

Index

A

- ABEND, 324
- abend dumps, 87–89
 - backup and recovery and, 232
- ACCEPT, 120, 121
- ACCESS, 204, 308, 319, 381
- Access Control Environment Element (ACEE), 215
- ACCESS DATABASE, 318, **318**
- access methods, catalog/database, 41–43
- ACCESS MODE, 318
- Access Path Comp, 326
- Access Register (AR), 19
- Accessories Suite, 113–114, **113**
- accounting trace, 259–261, 260*t*, 302, 378
- ACCTG, 92
- ACCUMACC (macro DSN6SYSP), 158
- ACQUIRE, 32
- active logs, 61–74. *See also* logs and logging
 - backup and recovery and, 232
 - running out of space in, 230–231
- ADD PARTITION, 56
- address spaces, 6, 12–13, **12**, 103, 309, 361
 - allied, 9–10
 - non-allied, 10
 - Resource Access Control Facility (RACF) and, 207, 207*t*
- ADMIN_TASK_ADD, 100
- ADMIN_TASK_REMOVE, 100
- ADMIN_TASK_STATUS, 100
- ADMIN_TASKS, 101
- Administration Tool, 351
- administration tools, 3
- administrative authorities, 201–204, **202**, **203**
- administrative scheduler, 12
- administrative tasks, 100–101
- ADMINT_TASK_LIST, 100
- ADMTDD1, 100
- ADMTPROC (macro DSN6SPRM), 100, 163
- Advanced Database Management Facility (ADMF), 6, 7
- ADVISORY, 322
- advisory pending state in, 232
- Agent Control Element (ACE), 11
- agent services manager, 7
- agents, 11
- allied address spaces, 9–10, 12
- ALLVALS, 234, 241, 328
- ALLVOLS, 247
- ALTER, 27, 54, 56, 142, 143, 204, 345
- ALTER BUFFERPOOL, 76, 78, 277, 282, 283, 287, 291, **291**, 293–294, **293**, **294**
- ALTER GROUPBUFFERPOOL, 348, 350
- ALTER TABLE, 56, 64, 165, 213
- ALTER TABLESPACE, 69, 339–340
- ALTER TRUSTED CONTEXT, 194–195, 215
- ALTER UTILITY, 330
- American Encryption Standard (AES), 190

- AMODE, 65
 - AMODE(24) to AMODE(31), archive log processing, 72
 - answers to practice questions, 361–384
 - APAR. *See* Authorized Program Analysis Report (APAR)
 - application abends, 232
 - Application Connectivity, 112
 - application hit ratio, 290
 - application requester, 9
 - application server, 9
 - Application Transparent Transport Layer Support (AT-TLS), 191, 212
 - APPLY, 120, 121
 - APPLY CHECK, 123
 - archive datasets, 151
 - ARCHIVE LOG, 64, 68, 224, **224**, 349
 - ARCHIVE LOG FREQ, 62, 66, 69
 - archive logs, 72, 374
 - backup and recovery and, 254
 - processing, AMODE(24) to AMODE(31), 72
 - AS SECURITY LABEL, 209
 - asymmetrical split on index pages, 60–61
 - AUDIT, 92, 213
 - Audit Management Expert, 212
 - audit trace, 261–262, 261–262*t* 302, 371, 372, 378
 - audit trace facility, 213–215, **215**
 - auditing, 2120–215, 218, 302, 371, 372, 378
 - audit trace facility in, 213–215, **215**
 - classes of, 214–215, 214*t*
 - tools for, 212
 - trace in, 261–262, 261–262*t*
 - authentication, user, 193
 - authorities, 217
 - authorization, 200–201, 371
 - administrative authorities in, 201–204, **202**, **203**
 - command, 308
 - exits, 209, 218
 - IFCID 314 Authorization exit parameters and, 215
 - Resource Access Control Facility (RACF) in, 204–209
 - SYSCTRL and, 204
 - Authorized Program Analysis Report (APARs) in, 118, 127–132, **128**, **129**, **130**, **131**, **132**, 134
 - automated memory monitoring and, 277
 - Automatic Class Selection (ACS), 27, 94, 168
 - Automatic Resource Manager (ARM), 346
 - automatic traces, 264–265
 - AUTORES, 350
 - auxiliary storage, 15–17, **16**
 - AVAILABLE, 116–117
 - Avoid Bind, 326
- ## B
- BACKOUT DURATION, 67
 - BACKUP, 220
 - BACKUP SYSTEM, 224, 227, 234, 237–245, 248, 249, 250, 251, 255, 376
 - copy pools in, 240–241
 - DFSMS Data Set Services (DFSMSdss) enhancements for, 239
 - DISPLAY UTILITY in, 239
 - DUMP and DUMPONLY in, 238
 - END FCINCREMENTAL in, 240
 - ESTABLISH FCINCREMENTAL in, 240
 - FlashCopy and, 238, 240
 - flow of, 242, **242**
 - FORCE parameter in, 239
 - full vs. data only, 243
 - RECOVER and, 239
 - Recovery Base Log Point (RBLP) in, 242
 - steps in running, 243–244
 - syntax of, 245, **245**
 - tape support in, 244–245
 - VERSIONS parameter for, 242
 - BACKUP, 219. *See also* system backup and recovery bar, the, 16
 - above and below, 43–45
 - base tables, 55
 - BASIC, 166
 - Basic Direct Access Method (BDAM), 65
 - Basic Row Format (BRF), 58–59, **59**, 139
 - Basic Sequential Access Method (BSAM), 65
 - below-the-bar EDM pool, 275
 - BIND, 15, 19, 32, 34, 39, 43, 45, 47, 141, 276, 282, 300, 326
 - BIND PACKAGE, 39
 - BIND PLAN, 348
 - BIND REPLACE, 39

- BINDADD, 47
- binding, 166
- rebinding and, 140–141
- BINDNV DSNZPARM, 47
- bit maps or space maps, 51–53, **52**, 52*t*, 53*t*
- BMC Software Computer Associates, 326
- Bootstrap Data Set (BSDS), 3, 31, 72–74, 142, 186, 367, 373
- backup and recovery and, 225, 229–230
- buffer manager, 7
- Buffer Pool Analyzer, 78
- Buffer Pool Tool, 326
- buffer pools, 33–40, **33**, 105, 277–278, **278**
- ALTER BUFFERPOOL and, 78
 - application hit ratio in, 290
 - application process flow and, 77–78
 - automatic management of, 293–294
 - Buffer Pool Analyzer and, 78
 - data management threshold for, 282
 - data sharing and, group, 350–351
 - Deferred Write Threshold (DWQT), 80, 283
 - definition of, 74–76, **74**, 75*t*, **75**
 - details of, 77–78
 - DISPLAY BUFFERPOOL, 312–313, **312**
 - DISPLAY GROUPBUFFERPOOL in, 347–348, **347**, **348**
 - fixed thresholds for, 281–283
 - hit ratios in, 288–290
 - immediate write threshold for, 282
 - management of, 76–77
 - number of, 75, **75**
 - page management in, 290–291
 - pages and, 278, **278**
 - performance and, 292–293
 - PGFIX in, 290–291
 - PGSTEAL in, 291
 - Sequential Prefetch Threshold (SPTH) for, 282–283
 - Sequential Steal Threshold (VPSEQT), 283, 286
 - size of, 75, 75*t*, 77, 364
 - sort pools and, 294–295
 - statistics on, 291–292, **292**
 - system hit ratio in, 289–290
 - thresholds for, 281–288, 288*t*, 293, 296, 303, 380
 - v8 to v9 incompatibilities and, 142
 - variable thresholds in, 283–287
 - Vertical Deferred Write Threshold (VDWQT), 283, 284–286
 - virtual buffer pool assisting parallel sequential threshold (VPXPSEQT), 283, 287
 - Virtual Buffer Pool Parallel Sequential Threshold (VPPSEQT), 286–287
 - virtual, 74–78, 277–278, **278**
 - Workload Manager (WLM) and, 76
- BYPASS, 124
- ## C
- CACHE DYNAMIC SQL, 298
- cache, dynamic, 298
- CACHEDYN_FREELOCAL (macro DSN6SPRM), 44–45, 163, 275
- caching, 34–35
- call attachment, 10
- Call Attachment Facility (CAF), 13–14
- CANCEL THREAD, 235–236, **236**, 307, 316, **316**, 320
- CARDF, 165, 165*t*
- CATALOG, 154
- catalog access, 41–43
- catalog space
- Integrated Catalog Facility (ICF) and, 154
 - v8 to v9 incompatibilities and, 143–144
- catalog tables, 3, 27–28, 27–28*t*
- management of, 30–31
 - space issues of, 340–342
 - storage and, 340–342
 - trusted context and, 195
- CATENFM, 31, 176, **176**
- CATENFM COMPLETE, 144, 182
- CATENFM START, 180–181
- CATMAINT, 31, 143, 144, 203, 310, 344
- CATMAINT UPDATE, 177–178
- CBIPARM, 352, 381
- Central Processor Asset for Cryptographic Functions (CPACF), 211
- certification web site, 2–3
- Change Index lists for, 130–131, **131**
- CHECK, 20, 161, 331, 332, 336
- CHECK DATA, 169, 331
- CHECK INDEX, 169

- CHECK LOB, 169
- CHECKPAGE, 327
- CHECKPOINT FREQ, 63, 66, 72
- checkpoints, system, 71–72, 249
- child objects, 37, 41
- CICS. *See* Customer Information Control System
- classes, trace, 258
- CLIST. *See* Command list
- CLONE, 333, 353, 382
- clone tables, 55
- clustering index, 57–58, **57**
- CLUSTERRATIO, 50
- CMSTAT, 24
- CMTSTAT, 23
- code structure for DB2, 5–6
- cold start, 230
- column-level encryption in, 210–211, **211**
- COMCRIT (macro DSN6SPRM), 163
- Command Center, 113
- COMMAND INPUT, 85
- Command List (CLIST), 31, 37, 41
 - DSNTIPC panel and, storage calculations, 155–156, **155**
 - enhancements to, 182–184, 183*t*, 184*t*
 - hidden DSNZPARMs and, 162–170
 - installation and, flow of, 148, **148**
 - modes in, 171–172
 - new and changed panels in, 153–156
 - panels, values, and dependencies in, 150–151, **150**
 - tailored jobs in, installation path, 183–184, 184*t*
 - tailored jobs in, migration, 183, 183*t*
- command structure, 306, **306**, **307**
- commands, 309–324
 - authorization, 308
 - command structure, 306, **306**, **307**
 - Commands panel, **307**
 - DB2, 309–324
 - MVS, 333–334
 - output of, 307–308
 - scope of, 307
 - scope of, in data sharing, 348–349
 - z/OS IRLM, 324–326
- Commands panel, **307**
- COMMENT ON TRUSTED CONTEXT, 194–195
- commit, 63
- COMMIT, 15, 235, 300, 325
- Common Service Area (CSA), 107
- compatibility mode, 140
- COMPRESS, 142, 327
- COMPRESS_SPT01, 141
- compression, 354, 383
 - index, 59–61
 - logs and, 68
 - prefix, 59
- CONDBAT, 24
- conditional restart, 374
 - backup and recovery and, 254
- Conditional Restart Control Record (CRCR), 374
- Connect Personal Edition Kit, 113
- connection, inactive, 23
- Consolidated Service Test (CST), 133–134
- Consolidated Software Inventory (CSI), 119
- Control Center, 113
- Control Sections (CSECT), 5
- CONTSTOR, 14–15
- Conversion Mode (CM), 29, 47, 140, 177–178
 - migrating to DB2 9 and, 173–174, 173–174*t*
- COPY, 30, 41, 53, 220, 221, 222, 223, 224, 326–327, 332, 333, 341, 353, 382
- copy pools, 240–241
- Coupling Facility (CF), 96, 345
- Coupling Facility Resource Management (CFRM), 345
- CREATE, 27, 36, 40, 54, 144, 201, 238, 244, 345
- CREATE DATABASE, 39, 42
- CREATE PROCEDURE, 47
- CREATE STOGROUP, 239
- CREATE TABLE, 64, 165, 213
- CREATE TABLESPACE, 69, 76, 79, 339
- CREATE TRUSTED CONTEXT, 194–195, 215
- CRESTART, 230, 231, 246, 251
- Cross Memory Services (CMS), 18
- Cryptographic Coprocessor Feature (CCF), 211
- Cryptographic Express2 Accelerator (CEX2A), 211
- Cryptographic Express2 Coprocessor (CEX2C), 211
- CTHREAD, 10, 25, 362
- Cursor Table (CT), 32, 35
- Customer Information Control System (CICS), 4, 10, 13, 146, 193

D

- D A,ALL for, 86
- D GRS,CONTENTION for, 86
- D OPDATA for, 86
- DASD
 - space issues of, 340
- data capture, to logs, 63–64
- Data Communications Resource Manager, 8
- Data Definition Language (DDL), 3, 37, 143
- Data Encryption for IMS and DB2 Databases, 212
- Data Encryption Standard (DES), 191
- Data Facility Data Set Services (DFDSS), 161
- Data Facility Product (DFP), 83
- Data Facility Storage Management Subsystem (DFSMS), 65, 121, 147–148
- Data Language/I (DL/I), 14
- Data Manager (DM), 7
- data pages, 54, **54**
- data parameters
 - DSNTIPA2 panel and, 154–155, **154**, **155**
 - DSNTIPA3 panel and, 155, **155**
- data security, 212
- Data Set Services. *See* DFSMS Data Set Services (DFSMSDss)
- data sets
 - maximum number of, 300
 - SMP/E, 133
- data shared area, **22**
- data sharing, 345–351
 - Automatic Resource Manager (ARM) in, 346
 - backup and recovery and, 237
 - command scope in, 348–349
 - Coupling Facility Resource Management (CFRM) in, 345
 - DISPLAY GROUPBUFFERPOOL in, 347–348, **347**, **348**
 - group buffer pools in, 350–351
 - locks and, 350–351
 - parameters for, 151
 - Shared Communications Area (SCA) in, 346
 - Workload Manager (WLM) in, 346
- data space manager, 8
- Data Studio Developer, 113, 157
- Data Studio Workbench, 110
- Data Systems Control Facility (DSCF), 6
- database access, 41–43
- Database Access Threads (DBATs), 17–18, 362
 - inactive, 23
- database descriptor pool, EDM, 39
- Database Descriptors (DBDs), 29, 36–37, 42, 273, 277, 331
 - size of, 344–345
 - structure of, and performance, 299, **299**
- Database Exception Table (DBET), 63, 232–233, 254
- Database Identifier (DBID), 42
- Database Management System (DBMS), 383
- database management, 26–31
- database manager, 151
- database server, 9
- database services, 6, 7–8
- Database Services Address Space (DBAS/DSAS), 6, 8
- DATACLAS, 27
- DATAREPEATFACTOR, 50
- DB2 9 for z/OS Program Directory, 110
- DB2 Accessories Suite, 110
- DB2 Administration Tool, 351
- DB2 commands, 309–324
- DB2 directory, 3, 32
- DB2 Interactive (DB2I), 198
- DB2 Management Clients Package, 110
- DB2 products and features, with codes, 111–115, 114–115*t*
- DB2 tracker site, 252
- DB2 Utilities Suite, 110
- DB2OSC, 158
- DBADM, 202*t*, 203, 332
- DBAT. *See* Database Access Threads
- DBCTRL, 203, 204, 332
- DBD. *See* Database Descriptor
- DBD01, 32, 37, 42, 45, 221, 242, 244, 248, 277
- DBETE, 232–233, 254, 375
- DBM1, 18, 19, 20, 32, 45, 46, 74, 87, 99, 207, 247, 274
- DBMAINT, 202*t*, 203
- DBPROTCL, 157
- DBPROTOCOL, 157
- DBRM Check, 326
- DCLGEN, 348

- DDF STARTUP OPTION, 152
- DEADLINE, 330
- DEADLOCK, 325
- DEALLOCATE, 15, 300
- Declared Global Temporary Tables (DGTTs), 79
- DECRYPT, 210
- default databases, v8 to v9 incompatibilities
 - and, 144
- DEFAULT SECURITY LABEL, 199
- Default Subsystem Name (DSN), 152
- DEFER, 223
- Deferred Write Threshold (DWQT), 80, 283, 284
- DEFINE CATALOG, 154
- DELAY, 330
- DELETE, 204
- DELETE NOSCRATCH, 225
- deprecated features. *See* v8 to v9 incompatibilities
- Describe, 326
- DESCRIBE, 43
- DEST, 258
- Developer Workbench (DWB), 113
- Development Center, 113
- DFSMS Data Set Services (DFSMSdss), 148
 - BACKUP SYSTEM and, 239
 - system backup and recovery, 239, 250
- DFSMS Hierarchical Storage Management (DFSMSHsm), 95, 148
- DIAG, 324
- DIAGNOSE, 87, **116**, 252, 310, 339
 - version/release information using, 116–117, **116**
- dictionary pages, 53–54
- dimension tables, 168
- directory space, v8 to v9 incompatibilities and, 143–144
- directory. *See* DB2 directory
- DISABLE, 160
- DISABSC (macro DSN6SPRM), 163
- disaster recovery process in, 223–235. *See also*
 - System backup and recovery
- dispatching priorities, 354, 383
- DISPLAY, 87, **116**, 338, 339
 - version/release information using, 116–117, **116**
- Display Active Users (DA) command, 334
- DISPLAY ARCHIVE, 317, **317**
- DISPLAY BUFFERPOOL, 283, 291–292, **292**, 294, **294**, 296, 312–313, **312**
- DISPLAY DATABASE, 235–236, **236**, 308, 330, 338, 348, 350
- DISPLAY DATABASE USE/LOCK LIMIT for, 86
- DISPLAY DATABASE, 320–323, 320–**323**
- DISPLAY FUNCTION SPECIFIC, 349
- DISPLAY GROUP, 330, 348
- DISPLAY GROUP DETAIL, 144
- DISPLAY GROUPBUFFERPOOL, 347–348, **347**, **348**
- DISPLAY PROCEDURE, 342, 349
- DISPLAY THREAD, 14, 146, 235–236, **236**, 307–308, 313–316, **314**, **315**, **316**, 320, 338, 349, 382
- DISPLAY THREAD DETAIL, 86
- DISPLAY TRACE, 214, **214**, 258, 270, **270**, 271, 272, 349
- DISPLAY UTILITY, 86, 235, 239, 323–324, **324**, 349
- DIST, 20, 99, 207
- DISTINCT, 78, 294–295
- Distributed Data Facility (DDF), 6, 8–9, 17–19, 151
 - Administration Tool for, 351
- Distributed Data Facility Services, 8–9
- Distributed Data Interchange Services, 8
- Distributed Relational Data Architecture (DRDA), 8–9, 191, 157, 192
- Distributed Relational Data System Manager, 8
- distributed thread processing, 23–25
- Distributed Transaction Manager, 7, 8
- distribution libraries, SMP/E, 125, 125*t*
- distribution zone, SMP/E, 120
- DLDFREQ, 177
- DNSJU004, 328
- DNSTEJ0, 184*t*
- DNSTEJ1, 184*t*
- DNSTEJ1T, 184*t*
- DNSTEJ1U, 184*t*
- DNSTEJ2A, 184*t*
- DNSTEJ2F, 184*t*
- DNSTEJ2P, 184*t*
- DNSTEJ4C, 184*t*
- DNSTEJ4P, 184*t*

- DNSTEJ61, 184*t*
 DNSTEJ75, 184*t*
 DNSTEJ77, 184*t*
 DNSTEJ78, 184*t*
 DNSTESA, 184*t*
 DNSTIJDE, 184*t*
 DNSTIJID, 184*t*
 DNSTIJTM, 184*t*
 DNSTIJUZ, 184*t*
 DRDA, 18, 19, 26, 157
 DROP, 40, 56, 143, 197, 238, 345
 DROP TRUSTED CONTEXT, 194–195
 DSMTIPA2, 133
 DSMZX, 300
 DSN000x databases, 144
 DSN1, 305
 DSN1CHKR, 31, 47, 144, 173*t*, 334*t*, 336–337
 DSN1COMP, 54, 60, 142, 334*t*, 383
 DSN1COPY, 31, 58, 59, 176, 177, 334*t*, 336
 DSN1DBM1, 6, 12
 DSN1DIST, 6, 12
 DSN1LOGP, 68, 70, 230, 234–235, 249, 255, 334*t*, 337, 375
 DSN1MSTR, 6, 12
 DSN1PRNT, 334*t*
 DSN1SDMP, 334*t*
 DSN3@ATH, 209
 DSN3@SGN, 209
 DSN5SYSP, 300
 DSN6ARV, 151
 DSN6ARVP, 62
 DSN6ENV, 151
 DSN6FAC, 23, 151
 DSN6GRP, 151
 DSN6LOGP, 62, 151
 DSN6S&SP.DBPROTCL, 19
 DSN6SPRC, 158, 159–160, **159**
 DSN6SPRM, 14, 44, 48, 141, 151, 160, 161–170, 165*t*, 167*t*
 DSN6SYSP, 98, 151, 158, 166, 167, 168, 177, 247, 266
 DSN6SYSP.DBPROTCL, 157
 DSN8ED7, 117, 152, 343
 DSNACCPM, 124
 DSNACCPs, 124
 DSNACEP1, 123*t*
 DSNADM, 205
 DSNALI, 13
 DSNALLOC, 122*t*, 123
 DSNAPPL1, 122*t*, 123, 123*t*
 DSNAPPLM, 124
 DSNAPPLS, 124
 DSNARIB, 183
 DSNASMKD, 123*t*
 DSNCAT, 154
 DSNCAT.BSDS, 154
 DSNCOLLID, 19, 157
 DSNDB01, 32, 37, 310, 319, 329, 336, 340
 DSNDB01.DBD01, 80, 333, 344
 DSNDB01.SCT02, 344
 DSNDB01.SPT01, 344
 DSNDB01.SYSLGRNX, 327
 DSNDB01.SYSUTILX, 327, 333
 DSNDB06, 26, 36, 54, 223, 310, 319, 329, 340
 DSNDB06.SYSCOPY, 327, 333
 DSNDB06.SYSDBASE, 340
 DSNDB06.SYSPKAGE, 340
 DSNDB06.SYSPLAN, 340, 341
 DSNDB06.SYSPLANAUTH, 340
 DSNDB06.SYSVIEWS, 340
 DSNDB06.SYSVTREE, 340
 DSNDB07, 36, 78, 79, 105, 142, 277, 292, 295, 330, 339
 performance and 295–297
 work files and, backup and recovery for, 231
 DSNDDDEF1, 123, 123*t*
 DSNDAQISE, 44, 276
 DSNDAQJ00, 63, 69
 DSNDAQWS1, 44
 DSNDAQWST, 267
 DSNEMC01, 183, 184, 185
 DSNH, 183, 184, 185
 DSNHC, 183, 184, 185
 DSNHDECP, 151, 182, 183
 DSNHDEPC, 145
 DSNISMKD, 123*t*
 DSNJ prefix, 5
 DSNJCNVB, 142, 334*t*, 367
 DSNJLOGF, 68, 334*t*, 337
 DSNJSLR, 344

- DSNJU003, 61, 70, 73, 192, 230, 231, 237, 246,
251, 334*t*, 335, 343
DSNJU004, 70–71, 88, 225, 230, 231, 234, 241,
247, 249, 334*t*, 335–336
DSNLSMKD, 123*t*
DSNR, 138, 206, 208
DSNRECV1–4, 122*t*, 123*t*
DSNRECVM, 124
DSNRECVS, 124
DSNRLLI, 14
DSNRLLMT, 156
DSNRLLST, 144, 156
DSNRTSDB, 178
DSNTCNVB, 73
DSNTEJ1L, 184*t*
DSNTEJ1P, 184*t*
DSNTEJ1S, 184*t*
DSNTEJ2C, 184*t*
DSNTEJ2D, 184*t*
DSNTEJ2E, 184*t*
DSNTEJ2U, 184*t*
DSNTEJ3C, 184*t*
DSNTEJ3M, 184*t*
DSNTEJ3P, 184*t*
DSNTEJ5A, 184, 185
DSNTEJ5C, 184, 185
DSNTEJ5P, 184, 185
DSNTEJ6, 184
DSNTEJ6, 184*t*
DSNTEJ62, 184*t*
DSNTEJ64, 184*t*
DSNTEJ65, 184*t*
DSNTEJ66, 184*t*
DSNTEJ6D, 184*t*
DSNTEJ6P, 184*t*
DSNTEJ6R, 184*t*
DSNTEJ6S, 184*t*
DSNTEJ6T, 184*t*
DSNTEJ6U, 184*t*
DSNTEJ6V, 184*t*
DSNTEJ6W, 184*t*
DSNTEJ6Z, 152, 184*t*
DSNTEJ7, 184*t*
DSNTEJ71, 184*t*
DSNTEJ73, 184*t*
DSNTEJ76, 184*t*
DSNTEJxx, 174*t*, 175
DSNTEESC, 184*t*
DSNTEESD, 184*t*
DSNTEESE, 184*t*
DSNTEESQ, 81
DSNTICA, 182
DSNTICC, 157
DSNTIDxx, 173
DSNTIEN, 366
DSNTIFGF, 184, 185
DSNTIFJT, 143, 184, 185
DSNTIJAA, 122*t*
DSNTIJC, 174
DSNTIJCA, 172*t*, 184*t*
DSNTIJCS, 175, 180
DSNTIJCX, 144, 173*t*, 183*t*, 337
DSNTIJD, 31
DSNTIJDE, 158
DSNTIJEN, 31, 143, 145, 174, 178, 180–181
DSNTIJES, 174, 180
DSNTIJEX, 173*t*, 172*t*, 184*t*, 205
DSNTIJFV, 175, 183*t*
DSNTIJIC, 31, 172*t*, 173*t*, 174*t*, 181, 183*t*, 184*t*
DSNTIJID, 172*t*
DSNTIJIN, 143, 172*t*, 173*t*, 183*t*, 184*t*
DSNTIJMS, 366
DSNTIJMV, 146, 172*t*, 173*t*, 183*t*, 184*t*
DSNTIJNF, 144, 174, 180, 181
DSNTIJNG, 180, 181
DSNTIJNX, 157, 180, 181
DSNTIJOM, 174*t*, 183*t*
DSNTIJOS, 157–158, 172*t*, 174*t*, 183*t*, 184*t*
DSNTIJP0, 183
DSNTIJP9, 138, 140
DSNTIJPD, 19
DSNTIJPM, 138, 173*t*, 183
DSNTIJRI, 173*t*, 183*t*
DSNTIJS, 152, 156–157, 158, 172*t*, 174*t*,
183*t*, 184*t*
DSNTIJTC, 31, 82, 172*t*, 173*t*, 174, 176,
177–178, 183*t*, 184*t*, 344, 366
DSNTIJTM, 78, 81, 153, 157, 158, 172*t*, 174*t*, 183*t*
DSNTIJUD, 122*t*

- DSNTIJUZ, 71, 73, 150, 151, 159, 160, 162,
 172*t*, 173, 173*t*, 182, 183*t*
 DSNTIJVC, 149, 172*t*, 173*t*, 183*t*, 184*t*
 DSNTINST, 41, 162, 173
 DSNTIP00, 180, **180**
 DSNTIP01, 151
 DSNTIP01 and DSNTIP02 panels, OTC license
 usage, 154, **154**
 DSNTIP02, 151
 DSNTIP03, 180
 DSNTIP1, 74
 DSNTIP2, 75
 DSNTIP5, 157, 192
 DSNTIP6, 221
 DSNTIP8, 298
 DSNTIP9 panel, work file database, 153, **153**
 DSNTIPA1, 133, 150, **150**, 178, **178**, 187, 368
 DSNTIPA2, 149
 DSNTIPA2 panel, data parameters, 154–155,
 154, **155**
 DSNTIPA3, 94–95, **95**, 133, 155, **155**
 DSNTIPC, 82, **83**
 DSNTIPC panel, CLIST storage calculations,
 155–156, **155**
 DSNTIPC1, 180
 DSNTIPE, 274
 DSNTIPE panel, thread management, 156, **156**
 DSNTIPH, 154
 DSNTIPIC, 295, 299
 DSNTIPL, 61, 62, 63, 69, 177, 337
 installation panel for, components of, 65–68
 DSNTIPM, 305–309
 DSNTIPN, 72, 214, 264, **265**, 266
 DSNTIPR, 152
 DSNTIPS, 26
 DSNTIPT, 179, **179**
 DSNTIPX, 152, 184
 DSNTIST, 81
 DSNTP2DP, 19, 157
 DSNTPSMP, 47
 DSNTWFG, 81
 DSNTYPE, 65
 DSNU, 183, 184, 185
 DSNTUTLIB, 143
 DSNWDPRD, 88
 DSNWMODS, 5
 DSNWMSGs, 44, 266
 DSNWSMKD, 123*t*
 DSNWZP, 117, 152, 182
 DSNWZPR, 182
 DSNX@XAC, 205, 206
 DSNXRAC, 205, 206
 DSNXSR, 156
 DSNxxx, 144
 DSNZPARMs, 24, 42–43, 42*t*, 45, 158–171,
 170–171*t*, 186, 187. *See also* installation and
 migration
 changing, 151–152
 chart of, 170–171*t*
 flow and purpose of, 151
 hidden, 162–170
 DSSIZE, 27, 56, 57
 DSVCI, 94
 DSYNB01.SYSUTILX, 373
 DUMP and DUMPONLY, 84, 238, 244–245
 dumps, 87–89, 91, 105, 364
 DWQT. *See* Deferred Write Threshold
 DXXRECEV, 122*t*
 dynamic cache, 298
 dynamic prefetch, 279
- ## E
- early DB2 code, v8 to v9 incompatibilities and,
 146–147
 EDITPROC, 58
 EDM pool, 32–40, **33**, 104, 273–277, 363, 379
 below-the-bar, 275
 DSNZPARM for, 42–43, 42*t*
 efficiency measurement for, 275–276
 performance and, 273–277, 297
 region size in DB2 and, 274–275
 size of, 344
 EDM statement cache, 34–35
 EDMBFIT, 42
 EDMPOOL, 43, 44
 EDMPOOL_SKELETON_POOL, 155–156, 155
 EDMSTMTC, 298
 EN_PJSJ (macro DSN6SPRM) in, 160
 ENABLE, 160

- Enabling New Function Mode (ENFM), 29, 143, 173–174, 173–174*t*, 177, 178–181, **179, 180**
- falling back to DB2 8 and, 145, 174–177, **175, 176, 177**, 185
- enclave, 17–18
- enclave management, 99–100
- ENCRYPT, 210
- encryption, 190–192, 216, 369
 - column-level, 210–211, **211**
 - hardware-level, 211–212
- END CHECKPOINT RBA, 249
- ENDLRSN, 230, 231
- ENDRBA, 230
- ENDTIME, 231
- ENHANCED, 141
- Enterprise Storage Server (ESS), 93, 238
- Environmental Descriptor Manager (EDM), 20
- Environmental Record Editing and Printing (EREP), 89–90
- environmental settings, 151
- ERROR HOLD, 124
- ERROR RANGE, 323
- error reporting, system, 83–86, **84**
- EXCHANGE, 55
- EXCP, 334
- EXEC, 16
- execution blocks (EBs), 11
- exit codes, 370
- EXPLAIN, 3, 50, 158, 268
- EXPLAIN STATEMENT CACH ALL, 298
- Express, 326
- EXTENDED, 141, 166
- Extended Address Volume (EAV), 93
- Extended Common Service Area (ECSA), 9, 108, 325
- Extensible Markup Language. *See* XML
- EXTENTS, 79
- EXTERNAL, 47
- external stored procedures, 100

- F**
- F irlmproc,STATUS,ALLI and F irlmproc,STATUS, ALLD, 86
- falling back to DB2 8, 145, 174–177, **175, 176, 177**, 185, 365
- FENCED, 47
- FETCH FIRST ROWS, 295
- Fiber Channel Connection (FICON), 94
- filters, trace, 272–273, **273**
- FIND, 85
- First-In, First-Out (FIFO), 291
- Fixed Storage Pools (FSP), 43
- fixed threshold, buffer pools and, 281–283
- fixes, acquiring, 134–135
- FlashCopy, 148, 219, 238, 240. *See also* system
 - backup and recovery
 - BACKUP SYSTEM and, 238, 240
 - DUMP and DUMPOONLY in, 238
- FMIDs. *See* Function Modifier Identifier
- FORCE, 239, 244–245, 319
- format log utility, 65
- FRBACKUP, 241
- FRDELETE, 241
- FREE, 39, 276
- FREE PACKAGE, 140, 348
- FREE PLAN, 348
- FREEMAIN, 15
- FREQUENCY TYPE in, 67
- FROMDUMP, 246
- FRRECOV, 241
- FUNCTION, 118, 127–132, **128, 129, 130, 131, 132**
- Function Modification Identifier (FMID), 114, 114–**115**, 118, 185, 365
- functions, v8 to v9 incompatibilities and, 147–148

- G**
- general command processor, 7
- Generalized Trace Facility (GTF), 92, 213
- GET DIAGNOSTICS, 194–195
- GETHIT, 210
- GETMAIN, 15
- GETPAGE, 282
- GETSHARED, 21
- GLOBAL, 326
- global statement caching, 35
- global trace, 264
- global zone, SMP/E, 119
- GRANT, 157, 195–197, **196**, 200–201, 204
- GRANT ALL, 204

- GRECP status, 350
 GROUP BY, 78, 294–295
 group manager, 7
 group names, RACF, 207, 207*t*
- ## H
- hardware-level encryption, 211–212
 hashing algorithms, 42, 47
 header page, 51, **51**
 hidden DSNZPARMS, 162–170
 Hierarchical Storage Management. *See* DFSMS
 Hierarchical Storage Management
 (DFSMSHsm)
 High Impact Pervasive (HIPER) PTFs,
 123–124, 134
 HLS Technologies, 326
 HONOR_KEEPDICTIONARY (macro
 DSN6SPRM), 163
 HVSHARE, 21, **21**
- ## I
- I/O enhancements, logging, 65
 I/O Supervise Queue (IOSQ), 93
 IARV64, 20–21
 IBM DB2 9 System Administrator for z/OS
 Exam (Test 000–737), 1–4
 IBM.HDB9910.FE, 121
 IBMLink, 122
 IC TYPE, 221
 ICFEREP 1, 89
 ICHRIN03, 207
 ICOPY, 327
 IDCAMS, 153
 IDXBPOOL, 142
 IEBCOPY, 120–121, **120–121**
 IEBTPCH, 121
 IEFUSI, 17
 IFCEREP1, 336, 384
 IFCID. *See* Instrumentation Facility Component
 Identifiers
 IFCOFFLD, 89
 IMAGE COPY, 60
 IMS. *See* Information Management System
 inactive connections, 23, 103, 362
 inactive DBAT, 23
 inactive thread, 362
 INDEX, 20, 204
 indexes, 30, 48–50, 57–61
 asymmetrical split on, 60–61
 Change Index lists for, 130–131, **131**
 clustering, 57–58, **57**
 compression in, 59–61
 matching index access in, 165
 NPGTHRS (macro DSN6SPRM) in, 165, 165*t*
 prefix compression in, 59
 structure of, 57–58, **57**
 v8 to v9 incompatibilities and, 142
 Information Management System (IMS), 9, 13, 193
 Informational APA III4401, 138
 initialization procedures, 7
 INLISTP (macro DSN6SPRM), 163
 INPUT MEMBER NAME, 179
 INSERT, 81, 204, 327
 INSTALL, 82
 INSTALL TYPE, 178
 installation and migration, 107–188. *See also*
 maintenance
 ACCUMACC (macro DSN6SYSP) in, 158
 ADMTPROC (macro DSN6SPRM) in, 163
 Authorized Program Analysis Report
 (APARs) in, 118, 127–132, **128, 129, 130,**
 131, 132, 127
 Bootstrap Data Set (BSDS) in, 186
 CACHEDYN_FREELocal (macro
 DSN6SPRM) in, 163
 Change Index lists for, 130–131, **131**
 CLIST and panels in, enhancements to,
 182–184, 183*t*, 184*t*
 CLIST flow in, 148, **148**
 CLIST modes for, 171–172
 COMCRIT (macro DSN6SPRM) in, 163
 Consolidated Service Test (CST) in, 133–134
 Consolidated Software Inventory (CSI) in, 119
 DB2 products and features in, with codes,
 111–115, **112, 113, 114–115*t***
 DISABSCL (macro DSN6SPRM) in, 163
 distribution libraries for, 125, 125*t*
 DSNTIJDE and, 158
 DSNTIJOS and, 157–158

- DSNTIJSJ changes and, 156–157
- DSNTIP01 and DSNTIP02 panels in, OTC license usage, 154, **154**
- DSNTIP5 changes and, 157
- DSNTIP9 panel in, work file database, 153, **153**
- DSNTIPA2 panel in, data parameters, 154–155, **154, 155**
- DSNTIPC panel in, CLIST storage calculations, 155–156, **155**
- DSNTIPE panel in, thread management, 156, **156**
- DSNZPARAM settings in, 151–152, 158–171, 170–171*t*, 186, 187. *See also* DSNZPARMs
- EN_PJSJ (macro DSN6SPRM) in, 160
- Enabling New Function Mode (ENFM), 173–174, 173–174*t*
- fallback in, ENFM, 145
- falling back to DB2 8 in, 174–177, **175, 176, 177**, 185
- fixes and, acquiring, 134–135
- Function Modification Identifier in (FMID) in, 114, 114–**115**, 118, 185
- FUNCTIONs in, 118, 127–132, **128, 129, 130, 131, 132**
- hidden DSNZPARMS in, 162–170
- High Impact Pervasive (HIPER) PTFs and, 123–124
- HONOR_KEEPPDICTIONARY (macro DSN6SPRM) in, 163
- IBMLink and, 122
- IEBCOPY and, 120–121, **120–121**
- IEBTPECH and, 121
- INLISTP (macro DSN6SPRM) in, 163
- installation path in, 183–184, 184*t*
- Installation Verification Procedure (IVP) and, 152
- Interactive System Productivity Facility (ISPF) and, 148–149
- Interactive System Productivity Facility/Program Development Facility (ISPF/PDF) and, 120
- Java and, 121
- Job Control Input (JCLIN) command and, 126
- job steps in, 172, 172*t*
- libraries of SMP/E and, 119
- licensing and, 154
- maintenance and, how, where, and when to apply, 126–133
- management of SMP/E maintenance in, 120–121, **120–121**
- MAX_CONCURRENT_PKG_OPS (macro DSN6SPRM) in, 164
- MAX_OPT_STOR (macro DSN6SPRM) in, 164
- MAX_UTIL_PARTS (macro DSN6SPRM) in, 164
- migrating to DB2 9 in, 173–174, 173–174*t*
- migration modes and, 177–182, 186. *See also* migration modes
- migration path for, 183, 183*t*
- modification identifiers and, 118
- MXDTCACH (macro DSN6SPRM) in, 162
- naming SMP/E jobs for, 124
- new and changed CLIST panels in, 153–156
- NPGETHRS (macro DSN6SPRM) in, 164–165, 165*t*
- obsolete and deprecated features in. *See* v8 to v9 incompatibilities
- OJPERFEH (macro DSN6SPRM) in, 165
- OPTIOWGT (macro DSN6SPRM) in, 160
- OPTIXOPREF (macro DSN6SPRM) in, 161
- OPTJBPR (macro DSN6SPRM) in, 161
- OTC_LICENSE (macro DSN6SYSP) in, 166
- panels, values, and dependencies in, 150–151, **150**
- Passport Advantage/Passport Advantage Express and, 137
- PLANMGMT (macro DSN6SPRM) in, 166–167
- pre- and post-requisites for, 127–132, **128, 129, 130, 131, 132**
- preconditioning fixes and, 141–142
- preparing for, 107–108
- Preventive Service Planning (PSP) and, 122
- product upgrade lists for, 130, **130**
- program directories and, 109–111, **109**
- Program Temporary Fix (PTF) in, 118, 127–132, **128, 129, 130, 131, 132, 134–135**
- program upgrade lists for, 129, **129**
- PTASKROL (macro DSN6SYSP) in, 167
- RECEIVE, APPLY, ACCEPT process in, 120, 121

- Recommended Service Upgrade (RSU) in, 131
- Red Alerts and, 134–135
- release information for, 115–117
- remigrating to DB29 CM, 177
- REOPTTEXT (macro DSN6SPRM) in, 161–162
- Replacement Modification Identifier (RMID) in, 118
- RSUs and, 134–136, 135*t*
- ServerPacs and, 118
- ShopzSeries tool for, 135–136, **135**, **136**
- SJMISSKY (macro DSN6SPRM) in, 168
- SJTABLES (macro DSN6SPRM) in, 167, 167*t*
- SMF89 (macro DSN6SYSP) in, 168
- SMP/E data sets in, 133
- SMP/E job structure in, 122–126, 122*t*, 123*t*
- SMSDCFL (macro DSN6SPRM) in, 168–169
- SMSDCIX (macro DSN6SPRM) in, 169
- software subscription and support and IBM for, 137
- SPRM/&SPRMRRF (macro DSN6SPRC) in, 159–160, **159**
- SPRM/&SPMRSMX (macro DSN6SPRC) in, 158
- support level for, 117–126, 132–133
- SYSMODs in, 127–132, **128**, **129**, **130**, **131**, **132**
- SysPacs and, 118
- System Managed Storage (SMS) and, 133
- System Modification Program/Extended (SMP/E) and, 117–126
- System Modifications (SYSMODs) and, 118
- tailoring DB2 jobs and the installation CLIST in, 148–171
- target libraries for, 125, 125–126*t*, 185
- Technical Help Database for, 128, **128**
- Update Modification Identifier (UMID) in, 118
- User Modification (USERMOD) in, 118, 127–132, **128**, **129**, **130**, **131**, **132**
- UTIL_TEMP_STORCLAS (macro DSN6SPRM) in, 161, 169
- v8 to v9 incompatibilities and preplanning in, 137–148, 186. *See also* v8 to v9 incompatibilities
- Value Unit Edition (VUE) and, 110, **110**
- work files in, 153, **153**, 187
- zones of SMP/E and, 119–120
- ZOSMETRICS (macro DSN6SPRM) in, 169–170
- installation path in, 183–184, 184*t*
- Installation Verification Procedure (IVP), 152
- instrumentation facilities, 7
- instrumentation subcomponent, 10
- Instrumentation Facility Component Identifiers (IFCIDs), 15, 301, 314, 377
- authorization exit parameters and, 215
- trace and, 258, 265–266
- Integrated Catalog Facility (ICF), 154
- Interactive Output Facility (IOF), 4
- Interactive Problem Control System (IPCS), 88
- Interactive System Productivity Facility (ISPF), 4, 90
- installation and, 148–149
- Interactive System Productivity Facility/Program Development Facility (ISPF/PDF), 120
- Internal Resource Lock Manager (IRLM), 6, 9, 13, 18, 87, 107, 111, 264, 324–326, 383
- startup procedure options and locks, 325–326
- Internet Protocol Security (IPSEC), 212
- introduction to DB2 9 for z/OS, 1–4
- IO WEIGHTING, 160
- IPCS LOGDATA, 90
- IPCS VERBX, 90
- IRLMPROC, 6, 12
- IRR@XACS, 205
- ## J
- Java, System Modification Program/Extended (SMP/E), 121
- Java Database Connectivity (JDBC), 100, 111
- JES2, 83, 84
- JES3, 83, 84
- JOB, 16
- Job Control Input (JCLIN) command, 126
- Job Control Language (JCL), 4
- job structure, SMP/E, 122–126, 122*t*, 123*t*, 122
- JOBLIB, 124
- JOIN, 78
- joins, 165, 167, 167*t*

K

KEEPDICTIONARY, 58, 329, 330
KEEPDYNAMIC, 34, 45

L

labels, security, 209–210
Language Environment Base Services, 147–148
LEAF PAGE, 48
leaf pages, 48
Least Recently Used (LRU), 39, 291
LEVELID, 177
LEVELID UPDATE FREQ, 68, 177
libraries, SMP/E, 119
LICENSE TERMS ACCEPTED, 154
licensing, OTC_LICENSE (macro DSN6SYSP)
 in, 166
LIGHT, 347
LIMIT, 308
LIMIT BACKOUT in, 67
Link List Lookaside Address (LLA) space, 147
links, 41–42, 47
LIST, 241, 313
LIST COPYPOOL, 234, 241, 247, 328
list sequential prefetch, 280
LOAD, 20, 30, 56, 97, 101, 220, 280, 323, 329,
 353, 383
LOAD PART, 56
LOAD REPLACE, 58, 246, 248
LOCAL, 326
LOCALSITE, 220
LOCATIONS, 329
locking, 49
locks, 276, 277, 325–326, 350–351
LOCKS, 330
Log Analysis Tool, 212
LOG APPLY STORAGE in, 66
LOG NO, 238
Log Record Sequence Number (LRSN), 181
Log Sequence Number (LRSN), 62
LOGAPPLY, 227
LOGAPSTG, 247
LOGCSR, 227, 373
Logical Partitions (LPAR), 22, 110
Logical Work Files (LWFs), 79

LOGONLY, 252
LOGREC, 84, 90
Logrec Viewer, 90
logs and logging, 3, 61–74, 151, 374, 383. *See*
 also problem diagnosis in DB2
 active, 61
 active, running out of space and, 230–231
 archive, 72
 ARCHIVE LOG and, 68
 ARCHIVE LOG FREQ in, 66
 attribute setting for, 69
 BACKOUT DURATION in, 67
 backup and recovery and, 227, 254
 Bootstrap Data Set (BSDS) in, 72–74
 CHECKPOINT FREQ in, 66
 commit in, 63
 components of, 69
 compression and, 68
 conversion of archive log processing,
 AMODE(24) to AMODE(31), 72
 copy pools and, 241
 data capture to, 63–64
 Database Exception Table (DBET) and, 63
 definition of, 62–63
 DISPLAY ARCHIVE, 317, **317**
 DSN1LOGP in, 70, 234–235, 234
 DSNJU003 for, 70
 DSNJU004 for, 70–71
 format utility for, 65
 formatting of, DSNJLOGF for, 68
 FREQUENCY TYPE in, 67
 I/O enhancements for, 65
 installation panel DSNTIPL for, components
 of, 65–68
 LEVELID UPDATE FREQ in, 68
 LIMIT BACKOUT in, 67
 LOG APPLY STORAGE in, 66
 log formats, 337
 Log Sequence Number (LRSN) in, 62
 LOGDATA and, 90
 Logrec Viewer and, 90
 NUMBER OF LOGS in, 66
 OUTPUT BUFFER in, 65–66
 performance and, 337–338
 print utility for, 64

- rates for, 68
 - Recovery Log Manager (RLM) and, 64–65, 229
 - Relative Byte Address (RBA), 248
 - RO SWITCH CHKPTS in, 67
 - RO SWITCH TIME in, 68
 - rollback in, 63
 - SET LOG and, 68
 - size of, 69
 - size of data sets in, 69–70
 - STOP DATABASE and, 68
 - SYSLGRNX and, 69
 - system checkpoints and, 71–72
 - uncompressed, 344
 - UPDATE RATE in, 66
 - UR CHECK FREQ in, 67
 - URLOG WRITE CHECK in, 67
 - utilities for, 70
 - VERBX LOGDATA and, 90
 - LOGUNDO, 227, 373
 - LONGLOG, 330
 - LONG-RUNNING READER, 156
 - lookaside, Link List Lookaside Address (LLA), 147
 - LookAt facility, 91
 - LRDRTHLD, 156
 - LSTATS, 313
 - LULIST, 329
 - LUMODES, 329
 - LUNAMES, 329
 - LWMENV, 98
- M**
- MAINT, 203
 - maintenance, how, where, and when to apply, 126–133. *See also* installation and migration
 - Authorized Program Analysis Report (APARs) in, 127–132, **128, 129, 130, 131, 132**
 - Change Index lists for, 130–131, **131**
 - FUNCTIONs in, 127–132, **128, 129, 130, 131, 132**
 - pre- and post-requisites for, 127–132, **128, 129, 130, 131, 132**
 - preconditioning fixes and, 141–142
 - product upgrade lists for, 130, **130**
 - program level in, 132–133
 - Program Temporary Fix (PTF) in, 127–132, **128, 129, 130, 131, 132**
 - program upgrade lists for, 129, **129**
 - PUT level in, 132–133
 - Recommended Service Upgrade (RSU) in, 131
 - schedule for, 131
 - support levels in, 132–133
 - SYSMODs in, 127–132, **128, 129, 130, 131, 132**
 - Technical Help Database for, 128, **128**
 - User Modification (USERMOD) in, 127–132, **128, 129, 130, 131, 132**
 - v8 to v9 incompatibilities and, 138–142
 - Management Clients Package, 112, **112**
 - manuals for DB2 9 for z/OS, 357–358
 - MAX OPEN FILE REFS, 156
 - MAX_CONCURRENT_PKG_OPS (macro DSN6SPRM), 164
 - MAX_OPT_STOR (macro DSN6SPRM), 164
 - MAX_UTIL_PARTS (macro DSN6SPRM), 164
 - MAXCSA, 325
 - MAXDBAT, 10, 24, 25, 362
 - MAXKEEPD, 34, 46, 104, 275, 363
 - MAXOFILR, 156
 - MAXPARTITIONS, 27, 56
 - MAXRBLK, 48
 - MAXRO, 330
 - MAXTEMPS, 153, 266, 367
 - MEMLIMIT, 16–17
 - memory, 15–17, **16**. *See also* storage
 - automated monitoring of, 277
 - Shared Virtual (SVM), 19–23
 - memory objects, shared, 20–21
 - MEPL. *See* Module Entry Point List
 - MERGECOPY, 323
 - message generator, 7, 9, 10
 - message numbers, DB2, 355, 356*t*
 - metrics, 169–170
 - MGMTCLAS, 27
 - MIGRATE, 82
 - migrating to DB2 9, 173–174, 173–174*t*. *See also* installation and migration
 - CLIST tailored jobs in, 183, 183*t*
 - migration modes, 177–182, 186, 366
 - CATENFM COMPLETE in, 182
 - CATENFM START in, 180–181

migration modes, *continued*

- CATMAINT UPDATE and, 177–178
 - conversion mode (CM) in, 177–178
 - DSNTIJEN in, 180–181
 - DSNTIJTC and, 177–178
 - DSNTIP03 in, 180
 - DSNTIPA1 in, 178, **178**, 187
 - DSNTIPC1 in, 180
 - DSNTIPT in, 179, **179**
 - Enabling New Function Mode (ENFM) in, 177, 178–181, **179**, **180**
 - New Function Mode (NFM) in, 177, 181–182, **182**
- migration path, 183, 183*t*
- MODE, 318
- modes, 29
- MODESELECT, 329
- MODIFY, 324, 325, 339, 345, 348, 349, 352, 381
- modification identifiers, 118
- MODIFY RECOVERY, 37, 222, **222**
- MODIFY TRACE, 270–271, **270**
- Module Entry Point List (MEPL), 87, 116–117, 339
- MONITOR, 92
- monitor trace, 262
- MQSeries, 14
- MSTR, 20, 87, 99, 207, 308, 333, 339
- Multiple Allegiance, 93
- MVS, 17, 83, 84
- commands, 333–334, 333
 - tracing, 92
- MXDTCACH (macro DSN6SPRM), 162

N

- NACTIVE, 79
- naming, 124, 158
- copy pools and, 241
 - DSN000x databases, 144
 - VCAT, 343
- native stored procedures. *See* stored procedures
- NEON Enterprise Software, 326
- network trusted context, 194–195
- New Function Mode (NFM), 46, 47, 177, 181–182, **182**. *See also* Enabling New Function Mode (ENFM)
- non-allied address spaces, 10

- NOT LOGGED, 329
- NPGTHRS (macro DSN6SPRM) in, 164–165, 165*t*
- NUMBER OF LOGS, 61, 66

O

- Object Descriptor (OBD), 29, 39–40
- Object Identifiers (OBIDs), 30, 36
- object management, in catalog tables, 29–30
- object-level recovery, 234
- obsolete and deprecated features. *See* v8 to v9 incompatibilities
- OJPERFEH (macro DSN6SPRM), 165
- OMEGAMON, 89, 267, 268, 297
- One-Time Charge (OTC) license, DSNTIP01 and DSNTIP02 panels and, 154, **154**
- Open Database Connectivity (ODBC), 111
- Optim Development Studio, 113
- Optim tools for auditing, 212–213
- optimistic locking, 49
- Optimization Expert, 157
- Optimization Service Center (OSC), 3, 111, 113–114, 157
- OPTIMIZE, 50
- OPTIOWGT (macro DSN6SPRM), 160
- OPTIXOPREF (macro DSN6SPRM), 161
- OPTJBPR (macro DSN6SPRM), 161
- ORDER BY, 78, 83
- OTC. *See* One-Time Charge
- OTC_LICENSE (macro DSN6SYSP), 166
- outer joins, 165
- OUTPUT BUFFER, 65–66, 337

P

- PACKADM, 202*t*, 203
- PACKAGE, 32
- Package Table (PT), 32, 35, 273
- PAGE, 323
- Page Set Rebuild Pending (PSRBD), 232
- pages, 278, 290–291, 303, 379
- physical, 50–55, 50
 - RECOVER, 328
- panels, values, and dependencies, in installation, 150–151, **150**

- Parallel Access Volume (PAV), 80, 93
- parallel sysplex and DB2, 96–97, 345–351
- Coupling Facility (CF) and, 96
 - large mainframe systems and hardware resources for, 96–97
 - Shared Communications Area (SCA) and, 96
 - workload benefits from, 97
 - z9 Integrated Information Processor (zIIP) and, 97–97
- parent objects, 37, 41
- PARMLIB, 147
- parse tree storage, 43
- PART, 322, 323
- PARTITION, 27
- Partition By Growth (PBG), 56
- Partition By Range (PBR), 56, 57
- partitioning, 27
- Passport Advantage/Passport Advantage Express, 137
- Path Check, 326
- paying for the test, 3
- PC, 325
- Peer to Peer Remote Copy (PPRC), 161
- PERFM, 92
- performance and tuning, 257–303. *See also* trace
- automated memory monitoring and, 277
 - below-the-bar EDM pool and, 275
 - buffer pools and, 292–293. *See also* buffer pools
 - hit ratios and, 288–290
 - management in, automatic, 293–294
 - statistics and, 291–292, **292**
 - thresholds and, 281–288, 296
- data sets and, maximum number of, 300
- Database Descriptors (DBDs) and, 273, 277, 299, **299**
- DSNDB07 database and, 295–297
- dynamic cache and, 298
- EDM pool and, 273–277, 297
- efficiency of EDM pool and, measuring, 275–276
- key elements in, 257–258
- list sequential prefetch and, 280
- logs and logging, 337–338
- OMEGAMON and, 297
- Package Tables (PTs) and, 273
- page management in, 290–291
- pages and, 278, **278**, 303
- prefetch and, 279–280, 280*t*
- read methods and, 279
- region size in DB2 and, 274–275
- RID pool and, 299
- RUNSTATS in, 257
- sequential prefetch and, 279–280, 280*t*
- Service Level Agreements (SLAs) and, 258
- skeleton pools and, 273
- skeleton tables and locks in, 276
- Skeleton Package Tables (SKPTs) and, 273
- sort pool in, 294–295
- storage and, 303
- stored procedures and, 299–300
- thread management and, 300
- thresholds for, 303
- tracing DB2 in, 258–273, 301. *See also* trace
- virtual buffer pools and, 277–278, **278**
- work files and, 295–297
- Workload Manager (WLM) and, 299–300
- WRITE operations and, 281
- performance trace, 263
- Peripheral Component Interconnect
- Cryptographic Coprocessor (PCICC), 212
- Peripheral Component Interconnect Extended
- Cryptographic Coprocessor (PCIXCC), 212
- Peripheral Component Interconnect
- Cryptographic Accelerator (PCICA), 212
- PERMANENT UNIT NAME, 155
- PGFIX, 290–291
- PGSTEAL, 291
- physical rows and pages, 50–55
- physical structures of DB2, 3
- PK31841 and, 140
- PK39850, 139
- PK52522 (Plan Stability) and, 140–141
- PK62178 and, 140
- PK76532 and, 140
- PK77228, 138
- PK78958 and, 140
- PK83585, 139
- PLAN, 32
- PLAN_TABLE, 282
- PLANMGMT (macro DSN6SPRM), 141, 166–167

- Point In Time (PIT), 247–248, 250
 - backup and recovery and, 223
 - pooled threads, 23
 - POOLINAC, 24
 - pools, 43–45
 - ports, secure, 192
 - precompiler, 10
 - preconditioning fixes, 141–142
 - PREFETCH, 50, 280
 - prefetch, 279–280, 280*t*
 - prefix compression, 59
 - PREFORMAT, 329
 - PREPARE, 34, 43, 46
 - Preventive Service Planning (PSP), 122
 - print log utility, 64
 - private protocol access, 25–26
 - private protocols, 19
 - privilege setting, 201
 - problem diagnosis in DB2. *See also* logs and logging
 - D A,ALL for, 86
 - D GRS,CONTENTION for, 86
 - D OPDATA for, 86
 - DIAGNOSE and, 87
 - DISPLAY DATABASE USE/LOCK LIMIT for, 86
 - DISPLAY THREAD DETAIL for, 86
 - DISPLAY UTILITY for, 86
 - dumps and, 87–89, 91
 - Environmental Record Editing and Printing (EREP) and, 89–90
 - F irlmproc,STATUS,ALLI and F irlmproc,STATUS, ALLD for, 86
 - Generalized Trace Facility (GTF) and, 92
 - Interactive Problem Control System (IPCS) and, 88
 - Interactive System Productivity Facility (ISPF) and, 90
 - IPCS LOGDATA and, 90
 - IPCS VERBX and, 90
 - Logrec Viewer and, 90
 - LookAt facility and, 91
 - Module Entry Point Listing (MEPL) and, 87
 - MVS tracing in, 92
 - start-up and shutdown messages and, 91, **91**
 - SYS1.DUMPxx and, 91
 - SYSLOG and, 86
 - System Management Facility (SMF) and, 89
 - trace in, 89, 92
 - trace utility for, 92, 92*t*
 - VERBX LOGDATA and, 90
- problem resolution methods, 338–339
 - processing flow, 17
 - product upgrade lists for, 130, **130**
 - products and features in DB2, with codes, 111–115, **112**, **113**, 114–115*t*
 - Program Development Facility (PDF), 4
 - program directories, 109–111, **109**, 358–359
 - program level support, 132–133
 - Program Temporary Fix (PTF), 118, 127–132, **128**, **129**, **130**, **131**, **132**, 134–135
 - program upgrade lists for, 129, **129**
 - PROJECTCPU option, 102
 - protocols, private, 19, 25–26
 - PSRBD, 331
 - PTASKROL (macro DSN6SYSP), 167
 - PURGE, 324
 - PUT level, 132–133
- ## Q
- queries, 3, 19, 30
 - QUERY, 241
 - QUIESCE, 223, 234, 310, 333
- ## R
- RACF. *See* Resource Access Control Facility
 - RAMAC Virtual Array (RVA), 240
 - RBA. *See* Relative Byte Address
 - RBASTART, **249**
 - RBDP. *See* Rebuild Pending
 - read methods, performance and, 279
 - READA, 63
 - READS, 63, 344
 - real storage, 15–17, **16**
 - Real Time Statistics (RTS), 29, 143
 - v8 to v9 incompatibilities and, 145
 - REBIND, 39, 141, 276
 - REBIND PACKAGE, 141, 166, 349
 - REBIND PLAN, 349

- REBIND TRIGGER PACKAGE, 166, 349
 rebinding, 140–141, 166
 REBUILD, 20, 252, 331
 REBUILD INDEX, 30, 97, 101, 227, 248, 323, 331
 Rebuild Pending (RBDP), 232–233, 331
 RECEIVE, 120, 121
 Recommended Service Upgrade (RSU), 131, 134–136, 135*t*
 RECOVER, 30, 220, 223–225, 223–224*t*, 234, 239, 246, 247, 248, 253, 280, 327–328, 323, 332, 350, 373, 375
 output from 227–228
 sequence of, 223–224*t*
 syntax of, 226–227, **227**
 using an earlier copy, 225–226, **226**
 RECOVER BSDS, 64, 229–230
 RECOVER INDEX, 252
 RECOVER INDOUBT, 317, **317**
 RECOVER LOGAPPLY, 235
 RECOVER TABLESPACE, 252
 Recovery Base Log Point (RBLP), 242
 Recovery Log Manager (RLM), 7, 64–65, 229
 RECOVERY LOGAPPLY, 255
 Recovery Manager (RM), 7, 229
 Recovery Pending (RECP), 232–233, 331
 recovery point, 247–248
 Recovery Resource Services Attachment Facility (RRSAF), 198
 RECOVERYSITE, 220
 RECP. *See* Recovery Pending
 Red Alerts, 134–135
 REFERENCES, 204
 references, 357–359
 REFRESH, v8 to v9 incompatibilities and, 147, **147**
 registering for the test, 3
 Relational Data Server (RDS) pool, EDM, 38
 relational data system, 7
 Relative Byte Address (RBA), 41, 181, 248–249, **249**
 of last valid log record, 248–249, **249**
 RELEASE, 15, 274, 282, 300
 release information for DB2 9 for z/OS, 115–117
 remigrating to DB29 CM, 177
 remote trusted connections, 199–200
 REOPTTEXT (macro DSN6SPRM), 161–162
 Reordered Row Format (RRF), 58–59, **59**, 139
 REORG, 20, 26, 30, 40, 56, 58, 97, 101, 143, 144, 181, 246, 280, 326, 327, 329–331, 337, 340
 REORG INDEX, 248
 REORG TABLESPACE, 248, 331
 REPAIR, 177, 323, 328, 331–332, **332**
 REPAIR DBD, 319
 REPLACE, 323
 Replacement Modification Identifier (RMID), 118
 Replication Center, 113
 REPORT, 252, 253, 323, 332–333, **332**, 373
 report classes, 98
 REPORT RECOVERY, 220–222, **221**, 226, 234, 327, 333
 REPORT09, 183
 REPORTONLY, 330
 RESET, 177
 Resource Access Control Facility (RACF), 138, 147–148, 190, 193, 204–209, 370, 371
 address spaces and, 207, 207*t*
 authorization checks mapped to, 208
 authorization routine exits and, 209
 authorization setting in, 204–209
 DSNR for, 206, 208
 exit codes, 217
 planning, 206–207
 resource classes in, 208, 208–209*t*, 217
 security labels and, 210
 subsystems associated with, 207
 user IDs and group names in, 207, 207*t*
 resource classes, RACF, 208, 208–209*t*, 217
 resource groups, 98
 Resource Limit Facility (RLF), v8 to v9 incompatibilities and, 144–145
 Resource List (RLIST), 156
 Resource Management/Measurement Facility (RMF), 15, 102, 169
 Resource Manager Identifier (RMID), 6
 resource managers, 6
 Resource Recovery Services (RRS), 10, 13, 14
 Resource Recovery Services Attachment Facility (RRRSAF), 14
 Responsive Systems, 326
 RESTART, 26, 331
 restart records, backup and recovery and, 254

- restarting DB2, 233
 - RESTORE, 70, 219, 220. *See also* system
 - backup and recovery
 - RESTORE SYSTEM, 231, 232, 237, 246–247, 247, 250, 251, 252
 - RESTORE_RECOVER_FROMDUMP, 246
 - RESTOREBEFORE, 226
 - RESTRICT, 321, 322, 350
 - RESTRICT ON DROP, 143
 - RESYNC PORT, 192
 - RETAIN, 222
 - REVOKE, 196–197, **196**, 200–201, 204
 - REXX Language Support, 81
 - RID pools. *See* Row Identifier (RID) pools
 - RO SWITCH CHKPTS, 67
 - RO SWITCH TIME, 68
 - role-based security, 195–197, 210, 217, 370
 - defining, 197, **197**
 - revoking, 197
 - rollback, 63
 - ROTATE PARTITION, 56
 - row formats, 139
 - row formats, 58–59, **59**, 139
 - Row Identifier (RID) pools, 48–50, **48**, 105, 364
 - performance and, 299
 - ROWFORMAT, 160
 - ROWID, 58
 - rows, physical, 50–55
 - RSU. *See* Recommended Service Upgrade
 - RUNSTATS, 20, 28, 55, 140, 141, 257
- S**
- sample tests, 2–3
 - Sarbanes-Oxley Act, 212
 - SCHEMA SWITCH, 344
 - SCOPE, 325, 326
 - scope of commands, 307
 - Screen Definition Facility (SDF), 308
 - SCT02, 32, 35, 38, 45, 276
 - SDSF. *See* System Display and Search Facility
 - SDSNEXIT, 145, 151, 205
 - SDSNEXT, 146
 - SDSNIVPD, 266
 - SDSNLINK, 146
 - SDSNLOAD, 146
 - SDSNLOD2, 146
 - SDSNMACS, 63, 69, 159, 276
 - SDSNSAMP, 5, 44, 81, 180
 - SECLABLE, 209–210
 - SECPORT, 192
 - SECQTY, 79
 - SECURE PORT, 192
 - secure ports, 192
 - Secure Sockets Layer (SSL), 191, 212
 - security, 189–212
 - administrative authorities in, 201–204, **202**, **203**
 - American Encryption Standard (AES) and, 190
 - auditing and. *See* auditing
 - authorities in, 217
 - authorizations in, 200–201
 - column-level encryption in, 210–211, **211**
 - data security and, 190, 212
 - encryption in, 190–192, 216
 - hardware-level encryption in, 211–212
 - IBM Security Framework in, 189
 - multilevel, 209–210
 - privileges in, 201
 - Resource Access Control Facility (RACF) and, 190, 193, 204–209
 - role-based, 195–197, 210, 217
 - SECLABLE and, 210
 - secure ports in, 192
 - security labels in, 209–210
 - security solution areas in, 189
 - SYSCTRL and, 204
 - Triple Data Encryption Standard (TDDES) and, 190
 - trusted connections in, 198–200. *See also* trusted connections
 - trusted context in, 193–195, 197–198, 198*t*, 210, 216
 - user authentication in, 193
 - security labels, 209–210
 - SECURITY_OUT, 200
 - SEGSIZE, 56, 143, 295–296
 - SELECT, 204, 252
 - sequential prefetch, 279–280, 280*t*
 - Sequential Steal Threshold (VPSEQT), 283, 286
 - SERB, 17, 26

- ServerPacs, 118
- service classes, 98, 99
- service controller, 8
- service definitions and, 98
- Service Level Agreements (SLAs), 258
- service policy, 98
- Service Request Block (SRB), 11
- service tasks, 11
- SET, 323
- SET ENCRPYTION PASSWORD, 210
- SET LOG, 68
- SET LOG RESUME, 248
- SET LOG SUSPEND, 248
- SET STATUS, 324
- SET SYSPARM, 38, 44, 156, 204, 311–312, **311, 312**
- SET SYSPARM LOAD, 44, 152, 367
- SET SYSPARM RELOAD, 45, 152
- SET SYSPARM STARTUP, 152, 367
- SETXCF FORCE, 237
- Shared Communication Area (SCA), 96, 346
- back-up and recovery and, 242
- shared memory, 103
- storage requirements restriction, 22–23, **22**
- Shared Memory Facility, 15
- shared memory objects, 20–21
- Shared Virtual Memory (SVM), 19–23
- SHAREMEMOBJ, 21
- ShopzSeries tool, 135–136, **135, 136**
- SHOWDSNS, 333
- SHRLEVEL, 331
- SHRLEVEL CHANGE, 169, 300, 330
- SHRLEVEL REFERENCE, 228, 330
- shut down DB2 subsystem, 228
- shutdown messages, 91, **91**
- simple table spaces, 143
- SJMISSKY (macro DSN6SPRM), 168
- SJMXPOOL, 162
- SJTABLES (macro DSN6SPRM), 167, 167*t*
- Skeleton Cursor Table (SKCT), 32–40, **33, 35, 276**
- Skeleton Package Table (SKPT), 32–40, **33, 32, 35–36, 273**
- Skeleton Package Table Parent Record (SPTR), 36
- skeleton pool, EDM, 38, 155–156, 273, 363, 379
- skeleton tables, 276
- SMF. *See* System Management Facility
- SMF89 (macro DSN6SYSP), 168
- SMP/E. *See* System Modification Program/Extended, 117
- SMSDCFL (macro DSN6SPRM), 168–169
- SMSDCIX (macro DSN6SPRM), 168, 169
- SNA. *See* Systems Network Architecture
- snap dumps, 87–89
- SnapShot, 240
- software subscription and support and IBM, 137
- SORT POOL SIZE, 82–83
- sort pool, 82–83, **82, 83t, 294–295**
- sort summary trace records, 80
- SORTN_JOIN, 280
- SPACE, 79
- space issues, 339–342. *See also* storage
 - space maps, 51–53, **52, 52t, 53t**
 - Spatial Support for DB2 9, 111, 114
- SPE APAR PK11129 (UK9008) and, 139
- specialty engines, 101–102
- split, asymmetrical, 60–61
- SPRM/&SPRMRRF (macro DSN6SPRC), 159–160, **159**
- SPRM/&SPRMRSMX (macro DSN6SPRC), 158
- SPT01, 32, 35–36, 45, 141, 276
- SQL, 14, 33, 34, 43, 46–47, 78, 100, 111
- SQLCODE, 142, 143, 144, 153
- SQLPAIRWISEJOIN, 160
- SQLWARN8, 200
- SRTPOOL DSN6SPRM, 82
- SSLGRNX, 220
- stand-alone dumps, 87–89
- star joins, 167, 167*t*
- START DATABASE, 140, 233, 319, **319, 323, 340, 349, 350, 353, 382**
- START DB2, 150, **150, 306, 308, 309, 310–311, 310, 311, 347, 352, 381**
- START FUNCTION SPECIFIC, 349
- START GTF, 92
- START PROCEDURE, 342, 349
- START RLIMIT, 144–145
- START TRACE, 63, 92, 258, 264, 296, **269, 272, 349**
- start-up and shutdown messages, 91, **91**
- STARTDB, 318

- STARTRBA, 230
- STAT, 92
- STATCLUS, 141
- STATIME, 45, 46, 264, 275
- STATISTICS, 46
- statistics trace, 263–264, 263*t*, **264**
- STCK, 237
- STEPLIB, 124
- STOGROUP, 239
- STOP, 228
- STOP DATABASE, 68, 307, 319–320, **319**, **320**, 339, 349
- STOP DB2, 308, 309, **309**
- STOP FUNCTION SPECIFIC, 349
- STOP PROCEDURE, 349
- STOP TRACE, 214, **214**, 258, 271, **271**, 272, 302, 349, 379
- storage, 15–17, **16**, 108*t*, 303
 - above and below the bar, 43–45
 - active logs running out of space and, 230–231
 - automated memory monitoring and, 277
 - catalog tables and, 340–342
 - classes and groups in, 95
 - CLIST storage calculations, 155–156, **155**
 - CREATE STOGROUP in, 239
 - DASD, 340
 - DSNTIPC panel in, CLIST storage calculations, 155–156, **155**
 - DSVCI and, 94
 - EDM pool, performance, and, 273–277
 - Enterprise Storage Server (ESS) and, 93
 - Extended Address Volume (EAV) and, 93
 - Parallel Access Volume (PAV) and, 93
 - planning for, estimating need for, 108, 108*t*
 - RAMAC Virtual Array (RVA) in, 240
 - requirements for, 107–108
 - shared memory requirements restriction, 22–23, **22**
 - space issues and, 339–342
 - Storage Management Subsystem (SMS) and, 93–95, **95**
 - System Managed Storage (SMS) and, 133
 - TotalStorage Enterprise Storage Server (ESS), 93, 238
 - Virtual Storage Constraint Relief (VSCR) and, 43–45
- storage classes, 169
- Storage Management Subsystem (SMS), 27, 93–95, **95**
 - Automatic Class Selection (ACS) and, 94
 - classes and groups in, 95
 - DFSMS Hierarchical Storage Management (DFSMSHsm) and, 95
 - DSNTIPA3 and, 94–95, **95**
 - DSVCI and, 94
 - Enterprise Storage Server (ESS) and, 93
 - Extended Address Volume (EAV) and, 93
 - Fiber Channel Connection (FICON) and, 94
 - I/O supervise queue (IOSQ) and, 93
 - Multiple Allegiance and, 93
 - Parallel Access Volume (PAV) and, 93
 - TotalStorage ESS and, 93
- storage manager, 7
- storage pools, 43–46
 - copy pools in, 240–241
- STORCLAs, 27
- Store Clock Value (STCK), 237
- Stored Procedure Address Space (SPAS), 47
- stored procedures/native stored procedures, 12, 19, 26, 46–47, 100, 104, 363
 - performance and, 299–300
 - v8 to v9 incompatibilities and, 143
 - Workload Manager (WLM) and, 299–300, 342–343, **343**
- stored procedures manager, 8
- Structured Query Language. *See* SQL
- STYPE, 221
- subcomponents of DB2, 5–6, 103, 361
- subscription, software subscription and support and IBM, 137
- subsystems in DB2, 12–13, **12**
 - recommendations, 333
 - startup messages, 311, **311**
 - support, 7, 9
- SUP APAR, 134
- SUP TAPE, 134
- Supervisor Call (SVC) dumps, 87–89

- support
 levels of, 117–126. *See also* System Modification Program/Extended (SMP/E)
 levels of, maintenance, 132–133
 software subscription and IBM for, 137
- SWITCH, 140, 141
- SYS1.DUMP, 88
- SYS1.DUMPxx and, 91
- SYS1.LOGREC, 86, 87, 90, 336, 354, 384
- SYS1.PARMLIB, 89, 124, 147, 265, 324
- SYS1.PROCLIB, 92
- SYS1.SAMPLIB, 205
- SYSABEND, 87
- SYSADM, 92, 152, 196, 202*t*, 203, 204, 308, 310, 332
- SYSADM2, 204
- SYSCOLAUTH, 201
- SYSCOPY, 69, 220, 221, 222, 223, 224, 228, 336, 373
- SYSCTRL, 92, 152, 196, 202*t*, 203, 204, 217, 332, 370
- SYSDBAUTH, 201
- SYSDEFLT, 81
- SYSIBM, 28, 41
- SYSIBM.ADMIN_ASKS, 100
- SYSIBM.DSN_PROFILE_ATTRIBUTES, 160
- SYSIBM.IPNAMES, 200
- SYSIBM.LOCATIONS, 199, 200
- SYSIBM.SYSCONTEXT, 195
- SYSIBM.SYSCONTEXTAUTHIDS, 195
- SYSIBM.SYSCOPY, 55, 327, 333
- SYSIBM.SYSCTXTTRUSTATTRS, 195
- SYSIBM.SYSINDEXPART, 343
- SYSIBM.SYSINDEXSPACESTATS, 145
- SYSIBM.SYSLGRNX, 333
- SYSIBM.SYSOBDS, 54–55, 55*t*
- SYSIBM.SYSOBJ, 143
- SYSIBM.SYSOBJROLEDEP, 195
- SYSIBM.SYSOPY, 226
- SYSIBM.SYSROLES, 195
- SYSIBM.SYSSTOGROUP, 343
- SYSIBM.SYSTABLEPART, 343
- SYSIBM.SYSTABLESPACE, 55
- SYSIBM.SYSTABLESPACESTATS, 145
- SYSIBM.USERNAMES, 200
- SYSINDEXES, 50
- SYSKEYTGTDIS, 28
- SYSLGRNX, 32, 41, 69, 72, 222, 233, 373
- SYSLOG, 84, 86, 308, 338
- SYSMDUMP, 88
- SYSMODs, 127–132, **128**, **129**, **130**, **131**, **132**, 127
- SYSOBJ, 143, 181
- SYSODBS, 55, 55*t*
- SYSOPR, 92, 140, 152, 202*t*, 203, 204, 308, 310
- SYSOPR2, 204
- SYSOTHER, 99
- SYSOUT, 84
- SYSPACKAGE, 181
- SysPacs, 118
- SYSPITR, 231, 237, 246, 248, 249
- SYSPITRT, 231
- SYSPLAN, 341, 342
- sysplex, 96–97, 345–351
- SYSPROC.DSNWZP, 182
- SYSRESAUTH, 201
- SYSROUTINES, 28
- SYSSTC, 333
- SYSSTRINGS, 329
- SYSTABAUTH, 201
- SYSTC, 99
- SYSTEM, 99
- SYSTEM AUTHID, 199
- system backup and recovery, 219–255. *See also*
 BACKUP SYSTEM; RESTORE;
 RESTORE SYSTEM
 active logs in, 230–231, 232
 active logs in, running out of space and,
 230–231
 advanced concepts in, 228–233
 advisory pending state in, 232
 application abends and, 232
 ARCHIVE LOG in, 224, **224**
 archive logs in, 254
 BACKUP and, 219, 220
 BACKUP SYSTEM in, 224, 227, 234,
 237–245, 248, 249, 250, 251, 255. *See also*
 BACKUP SYSTEM
 Bootstrap Data Set (BSDS) in, 225, 229–230
 CANCEL THREAD in, 235–236, **236**

- system backup and recovery, *continued*
 - checkpoints in, 249
 - cold starts in, 230
 - commands for, 235–236, **236**
 - conditional restart in, 254
 - COPY in, 220, 223, 224
 - copy pools in, 240–241
 - CREATE STOGROUP in, 239
 - data sharing and, 237
 - Database Exception Table (DBET) in, 232–233, 254
 - DB2 tracker site in, 252
 - DBETE in, 232–233, 254
 - DEFER parameters in, 233
 - DELETE NOSCRATCH in, 225
 - DFSMS Data Set Services (DFSMSdss) enhancements for, 239
 - DFSMS Data Set Services (DFSMSdss) in, 250
 - DISPLAY DATABASE in, 235–236, **236**
 - DISPLAY THREAD in, 235–236, **236**
 - DISPLAY UTILITY in, 235, 239
 - DSN1LOGP in, 234–235
 - DSNDB06 in, 223
 - DSNDB07 and work files in, 231
 - DUMP and DUMPONLY in, 238
 - FlashCopy and, 219, 238, 240
 - FORCE parameter in, 239
 - full vs. data only, 243, 250
 - LIST COPYPOOL in, 234
 - LOAD in, 220
 - LOGSCR phase in, 227
 - MODIFY RECOVERY in, 222, **222**
 - object-level, 234
 - Page Set Rebuild Pending (PSRBD), 232
 - Point In Time (PIT) in, 223, 247–248, 250–252
 - QUIESCE and, 234
 - RBA of last checkpoint end, 249
 - RBA of last valid log record and, 248–249, **249**
 - REBUILD INDEX in, 227
 - Rebuild Pending (RBDP) in, 232–233
 - RECOVER in, 220, 223–225, 223–224*t*, 234, 239, 246, 248, 253
 - output from, 227–228
 - syntax of, 226–227, **227**
 - using an earlier copy in, 225–226, **226**
 - RECOVER BSDS in, 229–230
 - RECOVER LOGAPPLY in, 235
 - Recovery Base Log Point (RBLP) in, 242
 - recovery from different system failures in, 228
 - Recovery Log Manager (RLM) and, 229
 - Recovery Manager (RM) and, 229
 - Recovery Pending (RECP) in, 232–233
 - recovery point in, 247–248
 - REPORT in, 253
 - REPORT RECOVERY in, 220–221, **221**, 226, 234
 - restart records in, 254
 - restarting DB2 in, 233
 - RESTORE in, 219, 220. *See also* RESTORE
 - RESTORE SYSTEM in, 232, 237, 246–247, **247**, 250, 251, 252. *See also* RESTORE SYSTEM
 - restoring to arbitrary PIT in, 251–252, **251**
 - restoring to PIT of prior backup, 250, **250**
 - restoring to previous backup in, 250–251, **250**
 - scenarios in, 249–252
 - Shared Communication Area (SCA) in, 242
 - shut down DB2 subsystem in, 228
 - START DATABASE in, 233
 - STCK and, 237
 - steps in running BACKUP SYSTEM for, 243–244
 - STOP in, 228
 - SYSCOPY and, 228, 223, 224
 - system disaster recovery process in, 223–235
 - system-level requirements for, 219–220
 - tape support using BACKUP SYSTEM in, 244–245
 - TERM UTILITY in, 227, 235–236, **236**
 - traditional approach to, 223–225
 - UNLOAD in, 220
- system checkpoints and, 71–72
- system disaster recovery process, 223–235. *See also* System backup and recovery
- System Display and Search Facility (SDSF), 4, 84–85, **85**, 334
- system error reporting, 83–86, **84**
- SYS1.LOGREC for, 86
- System Display and Search Facility (SDSF) for, 84–85, **85**

- Write To Operator With Reply Message (WTOR) and, 85
- system hit ratio, 289–290
- System Managed Storage (SMS), 133
- System Management Facility (SMF), 15, 84, 89, 168, 213, 377, 378
- trace and, recording data from, 267–268, 302
- System Modification Program/Extended (SMP/E), 4, 107, 114
- consolidated software inventory (CSI) in, 119
- data sets in, 133
- distribution libraries for, 125, 125*t*
- High Impact Pervasive (HIPER) PTFs and, 123–124
- IEBCOPY and, 120–121, **120–121**
- IEBTPCH and, 121
- Interactive System Productivity Facility/Program Development Facility (ISPF/PDF), 120
- Java and, 121
- Job Control Input (JCLIN) command and, 126
- job structure in, 122–126, 122*t*, 123*t*
- library structure in, 119
- management of maintenance in, 120–121, **120–121**
- modification identifiers and, 118
- naming jobs for, 124
- Preventive Service Planning (PSP) and, 122
- RECEIVE, APPLY, ACCEPT process in, 120, 121
- target libraries for, 125, 125–126*t*, 185
- zones of, 119–120
- System Modifications (SYSMODs), 118
- system operations and troubleshooting, 305–354
- CATMAINT and, 344
- data sharing and, 345–351
- DB2 Administration Tool in, 351
- DBD size and, 344–345
- EDM pool and, 344
- logs and logging in, 337–338
- managing DB2 components and processes in, 305–309
- problem resolution methods in, 338–339
- space issues and, 339–342
- subsystem recommendations in, 333
- uncompressed log records and, 344
- VCAT names and, 343
- WLM and stored procedures in, 342–343, **343**
- system page, 54–55, 55*t*
- system parameter manager, 7
- system parameters, 151
- System Resource Manager (SRM), 17
- system services, 6
- System Services Address Space (SSAS), 6–7
- system z architecture, 4
- System z New Application License Charges (zNALC), 110
- SYSTEMLEVEL BACKUPS, 221
- Systems Network Architecture (SNA), 8, 19, 26
- SYSTKEYTARGETS, 28
- SYSUDUMP, 87
- SYSUSERAUTH, 201
- SYSUTIL, 40–41
- SYSUTILX, 32, 40–41, 221
- ## T
- table joins, 167, 167*t*
- table spaces, 30–31, 30*t*, 50–55, **50**
- bit maps or space maps in, 51–53, **52**, 52*t*, 53*t*
- data pages in, 54, **54**
- dictionary pages in, 53–54
- header page in, 51, **51**
- Partition By Growth (PBG) in, 56
- Partition By Range (PBR) in, 56, 57
- physical rows and pages for, 50–55
- simple, 143
- system page in, 54–55, 55*t*
- universal, 56–57
- tables
- base, 55
- clone, 55
- universal spaces, 56–57
- TABLESPACE, 30
- TABLESPACESET, 221
- tailoring DB2 jobs and the installation CLIST, 148–171. *See also* installation and migration
- tape support, BACKUP SYSTEM, 244–245
- target libraries, 365
- SMP/E and, 125, 125–126*t*, 185
- target zone, SMP/E, 119

- Task Control Blocks (TCBs), 11, 17, 342
- TCP/IP, 8, 18, 19, 22, 383
- Technical Help Database for, 128, **128**
- technical requirements, v8 to v9
 - incompatibilities and, 147–148
- TEMP, 78, 153, 339. *See also* work file database, 78
- TERM UTILITY, 181, 227, 235–236, **236**, 349
- Test 000–737, DB2 9 System Administrator for z/OS, 1–4
- testing, Consolidated Service Test (CST) in, 133–134
- threads, 14–15, 104, 353, 362, 382
 - CANCEL THREAD, 316, **316**
 - DISPLAY THREAD, 313–316, **314**, **315**, **316**
 - distributed thread processing, 23–25
 - DSNTIPE panel in, thread management, 156
 - DSNZPARM values for, 24
 - management of, and performance, 300
 - RECOVER INDOUBT, 317, **317**
- thresholds, buffer pool, 281–288
- Time Sharing Option (TSO), 9, 13, 14, 91, 124, 193
- TIMEOUT, 264
- TIRBA, 227
- Tivoli Decision Support, 89, 267
- Tivoli Security Information and Event Manager, 212
- Tivoli zSecure Suite, 212
- TOCOPY, 227, 228, 234
- TOLASTCOPY, 227, 228
- TOLASTFULLCOPY, 227, 228
- TOLOGPOINT, 227
- TotalStorage Enterprise Storage Server (ESS), 93, 238
- tournament sorts, 295
- trace, 92–93, 92*t*, 218, 258–273, 377
 - accounting type, 259–261, 260*t*, 302, 378
 - audit, 213, 261–262, 261–262*t*, 302, 371, 372, 378
 - automatic starting, 264–265
 - commands for, 268–273
 - destinations for, 258, 258*t*, 301, 377
 - DISPLAY TRACE in, 214, **214**, 258, 270, **270**, 271, 272
 - DSNTIPN and, 264, **265**
 - filters for, 272–273, **273**
 - Generalized Trace Facility (GTF) and, 92, 213
 - global type, 264
 - IFCID 314 Authorization exit parameters and, 215
 - Instrumentation Facility Component Identifiers (IFCIDs), 258, 265–266
 - MODIFY TRACE in, 270–271, **270**
 - monitor type, 262
 - OMEGAMON in, 267, 268
 - performance and, 301
 - performance type, 263
 - PTASKROL (macro DSN6SYSP) in, 167
 - recoding SMF data and, 267–268
 - recommendations for, 264
 - SMF and, 302
 - START TRACE in, 258, 264, 269, **269**, 272
 - statistics type, 263–264, 263*t*, **264**
 - STOP TRACE in, 214, **214**, 258, 271, **271**, 272
 - stopping, 302
 - System Management Facility (SMF), 89, 378
 - TRACE AUTO START, 264
 - trace classes in, 258
 - TRACE SIZE and, 266
 - types of, 258–264
 - XAUTHID, XLOC, and XPLAN filtering in, 272–273, **273**
- TRACE SIZE, 266
- tracker site, DB2, 252
- tracking, 168
- TRACKMOD, 53
- TRACTBL, 266
- transaction dumps, 87–89
- Transmission Control Protocol/Internet Protocol. *See* TCP/IP
- TRIGGER, 204
- Triple Data Encryption Standard (TDES), 190
- troubleshooting, 3, 86–95. *See also* program diagnosis in DB2; system operations and troubleshooting
- TRUNCATE TABLE, 244
- trusted connections, 198–200
 - creating, 199
 - remote, 199–200

trusted context, 193–195, 197–198, 198*t*, 210, 216, 369

TSO. *See* Time Sharing Option

U

uncompressed log records, 344

Unicode Services, 148

unit of recovery (UD), 14

Universal Table Spaces (UTS), 56–57, 139

UNLOAD, 220

UPDATE, 204

Update Modification Identifier (UMID), 118

UPDATE RATE, 62, 66, 69

UPDATE VCAT SWITCH, 144

upgrades

product upgrade lists for, 130, **130**

program upgrade lists for, 129, **129**

UR CHECK FREQ in, 67

URLGWTH, 71, 300

URLOG WRITE CHECK in, 67

USE SMS, 155

user authentication, 193

user IDS, RACF, 207, 207*t*

User Modification (USERMOD), 118, 127–132, **128, 129, 130, 131, 132**

USERNAMES, 329

UTIL_TEMP_STORCLAS (macro DSN6SPRM), 161, 169

utilities, 3, 8, 10, 40–41, 326–333

log, 70

stand-alone, 334–337, 334*t*

V

v8 to v9 incompatibilities, 137–148, 186, 366

bootstrap data set and, 142

buffer pools and indexes in, 142

catalog space in, 143–144

Customer Information Control System (CICS), 146

Data Facility Storage Management Subsystem (DFSMS) and, 147–148

default databases and, 144

DFSMS Data Set Services (DFSMSdss) and, 148

DFSMS Hierarchical Storage Management (DFSMSHsm) and, 148

directory space in, 143–144

DISPLAY THREAD and, 146

DSNDB07 database and, 142

DSNHDEPC and, 145

early DB2 code and, 146–147

enabling new function mode (ENFM), 145

falling back to DB2 8 and, 145, 174–177, **175, 176, 177, 185**

FlashCopy and, 148

Informational APA II14401 and, 138

Language Environment Base Services and, 147–148

maintenance information for, 138–142

new functions and, 147–148

PK31841 and, 140

PK39850 and, 139

PK52522 (Plan Stability) and, 140–141

PK62178 and, 140

PK76532 and, 140

PK77228 and, 138

PK78958 and, 140

PK83585 and, 139

preconditioning fixes and, 141–142

Real Time Statistics (RTS) and, 145

REFRESH and, 147, **147**

Resource Access Control Facility (RACF), 147–148

Resource Limit Facility (RLF) and, 144–145

simple table spaces and, 143

SPE APAR PK11129 (UK9008) and, 139

stored procedures and, 143

technical requirements for, 147–148

Unicode Services and, 148

Workload Manager (WLM) and, 143

VALID PROC, 58

Value Unit Edition (VUE), 110, **110**

VARCHAR, 58

variable thresholds, buffer pool, 283–287

VCAT names, changing, 343

VDWQT, 80

VERBX LOGDATA, 90

VERSION, 47

version/ release information for DB2 9 for z/OS, 115–117

VERSIONS, 242

- Vertical Deferred Write Threshold (VDWQT), 283, 284–286
 - VIND PACKAGE, 348
 - Virtual Buffer Pool Assisting Parallel Sequential Threshold (VPXPSEQT), 283, 287
 - Virtual Buffer Pool Parallel Sequential Threshold (VPPSEQT), 283, 286–287
 - Virtual Buffer Pools (VBPs), 3, 74–78. *See also* buffer pools
 - Virtual Shared Object (VSO), 20, 361
 - Virtual Storage Access Method (VSAM), 14, 31, 100
 - Virtual Storage Constraint Relief (VSCR), 43–45
 - Virtual Storage Private Area Report (VSTOR), 15
 - Virtual Telecommunications Access Method (VTAM), 8, 383
 - VM, 91
 - VOLATILE, 50, 165
 - Volume Serial Number (VOLSER), 121
 - VPPSEQT, 287
 - VPSEQT, 80
 - VPSIZE, 279, 287
 - VPXPSEQT, 287
 - VSAM. *See* Virtual Storage Access Method
 - VTAM. *See* Virtual Telecommunications Access Method
- W**
- web sites of interest, 4, 357
 - WebSphere, 4, 99
 - Windows, Microsoft, 91
 - WLM. *See* Workload Manager
 - work files/work file database, 78–82, 187, 367
 - about, 80–82
 - Declared Global Temporary Tables (DGTTs) and, 79
 - DSNDB07, 231
 - DSNTIP9 panel and, 153, **153**
 - Logical Work Files (LWFs) and, 79
 - Parallel Access Volume (PAV) and, 80
 - performance and, 295–297
 - size for, 80
 - sorting, 80
 - space issues for, 339–340
 - write thresholds for, 80
 - work requests in DB2, 11
 - WORKFILE, 153
 - Workload Manager (WLM), 4, 12, 47, 97–99, 207, 346
 - buffer pool management using, 76
 - performance and, 299–300
 - report classes and, 98
 - resource groups and, 98
 - service classes and, 98, 99
 - service definitions and, 98
 - service policy in, 98
 - specialty engines and, 101
 - stored procedures and, 299–300, 342–343, **343**
 - task control blocks (TCBs) and, 342
 - v8 to v9 incompatibilities and, 143
 - zIIP specialty engines and, 101–102
 - workload, zIIP benefits to, 97
 - WORM support, 192
 - WRITE operations, performance and, 281
 - write thresholds, work files and, 80
 - Write to Operator with Reply Message (WTOR), 85
- X**
- XAUTHID filtering, trace and, 272
 - XLOC filtering, trace and, 272
 - XML, 111
 - data type for, 111
 - Extender for, deprecation of, 111
 - XML schema repository (XSR), 156
 - XPLAN filtering, trace and, 272–273, **273**
- Z**
- z/OS Application Connectivity, 110
 - z/OS website, 4
 - z/System Integrated Information Processor (zIIP), 18, 19, 96–97, 363
 - activating, 102
 - Resource Measurement Facility (RMF) and, 102
 - specialty engines, 101–102
 - Workload Manager and, 101–102
 - z9 processor, 101–102
 - zIIP. *See* z9 Integrated Information Processor (zIIP)
 - zones, SMP/E, 119–120
 - ZOSMETRICS (macro DSN6SPRM), 169–170