_PROC procedure, 319
 GATHER_DICTIONARY_STATS program, 165, 322
 GATHER_FIXED_OBJECTS_STATS procedure, 166
 GATHER_SCHEMA_STATS program, 165, 322
 GATHER_*_STATS procedures, 323
 GATHER_STATS_JOB job, 164, 319
 GATHER_SYSTEM_STATS procedure, 166
 GCS_SERVER_PROCESSES parameter, 492
 General Purpose database, 5
 GET_FILE procedure, 215, 218
 GET_SCHEDULER_ATTRIBUTE procedure, 111
 GET_TASK_REPORT procedure, 174, 175, 254–255
 GET_TASK_SCRIPT procedure (DBMS_ADVISOR), 174
 GET_THRESHOLD procedure, 155
 global attributes for scheduler, 110–113
 viewing defined, 123
 global indexes, 222
 global scripts, 367

GLOBAL_CONTEXT_POOL_SIZE parameter, 496
 glogin.sql file, 487
 GRANULARITY parameter, 323
 grid computing, 2
 grid control
 for database management, 7
 for Enterprise Manager, 18
 group outer join, 433–435
 Growth Trend Report, 263, 268, 269, 270
 segment analysis, 270
 guaranteed undo retention, 397
 Guess-Data Block Access (Guess-DBA) values, 222

H

hash clusters, sorted, 257, 276–279, 315
 hash-partitioned global indexes, 224–225, 240, 241
 creation, 225–226
 maintenance, 226–229
 using, 230
 hash partitioning, 196
 hash_join_enabled parameter, 493
 HELP parameter
 for exp and expdp, 66
 for imp and impdp, 71
 high-load SQL, ADDM identification of, 325, 325
 high redundancy, 9, 296, 299
 historical statistics, 135–136
 history, of optimizer statistics, 168–170
 home directory, 4
 cloning, 22–23

I

idle timeout, setting, 181
 IGNORE NAV option in SQL, 446

IGNORE parameter, for imp utility, 72
 image copies of datafiles, creation, 370–371
 imp utility, vs. impdp utility, 70–74
 impdp utility, 57, 61, 69–75
 import transformations, 74–75
 in-memory statistics collection area in AWR, 137
 INCLUDE parameter, 77–78
 for expdp utility, 68
 for impdp utility, 74
 incomplete names for ASM, 293
 incremental backup, fast, 363–366
 index organized tables (IOTs), 220, 222
 indexes, 224–232
 local-partitioned, 222–223
 maintenance to enforce security policies, 418
 partition storage characteristics, 224–231
 removing from recycle bin, 389
 skipping unusable, 224
 INDEXFILE SHOW parameter, for imp utility, 73
 initDB.ora file, 41
 initialization parameters, 17–18
 for ASM, 294
 changes for bigfile tablespaces, 208
 deprecated, 495–496
 new in Oracle 10g, 492–493
 obsolete, 493–494
 INSERT operations
 and range-partitioned global indexes, 225
 with SQL MERGE, 427
 omitting clause from, 428–429
 unconditional, 430–431
 installing Oracle 10g, 2–13
 enhancements, 10–13, 53
 Database Configuration Assistant (DBCA) tool, 14–17

Oracle Enterprise Manager (EM), 18–23
 simplifying instance configuration, 17–18
 viewing database usage, 23–26
 exam essentials, 47–48
 with Oracle Universal Installer, 3–6
 instance parameters, 17–18
 INSTANCE_TYPE parameter, 288, 492
 INSTR function, 451
 International Oracle Users Group (IOUG), 2
 INTERRUPT_TASK procedure (DBMS_ADVISOR), 174
 interval in calendaring expression, 105
 ITERATE option in MODEL clause, 448

J

JAccelerator, 12
 Java libraries, 12
 Java pool, 157
 job classes, 97
 job instance, 105
 JOB_ACTION parameter, for CREATE_JOB procedure, 103
 JOB_CLASS parameter, for CREATE_JOB procedure, 102
 JOB_NAME parameter
 for CREATE_JOB procedure, 101
 for expdp utility, 68
 jobs for scheduler, 96
 creation, 101–105
 managing, 108–109
 owned by current user, 122–123
 JOB_TYPE parameter, for CREATE_JOB procedure, 103
 join dependent expression in materialized view, 460
 join view fast refresh for materialized views, 461
 JPublisher, 12, 54

K

KEEP_MASTER parameter, for expdp utility, 68
 KILL_JOB parameter, for Data Pump, 79

L

large pool, 157
 LARGE_POOL_SIZE parameter, for ASM instance, 289
 LDAP_DIRECTORY_ACCESS parameter, 493
 LEFT OUTER JOIN, 435
 Legato Single Server Version (LSSV), 12
 LIKE operator, 448
 limited mode, for SQL Access Advisor, 335
 Linux, runInstaller script in, 4
 listener.ora file, 38
 LOB columns
 implicit LOB conversion, 453–454
 maximum size, 483
 local-partitioned indexes, 222–223
 locking statistics, 167
 LOCK_NAME_SPACE parameter, 495
 locks, for Flashback Table operations, 396
 LOCK_TABLE_STATS procedure, 167
 log buffer, 158
 log files
 attribute for scheduler retention, 110
 for Data Pump, 62
 optimal size, 282
 LOG parameter
 for exp utility, 67
 for imp utility, 73
 LOG_ARCHIVE_CONFIG parameter, 493
 LOG_ARCHIVE_DEST_10 parameter, 353

LOG_ARCHIVE_LOCAL_FIRST parameter, 493
 LOG_ARCHIVE_START parameter, 495
 LOG_BUFFER parameter, 192, 377
 LOG_CHECKPOINT_INTERVAL parameter, 281
 LOGFILE parameter
 for expdp utility, 67
 for impdp utility, 73
 LOG_HISTORY, 115
 login.sql file, 487
 LogMiner enhancements, 466
 log_parallelism parameter, 494
 long query warning alert, 257
 LONG_PREDICATE parameter, 418

M

main model, 447
 MAINTENANCE_WINDOW_GROUP window group, 164
 MANAGE_SCHEDULER privilege, 108, 120
 mandatory auditing, 418
 mapping, 181–184
 tables, 222
 MARK_RECOMMENDATION procedure (DBMS_ADVISOR), 174
 master control process in Data Pump, 58
 master table, 130
 for Data Pump export, 59
 materialized views, 460–463
 dependent refreshes, 461
 exam essentials, 476
 join view fast refresh, 461
 partition change tracking, 460
 refresh using trusted constraints, 461
 tuning, 462–463
 MAXDATAFILES parameter, 208
 MAX_ENABLED_ROLES parameter, 496

- MAX_IDLE_BLOCKER_TIME
parameter, 181
- MAX_IDLE_TIME parameter, 181, 193
- MAX_ROLLBACK_SEGMENTS
parameter, 161, 494
- MAXTRANS ignored, 458–459
- Mean Time to Recovery Advisor (MTTR
Advisor), 163
- measures, mapping from query
columns, 438
- memory
Automatic Shared Memory
Management (ASMM), 157–160
for Oracle 10g install, 11
PGA memory management, 33
- Memory Advisor, 172
- MERGE in SQL, 426–433
conditional updates and inserts,
429–430
DELETE clause, 431–432, 482
omitting UPDATE or INSERT clause,
428–429
unconditional inserts, 430–431
- MERGE PARTITION command, and
unusable index, 224
- Metadata API, 57
- metadata filters, for importing and
exporting, 77–79
- metrics, 145–146
- MINIMIZE LOAD clause, for BACKUP
command, 367
- MINIMIZE TIME clause, for BACKUP
command, 367
- mirroring for disk group, 296–297
- MMAN (memory manager) process,
160, 192
- MMNL (manageability monitor light)
process, 137
- MMON (manageability monitor)
process, 23, 137, 192, 315
and ADDM analysis, 147
check for tablespace space
problems, 246
- MODEL clause in SQL, 438–448
cell references, 441–444
options, 444–448
- MODIFY_SNAPSHOT_SETTINGS
procedure, 142
- MOUNT EXCLUSIVE mode, 379
- MOVE PARTITION command, and
unusable index, 224
- moving data across databases. *See also*
Data Pump
cross-platform transportable
tablespaces, 87–89
limitations, 88
steps, 88–89
external tables, 90–95
loading using, 90–91
projected columns, 94–95
unloading using, 91–94
- mts_circuits parameter, 494
- mts_dispatchers parameter, 494
- mts_listener_address parameter, 494
- mts_max_dispatchers parameter, 494
- mts_max_servers parameter, 494
- mts_multiple_listeners parameter, 494
- mts_servers parameter, 494
- mts_service parameter, 494
- mts_sessions parameter, 494
- MTTR Advisor, 163
- multi-threaded server (MTS) param-
eters, deprecation, 465
- multidimensional array
referencing multiple, 447–448
from SELECT statement, 438
-
- N**
- native floating-point data types,
454–456
arithmetic operations, 455–456
- network mode import, specifying, 76–77
- NETWORK_LINK parameter, 76
for expdp utility, 68
for impdp utility, 73

530 NLOB data type – Oracle Universal Installer (OUI)

NLOB data type, conversion between
 CLOB and, 453–454
 NLS_SORT parameter, 483
 NOLOGFILE parameter, for expdp
 utility, 68
 NOMOUNT state, for ASM
 instance, 287
 nonseed templates, 15
 nonthreshold alerts, 152
 normal mode, for SQL Tuning
 Advisor, 324
 normal redundancy, 9, 296
 NULLs, IGNORE NAV option for, 446
 NUMBER_OF_ARGUMENTS
 parameter
 for CREATE_JOB procedure, 103
 for CREATE_PROGRAM
 procedure, 97
 numeric names, for ASM, 292

O

object selection, fine-grained, 82
 object types, RMAN to backup different
 types, 369–373
 OLTP DSS systems, memory tuning, 161
 online backup mode, 368–369
 online logs for ASM, 293
 ONLINELOG template, 294
 OPEN_WINDOW procedure, 119–120
 operating system, certified versions, 4
 OPTIMAL_LOGFILE_SIZE
 column, 163
 optimizer statistics, 38, 164–170,
 318–324
 automatic gathering, 319,
 319–320, 321
 data dictionary statistics, 322–323
 on dictionary objects, 165–166
 DML table monitoring, 323–324
 enhanced query optimization,
 320–322
 history, 168–170
 locking statistics, 167
 maintaining current, 164–165
 managing, 166–170
 rule-based optimizer desupport, 324
 OPTIMIZER_DYNAMIC_SAMPLING
 parameter, 321, 326
 optimizer_max_permutations
 parameter, 494
 OPTIMIZER_MODE parameter, 324
 ORA-01502 errors, 224
 ORA-30393 error, 463
 Oracle 10g, 2
 CD distribution, 10
 companion products, 12
 Oracle Database 10g Companion
 CD, 12
 Oracle Database Quick Installation
 Guide, 3
 Oracle Enterprise Manager (EM).
See Enterprise Manager (EM)
 Oracle HTML DB, 12
 configuration options, 13
 Oracle HTTP server (OHS), 12, 54
 Oracle interMedia Image Accelerator, 12
 Oracle Managed Files (OMF), 361
 and bigfile tablespaces, 205
 Oracle Management Agent, 7, 18–19
 Oracle Management Repository, 18
 Oracle Text Knowledge Base, 12
 Oracle Universal Installer (OUI), 3–6
 Backup and Recovery options, 9, 9
 to configure disk group, 286, 286
 Database File Storage Option, 8, 8–9
 Database Management Option, 7, 7
 Database Schema Password, 10, 10
 preinstall requirements, 4
 selecting components for install, 4
 Starter Database options, 5, 5–6
 support for new features, 6–7
 verifying requirements, 3

ORACLE_DATAPUMP driver, 90
 to unload data, 91–94
 \$ORACLE_HOME/assistants/dbca/templates directory, 15
 ORACLE_LOADER driver, 90
 oracle_trace_collection_name parameter, 494
 oracle_trace_collection_path parameter, 494
 oracle_trace_collection_size parameter, 494
 oracle_trace_enable parameter, 494
 oracle_trace_facility_name parameter, 494
 oracle_trace_facility_path parameter, 494
 oratab file, upgrades and, 28
 ORB n background process, 285
 ORDER BY clause, 276–277
 _O_RELEASE variable, 488
 OUI. *See also* Oracle Universal Installer (OUI)
 out of space
 resumable space allocation and, 459
 for undo tablespace, 257
 OUT_ARGUMENT parameter, for DEFINE_PROGRAM_ARGUMENT procedure, 99
 outer join, partitioned, 433–435
 with analytic functions, 435–438
 _O_VERSION variable, 488
 OWNER parameter, for exp utility, 67

P

PARALLEL parameter
 for Data Pump, 79
 for expdp utility, 68
 parallel query (PQ) processes, in Data Pump, 58
 PARALLEL_AUTOMATIC_TUNING parameter, 496
 PARALLEL_SERVER parameter, 495
 PARALLEL_SERVER_INSTANCES parameter, 495
 parameter file, copying for database upgrade, 41
 PARAMETERFILE template, 295
 PARFILE parameter
 for exp and expdp, 66
 for imp and impdp, 71
 PARTIAL clause, for BACKUP command, 367
 partial workload, for SQL Access Advisor, 334–335
 PARTITION BY clause, 433
 partition change tracking, for materialized views, 460
 partitioned outer join in SQL, 433–435, 482
 with analytic functions, 435–438
 partitioning, 219–223
 for ASM, 285
 index organized tables (IOTs), 220, 222
 maintenance, with EM Database Control, 219–220, 220
 methods, 196
 partitions, mapping from query columns, 438
 partition_view_enabled parameter, 494
 passwords, database schema, 10
 PCTFREE, 315
 PCTUSED, 315
 performance
 of bitmap indexes, 231
 mixed disk drives and, 303
 performance statistics, 134–146
 from Automatic Workload Repository, 135–144
 Active Session History, 137–138
 baseline creation, 140–141
 changing snapshot settings, 142–143

- dropping baselines, 141
 - dropping snapshots, 139–140
 - snapshot creation, 138–139
 - viewing reports, 143–144
 - base statistics, 145–146
 - diagnosing, 146–157
 - with Automatic Database Diagnostic Monitor, 147–151, 148
 - with server-generated alerts, 151–156
 - permissions, for Data Pump, 61
 - Personal Edition, 4
 - PGA_AGGREGATE_TARGET parameter, 321–322
 - PL/SQL
 - enhancements, 499
 - new packages, 500–501
 - PL/SQL compiler, 498–499
 - PLAN_TABLE table, 320, 350
 - platforms, transporting tablespaces across, 88–89
 - plsql_block program, for scheduler, 97
 - PLSQL_CODE_TYPE parameter, 493, 498
 - PLSQL_COMPILER_FLAGS parameter, 496, 498
 - PLSQL_DEBUG parameter, 493, 498
 - plsql_native_c_compiler parameter, 494
 - plsql_native_linker parameter, 494
 - plsql_native_make_file_name parameter, 494
 - plsql_native_make_utility parameter, 494
 - PLSQL_OPTIMIZE_LEVEL parameter, 493, 498
 - PLSQL_WARNINGS parameter, 493
 - point-in-time recovery, 395
 - positional cell references, 442
 - predefined variables in SQL*Plus, 488
 - priority for windows, 118
 - _PRIVILEGE variable, 488
 - proactive tablespace monitoring, 245–257
 - Database Control to edit thresholds, 246, 247, 249, 251
 - space usage monitoring, 245–246
 - profile files, changes to calls, 487
 - program for scheduler, 96
 - creating, 97–99
 - managing, 109–110
 - Program Global Area (PGA) Advisor, 172
 - PROGRAM_ACTION parameter, for CREATE_PROGRAM procedure, 97
 - PROGRAM_NAME parameter
 - for CREATE_JOB procedure, 101
 - for CREATE_PROGRAM procedure, 97
 - for
 - DEFINE_PROGRAM_ARGUMENT procedure, 98
 - PROGRAM_TYPE parameter, for CREATE_PROGRAM procedure, 97
 - projected columns in external tables, 94–95
 - PURGE command, 389, 406
 - PURGE INDEX command, 389
 - PURGE TABLE command, 389
 - PURGE_LOG procedure, 115–116
 - PUT_FILE procedure, 215, 217–218
-
- Q**
- query optimizer, 164
 - QUERY parameter, 77
 - for exp and expdp, 66
 - for imp and impdp, 72
 - querying recycle bin, 386–388
 - QUICK_TUNE procedure (DBMS_ADVISOR), 174
 - quote operator in SQL, 457–458

R

- range-partitioned global indexes, 224, 241
- Rapid Application Development, 12
- RATIO method, 185
- raw disk devices, 9, 286
- RBAL background process, 285
- Real Application Clusters (RAC)
 - environment, SYSAUX
 - tablespace in, 197
- real data dictionary tables, statistics on, 322
- rebalancing
 - automatic, 284
 - dynamic, 297
- RECOVER COPY OF DATAFILE command, 407
- Recovery Manager (RMAN), 352
 - automatic channel failover, 367
 - compressed, 373–375
 - COMPRESSED keyword, 373
 - for different object type backups, 369–373
 - datafile and control file, 372–373
 - full database backup, 371
 - image copies, 370–371
 - individual tablespace, 372
 - dropping database, 366–367
 - duration, 367
 - enhanced scripting, 367
 - for flash recovery area backup, 358
 - partial backup options, 367
 - SWITCH DATABASE, 376
 - throttling, 367
- recovery of data, 375–376
 - with incrementally updated backup, 361–363
 - with RESETLOGS, 376
- recycle bin, 384, 406
 - bypassing, 389
 - exam essentials, 399
 - limitations, 390
 - querying, 386–388
 - retrieving dropped tables from, 384–386, 386
 - space reclamation, 388–389
- Red Hat Advanced Server 2.1, 4
- Redo Logfile Size Advisor, 244, 280–282
- redundancy, 9, 296
- reference models in MODEL clause, 447–448
- refresh using trusted constraints, for materialized views, 461
- REGEXP_INSTR function, 451
- REGEXP_LIKE function, 448–451
- REGEXP_REPLACE function, 452
- REGEXP_SUBSTR function, 452–453
- regular expressions in SQL, 448–453, 483
 - exam essentials, 476
- REMAP_DATAFILE parameter, for impdp utility, 73, 74
- REMAP_SCHEMA parameter, for impdp utility, 73, 74–75
- REMAP_SCHEMAS parameter, for impdp utility, 72
- REMAP_TABLESPACE parameter, for impdp utility, 73, 75
- REMOVE_WINDOW_GROUP_MEMBERS procedure, 120
- repeat_interval, 105
- REPEAT_INTERVAL parameter
 - for CREATE_JOB procedure, 103
 - for CREATE_SCHEDULE procedure, 100
- REPLACE function, 452
- RESET_JOB_ARGUMENT_VALUE procedure, 108
- RESETLOGS recovery option, 375
- resource allocation method, changing, 185
- resource group, viewing for currently running job, 122

- response file for silent install, 12
- RESTORE DATABASE command
(RMAN), 376
- RESTORE_* procedures, for
statistics, 170
- resumable space allocation, 459
- RESUMABLE_TIMEOUT parameter,
459, 483, 493
- RESUME_TASK procedure
(DBMS_ADVISOR), 174
- RETENTION GUARANTEE
clause, 161
- REUSE_DATAFILES parameter, for
impdp utility, 72
- reverse-key global index, 225
- REWRITE_OR_ERROR, 463
- RIGHT OUTER JOIN, 435
- RMAN. *See* Recovery Manager
(RMAN)
- RMAN archivelog backup piece, 294
- RMAN BACKUP RECOVERY AREA
command, 407
- RMAN datafile backup piece, 293
- RMAN datafile copy, 294
- RMAN incremental backup piece, 294
- ROWID format, 197
- ROWID management
for bigfile tablespaces, 206–207
segment shrink and, 259, 316
- ROW_LOCKING parameter, 161, 494
- rules in MODEL clause, AUTOMATIC
ORDER clause, 444–446
- runInstaller script, 3
in Unix, 4
- RUN_JOB procedure, 108
- RVWR background process, 377
- managing, 110
viewing information about, 123
- SCHEDULE_NAME parameter
for CREATE_JOB procedure, 101
for CREATE_SCHEDULE
procedure, 100
- Scheduler, 95–123
advanced components, 114–120
administrator privileges, 120
job classes, 114–116
windows and window groups,
117–120
calendar expressions, 105–106
concepts, 96–97
exam essentials, 125
job creation, 101–105
program creation, 97–99
querying data dictionary, 121–123
schedule creation, 99–101
using, 107–113
administering components,
107–110
setting attributes, 110–113
- SCHEDULER_ADMIN role, 120
- Schema mode, for Data Pump, 63
- schemas, 6
- SCHEMAS parameter
for expdp utility, 67
for impdp utility, 72
- SCN_TO_TIMESTAMP function, 397
- SEC_RELEVANT_COLS
parameter, 412
- security, 411–426
auditing, 418–426
fine-grained, 419–422
uniform audit trail, 422–426
virtual private database, 411–418
column-level, 412–416
enhancements, 418
policy types, 416–417
- seed database, 14
-
- S**
- saved schedules, 104
- schedule, 96
creation, 99–101

- seed templates, 15
- Segment Advisor, 172, 244, 257, 263, 263–276, 316
 - implementing recommendations, 275–276
 - options, 265
 - within PL/SQL, 272–273
 - selecting tablespaces for, 264
 - for table analysis, 273–275
 - task summary, 266
- segment management, 257–279
 - Segment Advisor, 263, 263–276
 - segment shrink, 257–261
- Segment Resource Estimation, 263, 270
- segment shrink, 257–261, 258, 315, 316
 - and compression, 258
 - restrictions and considerations, 259
 - SQL commands and, 259–261
- SELECT statement (SQL), 92
- SERIALIZABLE parameter, 161
- server-generated alerts, 151–156
 - architecture, 152
 - exam essentials, 186
- SERV_MOD_ACT_STAT_DISABLE procedure, 473
- SERV_MOD_ACT_STAT_ENABLE procedure, 473
- SERV_MOD_ACT_TRACE_DISABLE procedure, 471
- SERV_MOD_ACT_TRACE_ENABLE procedure, 471
- session switchback, automatic, 180–181
- SESSION_TRACE_DISABLE procedure, 471
- SESSION_TRACE_ENABLE procedure, 471
- SET_ATTRIBUTE procedure, 111–113, 115
- SET_ATTRIBUTE_NULL procedure, 113
- SET_INITIAL_CONSUMER_GROUP package, 182
- SET_JOB_ARGUMENT_VALUE procedure, 104
- SET_TASK_PARAMETER procedure (DBMS_ADVISOR), 174, 273
- SET_THRESHOLD procedure, 155, 252–254
- setup.exe, 3
- SGA (Shared Global Area), 134
- SGA_MAX_SIZE parameter, 158
- SGA_TARGET parameter, 157, 192, 193, 493
 - setting to zero, 160
- shadow process in Data Pump, 58
- shared context-sensitive policy type, for virtual private database, 417
- Shared Global Area (SGA), 134
- shared memory structures, automating management of, 157
- shared pool, 157
- shared-static policy type, for virtual private database, 417
- SHARED_SERVERS parameter, 464–466
- SHARED_SERVER_SESSIONS parameter, 483
- SHOW command, 489
- SHOW RECYCLEBIN command, 387, 489
- shutdown
 - for ASM instance, 289–290
 - for database, 41
- silent install of Oracle, 12
- silent upgrade, 40
- simplified install, 11
- sizing redo log files, 280–282
- SKIP_UNUSABLE_INDEXES parameter, 224, 240, 493
 - for imp and impdp, 72
- slave processes, setting maximum for scheduler, 110
- smallfile tablespaces, size limits, 204
- SMTP_OUT_SERVER parameter, 493
- “Snapshot too old” error, 257

- snapshots
 - changing settings, 142–143
 - creation, 138–139
 - dropping, 139–140
- Solaris 2.8, 4
- sorted hash clusters, 257, 276–279, 315
- space management, 245–282
 - with DBMS_SERVER_ALERT, 252–257
 - EXPAND_MESSAGE procedure, 256
 - GET_TASK_REPORT procedure, 254–255
 - SET_THRESHOLD procedure, 252–254
 - proactive tablespace monitoring, 245–257
 - Database Control to edit thresholds, 246, 247, 249, 251
 - space usage monitoring, 245–246
 - Redo Logfile Size Advisor, 280–282
 - segment management, 257–279
 - Segment Advisor, 263, 263–276
 - segment shrink, 257–261
 - sorted hash clusters, 276–279
 - Undo Advisor, 279–280, 280, 281
 - undo tablespace monitoring, 257
- SPFILE, 288
- spfileDB.ora file, 41
- SPLIT PARTITION command, and unusable index, 224
- SPOOL command, 487
- SQL
 - ADDM identification of high-load, 325, 325
 - case- and accent-insensitive queries, 456–457
 - to configure Flashback Database, 378–379
 - data types, 453–457
 - implicit LOB conversion, 453–454
 - native floating-point, 454–456
 - exam essentials, 476
 - and flash recovery area, 354–355
 - MERGE improvements, 426–433
 - conditional updates and inserts, 429–430
 - DELETE clause, 431–432
 - omitting UPDATE or INSERT clause, 428–429
 - unconditional inserts, 430–431
 - MODEL clause, 438–448
 - cell references, 441–444
 - options, 444–448
 - partitioned outer join, 433–435
 - quote operator, 457–458
 - regular expressions, 448–453
- SQL Access Advisor, 171, 318, 334–339, 349
 - exam essentials, 343
 - Recommendation Options page, 336
 - recommended action, 339
 - Review page, 338
 - Schedule page, 337
 - Workload Source page, 335
- SQL files for Data Pump, 62
- SQL Optimizer, 32
- SQL profiling, 349, 350
 - longevity of, 327
- SQL Tuning Advisor, 171, 318, 324–333, 350
 - access path analysis, 326–327
 - exam essentials, 342
 - initialization parameters, 333
 - SQL profiling, 326
 - SQL structure analysis, 327–328
 - statistics analysis, 326

- using, 328–333
 - and DBMS_SQLTUNE package, 332–333
 - and EM Database Control, 328–330, 329, 330, 331
- SQL Tuning Set (STS), 328
- SQLFILE parameter, for impdp utility, 73
- sqlnet.ora file, 464
- SQL*Plus utility
 - for database upgrade, 40–43
 - DESCRIBE command, 486
 - to invoke ADDM report, 149
 - invoking, 489–490
 - predefined variables, 488
 - PRINT command, 275
 - profile files, 487
 - SHOW command, 489
 - SPOOL command, 487
 - whitespace in file names, 487
- _SQLPLUS_RELEASE variable, 488
- SQLTUNE_CATEGORY parameter, 333, 493
- standard auditing, 418
- Standard Edition, 4
- START_DATE parameter
 - for CREATE_JOB procedure, 103
 - for CREATE_SCHEDULE procedure, 100
- Starter Database options, 5–6
- START_JOB parameter, for Data Pump, 79
- startup for ASM instance, 289–290
- STARTUP UPGRADE option, 43–44, 54
- stateful alerts, 152
- stateless alerts, 152, 192
- STATEMENT_TYPES parameter, 418
- static policy type, for virtual private database, 417
- statistics, 193. *See also* optimizer statistics; performance statistics
 - aggregation, 467, 472–474, 483
- STATISTICS_LEVEL initialization parameter, 136, 150, 192, 323–324, 349
 - and ASMM, 157
 - resizing, 158
- STATSPACK program, 134
- STATUS parameter
 - for Data Pump, 79
 - for expdp utility, 67
 - for impdp utility, 72
- STOP_JOB parameter, for Data Pump, 79
- STOP_JOB procedure, 108
- storage management. *See* Automatic Storage Management (ASM)
- stored_procedure program, for scheduler, 97
- streams pool, 158
- STREAMS_POOL_SIZE parameter, 493
- SUBSTR function, 452
- Sun platforms, 4
- SuSE SLES-7, 4
- SWITCH DATABASE command (RMAN), 376
- SWITCH_TIME parameter, 193
- SWITCH_TIME_IN_CALL parameter, 180, 193
- symbolic cell references, 442–443
- SYSAUX tablespace, 13, 14, 196, 197–204, 241
 - attributes, 41
 - contents, 199–200
 - creation, 36, 198–199
 - dos and don'ts, 204
 - EM to view, 201
 - exam essentials, 232
 - image copy in flash recovery area, 370

538 SYSDBA system privilege – tkprof utility

occupants after move operation, 203
 out of space, 143
 relocating occupants, 200–204
 SYSDBA system privilege, 349
 SYSOPER users, 288
 system statistics, 166
 SYSTEM tablespace, 196, 197
 as default permanent tablespace, 214
 image copy in flash recovery area, 370

T

Table mode for Data Pump, 63
 TABLE_EXISTS_ACTION parameter,
 for impdp utility, 72
 tables
 removing from recycle bin, 389
 retrieving dropped from recycle bin,
 384–386, 386
 updates, and bitmap index size, 231
 TABLES parameter
 for exp and expdp, 67
 for imp and impdp, 72
 Tablespace mode, for Data Pump, 63
 tablespaces, 196–218. *See also* SYSAUX
 tablespace
 bigfile tablespaces, 204–211
 creation, 205–206
 data dictionary changes, 208
 DBVERIFY use with, 208–210
 initialization parameter
 changes, 208
 ROWID management, 206–207
 copying using database server,
 215–218
 default permanent, creation, 214–215
 exam essentials, 232
 excluding from Flashback
 Database, 383
 individual backup of, 372
 proactive monitoring, 245–257
 Database Control to edit
 thresholds, 246, 247, 249, 251
 space usage monitoring, 245–246
 renaming, 213–214
 temporary tablespace groups,
 210–213
 assigning to users, 212
 creating and dropping, 211,
 211–212
 data dictionary views, 213
 TABLESPACES parameter
 for exp and expdp, 67
 for imp and impdp, 72
 temp files for ASM, 293
 TEMPFILE template, 295
 templates
 alias file name with, 292
 for ASM file types, 293–295
 for DBCA, 14–15
 incomplete names with, 293
 temporary tablespace, 197
 temporary tablespace groups, 210–213,
 240, 241
 assigning to users, 212
 creating and dropping, 211, 211–212
 data dictionary views, 213
 testing environment, flushing buffer
 cache for consistency, 459
 threshold levels
 setting, 154–156
 and triggered alerts, 151
 throughput metric, 147
 time frame, for backup operation, 367
 time mapping, 397
 time model statistics, 145
 time zone, default, for scheduler, 110
 TIMESTAMP_TO_SCN function, 397
 tkprof utility, 467

tnsnames.ora file, 464
TO_BINARY_DOUBLE function, 456
TO_BINARY_FLOAT function, 455
TOUSER parameter, for imp utility, 73
tracing, 467–474
 with DBMS_MONITOR, 469–470
 end-to-end application, 467
 end-to-end application with EM, 468
 with trcsess utility, 471–472
Transaction Processing database, 5
transaction rollback monitoring,
 466–467
TRANSACTION_AUDITING
 parameter, 161, 495
TRANSFORM parameter for impdp
 utility, 73, 75
Transport tablespace mode for Data
 Pump, 63
transportable tablespaces,
 cross-platform, 87–89
 limitations, 88
 steps, 88–89
TRANSPORT_DATAFILES parameter
 for impdp utility, 72
TRANSPORT_FULL_CHECK
 parameter for expdp utility, 67
TRANSPORT_TABLESPACES
 parameter
 for exp and expdp, 67
 for imp and impdp, 72
 for impdp utility, 77
trcsess utility, 467, 471–472
trend analysis, 136
TRUNCATE PARTITION
 statement, 460
trusted constraints, refresh using, 461
TS_TYPE_IN parameter, 207
TTS_FULL_CHECK parameter, for exp
 utility, 67
tuning mode, for SQL Tuning
 Advisor, 325

U

unconditional inserts with SQL
 MERGE, 430–431
Undo Advisor, 161, 162, 172, 244,
 279–280, 280, 281
undo retention
 automatic, 160–163
 guaranteed, 397
undo tablespace, 197
 alerts, 315
 monitoring, 257
UNDO_RETENTION parameter,
 160, 397
UNDO_SUPPRESS_ERRORS
 parameter, 161
undo_suppress_errors parameter, 495
uniform audit trail, 422–426, 482
United Linux 1.0, 4
Unix
 dbca executable, 13
 runInstaller script in, 4
unloading using external tables, 91–94
UNLOCK_TABLE_STATS
 procedure, 167
UPDATE operations with
 SQL MERGE, 427
 omitting clause from, 428–429
UPDATE_TASK_ATTRIBUTES pro-
 cedure (DBMS_ADVISOR), 174
upgrading database, 26–46
 performing upgrade, 35–46
 downgrading database, 44
 manual upgrade, 40–43
 using DBUA, 36–38
 using DBUA command line, 39–40
 real world scenario, 44–46
SYSAUX tablespace creation
 when, 198
upgrade-supported releases, 27–28
validating database before, 28–34

540 user quota – V\$SYSAUX_OCCUPANTS dynamic performance view

user quota, and dropped tables, 406

_USER variable, 488

users

access to ASM instance, 288

education on new features, 391

temporary tablespace group

assignment to, 212

USERS tablespace, threshold levels

for, 249

USER_TABLESPACES dictionary

view, 208

USING ENFORCED CONSTRAINTS

clause, 461

USING TRUSTED CONSTRAINTS

clause, 461

utilrp.sql script, 36

utlu101i.sql utility, 28, 40, 42–43, 54

V

V&INSTANCE_RECOVERY view,
282, 283

V\$ACTIVE_SESSION_HISTORY
view, 138

V\$ALERT_TYPES dictionary view, 152

validating database before upgrade,
28–34

V\$ASM_ dynamic performance
views, 290

V\$ASM_DISK view, 297

V\$ASM_DISKGROUP view, 298

V\$ASM_OPERATION VIEW, 301

V\$BLOCK_CHANGE_TRACKING
dynamic performance view, 366

V\$CLIENT_STATS view, 473

V\$DATABASE view, 240, 406

V\$DATAFILE view, 240, 291, 379

verifying copied datafiles, 217

VERSION parameter, for expdp
utility, 68

V\$FAST_START_SERVER view, 466

V\$FAST_START_TRANSACTIONS
view, 466, 483

V\$FLASHBACK_DATABASE_LOG
parameter, 382

V\$FLASHBACK_DATABASE_STAT
parameter, 382–383

V\$FLASHBACK_DATABASE_STAT
view, 407

viewing reports in AWR, 143–144

views. *See* data dictionary views; *specific
names of views*

V\$INSTANCE_RECOVERY view, 163

Virtual Private Database (VPD),

411–418

column-level, 412–416

enhancements, 418

exam essentials, 476

policy types, 416–417

and recycle bin, 390

V\$MTTR_TARGET_ADVICE

dictionary view, 163

V\$RECOVERY_FILE_DEST dynamic
performance view, 358

V\$SERVICE_STATS view, 473

V\$SERV_MOD_ACT_STATS view,
473

V\$SESSION view, 135

V\$SESS_TIME_MODEL dictionary
view, 145

V\$SGA_CURRENT_RESIZE_OPS
view, 160

V\$SGA_DYNAMIC_COMPONENTS
view, 160

V\$SGA_DYNAMIC
_FREE_MEMORY view, 160

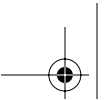
V\$SGA_DYNAMIC_COMPONENTS
dictionary view, 158

V\$SGA_RESIZE_OPS view, 160

V\$STATISTICS_LEVEL view, 136

V\$SVCMETRIC view, 473

V\$SYSAUX_OCCUPANTS dynamic
performance view, 199, 203



V\$\$SYS_TIME_MODEL dictionary
view, 145
V\$\$TRANSPORTABLE_PLATFORM
view, 87

W

warning level for disk space
usage, 245
Welcome to the Oracle Database 10g
installation screen, 11

WHEN MATCHED THEN UPDATE
clause, with SQL MERGE, 431–432
whitespace in file names, 487
Windows, 4
windows and window groups, 97,
117–120
viewing, 123
worker process in Data Pump, 58

X

XTRANSPORT template, 295

