Index

Symbols	Advisor (continued)
.trm files, 7-8	Undo, 14-8 AFTER SUSPEND trigger
	agent
abort response, 34-12	aggregate functions
two-phase commit, 34-12	statement transparency in distributed
accounts	databases, 32-29
creating for materialized views, 38-5	alert log, 7-7
DBA operating system account, 1-21	about, 6-2
adaptive query optimization	size of, 6-3
adaptive plans, 7-42	using, 6-2
adaptive query plans, 7-42	viewing, 7-40
ADD LOGFILE clause	when written, 6-5
ALTER DATABASE statement, 9-13	alert thresholds
ADD LOGFILE MEMBER clause	setting for locally managed tablespaces, 18-3
ALTER DATABASE statement, 9-13	alerts
adding	server-generated, 6-6
columns, 19-62	tablespace space usage, 18-3
columns in compressed tables, 19-62	threshold-based, 6-6
ADMIN_TABLES procedure	viewing, 18-5
DBMS_REPAIR package, 24-2	ALL_DB_LINKS view, 32-19
example, 24-9	allocation
ADMINISTER_RESOURCE_MANAGER system	extents, 19-61
privilege, 26-31	ALTER CLUSTER statement
administering	ALLOCATE EXTENT clause, 21-7
the Scheduler, 29-1	using for hash clusters, 22-11
administration	using for index clusters, 21-7
distributed databases, 32-1	ALTER DATABASE statement
administrative user accounts, 1-22	ADD LOGFILE clause, 9-13
SYS, 1-21	ADD LOGFILE MEMBER clause, 9-13
SYSBACKUP, 1-21	ARCHIVELOG clause, 10-5
SYSDG, 1-21	CLEAR LOGFILE clause, 9-18
SYSKM, 1-21	DATAFILEOFFLINE DROP clause, 12-9
administrator passwords, synchronizing password	DROP LOGFILE clause, 9-16
file and data dictionary, 1-45	DROP LOGFILE MEMBER clause, 9-16
ADR	NOARCHIVELOG clause, 10-5
See automatic diagnostic repository	RENAME FILE clause, 12-16
ADR base, 7-11	UNRECOVERABLE DATAFILE clause, 9-18
ADR home, 7-11	ALTER INDEX statement
ADRCI utility, 7-11	COALESCE clause, 20-10
advanced index compression, 20-20	ALTER SEQUENCE statement, 23-17
advanced row compression, 19-8	ALTER SESSION statement
Advisor	ADVISE clause, 35-8
Data Repair, 7-3	CLOSE DATABASE LINK clause, 33-2

ALTER SESSION statement (continued)	ANALYZE statement (continued)
Enabling resumable space allocation, 18-11	validating structure, 17-5, 24-4
ALTER SYSTEM FLUSH FLASH_CACHE, 4-31	analyzing schema objects, 17-4
ALTER SYSTEM statement	analyzing tables
ARCHIVE LOG ALL clause, 10-6	distributed processing, 33-6
DISABLE DISTRIBUTED RECOVERY	AND condition
clause, 35-22	for simple subquery materialized views, 36-19
ENABLE DISTRIBUTED RECOVERY clause,	APPEND hint, 19-11
35-22	application development
enabling Database Resource Manager, 26-39	distributed databases, <i>31-41</i> , <i>33-1</i> , <i>33-10</i>
SET RESOURCE_MANAGER_PLAN, 26-39	application development for distributed
SET SHARED_SERVERS initialization	databases, 33-1
parameter, 3-12	analyzing execution plan, 33-8
SWITCH LOGFILE clause, 9-17	database links, controlling connections, 33-2
ALTER TABLE statement	handling errors, 33-2, 33-10
ALLOCATE EXTENT clause, 19-61	handling remote procedure errors, 33-10
DEALLOCATE UNUSED clause, 19-61	managing distribution of data, 33-1
DISABLE ALL TRIGGERS clause, 17-12	
	managing referential integrity constraints, 33-2
DISABLE integrity constraint clause, 17-18 DROP COLUMN clause, 19-64	
•	terminating remote connections, 33-2
DROP integrity constraint clause, 17-19	tuning distributed queries, 33-3
DROP UNUSED COLUMNS clause, 19-65	tuning using collocated inline views, 33-4
ENABLE ALL TRIGGERS clause, 17-12	using cost-based optimization, 33-5
ENABLE integrity constraint clause, 17-18	using hints to tune queries, 33-7
external tables, 19-146	archived redo log files
modifying index-organized table attributes,	alternate destinations, 10-14
19-134	archiving modes, 10-5
MOVE clause, 19-58–19-60, 19-134	data dictionary views, 10-20
reasons for use, 19-57	destination availability state, controlling, <i>10-14</i>
SET UNUSED clause, 19-65	destination status, 10-13
ALTER TABLESPACE statement	destinations, groups, 10-11
adding an Oracle managed data file, example,	destinations, specifying, 10-7
15-18	failed destinations and, 10-15
adding an Oracle managed temp file,	mandatory destinations, 10-16
example, 15-19	multiplexing, 10-7
ONLINE clause, example, 11-24	normal transmission of, 10-14
READ ONLY clause, 11-25	re-archiving to failed destination, 10-18
RENAME DATAFILE clause, 12-14	sample destination scenarios, 10-17
ALTER TRIGGER statement	standby transmission of, 10-14
DISABLE clause, 17-12	status information, 10-20
ENABLE clause, 17-12	transmitting, 10-14
altering	ARCHIVELOG mode, 10-3
(Scheduler) windows, 28-76	advantages, 10-3
event schedule, 28-41	archiving, 10-2
event-based job, 28-40	automatic archiving in, 10-3
indexes, 20-24	definition of, 10-3
job classes, 28-72	distributed databases, 10-3
jobs, 28-19	enabling, 10-5
programs, 28-28	manual archiving in, 10-3
schedules, 28-31	running in, 10-3
ANALYZE statement	switching to, 10-5
CASCADE clause, 17-5	taking data files offline and online in, 12-9
CASCADE clause, FAST option, 17-5	archiver process (ARCn), 3-29
corruption reporting, 24-5	trace output (controlling), 10-19
listing chained rows, 17-6	archiving
remote tables, 33-6	alternate destinations, 10-14

archiving <i>(continued)</i> changing archiving mode, 10-5	В
controlling number of processes, <i>10-7</i>	background processes, 3-29
destination availability state, controlling, 10-14	FMON, <i>12-24</i>
destination failure, 10-15	BACKGROUND_DUMP_DEST initialization
destination status, 10-13	parameter, 7-6
manual, <u>10-6</u>	backups
NOARCHIVELOG vs. ARCHIVELOG mode,	effects of archiving on, 10-3
10-2	big table cache, 4-4
setting initial mode, 10-5	bigfile tablespaces
to failed destinations, 10-18	altering, <u>11-37</u>
trace output, controlling, 10-19	creating, 11-9
viewing information on, 10-20	creating temporary, 11-18
attribute-clustered tables, 19-23	description, 11-8
auditing	BLOB data type, 19-34
database links, 31-29	block size, redo log files, 9-9
authentication	blockchain tables
database administrators, 1-29	about, 19-168
database links, 31-23	adding user columns, 19-179
operating system, 1-33	altering, 19-181
password files, 1-34	benefits, 19-168
selecting a method, 1-29	countersigning rows, 19-186
using password file, 1-34	creating, 19-177
auto indexes, 20-32	creating certificates, 19-181
AUTO_TASK_CONSUMER_GROUP	creating row versions, 19-179
of Resource Manager, 25-7	creating user chains, 19-180
AUTOEXTEND clause, 12-6	data dictionary views, 19-197
automatic big table cache, 4-4	delegate signing rows, 19-185
automatic diagnostic repository, 7-2, 7-6	deleting rows, 19-191
in Oracle Client, 7-11	dropping, 19-192
in Oracle Clusterware, 7-11	dropping user columns, 19-179
in Oracle Real Application Clusters, 7-11	getting byte values, 19-195
structure, contents and location of, 7-11	getting bytes for hash, 19-193
automatic error mitigation, 7-66	getting bytes for signature, 19-195
automatic file extension, 12-6	hidden columns, 19-171
automatic indexes, 20-31	restrictions, 19-176
views, 20-40	retention period, 19-174
automatic indexing	retention period for rows, 19-175
about, <i>20-32</i>	signing rows, 19-183
configuring, 20-34	using for log history, 19-197
generating reports, 20-38	validating data, 19-187
how automatic indexing works, 20-33	BLOCKSIZE clause
automatic maintenance tasks, 25-1	of CREATE TABLESPACE, 11-21
assigning to maintenance windows, 25-5	
definition, 25-2	С
enabling and disabling, 25-4	<u> </u>
predefined, 25-2	caches
resource allocation, 25-8	sequence numbers, 23-21
Scheduler job names, 25-3	calendaring expressions, 28-32
automatic segment space management, 11-7	calls
automatic undo management, 14-2	remote procedure, 31-43
migrating to, 14-15	cancelling SQL statements, 3-40
	capacity planning
	space management
	capacity planning, 18-38

CASCADE clause	cloning
when dropping unique or primary keys, 17-18	a database, 1-9
CATBLOCK.SQL script, 6-10	an Oracle home, 1-9
CDB resource plans, 26-21	CLOSE DATABASE LINK clause
PDB performance profiles, 26-60, 26-69	ALTER SESSION statement, 33-2
CDBs	closing database links, 32-17
CDB resource plans	closing windows, 28-77
viewing information about, 26-77	clusters, 21-5
Database Resource Manager, 26-56	about, <i>21-1</i>
resource management, 26-3	allocating extents, 21-7
centralized user management	altering, 21-7
distributed systems, 31-25	analyzing, 17-4
certificates	cluster indexes, 21-9
creating, 19-181	cluster keys, 21-1, 21-4
chain condition syntax, 28-55	clustered tables, 21-1, 21-3, 21-6, 21-8, 21-10
chain rules, 28-55	columns for cluster key, 21-4
chain steps	creating, 21-5
defining, 28-53	data dictionary views reference, 21-11
chained rows	deallocating extents, 21-7
eliminating from table, procedure, 17-7	dropping, 21-9
chains	estimating space, <i>21-4</i> , <i>21-5</i>
creating, 28-53	guidelines for managing, 21-3
creating and managing job, 28-50	location, 21-4
creating jobs for, 28-59	privileges, 21-5, 21-7, 21-10
disabling, <u>28-61</u>	selecting tables, 21-3
dropping, 28-60	single-table hash clusters, 22-7
dropping rules from, 28-61	truncating, 17-8
enabling, 28-58	validating structure, 17-5
handling stalled, 28-65	coalescing indexes
monitoring running, 28-64	costs, <i>20-10</i>
overview, 27-11	cold backup
pausing, 28-62	performing with a detached Oracle Scheduler
running, 28-60	job, 28-15
setting privileges, 29-2	collections
steps	materialized views, 36-26
pausing, 28-62	restrictions, 36-28
skipping, <i>28-63</i>	replication, 36-26
stopping, 28-62	collocated inline views
stopping individual steps, 28-62	tuning distributed queries, 33-4
change vectors, 9-2	column objects
CHAR data type	materialized views
increasing column length, 19-61	column subsetting, 36-24
CHECK_OBJECT procedure	replication, 36-22
DBMS_REPAIR package, 24-2	column subsetting
example, <i>24-10</i>	materialized views
finding extent of corruption, 24-6	column objects, 36-24
checkpoint process (CKPT), 3-29	columns
checksums	adding, 19-62
for data blocks, 12-18	adding to compressed table, 19-62
redo log blocks, 9-17	displaying information about, 19-200
CLEAR LOGFILE clause	dropping, 19-63, 19-65
ALTER DATABASE statement, 9-18	dropping in compressed tables, 19-66
clearing redo log files, 9-18	encrypted, 19-28
client/server architectures	increasing length, 19-61
distributed databases, 31-6	invisible, 19-25
globalization support, 31-45	modifying definition, 19-61

columns (continued)	connections
renaming, 19-63	terminating remote, 33-2
virtual, <i>19-2</i>	constraints, 17-13
virtual, indexing, 20-5	deferrable, 37-11
commands	disabling at table creation, 17-17
submitting, 1-10	distributed system application development
COMMENT statement, 19-198	issues, 33-2
comments	dropping integrity constraints, 17-19
adding to problem activity log, 7-21	enable novalidate state, 17-15
commit phase, 34-10, 34-21	enabling example, 17-17
in two-phase commit, 34-12, 34-13	enabling when violations exist, 17-15
commit point site, 34-6	exceptions, 17-15, 17-20
commit point strength, 34-7, 35-2	exceptions to integrity constraints, 17-20
determining, 34-7	integrity constraint states, 17-14
distributed transactions, 34-6, 34-7	keeping index when disabling, 17-18
how the database determines, 34-7	keeping index when dropping, 17-18
commit point strength	ORA-02055 constraint violation, 33-2
definition, 34-7	renaming, 17-19
specifying, 35-2	setting at table creation, 17-16
COMMIT statement	when to disable, 17-14
FORCE clause, 35-9, 35-10	See also integrity constraints
forcing, 35-7	control files
two-phase commit and, 31-34	adding, <mark>8-5</mark>
COMMIT_POINT_STRENGTH initialization	changing size, 8-4
parameter, 34-7	conflicts with data dictionary, 8-8
committing transactions	creating, 8-1, 8-4, 8-6
commit point site for distributed transactions,	creating as Oracle Managed Files, 15-20
34-6	data dictionary views reference, 8-11
complete refresh, 36-21, 37-8	default name, 8-4
complex materialized views, 36-6, 36-8	dropping, 8-10
value for PCTUSED, 37-8	errors during creation, 8-9
components	importance of multiplexed, 8-3
srvctl component names and abbreviations,	initial creation, 8-4
2-34	location of, 8-3
compression, 38-3	log sequence numbers, 9-4
indexes, 20-18	mirroring, 8-3
advanced compression, 20-20	moving, 8-5
prefix compression, 20-19	multiplexed, 8-3
levels, 19-8	names, 8-2
tables, 19-8	number of, 8-3
adding a column, 19-62	relocating, 8-5
dropping columns in, 19-66	renaming, 8-5
tablespaces, 11-10	requirement of one, 8-1
configuring	size of, 8-3
Oracle Scheduler, 29-2	troubleshooting, 8-8
CONNECT command, SQL*Plus, 1-13, 1-15	CONTROL_FILES initialization parameter
connected user database links, 32-10	specifying file names, 8-2
advantages and disadvantages, 31-15	when creating a database, 8-4
definition, 31-14	copying jobs, 28-25
REMOTE_OS_AUTHENT initialization	core files, 7-8
parameter, 31-15	corruption
connecting	repairing data block, 24-1
with SQL*Plus, 1-12	cost-based optimization, 33-5
connection qualifiers	distributed databases, 31-44
database links and, 32-11	hints, 33-7
diagnosing problems with, 40-1	using for distributed queries, 33-5
alaginosing problems with, 70 1	

cpu resource management	CREATE UNDO TABLESPACE statement
CPU scope, 26-131	using Oracle Managed Files, 15-15
CPU_COUNT initialization parameter, 26-33	using Oracle Managed Files, example, 15-17
CREATE BIGFILE TABLESPACE statement, 11-9	using to create an undo tablespace, 14-12
CREATE BIGFILE TEMPORARY TABLESPACE	CREATE VIEW statement
statement, 11-18	about, 23-3
CREATE CLUSTER statement	OR REPLACE clause, 23-5
creating clusters, 21-5	WITH CHECK OPTION, 23-3, 23-6
example, <i>21-5</i>	CREATE_CREDENTIAL procedure, 3-36, 28-9
for hash clusters, 22-4	CREATE SIMPLE PLAN procedure
HASH IS clause, 22-4, 22-8	Database Resource Manager, 26-79, 26-82
HASHKEYS clause, 22-4, 22-9	creating
CREATE CONTROLFILE statement	chains, 28-53
about, 8-6	control files, 8-4
checking for inconsistencies, 8-8	event schedule, 28-40
NORESETLOGS clause, 8-7	event-based job, 28-39
Oracle Managed Files, using, 15-20	indexes, 20-12
RESETLOGS clause, 8-7	after inserting table data, 20-3
CREATE DATABASE LINK statement, 32-8	associated with integrity constraints,
CREATE DATABASE statement	20-15
CONTROLFILE REUSE clause, 8-4	NOLOGGING, 20-7
MAXLOGFILES parameter, 9-10	online, <i>20-17</i>
MAXLOGMEMBERS parameter, 9-10	prerequisites, 20-13
used to create an undo tablespace, 14-11	USING INDEX clause, 20-15
using Oracle Managed Files, 15-9	job classes, 28-72
using Oracle Managed Files, examples,	jobs, 28-4
15-25, 15-29	programs, 28-26
CREATE INDEX statement	Scheduler windows, 28-75
NOLOGGING, 20-7	schedules, 28-30
ON CLUSTER clause, 21-7	sequences, 23-22
with a constraint, 20-15	window groups, 28-80
CREATE SCHEMA statement	creating data files, 12-5
multiple tables and views, 17-2	creating database links, 32-6
CREATE SEQUENCE statement, 23-17	connected user, 32-11
CACHE option, 23-22	connected user scenarios, 32-32
CREATE SYNONYM statement, 23-26	current user, 32-11
CREATE TABLE statement	current user scenario, 32-33
CLUSTER clause, 21-6	examples, 31-17
creating a private temporary table, 19-38	fixed user, 32-10
creating global temporary table, 19-36	fixed user scenario, 32-31
example of, 19-34	obtaining necessary privileges, 32-7
INCLUDING clause, 19-131	private, 32-8
MONITORING clause, 19-55	public, 32-8
NOLOGGING clause, 19-7	service names within link names, 32-11
ORGANIZATION EXTERNAL clause, 19-142	shared, <i>32-12</i>
PCTTHRESHOLD clause, 19-131	shared connected user scenario, 32-32
CREATE TABLESPACE statement	specifying types, 32-7
BLOCKSIZE CLAUSE, using, 11-21	creating databases
FORCE LOGGING clause, using, 11-21	using Oracle Managed Files, 15-9
LOST WRITE PROTECTION clause, 11-47	creating sequences, 23-17
using Oracle Managed Files, 15-15	creating synonyms, 23-26
using Oracle Managed Files, examples, 15-16	creating views, 23-3
CREATE TEMPORARY TABLESPACE statement,	credentials, Oracle Scheduler
11-17 using Oracle Managed Files, 15-19	about, 27-10
using Oracle Managed Files, 15-18 using Oracle managed files, example, 15-19	granting privileges on, 27-10

critical errors	data files (continued)
diagnosing, 7-2	offline
CRSCTL utility	relocating, 12-13
Oracle Restart, 2-4	renaming, <i>12-13</i>
current user database links	online, <i>12-9</i>
advantages and disadvantages, 31-16	relocating, 12-11
cannot access in shared schema, 31-26	renaming, <u>12-11</u>
definition, 31-14	relocating, 12-10
shared schema, 31-26	renaming, 12-10
CURRVAL pseudo-column, 23-19	reusing, 12-5
restrictions, 23-20	shadow lost write protection, 11-44
cursors	size of, 12-5
and closing database links, 33-2	statements to create, 12-5
customize package page, accessing, 7-60	storing separately from redo log files, 12-5
customizing an incident package, 7-59, 7-60	verifying data blocks, 12-18
odotomizing an inoldoni paoliago, 7 00, 7 00	data manipulation language, 31-1
5	statements allowed in distributed transactions
D	31-32
data	Data Recovery Advisor, repairing data corruptions
loading using external tables, 19-142	with, 7-77
data block corruption	Data Repair Advisor, 7-3
repairing, <i>24-1</i>	database
data blocks	cloning, 1-9
	database administrators, 1-3
shadow lost write protection, 11-44	authentication, 1-29
shared in clusters, 21-1	DBA role, <i>1-24</i>
verifying, 12-18	operating system account, 1-21
data dictionary	password files for, 1-30
conflicts with control files, 8-8	responsibilities of, 1-3
purging pending rows from, 35-11, 35-12	·
data encryption	security and privileges of, 1-21
distributed systems, 31-28	security officer versus, 5-1
data file headers	task definitions, 1-5
when renaming tablespaces, 11-42	utilities for, 1-49
data files	Database Configuration Assistant
adding to a tablespace, 12-5	shared server configuration, <i>3-14</i>
bringing online and offline, 12-8	database destinations, Oracle Scheduler
checking associated tablespaces, 11-60	about, 27-8
copying using database, 12-19	creating, 28-10
creating, 12-5	Database In-Memory
creating Oracle Managed Files, 15-7, 15-23	See Oracle Database In-Memory
data dictionary views reference, 12-33	database jobs, Oracle Scheduler, 27-21
database administrators access, 1-21	database links, 32-6
default directory, 12-5	advantages, 31-10
definition, 12-2	auditing, 31-29
deleting, 11-43	authentication, 31-23
dropping, 12-9, 12-17	authentication without passwords, 31-24
dropping Oracle managed, 15-24	closing, 32-17, 33-2
file numbers, 12-2	connected user, 31-14, 31-15, 32-10, 32-32
fully specifying file names, 12-5	connections, determining open, 32-20
guidelines for managing, 12-2	controlling connections, 33-2
headers when renaming tablespaces, 11-42	creating, 32-6, 32-31–32-33
identifying OS file names, 12-15	creating shared, 32-14
location, 12-5	creating, examples, 31-17
mapping files to physical devices, 12-22	creating, scenarios, 32-31
minimum number of, 12-3	current user, 31-14, 31-16, 32-10
MISSING, 8-8	data dictionary USER views, 32-19

database links <i>(continued)</i>	database resident connection pooling (continued)
definition, 31-8	multi-pool, using, 3-26
diagnosing problems with, 40-1	triggers, 3-5
distributed queries, 31-32	Database Resource Manager
distributed transactions, 31-33	active session pool with queuing, 26-19
dropping, 32-17	administering system privilege, 26-31
enforcing global naming, 32-2	and operating system control, 26-126
enterprise users and, 31-26	automatic consumer group switching, 26-18
fixed user, 31-14, 31-16, 32-31	CDB resource plans, 26-21
global, 31-13	CDBs, 26-3, 26-56
global names, 31-10	CREATE SIMPLE PLAN procedure, 26-79,
loopback, 31-12	26-82
global object names, 31-35	data dictionary views reference, 26-130
handling errors, 33-2	description, 26-2
host name, 32-21	enabling, 26-39
incoming database links, 32-22	execution time limit, 26-19
limiting number of connections, 32-18	monitoring PDBs, 26-121
listing, 32-19, 35-3, 35-5	PDB resource plans, 26-26
loopback, <i>31-12</i>	PDBs, 26-56
managing, 32-16	resource allocation methods, 26-88
materialized view sites, 38-5	resource consumer groups, 26-7, 26-42,
minimizing network connections, 32-12	26-86
name resolution, 31-35	resource plan directives, 26-7, 26-89, 26-94
names for, 31-12	resource plans, 26-7, 26-11, 26-30, 26-39,
•	26-82, 26-96, 26-107
private, <i>31-13</i>	
public, 31-13	STATISTICS_LEVEL parameter, 26-4
referential integrity in, 33-2	undo pool, 26-19
remote transactions, 31-32, 31-33	validating plan schema changes, 26-94
resolution, 31-35	Database Smart Flash Cache, 4-30
restrictions, 31-20	flushing, 4-31
roles on remote database, 31-20	tuning, <i>4-31</i>
schema objects and, 31-18	database writer process
SCN activity, 32-23	calculating checksums for data blocks, 12-18
service names used within link names, 32-11	database writer process (DBWn), 3-29
shared, 31-9, 32-13–32-15	databases
shared SQL, 31-33	administering, 1-1
synonyms for schema objects, 31-19	administration of distributed, 32-1
tuning distributed queries, 33-3	planning, 1-7
tuning queries with hints, 33-7	renaming, 8-6, 8-7
tuning using collocated inline views, 33-4	date expressions, 37-9
types of links, 31-13	DB_BLOCK_CHECKING initialization parameter,
types of users, 31-14	24-4, 24-5
users, specifying, 32-9	DB_BLOCK_CHECKSUM initialization parameter,
using cost-based optimization, 33-5	12-18
viewing, 32-19	enabling redo block checking with, 9-17
database objects	DB_BLOCK_SIZE initialization parameter
obtaining growth trends for, 18-40	and nonstandard block sizes, 11-21
database program unit, definition, 27-1	DB_CACHE_SIZE initialization parameter
database resident connection pooling, 3-5	specifying multiple block sizes, 11-21
advantages, 3-5	DB_CACHE_SIZE parameter, 26-34
configuration parameters, 3-24	DB_CREATE_FILE_DEST initialization parameter
configuring the connection pool, 3-23	setting, 15-6
data dictionary views reference, 3-27	DB_CREATE_ONLINE_LOG_DEST_n
determining the state of, 3-28	initialization parameter
disabling, 3-22	setting, 15-6
enabling, 3-22	9,

DB_FILES initialization parameter	DBMS_RESUMABLE package, 18-14
determining value for, 12-4	DBMS_SCHEDULER
DB_nK_CACHE_SIZE initialization parameter	in-memory trace, 29-18
specifying multiple block sizes, 11-21	DBMS_SCHEDULER.GET_FILE, retrieving
DB_PERFORMANCE_PROFILE parameter,	external job stdout with, 28-17
26-61	DBMS_SERVER_ALERT package
DB_RECOVERY_FILE_DEST initialization	setting alert thresholds, 18-2
parameter	DBMS_SPACE package, 18-33
setting, 15-6	example for unused space, 18-35
DB_UNRECOVERABLE_SCN_TRACKING	FREE_BLOCK procedure, 18-35
initialization parameter, 19-47	SPACE_USAGE procedure, 18-35
DBA	UNUSED SPACE procedure, 18-35
See database administrators	DBMS_SPACE_ADMIN
DBA role, 1-24	DROP_EMPTY_SEGMENTS procedure,
DBA_2PC_NEIGHBORS view, 35-5	18-34
using to trace session tree, 35-5	MATERIALIZE_DEFERRED_SEGMENTS
DBA_2PC_PENDING view, 35-3, 35-11, 35-20	procedure, 19-32
using to list in-doubt transactions, 35-3	DBMS_SQLDIAG package, 7-47
DBA_DB_LINK view, 32-23	DBMS_TNS package, 32-21
DBA_DB_LINK_SOURCES view, 32-22, 32-23	DBMS_TRANSACTION package
DBA_DB_LINKS view, 32-19	- · · · · ·
DBA_EXTERNAL_SCN_ACTIVITY view, 32-23	PURGE_LOST_DB_ENTRY procedure,
DBA_EXTERNAL_SCN_ACTIVITY New, 32-25 DBA_REGISTERED_MVIEWS view, 36-31	35-12
DBA_REGISTERED_INVIEWS VIEW, 30-31 DBA_TYPE_VERSIONS	DBVERIFY utility, 24-4
	DDL log, 7-9
replication, 36-23	DEALLOCATE UNUSED clause, 18-33
DBMS_CREDENTIAL package, 3-36	deallocating unused space, 18-16
DBMS_FILE_TRANSFER package	DBMS_SPACE package, 18-33
copying data files, 12-18	DEALLOCATE UNUSED clause, 18-33
DBMS_JOB	debug log, 7-10
about, A-1	declarative referential integrity constraints, 33-2
moving jobs to Oracle Scheduler, A-2	dedicated server processes, 3-2
DBMS_METADATA package	trace files for, 6-2
GET_DDL function, 17-33	default temporary tablespace
using for object definition, 17-33	renaming, <i>11-42</i>
DBMS_MVIEW package, 36-31	DEFAULT_CONSUMER_GROUP for Database
EXPLAIN_MVIEW procedure, 39-5	Resource Manager, 26-54, 26-110
REFRESH procedure, 39-4	deferred segment creation
REGISTER_MVIEW procedure, 36-31	in tables, <i>19-29</i>
DBMS_PROCESS package, 3-31	indexes, 20-6
DBMS_REDEFINITION package	deferred segments
performing online redefinition with, 19-74	materializing, 19-32
DBMS_REFRESH package	defining
MAKE procedure, 39-3	chain steps, 28-53
REFRESH procedure, 39-4	deleting
DBMS_REPAIR	certificates, 19-183
logical corruptions, 24-6	dependencies
DBMS_REPAIR package	between schema objects, 17-23
examples, 24-8	displaying, 17-35
procedures, 24-2	destinations, Oracle Scheduler
using, 24-3, 24-12	about, 27-8
DBMS_RESOURCE_MANAGER package, 26-7,	creating, 28-10
26-31, 26-48	detached jobs, 27-26
procedures (table of), 26-31	creating, 28-15
DBMS_RESOURCE_MANAGER_PRIVS	DIAGNOSTIC_DEST initialization parameter, 6-2
package, <i>26-31</i>	7-6, 7- <u>11</u>
procedures (table of), 26-31	

dictionary-managed tablespaces	distributed databases (continued)
migrating SYSTEM to locally managed, 11-58	running in NOARCHIVELOG mode, 10-3
Digital POLYCENTER Manager on NetView,	scenarios, 32-31
31-30	schema object name resolution, 31-37
direct path load	security, 31-22
fast refresh, 37-8	shared schema users, 31-26
direct-path INSERT	site autonomy of, 31-22
benefits, 19-43	SQL transparency, 31-43
how it works, 19-44	transaction processing, 31-31
index maintenance, 19-48	transparency, 31-42
locking considerations, 19-49	distributed processing
logging mode, 19-46	distributed databases, 31-3
parallel INSERT, 19-45	distributed queries, 31-32
parallel load compared with parallel INSERT,	analyzing tables, 33-6
19-43	application development issues, 33-3
space considerations, 19-48	cost-based optimization, 33-5
directory objects	optimizing, 31-44
external procedures, 3-36	distributed systems
disabling	data encryption, 31-28
chains, 28-61	distributed transactions, 31-33
jobs, 28-23	case study, <i>34-18</i>
programs, 28-28	commit point site, 34-6
window groups, 28-82	commit point strength, 34-7, 35-2
windows, 28-78	committing, 34-7
disabling recoverer process, 35-22	database server role, 34-5
dispatcher process (Dnnn), 3-29	defined, 34-1
dispatcher processes, 3-16, 3-19	DML and DDL, 34-2
DISPATCHERS initialization parameter	enhancing security, 35-23
setting initially, 3-16	failure during, 35-20
distributed applications	global coordinator, 34-5
distributing data, 33-1	lock timeout interval, 35-20
distributed databases	locked resources, 35-20
administration overview, 31-21	locks for in-doubt, 35-21
application development, <i>31-41</i> , <i>33-1</i> , <i>33-10</i>	manually overriding in-doubt, 35-7
client/server architectures, 31-6	naming, 35-2, 35-8
commit point strength, 34-7	session trees, 34-3, 34-5, 34-6, 35-5
cost-based optimization, 31-44	setting advice, 35-8
direct and indirect connections, 31-6	transaction control statements, <i>34-3</i>
distributed processing, 31-3	transaction timeouts, 35-20
distributed queries, 31-32	two-phase commit, 34-18, 35-6
distributed updates, 31-32	viewing database links, 35-3
enhancing security, 35-23	distributed updates, 31-32
exclusively mapped global users, <i>31-26</i>	DML
forming global database names, 32-2	See data manipulation language
global object names, 31-20, 32-1	DML error logging, inserting data with, 19-50
globalization support, 31-45	DRCP
location transparency, 31-42, 32-24	initialization parameters, 3-21
management tools, 31-30	DRIVING_SITE hint, 33-8
managing read consistency, 35-23	DROP ALL STORAGE clause, 17-9
nodes of, 31-6	DROP CLUSTER statement
overview, 31-2	CASCADE CONSTRAINTS clause, 21-9
remote object security, 32-25	dropping cluster, 21-9
remote queries and updates, 31-32	dropping cluster index, 21-9
replicated databases and, 31-4	dropping hash cluster, 22-11
resumable space allocation, 18-9	INCLUDING TABLES clause, 21-9
running in ARCHIVELOG mode, 10-3	
,	

DROP LOGFILE clause	enabling recoverer process
ALTER DATABASE statement, 9-16	distributed transactions, 35-22
DROP LOGFILE MEMBER clause	encryption
ALTER DATABASE statement, 9-16	column, 19-28
DROP SYNONYM statement, 23-27	tablespace, 11-11
DROP TABLE statement	enterprise users
about, 19-120	definition, 31-26
CASCADE CONSTRAINTS clause, 19-120	error logging, DML
for clustered tables, 21-10	inserting data with, 19-50
DROP TABLESPACE statement, 11-43	errors
dropping	alert log and, 6-2
chain steps, 28-61	assigning names with
chains, 28-60	PRAGMA_EXCEPTION_INIT, 33-10
	-
columns	critical, 7-2
marking unused, 19-65	exception handler, 33-10
remove unused columns, 19-65	integrity constrain violation, 33-2
columns in compressed tables, 19-66	ORA-00028, 3-38
data files, 12-17	ORA-01173, 8-9
data files, Oracle managed, 15-24	ORA-01176, 8-9
database links, 32-17	ORA-01177, 8-9
job classes, 28-72	ORA-01215, 8-9
jobs, 28-22	ORA-01216, 8-9
programs, 28-28	ORA-01591, 35-21
rules from chains, 28-61	ORA-02049, <u>35-20</u>
schedules, 28-31	ORA-02050, 35-6
tables	ORA-02051, 35-6
consequences of, 19-120	ORA-02054, 35-6
temp files, <i>12-17</i>	RAISE_APPLICATION_ERROR() procedure,
Oracle managed, 15-24	33-10
window groups, 28-81	remote procedure, 33-10
windows, 28-78	rollback required, 33-2
dropping multiple jobs, 28-22	trace files and, 6-2
DUMP_ORPHAN_KEYS procedure	when creating control file, 8-9
DBMS_REPAIR package, 24-2	event message
example, <i>24-11</i>	passing to event-based job, 28-41
recovering data, 24-7	event schedule
dumps, 7-8	altering, 28-41
dynamic statistics, 7-42	creating, 28-40
,	event-based job
_	altering, 28-40
E	creating, 28-39
e-mail notifications, Scheduler, 28-91	passing event messages to, 28-41
ECID, 7-5	events
editions	using to start Scheduler jobs, 28-36
	events (Scheduler)
in CONNECT command, 1-13	overview, 28-37
managing, 17-28	example
EMPHASIS resource allocation method, 26-88	setting maximum utilization limit for plans and
empty tables	subplans, 26-102
dropping segments, 18-34	·
enabling	examples
chains, 28-58	managing parallel statement execution using
jobs, 28-24	Resource Manager, 26-104
programs, 28-29	exception handler, 33-10
window groups, 28-82	exceptions
windows, 28-79	assigning names with
	PRAGMA_EXCEPTION_INIT, 33-10

exceptions (continued)	file mapping
integrity constraints, 17-20	examples, <i>12-31</i>
user-defined, 33-10	how it works, <i>12-23</i>
executing	how to use, 12-27
remote external jobs, 29-5	overview, 12-23
execution context identifier, 7-5	structures, 12-25
execution plans	views, 12-29
analyzing for distributed queries, 33-8	file names
EXISTS condition	Oracle Managed Files, 15-8
materialized views with subqueries, 36-19	file system
EXPLAIN_MVIEW procedure, 39-5	used for Oracle managed files, 15-3
expressions, calendaring, 28-32	file watchers
extents	about, <i>28-43</i>
allocating cluster extents, 21-7	changing detection interval, 28-48
allocating for tables, 19-61	creating, 28-44
data dictionary views for, 18-36	managing, 28-48
deallocating cluster extents, 21-7	files
displaying free extents, 18-38	creating Oracle Managed Files, 15-7, 15-23
external destinations, Oracle Scheduler	filter columns, 37-4
about, 27-8	finalizing
creating, 28-10	an incident package, definition, 7-53
external jobs	FINISH_REDEF_TABLE procedure
retrieving stdout and stderr, 27-23, 27-24,	dml_lock_timeout parameter, 19-76
28-17	FIX_CORRUPT_BLOCKS procedure
external jobs, Oracle Scheduler, 27-22	DBMS_REPAIR, 24-2
external procedures	example, <i>24-11</i>
credentials, 3-36	marking blocks corrupt, 24-7
directory objects, 3-36	fixed user database links
managing processes for, 3-35	advantages and disadvantages, 31-16
external tables	creating, 32-10
altering, 19-146	definition, 31-14
creating, <i>19-142</i>	flashback data archive, 38-3
defined, 19-140	Flashback Drop
dropping, 19-157	about, <i>19-121</i>
Hadoop, <i>19-140</i>	purging recycle bin, 19-124
inline, 19-140, 19-149	querying recycle bin, 19-124
partition values in file paths, 19-158	recycle bin, 19-122
partitioned, 19-150	restoring objects, 19-125
altering, 19-157	Flashback Table
creating, <i>19-153</i>	overview, 19-119
restrictions, 19-152	flood-controlled incidents
privileges required, 19-157	defined, 7-4
querying, 19-149	viewing, 7-23
uploading data example, 19-142	FMON background process, 12-24
	FORCE clause
F	COMMIT statement, 35-9
·	ROLLBACK statement, 35-9
fast recovery area	force full database caching mode, 4-27
as archive log destination, 10-8	disabling, 4-30
with Oracle managed files, 15-5	enabling, 4-29
fast refresh, 36-5, 36-21, 37-8	prerequisites, 4-29
avoiding problems, 39-6	FORCE LOGGING
determining possibility of, 39-5	precedence of settings, 9-19
direct path load, 37-8	FORCE LOGGING clause
fault diagnosability infrastructure, 7-2, 7-5	CREATE TABLESPACE, 11-21
	force refresh. 36-21, 37-9

forcing COMMIT or ROLLBACK, 35-3, 35-7 forcing a log switch, 9-17 using ARCHIVE_LAG_TARGET, 9-11 with the ALTER SYSTEM statement, 9-17 foreign keys replicated tables, 38-1 forget phase in two-phase commit, 34-14 free space listing free extents, 18-38	groups, Oracle Scheduler, 27-18 growth trends of database objects, 18-40 GV\$DBLINK view, 32-20 H Hadoop external tables, 19-140 hash clusters advantages and disadvantages, 22-1
tablespaces and, 11-61 full transportable export/import, 13-13	altering, 22-11 choosing key, 22-8
function-based indexes, 20-17	contrasted with index clusters, 22-1
G	controlling space use of, 22-7 creating, 22-4 data dictionary views reference, 22-11
generic connectivity	dropping, <u>22-11</u>
definition, 31-6	estimating storage, 22-10
global coordinators, 34-5	examples, 22-9
distributed transactions, 34-5	hash function, 22-1, 22-3, 22-4, 22-8
global database consistency	HASH IS clause, 22-4, 22-8
distributed databases and, 34-13	HASHKEYS clause, 22-4, 22-9
global database links, <i>31-13</i>	single-table, 22-7
creating, 32-9 global database names	sorted, <i>22-4</i> hash functions
changing the domain, 32-3	for hash cluster, 22-1
database links, 31-10	health checks, 7-2
loopback, 31-12	Health Monitor, 7-31
enforcing for database links, 31-12	checks, 7-32
enforcing global naming, 32-2	generating reports, 7-35
forming distributed database names, 32-2	viewing reports, 7-35
impact of changing, 31-40	viewing reports using ADRCI, 7-37
querying, 32-3	heterogeneous distributed systems
global object names	definition, 31-5
database links, 31-35	Heterogeneous Services
distributed databases, 32-1	overview, 31-5
global temporary tables	hints, 33-7
assigning to a tablespace, 19-38	DRIVING_SITE, 33-8
creating, 19-36	NO_MERGE, 33-8
global users, 32-33	using to tune distributed queries, 33-7
exclusively mapped in distributed systems,	horizontal partitioning
31-26	See row subsetting HP OpenView, 31-30
shared schema in distributed systems, <i>31-26</i>	Hybrid Columnar Compression, 19-8
GLOBAL_NAME view using to determine global database name,	Trybha Colamha Compression, 13-0
32-3	1
GLOBAL_NAMES initialization parameter	l
database links, 31-12	IBM NetView/6000, 31-30
globalization support	IM column store
client/server architectures, 31-45	See In-Memory Column Store
distributed databases, 31-45	immutable table
GRANT statement	retention period, 19-160
SYSOPER/SYSDBA privileges, 1-47	immutable tables
granting privileges and roles	about, 19-159
SYSOPER/SYSDBA privileges, 1-47	adding user columns, 19-163

immutable tables (continued)	incidents (continued)
altering, 19-163	flood-controlled, 7-4
creating, 19-162	viewing, 7-23
creating row versions, 19-164	incidents, SQL, 7-42
deleting rows, 19-164	incompatibilities
dropping, 19-165	adding job or program, 28-66
dropping user columns, 19-163	dropping, 28-67
restrictions, 19-161	job or program, 28-66
row retention period, 19-161	removing job or program, 28-67
Import	using, 28-65
materialized view logs, 37-5	index clusters
import operations	See clusters
PDBs, 13-15, 13-26	index-organized tables, 19-126
in-doubt transactions, 34-14	analyzing, 19-137
after a system failure, 35-6	AS subquery, 19-132
automatic resolution, 34-15	converting to heap, 19-139
deciding how to handle, 35-6	creating, 19-128
deciding whether to perform manual override,	described, 19-127
35-7	INCLUDING clause, 19-131
defined, 34-12	maintaining, 19-134
manual resolution, 34-17	ORDER BY clause, using, 19-138
manually committing, 35-9	parallel creation, 19-132
manually committing, example, 35-13	prefix compression, 19-133
manually overriding, 35-7, 35-9	rebuilding with MOVE clause, 19-134
manually overriding, scenario, 35-13	storing nested tables, 19-130
manually rolling back, 35-10	storing object types, 19-130
overview, 34-14	threshold value, 19-131
pending transactions table, 35-20	indexes
purging rows from data dictionary, 35-11,	advanced index compression, 20-20
35-12	altering, 20-24
recoverer process and, 35-22	analyzing, 17-4
rolling back, 35-9, 35-10	automatic indexes, 20-31
SCNs and, 34-17	choosing columns to index, 20-4
simulating, 35-21	cluster indexes, 21-7–21-9
tracing session tree, 35-5	coalescing, 20-10, 20-26
viewing database links, 35-3	column order for performance, 20-5
In-Memory Column Store, 4-37	creating, <i>20-12</i>
in-memory full jobs	prerequisites, 20-13
example of creating, 28-7	data dictionary views reference, 20-41
in-memory jobs, 27-28	deferred segment creation, 20-6
in-memory runtime, jobs	determining unusable status of, 20-26, 20-27
example of creating, 28-7	disabling and dropping constraints cost, 20-11
Incident Manager, accessing, 7-46	dropping, 20-5, 20-31
incident manager, accessing, 7-40	estimating size, 20-6
correlated, 7-55	estimating space use, 18-40
correlated, 7-33 correlated, creating, editing, and uploading,	function-based, 20-17
7-63	guidelines for managing, 20-1
	invisible, 20-8, 20-9, 20-22, 20-28
correlated, deleting, 7-64	keeping when disabling constraint, 17-18
customizing, 7-59, 7-60	keeping when dropping constraint, 17-18
defined, 7-2	limiting for a table, 20-5
viewing, 7-60	materialized view sites, 37-6
incident packages, 7-52	monitoring space use of, 20-30
incident packaging service, 7-2	monitoring space use of, 20-30 monitoring usage, 20-29
incidents	multiple on a set of columns, 20-9
about, 7-3	
	on foreign keys, 38-1

indexes (continued)	integrity constraints (continued)
parallelizing index creation, 20-7	cost of dropping, 20-11
rebuilding, 20-10, 20-26	creating indexes associated with, 20-15
rebuilt after direct-path INSERT, 19-48	dropping tablespaces and, 11-43
renaming, 20-29	ORA-02055 constraint violation, 33-2
setting storage parameters for, 20-6	See also constraints
shrinking, 18-31	invisible columns, 19-25
space used by, 20-30	invisible indexes, 20-8, 20-9, 20-28
tablespace for, 20-7	creating, <i>20-22</i>
temporary segments and, 20-3	IOT
unusable, 20-8, 20-21, 20-26	See index-organized tables
validating structure, 17-5	IPS, 7-2
when to create, 20-4	
INITIAL parameter	J
cannot alter, 19-58	<u></u>
initialization parameters	job child processes
COMMIT_POINT_STRENGTH, 34-7	replication, 38-7
CONTROL FILES, 8-2, 8-4	job classes
DB_BLOCK_CHECKING, 24-5	altering, 28-72
DB_BLOCK_CHECKSUM, 9-17, 12-18	creating, 28-72
DB_BLOCK_SIZE, 11-21	dropping, 28-72
DB_CACHE_SIZE, 11-21	managing Scheduler job attributes, resources,
DB FILES, 12-4	and priorities with, 28-71
DB_nK_CACHE_SIZE, 11-21	overview, 27-12
DISPATCHERS, 3-16	viewing, 27-12
editing, 38-7	job coordinator, 27-32
GLOBAL_NAMES, 31-12	job credentials, 28-9
LOG_ARCHIVE_DEST, 10-7	job destination ID, defined, 28-20, 28-88
LOG_ARCHIVE_DEST_n, 10-7, 10-18	job log, Scheduler
LOG_ARCHIVE_DEST_STATE_n, 10-14	viewing, 28-85
LOG_ARCHIVE_MAX_PROCESSES, 10-7	job recovery (Scheduler), 29-23
LOG_ARCHIVE_MIN_SUCCEED_DEST,	job resources
10-16	managing, 28-68
LOG ARCHIVE TRACE, 10-19	job scheduling
OPEN_LINKS, 32-18	dependency, 27-1
REMOTE_LOGIN_PASSWORDFILE, 1-45	event-based, 27-1
REMOTE_OS_AUTHENT, 31-15	time-based, 27-1
	JOB_QUEUE_PROCESSES initialization
RESOURCE_MANAGER_PLAN, 26-39	
shared server and, 3-10	parameter, 27-33, 38-7, A-2
SHARED_SERVERS, 3-12	jobs, 28-7
SORT_AREA_SIZE, 20-3	adding to an incompatibility, 28-66
SQL_TRACE, 6-2	altering, 28-19
INITRANS parameter	copying, 28-25
altering, 19-58	creating, 28-4
inline external tables, 19-140, 19-149	creating and managing Scheduler, 28-2
INSERT statement	creating for chains, 28-59
with DML error logging, 19-50	credentials, 27-10
installing	database, 27-21
Release Update Revisions (Revisions), 1-9	detached, 27-26
Release Updates (Updates), 1-9	disabling, 28-23
instance caging, 26-108	dropping, 28-22
with maximum utilization limit, 26-109	dropping an incompatibility, 28-67
instances	e-mail notifications, 28-91
managing CPU for multiple, 26-108	enabling, 28-24
integrity constraints, 17-13	event-based, 28-39
cost of disabling, 20-11	external, 27-22

jobs (continued)	LIST CHAINED ROWS clause
in-memory, 27-28	of ANALYZE statement, 17-7
in-memory full, example of creating, 28-7	listeners
in-memory runtime, example of creating, 28-7	removing with srvctl, 2-68
incompatibilities, 28-66	listing database links, 32-19, 35-3, 35-5
lightweight, 27-27	loading data
lightweight, example of creating, 28-7	using external tables, 19-142
monitoring, 28-84	LOBs, 19-34
monitoring with events raised by the	local coordinators
Scheduler, 28-88	distributed transactions, 34-5
multiple-destination, 27-29	local temporary tablespaces, 11-15
status of child jobs, 29-14	locally managed tablespaces, 11-5
overview, 27-6	automatic segment space management in,
priorities, 28-73	11-7
remote database, 27-21	DBMS_SPACE_ADMIN package, 11-55
remote external	detecting and repairing defects, 11-55
about, <i>27-24</i>	migrating SYSTEM from dictionary-managed,
removing from an incompatibility, 28-67	<i>11-58</i>
resources, 28-68, 28-69	shrinking, temporary, 11-42
running, 28-20	temp files, <i>11-17</i>
script jobs, 27-28	temporary, creating, 11-17
starting when a file arrives on a system, 28-42	location transparency in distributed databases
starting with events raised by your application,	creating using synonyms, 32-25
28-38	creating using views, 32-24
status, 28-84, 29-32	restrictions, 32-29
stopping, 28-20	using procedures, 32-29
trace messages, 29-18	lock timeout interval
troubleshooting remote, 29-22	distributed transactions, 35-20
viewing information on running, 29-13	locks
join views	in-doubt distributed transactions, 35-20, 35-21
definition, 23-4	monitoring, 6-10
DELETE statements, 23-11	log
key-preserved tables in, 23-9	window (Scheduler), 28-74
modifying, 23-7	log archive destination groups, 10-11
rules for modifying, 23-10	log sequence number
updating, 23-7	control files, 9-4
joins	log switches
statement transparency in distributed	description, 9-4
databases, 32-29	forcing, 9-17
	log sequence numbers, 9-4
K	multiplexed redo log files and, 9-7
	privileges, 9-17
key-preserved tables	using ARCHIVE_LAG_TARGET, 9-11
in join views, 23-9	waiting for archiving to complete, 9-7
in outer joins, 23-13	log writer process (LGWR), 3-29
keys	multiplexed redo log files and, 9-7
cluster, 21-1	online redo logs available for use, 9-3
keystore, 11-11, 19-28	trace files and, 9-7
, 20 20	writing to online redo log files, 9-3
	LOG_ARCHIVE_DEST initialization parameter
L	specifying destinations using, 10-7
large objects 10-3/	LOG_ARCHIVE_DEST_n initialization parameter,
large objects, 19-34 lightweight jobs, 27-27	10-7
example of creating, 28-7	GROUP attribute, 10-11, 10-12
links	PRIORITY attribute, 10-11, 10-12
See database links	REOPEN attribute, 10-18
Oce database films	

LOG_ARCHIVE_DEST_STATE_n initialization	manual archiving
parameter, 10-14	in ARCHIVELOG mode, 10-6
LOG_ARCHIVE_DUPLEX_DEST initialization	manual overrides
parameter	in-doubt transactions, 35-9
specifying destinations using, 10-7	many to many subqueries
LOG_ARCHIVE_MAX_PROCESSES initialization	materialized views, 36-15
parameter, 10-7	many to one subqueries
LOG_ARCHIVE_MIN_SUCCEED_DEST	materialized views, 36-13
initialization parameter, 10-16	master materialized view sites, 37-1
LOG_ARCHIVE_TRACE initialization parameter,	master materialized views, 37-2
10-19	materialized view logs, 37-3
LOGGING clause	master sites, 36-1
CREATE TABLESPACE, 11-21	advantages of, 38-4
logging mode	compared with materialized view sites, 38-3
direct-path INSERT, 19-46	internal triggers, 37-2
NOARCHIVELOG mode and, 19-47	materialized view registration, 36-30
logical corruptions from DBMS_REPAIR, 24-6	materialized views, 37-1
logical standby, 27-37	master tables
logical volume managers	materialized view logs, 37-3
mapping files to physical devices, 12-22,	materialized views, 37-2
12-32	redefining online, 37-3
used for Oracle Managed Files, 15-3	reorganizing, 37-3
LOGON trigger	materialized view logs, 36-21, 37-3
setting resumable mode, 18-12	column logging, 36-19
logs	many to many subqueries, 36-19
job, <i>29-15</i>	many to one subqueries, 36-19
window (Scheduler), 28-74, 29-15	ON PREBUILT TABLE clause, 36-19
LONG columns, 32-29	one to many subqueries, 36-19
LONG RAW columns, 32-29	combination, 37-3
lost write protection	creating, 38-8
shadow lost write protection, 11-44	filter columns, 37-4
LOST WRITE PROTECTION clause, 11-47	Import, 37-5
·	join columns, 37-4
N A	logging columns, 37-4
M	object ID, 37-3
maintenance tasks, automatic	object tables, 38-8
See automatic maintenance tasks	primary key, 37-3
maintenance window	privileges required to create, 38-8
creating, 25-6	REFs, 36-30
definition, 25-2	ROWID, 37-3
MAINTENANCE_WINDOW_GROUP, 25-3	trigger, 37-2
modifying, 25-5	troubleshooting, 40-4
predefined, 25-9	underlying table for, 37-3
removing, 25-7	materialized view sites, 36-2
Scheduler, 25-3	adding
MAKE procedure, 39-3	avoiding problems, 39-6
managing	advantages of, 38-4
indexes automatically, 20-31	compared with master sites, 38-3
sequences, 23-16	database links, 38-5
space threshold alerts for the undo	materialized views
tablespace, 14-14	BUILD DEFERRED
synonyms, 23-26	troubleshooting, 40-4
tables, <i>19-1</i>	capabilities, 39-5
transactions, 30-1	collection columns
views, 23-1	restrictions, 36-28
VICVO, ZO-I	1030100013, 30 20

materialized views (continued)	materialized views (continued)
column objects	row subsetting, 36-12
column subsetting, 36-24	rowid, 36-6
column subsetting	simple, 36-8
column objects, 36-24	simple subquery
complex, 36-6, 36-8	AND condition, 36-19
value for PCTUSED, 37-8	subqueries, 36-13
constraints	column logging, 36-19
deferrable, 37-11	EXISTS condition, 36-19
creating schemas for, 38-5	joins, 36-19
creator, 36-10	many to many, 36-15
data subsetting, 36-3, 36-12	many to one, 36-13
disconnected computing, 36-3	one to many, 36-14
index, 37-6	OR condition, 36-19
Logical Partition Change Tracking (LPCT),	restrictions, 36-19
37-8	trace file, 40-3
	types of, 36-4
master materialized view sites, 37-1	unions with subqueries, 36-16
master materialized views, 37-2	
master sites, 37-1	restrictions, 36-20
master tables, 37-2	user-define, 36-22
materialized view logs, 36-21, 37-3	user-defined data types
monitoring, 39-9	ON COMMIT REFRESH clause, 36-22
nested tables	uses for, 36-3
restrictions, 36-28	varrays
network loads, 36-3	r, 36-28
object materialized views, 39-1	materializing deferred segments, 19-32
OID preservation, 36-26	MAX_DUMP_FILE_SIZE initialization parameter,
object tables, 36-25	6-4, 7-6
owner, 36-10	MAX_IOPS parameter, 26-38
Partition Change Tracking (PCT), 37-8	MAX_MBPS parameter, 26-38
preparing for, 38-4	MAXDATAFILES parameter
primary key, 36-4	changing, <mark>8-6</mark>
privileges, 36-10, 38-7	MAXINSTANCES, 8-6
read-only, 1, 36-2	MAXLOGFILES parameter
registration, 36-31	changing, 8-6
unregistering, 36-31	CREATE DATABASE statement, 9-10
refresh groups, 36-21, 37-6	MAXLOGHISTORY parameter
size, 37-6	changing, 8-6
refresher, 36-10	MAXLOGMEMBERS parameter
refreshing, 36-21, 37-7	changing, 8-6
complete, 37-8	CREATE DATABASE statement, 9-10
failures, 40-3	MAXTRANS parameter
fast, 36-5, 37-8, 39-5	altering, 19-58
force, 37-9	media recovery
initiating, 37-9	effects of archiving on, 10-3
interval, 37-9	MEMOPTIMIZE POOL SIZE initialization
on-demand, 37-10	parameter, 4-38
retries, 40-3	Memoptimized Rowstore
troubleshooting, 40-2, 40-4	about, 4-38
REFs, 36-28	fast ingest, 4-38
logging, 36-30	fast lookup, 4-38
scoped, 36-29	MEMOPTIMIZE_POOL_SIZE initialization
unscoped, 36-30	parameter, 4-38
WITH ROWID clause, 36-30	memory
registration, 36-30	automatic memory management, 4-5
reorganizing, 37-3	automatic shared memory management, <i>4-11</i>

memory (continued)	nested tables (continued)
Database Smart Flash Cache, 4-30	replication, 36-26
managing, 4-2	networks
manual memory management, 4-10	connections, minimizing, 32-12
manual shared memory management, 4-19	distributed databases use of, 31-2
unified memory management, 4-5	NEXTVAL pseudo-column, 23-19
migrated rows	restrictions, 23-20
eliminating from table, procedure, 17-7	NO_DATA_FOUND keyword, 33-10
MINEXTENTS parameter	NO_MERGE hint, 33-8
cannot alter, 19-58	NOARCHIVELOG mode
mirrored files	archiving, 10-2
control files, 8-3	definition, 10-3
online redo log, 9-7	dropping data files, 12-9
online redo log location, 9-8	LOGGING mode and, 19-47
online redo log size, 9-9	media failure, 10-3
MISSING data files, 8-8	no hot backups, 10-3
monitoring	running in, 10-3
performance, 6-10	switching to, 10-5
running chains, 28-64	taking data files offline in, 12-9
MONITORING clause	NOLOGGING clause
CREATE TABLE, 19-55	CREATE TABLESPACE, 11-21
MONITORING USAGE clause	NOLOGGING mode
of ALTER INDEX statement, 20-29	direct-path INSERT, 19-46
Monthly Recommended Patches (MRP), 1-18	normal transmission mode
moving control files, 8-5	definition, 10-15
multiple instances, managing CPU for, 26-108	Novell NetWare Management System, 31-30
multiple jobs	
dropping, 28-22	0
multiple temporary tablespaces, 11-18, 11-20	0
multiple-destination jobs, Oracle Scheduler, 27-29	object identifiers
status of child jobs, 29-14	agreement for replication, 36-23
multiplexed control files	object materialized views, 39-1
importance of, 8-3	OID preservation, 36-26
multiplexing	object privileges
archived redo log files, 10-7	for external tables, 19-157
control files, 8-3	object quarantine, 6-12
redo log file groups, 9-6	object tables
redo log files, 9-6	materialized view logs, 38-8
•	materialized views, 36-25
NI	object-relational model
N	replication, 36-22
name resolution in distributed databases	objects
database links, 31-35	See schema objects
impact of global name changes, <i>31-40</i>	OF object_type clause
procedures, 31-39	object materialized views, 39-1
schema objects, <i>31-20</i> , <i>31-37</i>	offline tablespaces
synonyms, <i>31-39</i>	priorities, <u>11-22</u>
views, <i>31-39</i>	taking offline, 11-22
when global database name is complete,	ON COMMIT REFRESH clause
31-35	of CREATE MATERIALIZED VIEW, 36-22
	ON PREBUILT TABLE clause, 36-19
when global database name is partial, 31-35 when no global database name is specified,	one to many subqueries
when no global database name is specified, $31-36$	materialized views, 36-14
nested tables	online redefinition of tables, 19-68, 37-3
	examples, 19-98
materialized views, 36-26	features of, 19-69
restrictions, 36-28	15atur55 01, 13-03

online redefinition of tables <i>(continued)</i>	Oracle Database In-Memory, 4-37
intermediate synchronization, 19-81	Oracle Database users
monitoring, 19-85	types of, 1-3
redefining a single partition	Oracle home
rules for, 19-97	cloning, 1-9
redefining partitions, 19-96	Oracle managed files, 15-1
refreshing dependent materialized views,	naming, <u>15-8</u>
19-81	scenarios for using, 15-25
restarting after failure, 19-88	Oracle Managed Files
restrictions, 19-71	adding to an existing database, 15-30
rolling back, 19-92	behavior, 15-23
terminate and cleanup, 19-95	benefits, 15-3
Virtual Private Database policies, 19-78	CREATE DATABASE statement, 15-9
with DBMS REDEFINITION, 19-74	creating, 15-7
online redo log files	creating control files, 15-20
See online redo logs	creating data files, 15-15
online redo logs, 9-1, 9-2	creating online redo log files, 15-22
creating groups, 9-12	creating temp files, 15-18
creating members, 9-13	described, 15-2
data dictionary views reference, 9-20	dropping data file, 15-24
dropping groups, 9-15	dropping online redo log files, 15-24
dropping members, 9-15	dropping temp file, 15-24
forcing a log switch, 9-17	initialization parameters, 15-5
guidelines for configuring, 9-5	renaming, <i>15-24</i>
INVALID members, 9-16	Oracle Managed Files feature
location of, 9-8	See Oracle managed files
managing, 9-1	Oracle release numbers, 1-18
moving files, 9-14	Oracle Restart
number of files in the, 9-10	about, <i>2-2</i>
optimum configuration for the, 9-10	configuration
renaming files, 9-14	adding components to, 2-15
renaming members, 9-14	modifying, 2-19
specifying ARCHIVE_LAG_TARGET, 9-11	removing components from, 2-16
STALE members, 9-16	viewing for a component, 2-18
See also redo log files]	configuring, 2-11
online segment shrink, 18-31	CRSCTL utility, 2-4
OPEN_LINKS initialization parameter, 32-18	disabling and enabling management for a
opening windows, 28-76	component, 2-17
operating system authentication, 1-31, 1-33	environment variables in, 2-20
operating systems	patches
database administrators requirements for,	installing, 2-29
1-21	registering a component with, 2-15
renaming and relocating files, 12-13	starting, 2-4
optimizer statistics	starting and stopping components managed
dynamic, 7-42	by, 2-29
OR condition	Oracle home, 2-29
materialized views with subqueries, 36-19	status of components, 2-18
ORA-02055 error	stopping, 2-4
integrity constraint violation, 33-2	Oracle Scheduler
ORA-02067 error	creating credentials, 28-9
rollback required, 33-2	Oracle Scheduler agent
ORA-12838 error, direct path insert, 19-45	on Windows, 29-11
Oracle Call Interface	OracleSchedulerExecutionAgent, 29-11
See OCI	tasks, 29-10
Oracle Data Guard	Windows Service, 29-11
support by the Scheduler, 27-37, 29-29	Oracle Scheduler Agent, 29-5

Oracle Scheduler agents	password file (continued)
registering with databases, 29-12	synchronizing administrator passwords with
OracleSchedulerExecutionAgent, 29-11	the data dictionary, 1-45
ORAPWD utility, 1-43	viewing members, 1-48
ORGANIZATION EXTERNAL clause	password file authentication, 1-34
of CREATE TABLE, 19-142	passwords
orphan key table	case sensitivity of, 1-29, 1-35, 1-36
example of building, 24-9	password file, 1-47
OSBACKUPDBA group, 1-31	setting REMOTE_LOGIN_PASSWORD
OSDBA group, 1-31	parameter, 1-45
OSDGDBA group, 1-31	patch sets, 1-18
- ·	•
OSKMDBA group, 1-31	patches
OSOPER group, 1-31	installing
OTHER_GROUPS	Oracle Restart, 2-29
for Database Resource Manager, 26-8	pausing chains and chain steps, 28-62
OTHER_GROUPS for Database Resource	PCTINCREASE parameter, 19-58
Manager, 26-89, 26-94, 26-107	PCTUSED parameter
outer joins, 23-13	value for complex materialized views, 37-8
key-preserved tables in, 23-13	PDB performance profiles, 26-60
overlapping windows, 27-15	managing, 26-69
	PDB resource plans, 26-26
P	PDBs
<u> </u>	buffer pool size, 26-34
packages	CDB resource plans, 26-21
DBMS_FILE_TRANSFER, 12-18	creating, 26-57, 26-60
DBMS_METADATA, 17-33	directives, 26-24
-	disabling, 26-76
DBMS_REPAIR, 24-2	enabling, 26-64
DBMS_RESOURCE_MANAGER, 26-7,	managing, 26-64
26-31, 26-48	shares, 26-21
DBMS_RESOURCE_MANAGER_PRIVS,	utilization limits, 26-22
26-31	
DBMS_RESUMABLE, 18-14	viewing information about, 26-77
DBMS_SPACE, 18-33, 18-35	CPU limits, 26-33
DBMS_STORAGE_MAP, 12-29	Database Resource Manager, 26-56
packaging and uploading problems, 7-55	I/O limits, 26-38
parallel execution	import operations, 13-15, 13-26
managing, 3-32	PDB resource plans, 26-26
parallel hints, 3-33	creating, 26-79
parallelizing index creation, 20-7	disabling, 26-82
resumable space allocation, 18-9	enabling, <u>26-80</u>
parallel hints, 3-33	modifying, 26-81
parallel statement execution	PGA size, 26-34
directive attributes for managing, 26-104	resource management, 26-3
managing using Resource Manager, 26-16	SGA size, <i>26-34</i>
parallelizing table creation, 19-6, 19-40	shared pool size, 26-34
partitioned tables	pending area for Database Resource Manager
moving a partition online, 19-60	plans, 26-96
redefining partitions online, 19-96	validating plan schema changes, 26-94
rules for, 19-97	pending transaction tables, 35-20
	performance
password file	index column order, 20-5
adding users, 1-47	location of data files and, 12-5
creating, 1-43	monitoring, 6-10
ORAPWD utility, 1-43	
removing, 1-49	PGA_AGGREGATE_LIMIT parameter, 26-34
setting REMOTE LOGIN PASSWORD, 1-45	PGA_AGGREGATE_TARGET parameter, 26-34

PL/SQL	privileges (continued)
replaced views and program units, 23-5	altering tables, 19-56
plan schemas for Database Resource Manager,	closing a database link, 33-2
<i>26-11</i> , <i>26-39</i> , <i>26-111</i>	creating database links, 32-7
validating plan changes, 26-94	creating tables, 19-33
plans for Database Resource Manager	creating tablespaces, 11-4
examples, 26-96	database administrator, 1-21
PRAGMA_EXCEPTION_INIT procedure	drop table, <i>19-120</i>
assigning exception names, 33-10	dropping indexes, 20-31
prefix compression, 19-133, 20-19	dropping online redo log members, 9-16
prepare phase	dropping redo log groups, 9-16
abort response, 34-12	enabling and disabling triggers, 17-11
in two-phase commit, 34-10	for external tables, 19-157
prepared response, 34-11	forcing a log switch, 9-17
read-only response, 34-11	managing with procedures, 32-29
recognizing read-only nodes, 34-11	managing with synonyms, 32-27
steps, 34-12	managing with views, 32-25
prepare/commit phases	manually archiving, 10-6
effects of failure, 35-20	materialized views, 36-10, 38-7
failures during, 35-6	renaming objects, 17-22
locked resources, 35-20	renaming redo log members, 9-14
pending transaction table, 35-20	Scheduler, 29-30
prepared response	sequences, 23-17, 23-25
two-phase commit, 34-11	setting chain (Scheduler), 29-2
prespawned processes, 3-30	synonyms, 23-26, 23-27
PRIMARY KEY constraints	taking tablespaces offline, 11-22
associated indexes, 20-15	truncating, 17-9
dropping associated indexes, 20-31	using a view, 23-6
enabling on creation, 20-15	using sequences, 23-18
foreign key references when dropped, 17-18	views, 23-3, 23-5, 23-15
indexes associated with, 20-15	problem activity log
materialized views, 36-4	adding comments to, 7-21
replicated tables, 38-1	problems
priorities	about, 7-3
job, 28-73	adding comments to activity log, 7-21
priority transactions	problems (critical errors)
acknowledging rollback, 30-4	packaging and uploading, 7-55
behavior, 30-7, 30-8	procedures
determining system-level wait targets, 30-5	external, 3-35
distributed transaction behavior, 30-7	location transparency in distributed
monitoring, 30-6	databases, 32-27
restrictions, 30-8	name resolution in distributed databases,
setting mode, 30-4	31-39
setting system-level wait targets, 30-3	remote calls, <i>31-43</i>
setting system-level wait targets, 30-3 setting transaction priority, 30-2	
statistics incremented in ROLLBACK mode,	process manager (PMAN), 3-29 process monitor (PMON), 3-29
	•
30-6	processes, 3-2
statistics incremented in TRACK mode, 30-7	prespawned, <i>3-30 See also</i> server processes
using, 30-2	PRODUCT_COMPONENT_VERSION view, 1-20
private database links, 31-13	-
private synonyms, 23-26	programs altering, <i>28-28</i>
private temporary tables	creating, 28-26
creating, 19-38	
privileges	creating and managing, to define Scheduler jobs, 28-25
adding redo log groups, 9-12	
altering index, 20-24	disabling, 28-28

programs (continued)	read-only tablespaces (continued)
dropping, 28-28	on object storage (continued)
enabling, 28-29	using, <i>11-29</i>
overview, 27-4	WORM devices, 11-28
proxy resident connection pooling, 3-8	Real Application Clusters
per-PDB, 3-8	allocating extents for cluster, 21-7
per-service, 3-8	sequence numbers and, 23-17
public database links, 31-13	threads of online redo log, 9-2
connected user, 32-32	rebuilding indexes, 20-26
fixed user, 32-31	costs, <i>20-10</i>
public fixed user database links, 32-31	online, 20-26
public synonyms, 23-26	reclaiming unused space, 18-16
PURGE_LOST_DB_ENTRY procedure	recoverer process, 3-29
DBMS_TRANSACTION package, 35-12	disabling, 35-22
	distributed transaction recovery, 35-22
Q	enabling, 35-22
<u> </u>	pending transaction table, 35-22
quarantine	recovering
objects, 6-12	Scheduler jobs, 29-23
SQL statements, 7-78	recovery
queries	creating new control files, 8-6
distributed, 31-32	recycle bin
distributed application development issues,	about, <i>19-122</i>
33-3	purging, <i>19-124</i>
location transparency and, 31-43	renamed objects, 19-122
remote, 31-32	restoring objects from, 19-125
quotas	viewing, 19-124
tablespace, <u>11-3</u>	REDEF_TABLE procedure, 19-73
•	example, 19-98
R	redefining tables
Γ	online
RAISE_APPLICATION_ERROR() procedure,	replication, 37-3
33-10	redefining tables online
read consistency	See online redefinition of tables, 19-68
managing in distributed databases, 35-23	redo log files, 9-1, 9-2
read-o, 36-31	active (current), 9-4
read-only materialized views, 1, 36-2	archiving, 10-2
registration	available for use, 9-3
manual, <u>36-31</u>	block size, setting, 9-9
read-only response	circular use of, 9-3
two-phase commit, 34-11	clearing, 9-18
read-only tables, 19-66	contents of, 9-2
read-only tablespaces	creating as Oracle Managed Files, 15-22
data file headers when rename, 11-42	creating as Oracle Managed Files, example,
delaying opening of data files, 11-28	15-25
enabling database for object storage, 11-29	creating groups, 9-12
making read-only, 11-25	creating members, 9-12, 9-13
making writable, 11-27	distributed transaction information in, 9-3
on object storage	dropping groups, 9-15
accessing, 11-32	dropping members, 9-15
creating default credential, 11-33	group members, 9-6
deleting, 11-35	groups, defined, 9-6
moving, 11-33	how many in redo log, 9-10
querying, 11-35	inactive, 9-4
setting ACE, <u>11-30</u>	instance recovery use of, 9-2
setting HTTP proxy, 11-29	LGWR and the, 9-3

redo log files (continued)	REFs (continued)
log switches, 9-4	replication, 36-28
maximum number of members, 9-10	REGISTER_MVIEW procedure, 36-31
members, 9-6	release numbers, 1-18
mirrored, log switches and, 9-7	release update (Update, RU), 1-18
multiplexed, 9-6, 9-7	Release Update Revisions (Revisions)
online, defined, 9-2	installing, 1-9
planning the, 9-5	Release Updates (Updates)
redo entries, 9-2	installing, 1-9
requirements, 9-8	releases, 1-18
specifying at database creation, 15-11	checking the Oracle Database release
storing separately from data files, 12-5	number, <u>1-20</u>
threads, 9-2	definition, 1-18
valid and invalid configurations, 9-8	relocating control files, 8-5
verifying blocks, 9-17	remote data
See also online redo logs	querying, 32-29
redo logs	updating, 32-29
See online redo log	remote database jobs, 27-21
redo records, 9-2	Scheduler agent setup, 29-9
LOGGING and NOLOGGING, 11-21	remote external jobs
referential integrity	about, 27-24
distributed database application development,	executing, 29-5
33-2	Scheduler agent setup, 29-9
refresh	remote procedure calls, 31-43
automatic, 37-9	distributed databases and, 31-43
complete, 37-8	remote queries
failures, 40-3	distributed databases and, 31-32
fast, 37-8	remote transactions, 31-33
determining possibility of, 39-5	defined, 31-33
force, 37-9	REMOTE_LOGIN_PASSWORDFILE initialization
group, <i>37-9</i>	parameter, 1-45
initiating, 37-9	•
interval, 37-9	REMOTE_OS_AUTHENT initialization parameter connected user database links, 31-15
manual, <i>37-10</i>	
materialized views, 36-21, 37-7	RENAME statement, 17-22
monitoring, 39-12	renaming control files, 8-5
on-demand, <i>37-10</i>	renaming files Oracle Managed Files, 15-24
retries, 40-3	
rollback segments	renaming indexes, 20-29
troubleshooting, 40-4	REOPEN attribute
scheduling, 37-9	LOG_ARCHIVE_DEST_n initialization
troubleshooting, 40-4	parameter, 10-18
troubleshooting	repair table
ORA-12004 error, 40-4	example of building, 24-9
ORA-942 error, 40-4	repairing data block corruption
truncating materialized views	DBMS_REPAIR, 24-1
troubleshooting, 40-4	repeat interval, schedule, 28-32
refresh groups, 36-2, 36-21, 37-6	replication
monitoring, 39-11	filter columns, 37-4
	job child processes, 38-7
size considerations, 37-6	master sites
troubleshooting, 40-2	advantages, 38-4
REFRESH procedure, 37-10, 39-4	materialized view logs, 36-21
REFRESH_ALL_MVIEWS procedure, 37-10, 39-4	materialized view sites
REFRESH_DEPENDENT procedure, 37-10, 39-4	advantages, 38-4
REFS	monitoring
materialized views, 36-28	materialized view environments, 39-9

replication (continued)	resource consumer groups (continued)
read-only materialized views, 36-2	switching sessions for a user, 26-49
refresh, 36-21	SYS_GROUP, 26-107
refresh groups, 36-2, 36-21	updating, 26-110
sites, 36-1	Resource Manager
choosing, 38-3	AUTO_TASK_CONSUMER_GROUP
tables, 38-1	consumer group, 25-7
unsupported data types	canceling long-running SQL statements,
BFILE, 38-1	26-18
LONG, 38-1	managing parallel statement execution, 26-16
unsupported table types, 38-3	quarantine SQL statements, 26-18
user-defined data types, 36-22	resource plan directives, 26-7, 26-94
virtual private database (VPD), 38-6	deleting, 26-113
replication catalog	for managing parallel statement execution,
DBA_REGISTERED_MVIEWS, 36-31	26-104
USER_REFRESH, 40-3	specifying, 26-89
USER_REFRESH_CHILDREN, 40-3	updating, 26-112
replication objects	resource plans, 26-7, 26-30
at materialized view sites	CDB, 26-21
problems creating, 40-2	creating, 26-82
indexes	DEFAULT_MAINTENANCE_PLAN, 25-8
on foreign keys, 38-1	DELETE PLAN CASCADE, 26-111
tables, 38-1	deleting, <u>26-111</u>
foreign keys, 38-1	examples, 26-96
primary keys, 38-1	parameters, 26-88
reporting problems to Oracle Support, 7-51	PDB, 26-26
RESOLVE_TNSNAME function, 32-21	plan schemas, 26-11, 26-39, 26-111
resource allocation methods	SYSTEM_PLAN, 26-107
active session pool, 26-88	top plan, 26-39, 26-94
ACTIVE_SESS_POOL_MTH, 26-88	updating, 26-111
CPU, 26-10	validating, 26-94
CPU resource, 26-88	RESOURCE MANAGER CPU SCOPE
EMPHASIS, 26-88	initialization parameter, 26-131
limit on degree of parallelism, 26-88	RESOURCE MANAGER PLAN initialization
MAX_UTILIZATION_METHOD, 26-12	parameter, 26-39
PARALLEL_DEGREE_LIMIT_MTH, 26-88	resources (job)
PARALLEL_DEGREE_LIMIT_P1, 26-13	altering, 28-69
PARALLEL_QUEUE_TIMEOUT, 26-16	creating, 28-68
PARALLEL_STMT_CRITICAL, 26-14	managing, 28-68
PGA, 26-17	specifying for jobs, 28-69
QUEUEING_MTH, 26-88	result sets, SQL, 19-35
queuing resource allocation method, 26-88	resumable space allocation
resource consumer groups, 26-7	correctable errors, 18-8
changing, 26-48	detecting suspended statements, 18-12
creating, 26-86	disabling, 18-10
DEFAULT CONSUMER GROUP, 26-54,	distributed databases, 18-9
26-110	enabling, <i>18-10</i>
deleting, 26-110	example, 18-15
granting the switch privilege, 26-54	how resumable statements work, 18-7
managing, 26-42, 26-49	naming statements, 18-12
OTHER_GROUPS, 26-8, 26-89, 26-94,	parallel execution and, 18-9
26-107	resumable operations, 18-8
parameters, 26-86	setting as default for session, 18-12
revoking the switch privilege, 26-55	timeout interval, 18-11, 18-13
setting initial, 26-43	RESUMABLE_TIMEOUT initialization parameter
switching a session, 26-48	setting, 18-10
	~~····································

retention guarantee (for undo), 14-6	Scheduler job credentials
reversing table changes, 19-119	specifying, 28-9
roles	Scheduler objects, naming, 28-2
DBA role, 1-24	Scheduler privileges reference, 29-30
obtained through database links, 31-20	SCHEDULER_BATCH_ERRORS view, 28-22
ROLLBACK statement	schedules
FORCE clause, 35-9, 35-10	altering, 28-31
forcing, 35-7	creating, 28-30
rollbacks	creating and managing, to define Scheduler
ORA-02, 33-2	jobs, 28-29
rolling upgrade, 27-37	dropping, 28-31
row subsetting, 36-12	overview, 27-5
materialized views, 36-12	schema objects, 17-26
rowids	analyzing, 17-4
rowid materialized views, 36-6	creating multiple objects, 17-2
	data dictionary views reference, 17-34
Iows	defining using DBMS METADATA package,
listing chained or migrated, 17-6	
rsmgr:io rate limit, 26-38	17-33
rules	dependencies between, 17-23
adding to a chain, 28-55	distributed database naming conventions for
dropping from chains, 28-61	31-20
running	global names, 31-20
chains, 28-60	listing by type, 17-34
jobs, <i>28-20</i>	name resolution in distributed databases,
	31-20, 31-37
S	name resolution in SQL statements, 17-26
	privileges to rename, 17-22
savepoints	referencing with synonyms, 32-26
in-doubt transactions, 35-9, 35-10	renaming, 17-22
scalable sequences, 23-23	validating structure, 17-5
schagent utility, 29-11	viewing information, 17-33, 18-35
Scheduler	schema objects space usage
administering, 29-1	data dictionary views reference, 18-36
architecture, 27-32	schemas
closing a PDB, 27-37	creating for materialized views, 38-5
configuring, 29-2	SCN
credentials for jobs, 27-10	See system change number
data dictionary views reference, 29-32	script jobs, 27-28
e-mail notifications, 28-91	security
examples of using, 29-24	accessing a database, 5-1
import and export, 29-20	administrator of, 5-1
maintenance window, 25-3	centralized user management in distributed
	databases, 31-25
monitoring and managing, 29-13	database security, 5-1
monitoring jobs, 28-84	distributed databases, 31-22
objects, 27-3	establishing policies, 5-1
overview, 27-1	privileges, 5-1
security, 29-20	•
support for Oracle Data Guard, 27-37, 29-29	remote objects, 32-25
troubleshooting, 29-21	Scheduler, 29-20
job does not run, 29-21	using synonyms, 32-27
using in RAC, 27-35	Segment Advisor, 18-18
Scheduler agent, 29-5	configuring Scheduler job, 18-29
configuration, 29-9	invoking with Oracle Enterprise Manager
installation, 29-9	Cloud Control, 18-20
setup, 29-9	invoking with PL/SQL, 18-21
Scheduler chain condition syntax, 28-55	running manually, 18-19

session trees for distributed transactions
clients, 34-4
commit point site, 34-6, 34-7
database servers, 34-5
definition, 34-3
global coordinators, 34-5
local coordinators, 34-5
tracing transactions, 35-5
sessions
acknowledge priority transactions rollback,
30-4
active, 3-38
inactive, 3-39
priority transactions, 30-1
setting advice for transactions, 35-8
setting priority transaction mode, 30-4
setting priority transaction mode, 30-4 setting system-level wait targets, 30-3
setting system level wait targets, 30-3 setting transaction priority, 30-2
• •
terminating, 3-37
SGA
See system global area
SGA_MIN_SIZE parameter, 26-34
SGA_TARGET parameter, 26-34
shadow lost write protection, 11-44
creating tablespaces for, 11-47
disabling, 11-50
dropping a shadow tablespace, 11-52
enabling for a data file, 11-49
enabling for a database, 11-47
enabling for a PDB, 11-47
enabling for a tablespace, 11-49
removing, 11-51
suspending, 11-51
shared database links
configuring, 32-14
creating, 32-14
dedicated servers, creating links to, 32-14
determining whether to use, 32-13
example, 31-18
shared servers, creating links to, 32-15
shared server, 3-3
configuring dispatchers, 3-14
data dictionary views reference, 3-19
disabling, 3-12, 3-19
initialization parameters, 3-10
interpreting trace output, 6-6
setting minimum number of servers, 3-12
·
trace files for processes, 6-2
shared SQL
for remote and distributed statements, 31-33
shared temporary tablespaces, 11-15
SHARED_POOL_SIZE parameter, 26-34
shrinking segments online, 18-31
simple materialized views, 36-8

Simple Network Management Protocol (SNMP)	SQL Test Case Builder, 7-42
support	accessing the Incident Manager, 7-46
database management, 31-30	accessing the Support Workbench, 7-47
single-file tablespaces	command-line interface, 7-47
description, 11-8	gathering diagnostic data, 7-41
single-table hash clusters, 22-7	graphical interface, 7-46
site autonomy	key concepts, 7-42
distributed databases, 31-22	output, <i>7-44</i>
SKIP_CORRUPT_BLOCKS procedure, 24-7	running, 7-48
DBMS_REPAIR, 24-2	SQL incidents, 7-42
example, <i>24-12</i>	user interfaces, 7-46
skipping chain steps, 28-63	what it captures, 7-42
SORT_AREA_SIZE initialization parameter	SQL_TRACE initialization parameter
index creation and, 20-3	trace files and, 6-2
space	SQL*Loader
deallocating unused, 18-33	about, <i>1-49</i> , <i>19-41</i>
reclaiming unused, 18-16	SQL*Plus, 1-10
space allocation	about, <i>1-11</i>
resumable, 18-6	connecting with, 1-12
space management	SRVCTL
data types, space requirements, 18-35	add asm command, 2-36
deallocating unused space, 18-16	add command, usage description, 2-35
Segment Advisor, 18-16	add database command, 2-38
shrink segment, 18-16	add listener command, 2-40
space usage alerts for tablespaces, 18-3	add ons command, 2-40
SQL	adding a disk group with, 2-36
result sets, 19-35	case sensitivity, 2-33, 2-92
submitting, 1-10	case sensitivity of commands, 2-34, 2-92
test cases, 7-41	command reference, 2-33
SQL failure	commands
repairing with SQL Repair Advisor, 7-70	downgrade database, 2-52
SQL incidents, 7-42	upgrade database, 2-91
SQL patch	commands, case sensitivity, 2-33, 2-92
disabling using Cloud Control, 7-74	component names, 2-34
disabling using DBMS_SQLDIAG package	config asm command, 2-45
subprogram, 7-75	config command, usage description, 2-45
removing using Cloud Control, 7-74	config database command, 2-46
removing using DBMS_SQLDIAG package	config listener command, 2-47
subprogram, 7-75	config ons command, 2-47
viewing using Cloud Control, 7-74	config service command, 2-48
SQL Repair Advisor	creating and deleting databases services with,
about, 7-71	2-22
exporting and importing a patch using the	disable asm command, 2-49
DBMS_SQLDIAG package	disable command, usage description, 2-48
subprograms, 7-76	disable database command, 2-49
repairing SQL failure with, 7-70	disable diskgroup command, 2-50
running using Cloud Control, 7-71	disable listener command, 2-50
running using the DBMS_SQLDIAG package	disable ons command, 2-51
subprograms, 7-72	disable service command, 2-51
SQL statements	enable asm command, 2-54
about quarantine, 7-79	enable command, usage description, 2-53
cancelling, 3-40	enable database command, 2-54
distributed databases and, 31-32	enable diskgroup command, 2-54
quarantine, 7-78	enable listener command, 2-55
SQL test case builder, 7-3	enable ons command, 2-55
	enable service command, 2-56

SRVCTL (continued)	standby transmission mode
getenv asm command, 2-57	definition of, 10-15
getenv command, usage description, 2-56	statement transparency in distributed database
getenv database command, 2-57	managing, <u>32-29</u>
getenv listener command, 2-58	statistics
help for, 2-14	automatically collecting for tables, 19-55
modify asm command, 2-59	STATISTICS_LEVEL initialization parameter
modify command, usage description, 2-58	Database Resource Manager, 26-4
modify database command, 2-60	statistics, optimizer
modify listener command, 2-61	dynamic, 7-42
modify ons command, 2-61	stderr
modify service command, 2-62	for local external jobs, 27-23, 27-24
preparing to run, 2-13	retrieving, 27-23, 27-24
reference, 2-33	stdout
remove asm command, 2-66	for local external jobs, 27-23, 27-24
remove command, usage description, 2-66	retrieving, 27-23, 27-24, 28-17
remove database command, 2-67	steps, chain
remove diskgroup command, 2-68	dropping, 28-61
remove listener command, 2-68	stopping
remove ons command, 2-69	chain steps, 28-62
remove service command, 2-69	chains, 28-62
setenv asm command, 2-71	jobs, 28-20
setenv command, usage description, 2-70	storage parameters
setenv database command, 2-72	INITIAL, 19-58
setenv listener command, 2-73	INITRANS, altering, 19-58
start asm command, 2-73	MAXTRANS, altering, 19-58
start command, usage description, 2-73	MINEXTENTS, 19-58
start database command, 2-74	PCTINCREASE, 19-58
start diskgroup command, 2-75	storage subsystems
start home command, 2-75	mapping files to physical devices, 12-22,
start listener command, 2-76	12-32
start ons command, 2-76	stored procedures
start service command, 2-77	managing privileges, 32-29
status asm command, 2-78	remote object security, 32-29
status command, usage description, 2-78	submitting SQL and commands to the database,
status database command, 2-79	1-10
status diskgroup command, 2-79	subqueries
status home command, 2-80	in remote updates, 31-32
status listener command, 2-80	in unions
status ons command, 2-81	materialized views, 36-16
status service command, 2-81	materialized views, 36-13, 36-19
stop asm command, 2-83	AND condition, 36-19
stop command, usage description, 2-82	column logging, 36-19
stop database command, 2-84	EXISTS condition, 36-19
stop diskgroup command, 2-84	joins, 36-19
stop home command, 2-85	many to many, 36-15
stop listener command, 2-86	many to one, 36-13
stop ons command, 2-86	one to many, 36-14
stop service command, 2-87	restrictions, 36-19
unsetenv asm command, 2-89	statement transparency in distributed
unsetenv command, usage description, 2-88	databases, 32-29
unsetenv database command, 2-90	subsetting
unsetenv listener command, 2-90	materialized views, 36-12
STALE status	column objects, 36-24
of redo log members, 9-16	SunSoft SunNet Manager, 31-30
stalled chain (Scheduler), 28-65	3 ,

Support Workbench, 7-10	system change numbers (continued)
for Oracle ASM instance, 7-24	in-doubt transactions, 35-10
viewing problems with, 7-23	using V\$DATAFILE to view information about,
Support Workbench, accessing, 7-47	12-34
SWITCH LOGFILE clause	when assigned, 9-2
ALTER SYSTEM statement, 9-17	system global area, 23-21
synonyms	holds sequence number cache, 23-21
creating, 23-26, 32-26	system monitor process (SMON), 3-29
data dictionary views reference, 23-28	system privileges
definition and creation, 32-26	ADMINISTER_RESOURCE_MANAGER,
displaying dependencies of, 17-35	26-31
dropping, 23-27	for external tables, 19-157
examples, 32-26	SYSTEM tablespace
location transparency in distributed	cannot rename, 11-42
databases, 32-25	restrictions on taking offline, 12-8
managing, 23-26, 23-27	when created, 11-4
managing privileges in remote database,	SYSTEM_PLAN for Database Resource
32-27	Manager, 26-107
name resolution in distributed databases,	
31-39	T
private, 23-26	1
public, 23-26	table compression, 38-3
remote object security, 32-27	table size
SYS account, 1-21	estimating, 18-39
objects owned, 1-23	tables
SYS_GROUP for Database Resource Manager,	about, <i>19-2</i>
26-107	adding columns, 19-62
SYSAUX tablespace, 11-4	allocating extents, 19-61
cannot rename, 11-42	altering, 19-57
monitoring occupants, 11-53	altering physical attributes, 19-58
moving occupants, 11-53	analyzing, 17-4
SYSBACKUP account, 1-21, 1-23	attribute-clustered, 19-23
connecting as, 1-25	bulk updates, 19-54
SYSDBA account	compressed, 19-8
connecting as, 1-25	creating, 19-33
SYSDBA administrative privilege	data dictionary views reference, 19-198
adding users to the password file, 1-47	deferred segment creation, 19-29
determining who has privileges, 1-48	designing before creating, 19-5
granting and revoking, 1-47	dropping, 19-120
SYSDG account, 1-21, 1-23	dropping columns, 19-63
connecting as, 1-25	estimating size, 19-32
SYSKM account, 1-21, 1-23	estimating space use, 18-39
connecting as, 1-25	external, 19-139
SYSOPER account	Flashback Drop, 19-121
connecting as, 1-25	Flashback Table, 19-119
SYSOPER administrative privilege	global temporary, 19-36
adding users to the password file, 1-47	guidelines for managing, 19-3
determining who has privileges, 1-48	hash clustered
granting and revoking, 1-47	See hash clusters, 22-4
SYSRAC account, 1-23	hybrid partitioned, 19-158
connecting as, 1-25	increasing column length, 19-61
SYSTEM account, 1-21	index-organized, 19-126
objects owned, 1-23	invisible columns, 19-25
system change numbers	key-preserved, 23-9
coordination in a distributed database system,	limiting indexes on, 20-5
34-13	managing, 19-1

tables (continued)	tablespaces (continued)
modifying column definition, 19-61	quotas, assigning, 11-3
moving, <i>19-58</i>	read-only, <i>11-25</i>
parallelizing creation, 19-6, 19-40	mounting, 13-7
partitioned, 19-139	renaming, <i>11-35</i> , <i>11-42</i>
partitions	shrinking, 11-37
moving online, 19-60	single-file, 11-8, 11-37
private temporary, 19-38	space usage alerts, 18-3
read-only, 19-66	specifying nonstandard block sizes, 11-21
redefining online, 19-68	SYSAUX, 11-4, 11-42
replication, 37-3	SYSAUX, managing, 11-52
renaming columns, 19-63	SYSTEM, 11-4, 11-5
replicating, 38-1	taking offline normal, 11-22
researching and reversing erroneous changes	taking offline temporarily, 11-22
to, 19-119	temp files in locally managed, 11-17
restrictions when creating, 19-32	temporary, <i>11-15</i> , <i>11-20</i>
setting storage parameters, 19-32	temporary bigfile, 11-18
shrinking, 18-31	temporary for creating large indexes, 20-16
specifying location, 19-6	undo, 14-2
statistics collection, automatic, 19-55	using multiple, 11-2
temporary, 19-35	using Oracle Managed Files, 15-15
truncating, 17-8	temp files, <u>11-17</u>
types, 19-5	creating as Oracle managed, 15-18
unrecoverable (NOLOGGING), 19-7	dropping, <i>12-17</i>
validating structure, 17-5	dropping Oracle managed, 15-24
zone maps, 19-24	TEMP_UNDO_ENABLED parameter, 14-15
tablespace set, 13-30	temporary segments
tablespaces	index creation and, 20-3
adding data files, 12-5	temporary tables, 38-3
assigning user quotas, 11-3	global, 19-35
autoextending, 11-36	private, <i>19-35</i>
automatic segment space management, 11-7	temporary tablespace, default
bigfile, 11-8	specifying at database creation, 15-13
checking default storage parameters, 11-60	temporary tablespaces
compressed, 11-10	altering, 11-41
containing XMLTypes, 13-10	bigfile, <i>11-18</i>
data dictionary views reference, 11-59	creating, 11-17
DBMS_SPACE_ADMIN package, 11-55	groups, 11-18
detecting and repairing defects, 11-55	renaming default, 11-42
diagnosing and repairing problems in locally	shrinking, locally managed, 11-42
managed, 11-55	temporary undo, 14-15
dictionary managed, 11-10	terminating user sessions
	active sessions, 3-38
dropping, 11-43	, , , , , , , , , , , , , , , , , , ,
encrypted, 11-11	identifying sessions, 3-38
creating, 11-13	inactive session, example, 3-39
guidelines for managing, 11-2	inactive sessions, 3-39
increasing size, 11-36	test case
listing files of, 11-60	builder, SQL, 7-3
listing free space in, 11-61	threads
locally managed, 11-5	online redo log, 9-2
locally managed temporary, 11-17	threshold based alerts
location, 12-5	managing with Oracle Enterprise Manager
migrating SYSTEM to locally managed, 11-58	Cloud Control, 6-7
on a WORM device, 11-28	threshold-based alerts
Oracle Managed Files, managing, 15-25,	server-generated, 6-6
15-29	

thresholds	triggers
setting alert, 18-3	disabling, 17-12
trace file segmentation, 6-4	enabling, <i>17-12</i>
trace files, 7-8	for materialized view log, 37-2
location of, 6-2	True Cache
log writer process and, 9-7	configuring and using, 4-40
materialized views, 40-3	TRUNCATE statement
using, 6-2	DROP ALL STORAGE, 17-9
when written, 6-5	DROP STORAGE, 17-9
trace files, finding, 7-40	DROP STORAGE clause, 17-9
traces, 7-8	REUSE STORAGE, 17-9
tracing	REUSE STORAGE clause, 17-9
archivelog process, 10-19	tuning
transaction control statements	analyzing tables, 33-6
distributed transactions and, 34-3	cost-based optimization, 33-5
transaction failures	two-phase commit
simulating, 35-21	case study, 34-18
transaction management	commit phase, <i>34-12</i> , <i>34-21</i>
overview, 34-9	described, 31-34
transaction processing	discovering problems with, 35-6
distributed systems, 31-31	distributed transactions, 34-9
transactions	example, <i>34-18</i>
closing database links, 33-2	forget phase, 34-14
distributed and two-phase commit, 31-34	in-doubt transactions, 34-14, 34-17
in-doubt, 34-12, 34-14, 34-17, 35-6	phases, 34-9
managing, 30-1	prepare phase, <i>34-10</i> , <i>34-12</i>
naming distributed, 35-2, 35-8	recognizing read-only nodes, 34-11
remote, 31-33	specifying commit point strength, 35-2
transmitting archived redo log files, 10-14	steps in commit phase, 34-13
Transparent Data Encryption	tracing session tree in distributed
columns, 19-28	transactions, 35-5
keystore, 11-11, 19-28	viewing database links, 35-3
tablespaces, 11-11	
transporting data	TT.
across platforms, 13-8	U
character sets, 13-10	Undo Advisor, 14-8
compatibility considerations, 13-12	undo management
full transportable export/import, 13-13	automatic, 14-2
limitations, 13-14	described, 14-2
when to use, 13-2	initialization parameters for, 14-3
limitations, 13-10	temporary undo, 14-15
national character sets, 13-10	undo retention
PDBs, 13-15, 13-26	automatic tuning of, 14-5
transferring data files, 13-53	explained, 14-4
transportable tables, 13-36	guaranteeing, 14-6
limitations, 13-37	setting, 14-8
transportable tablespaces, 13-26	undo segments
from backup, 13-13, 13-27	in-doubt distributed transactions, 35-7
limitations, 13-27	undo space
tablespace set, 13-30	data dictionary views reference, 14-17
transportable set, 13-28	undo space management
when to use, 13-2	automatic undo management mode, 14-2
wizard in Oracle Enterprise Manager	Undo tablespace
Cloud Control, 13-27	specifying at database creation, 15-12
XMLTypes in, <i>13-10</i>	undo tablespaces
200 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	altering, 14-12

undo tablespaces <i>(continued)</i>	utilities
creating, <i>14-11</i>	for the database administrator, 1-49
data dictionary views reference, 14-17	SQL*Loader, <i>1-49</i> , <i>19-41</i>
dropping, <i>14-13</i>	utilization limits for PDBs, 26-22
managing, <i>14-10</i>	UTLCHAIN.SQL script
managing space threshold alerts, 14-14	listing chained rows, 17-7
monitoring, 14-17	UTLCHN1.SQL script
PENDING OFFLINE status, 14-14	listing chained rows, 17-7
renaming, <i>11-42</i>	UTLLOCKT.SQL script, 6-10
sizing a fixed-size, 14-8	• •
switching, 14-13	V
user quotas, 14-14	V
unions	V\$ARCHIVE view, 10-19
with subqueries	V\$DATABASE view, 10-20
materialized views, 36-16	V\$DBLINK view, 32-20
restrictions for materialized views, 36-20	V\$DIAG_CRITICAL_ERROR view, 7-14
UNIQUE key constraints	V\$DIAG INFO view, 7-14
associated indexes, 20-15	V\$DISPATCHER view
dropping associated indexes, 20-31	monitoring shared server dispatchers, 3-17
enabling on creation, 20-15	V\$DISPATCHER RATE view
foreign key references when dropped, 17-18	monitoring shared server dispatchers, 3-17
indexes associated with, 20-15	V\$ENCRYPTED_TABLESPACES view, 11-14,
UNRECOVERABLE DATAFILE clause	11-59
ALTER DATABASE statement, 9-18	V\$LOG view, 9-20, 10-19
UNREGISTER_MVIEW procedure, 36-31	displaying archiving status, 10-19
unusable indexes, 20-8	V\$LOG_HISTORY view, 9-20
updates	V\$LOGFILE view, 9-20
bulk, 19-54	log file status, 9-16
location transparency and, 31-43	V\$PWFILE_USERS view, 1-48
us, 36-24	V\$QUARANTINE view, 6-13
user accounts	V\$QUEUE view
predefined, 5-3	
USER_DB_LINKS view, 32-19	monitoring shared server dispatchers, 3-17
USER DUMP DEST initialization parameter, 7-6	V\$RSRCPDBMETRIC view, 26-121
USER_REFRESH view, 40-3	CPU usage, 26-123
USER REFRESH CHILDREN view, 40-3	I/O generated, 26-125
user-defined data types	memory usage, 26-126
materialized views, 36-22	parallel execution, 26-124
collections, 36-26	V\$RSRCPDBMETRIC_HISTORY view, 26-121
object tables, 36-25	V\$SESSION view, 3-39
ON COMMIT REFRESH clause, 36-22	V\$THREAD view, 9-20
REFs, 36-28	V\$VERSION view, 1-20
type agreement, 36-23	VALIDATE STRUCTURE clause
replication, 36-22	of ANALYZE statement, 17-5
collections, 36-26	VALIDATE STRUCTURE ONLINE clause
	of ANALYZE statement, 17-5
column objects, 36-22	varrays
REFs, 36-28	materialized, 36-26
type agreement, 36-23	materialized views
users	restrictions, 36-28
assigning tablespace quotas, 11-3	replication, 36-26
session, terminating, 3-39	verifying blocks
SYS, 1-21	redo log files, 9-17
SYSBACKUP, 1-21	viewing
SYSDG, 1-21	alerts, 18-5
SYSKM, 1-21	incident package details, 7-60
SYSTEM. 1-21	

views	views (continued)
creating, 23-3	wildcards in, 23-4
creating with errors, 23-5	WITH CHECK OPTION, 23-3
data dictionary	virtual columns, 19-2, 38-3
for archived redo log files, 10-20	indexing, 20-5
for clusters, 21-11	Virtual Private Database
for control files, 8-11	redefining tables online, 19-78
for data files, 12-33	virtual private database (VPD), 38-6
for database resident connection pooling,	(),
3-27	147
for Database Resource Manager, 26-130	W
for hash clusters, 22-11	wildcards
for indexes, 20-41	in views, 23-4
for Oracle Scheduler, 29-32	window groups
for redo log, 9-20	creating, <i>28-80</i>
for schema objects, 17-34	disabling, 28-82
for sequences, 23-28	
for shared server, 3-19	dropping, 28-81
for space usage in schema objects, 18-36	dropping a member from, 28-81
for synonyms, 23-28	enabling, 28-82
for tables, <i>19-198</i>	managing job scheduling and job priorities
for tablespaces, 11-59	with, 28-79
for undo space, 14-17	overview, 27-18
for views, 23-28	window logs, 28-74
•	windows (Scheduler)
data dictionary views for, 23-28	altering, 28-76
DBA_2PC_NEIGHBORS, 35-5	closing, 28-77
DBA_2PC_PENDING, 35-3	creating, 28-75
DBA_DB_LINKS, 32-19	disabling, 28-78
displaying dependencies of, 17-35	dropping, 28-78
dropping, 23-15	enabling, 28-79
file mapping views, 12-29	opening, 28-76
FOR UPDATE clause and, 23-3	overlapping, 27-15
invalid, 23-6	overview, 27-14
join	windows, managing job scheduling and resource
See join views, 23-4	allocation with, 28-74
location transparency in distributed	WITH ROWID clause
databases, 32-24	REFs, 36-30
managing, 23-1, 23-5	WORM devices
managing privileges with, 32-25	and read-only tablespaces, 11-28
name resolution in distributed databases,	WRH\$_UNDOSTAT view, 14-17
31-39	
ORDER BY clause and, 23-3	X
remote object security, 32-25	^
restrictions, 23-6	XMLTypes
using, 23-6	transporting data, 13-10
V\$ARCHIVE, <i>10-19</i>	a samporting data; 10 10
V\$DATABASE, 10-20	7
V\$LOG, <i>10-19</i>	Z
V\$LOGFILE, 9-16	7000 mano 10 24
	zone maps, <i>19-24</i>