Index

1-800 telephone service notification, 339	assumptions of the DRP, 374
9/11 example, loss of life or missing people	audits of disaster preparedness, 14
during, 281–284	authority for DRP, 26
	authorization list
A-list recovery strategy for servers, 124, 132–134, 133 <i>t</i> , 380, 380 <i>t</i> access paths, restoration of, 209 access to hotsite, determining ease of, 571–572 accountability for DRP, 18–20 activation procedures for DRP, 391–423, 394 active testing, 529–532 administrative responsibilities, for team for	for hotsite, 406, 407 , 408–409 for tape backup access, 412–413, 413 Auxiliary Storage Pools (ASPs), 127 availability, 39–40. <i>See also</i> high-availability servers avoiding risks, 80 awareness training, 589
disaster recovery, 305	B-list recovery strategy for servers, 125,
air conditioning systems, 52. <i>See also</i> humidity levels; temperature levels alarms, 68–71	134–135, 134–135 <i>t</i> , 381, 381 <i>t</i> backup, 37–38, 148–150, 149–150 <i>t</i> , 161–215. <i>See also</i> recovery
alert declaration of potential disaster, 369	access path restoration after, 209
alert notification procedure, 393–396	automation of, 173
alternate installation devices, 71–72	backup lists for Domino and, 213, 213t
alternate meeting places, command center and, 330	backup partitioning and, 235, 235
alternate sites, 154	Backup Recovery and Media Services
American Red Cross, 589	(BRMS) in, 166, 171–172, 171 , 186–192,
Annualized Loss Exposure (ALE), 82–84 antistatic devices, 55	186 , 187 . <i>See also</i> Backup Recovery and Media Services
application recovery team, 302. See also teams for disaster recovery	best practices in, 166–167 Capacity Backup system from IBM and,
assessing damage, 401–404	248–250, 249 <i>t</i>
assessment of established organization,	change-control process integration with,
understanding, 350–351	173–174
assessment phase of DRP, 348	checklist for, 174–175

backup, continued	regulatory compliance and, 166
checkpoints and checkpoint images in, 196–197	removable media and, duplication of, 203–204
CobiT framework for, 167	RESTORE commands and, 204–206, 205 <i>t</i>
control groups for Domino and, 212, 212 <i>t</i>	Restore Object Using BRMS (RSTBRM)
Critical Control Data (CCD) and, 213–214	in, 212
customer log sample from, 168–169	Save Changed Objects (SAVCHGOBJ) in,
daily incremental, 193–194, 198–199	193–194
data recovery from, 162–167	Save Libraries (SAVLIB) in, 194, 199
Domino Servers and, tips for, 209–213	Save Option in, 188–192, 188 , 189
elements of System i5 in, 190–191	Save Security Data (SAVSECDTA) in,
failures of, 171	194–195, 198–199, 199
flexibility of, 142	save windows in, 163
full system saves in, 193	save-while-active (SWA) saves in, 195–198,
GO SAVE command for, 192–195, 213–214	197, 198
Hardware Management Console (HMC) for,	Start Backup Using BRMS (STRBKUBRM)
213–214, 214	in, 210
how much to include in, 185	strategy for, 164–165, 192–195
how often to run, 163	tape in. See tape backup
i5/iSeries restoration, 444	technical expertise required for, 174
importance of, 161	technology recovery in, 164-165
Integrated File System (IFS) and, 209	ten key issues in, 167–174
lifecycle program for, 169-170	Virtual Tape Libraries (VTL) in, 200-203,
log review from, 170-171	201, 203
media for, 176-184. See also tape backups	weekly strategy for, 193
monthly strategy for, 193	window for, when backups run longer than, 172
nighttime schedule for, 167–169	backup lists, Domino servers, 213, 213t
orphan data and, 172-173	backup partitioning and, 235, 235
planned downtime/maintenance and,	Backup Recovery and Media Services (BRMS),
199–200, 224–226, 224 , 225	186–192, 186 , 187 , 477–506
planning for, 169	backup and, 181
priorities for, ranking of, 127–129, 129t,	benefits of, 186–187
187–192, 188–191	control group in, 192
program temporary fix (PTF) installation and,	control groups for Domino and, 212, 212 <i>t</i>
199–200	disk configuration build at home system,
PRTDSKINF and, 173	using Option 3, 487–492, 487–491
Ragged enhancement for SWA saves in, 198	disk configuration build at hotsite, using
RAID disks and, 202	Option 2, 484–487, 484 , 485
recovery from, 165–166	Domino Servers and, 210–213, 211
Recovery Point Objectives (RPO) and,	elements of System i5 in, 190–191
129–132, 131 <i>t</i> , 164	Licensed Internal Code restore for, 478–484,
recovery strategies for, 204–214. See also	480t, 481–484
recovery Recovery Time Objectives (RTO) and,	media class in, 192 media identifier in, 192
129–132, 131 <i>t</i> , 164	media in, 192
149-134, 1311, 104	mouta m, 172

operating system restore in, 492–503,	legal costs in, 93
493–502	mission-critical function identification in,
policies in, 192	96–100, 118–120, 119
prioritizing needs for, 187–192, 188–191	objectives of, setting, 116–117
product recovery, 503–505, 503 , 504	opportunity loss in, 94–95
protecting from corruption, 171–172, 171	participants/personnel needed for, 89-90
resources required for, 478 restoration of, 477–506	planned vs. unplanned outages and, impact of, 102–104, 104
Restore Object Using BRMS (RSTBRM)	process of, 116–121
in, 212	productivity losses in, 92–93
Save Option in, 188–192, 188, 189	questionnaire for, 117, 591–597
Start Backup Using BRMS (STRBKUBRM) in, 210	Recovery Point Objective (RPO) and, 88, 104–115, 106 , 111 , 113
system recovery report in, 207, 208	recovery strategies and, 34
tape backups and, 260	Recovery Time Objective (RTO) and, 88,
terminology of, 192	104–115, 106 , 107 , 108
vital records management and, 260	remedial expenses in, 95
barcode support, vital records management and, 266	Return on Investment (ROI) and, 88,
basis of DRP, 351–352	105–115, 106 , 115–116
battery supplies, 56–57. See also uninterruptible	revenue losses in, 91–92 review findings of, 120–121
power supplies (UPS)	risk analysis vs., 76
disposing of, 58	servers and, 124
benefits analysis, for commercial hotsites,	tangible cost analysis in, 90–93, 91
577–579	validate responses to BIA questionnaire for, 118
blackouts. See power outages brownouts. See power outages	vital records management and, 252
building infrastructure, for commercial hotsites,	workshop approach to, in mission-critical
568–569	function identification, 97–99
building recovery strategy requirements. See	
strategies for recovery	C
business continuity planning (BCP), 13	call sheets, employee, 319–323, 320 , 339–340
Business Impact Analysis (BIA), 30–31, 76, 87–121, 139	call-up. See hotsite, call-up procedures for
consolidate responses to BIA questionnaire	cameras, security, 69–71
for, 118–120	Capacity Backup system from IBM, 248–250, 249 <i>t</i>
critical IT application identification for, 117	caring for the team during disaster, 305–310 chain of command established for recovery
high-availability (H/A) servers and, 220	team, 297–298
impact of outage in, assessing costs of,	challenges of disaster recovery, 140–141
100–104	change control process/change management,
intangible cost analysis in, 94–95	549–560. <i>See also</i> maintaining the DRP
interview approach to, in mission-critical	backup and, integration with, 173–174
function identification, 99–100	company data and, 553–554
IT to verify business data in, 102	design of, 541–542
labor costs/overtime in, 92–93	Disaster Recovery Coordinator's role in,
late fees and penalties in, 93	558–559

change control process/change management, cont.	testing access and, 573
distribution technology and, 557-558	tour of facilities in, 569–570
documentation and, 556	commitment control in transaction processing, 35
hardware and, 550-551	commitment to DRP, 22–24
maintaining the DRP and, 544–545, 545	communications, 317-340, 399. See also
revision tracking in, 560, 560t	command center
software and, 551–553	1-800 telephone service notification in, 339
vital record management and, 555	alternate meeting places for, 330
changes in i5 philosophy silos, documentation	employee call sheets in, 319–323, 320 ,
and, 427–428	339–340
changes/updates to DRP, 22, 23–24, 42–43	equipping the command center for, 331–333
checkpoints and checkpoint images, 196-197	form of, succinct nature of, 325–326
Chief Financial Office (CFO)'s role in DRP, 18	high-availability (H/A) servers and, 244–245
Chief Information Officer (CIO)'s role in DRP, 18	importance of, 317–318
cipher locks, 70–71	media coverage and, facing and dealing with,
clustering of servers, 35	334–337
CobiT framework, 167, 253	media spokesman for, 336–337
cold sites, 152–153	meeting place for command center and,
command center. See also communications	selecting, 329–333, 334
alternate meeting places for, 330	notification of personnel in, 327–329, 327t
assembling team at, 399–400	notification solution design for, 338–340
equipping, 331–333	official privacy notice for, 323
location of, 329–330	phone dialogues in, 326–327
meeting place for, selection of, 329–333, 334	phone list maintenance for, 339–340
rules of communication for, 331	privacy of contact lists/call sheets used in,
staffing of, 330	322–323
command-center stress, 283–284	Recovery Point Objectives (RPOs) and, 318
commercial hotsite providers, 563–581. See also	Recovery Time Objectives (RTOs) and, 318
hotsites; off-site storage providers, choosing	rules of, 331
access to, determining ease of, 571–572	staffing of command center for, 330
advance planning for, 564–565	team leaders and members, 287–288
benefits analysis for, 577–579	testing of call-notification process for, 318, 318
building infrastructure of, 568–569	web site notification in regional disasters
contract costs for, inclusion and renewals,	and, 338
579–580	who to contact in event of emergency,
cost considerations of, 576–581, 578 <i>t</i>	323–329, 324
electrical power supplies and, 568	company data, maintenance and change
equipment requirements for, 570–571	management in, 553–554
experience of, 573	completeness of DRP, 21
internal vs. external hotsites and, 566–567,	compliance. See regulatory compliance
566–567 <i>t</i>	comprehensiveness of DRP/recovery strategy,
number of customers served by, 572–573	21–22, 143
security of building in, 568–569	connectivity, high-availability (H/A) servers
selection criteria for, 567–576	and, 245
tendering an offer to, 574–576	container identification tag, 271

container vaulting, vital records management and, 266	data center solutions, 150-155
content of DRP procedures, 358–359	side-by-side systems and, 236-239, 236
contingency planning, 13	data recovery, 162–167
continuous systems availability, 234–235	database replication, 234–235
contract costs, commercial hotsites and,	DataMirror, 249
inclusion and renewals, 579-580	death or serious injury, 282
control group	declaration of disaster, 369–370
BRMS, 192	design of DRP, in maintenance, 541–542
Domino, 212, 212 <i>t</i>	desirable vs. undesirable traits for DR team,
cooling units, portable, 54–55	277–280, 277 <i>t</i>
cooling, 52. See also humidity levels;	developing the DRP, 40–43, 41 , 40
temperature levels	device configuration restore, in i5/iSeries
cost, 147	restoration, 470–471
Annualized Loss Exposure (ALE) in, 82-84	diesel and natural-gas generator backups, 61-62
of commercial hotsites, 576–581, 578t	directions and map to hotsite, 409–410, 410 , 411
dollar value benefit and, 225	Disaster Recovery (DR) defined, 6, 370
of downtime, 31–33, 79, 90–93, 92 , 131–132,	Disaster Recovery Coordinator
218–219, 220–231	maintaining the DRP and, role of, 558–559
of DRP, 36–37	testing the DRP and, role of, 533–534
intangible, 94–95	Disaster Recovery Plan (DRP), 4, 13, 17–26,
of labor/overtime, 92–93	341–389, 391–423
of late fees and penalties, 93	accountability for, 18-20
of legal issues, 93	activation procedures/process for, 391–423, 39 4
opportunity loss as, 94–95	activities encompassed by, 392
productivity losses as, 92–93	alert declaration of potential disaster in, 369
of recovery, 143–144	alert notification procedure in, 393–396
of remedial expenses, 95	assessing current status of, Phase 1, 17–18, 17
revenue losses as, 91–92	assessment and initial response phase of, 348
tangible, 90–93, 91	assumptions of, 374
crashes. See hardware failure	authority for, 26
crisis management phase of DRP, 348–349	backup strategies and, 37–38
Critical Control Data (CCD), 213–214	basis established for, 351–352
critical systems in server recovery, 124–125, 132–134	Business Impact Analysis (BIA) in, 30–31
A-List, 124, 132–134, 133 <i>t</i> , 380, 380 <i>t</i>	changes/updates to, 22, 23–24. See also
B-List, 125, 134–135, 134–135 <i>t</i> , 381, 381 <i>t</i>	maintaining the DRP
criticality assessment, server, 33-40. See also	completeness of, 21
servers	comprehensiveness of, 21–22
currency of DRP, 22	content of procedures included in, 358–359
Customer Relationship Management (CRM), 217	costs of, 36–37
	crisis management phase in, 348–349
D	critical systems definition in, A-List, 380, 380t
daily incremental backups, 193-194, 198-199	critical systems definition in, B-List, 381, 381 <i>t</i>
damage assessment following disaster, 401–404	currency of, 22
data, maintenance and change management in,	declaration of disaster in, 369–370
553–554	defining objectives of, 20–22

Disaster Recovery Plan (DRP), continued definitions for, 369–373 development and documentation of, 341–389 development of, Phase 4 in, 40–43, 41 disaster defined in, 370 disaster recovery coordinator's role in, 19 disaster recovery defined in, 370 disaster recovery plan defined in, 370–371 distribution list for, 388, 388t distribution of, 46 downtime cost assessment in, 31–33 DR operations phase in, 349 end user acceptance of, 45 established organization of, understanding, 350–351 executive sponsor for, 19–20 facilities restoration phase of, 350 family, 583–590. See also family DRP first-alert response in, 396–405 assessing damage in, 401–404 hotsite alerted to disaster in, 400–401 initial assessment, verifying disaster in, 396–398 notifying personnel in, 404–405	objectives of, 345, 367–368 overview of development in, 342–353, 343 , 344 phases of, 341–342, 346–350, 347 planning team for, 24–26, 89–90. <i>See also</i> teams for disaster recovery prevention defined in, 372 prevention phase of, 347–348 primary site restoration team (IT management team) in, 384 procedures in, developing and writing, 365–381 recalling tapes from off-site storage provider in, 412–413 recovery defined in, 372 Recovery Point Objectives (RPO) in, 32, 36–37, 372 recovery trangers in, 384, 385 , 386 , 387 recovery strategies in, 34–37 recovery team defined in, 372–373 Recovery Time Objectives (RTOs) defined in, 31, 36–37, 345, 373 regulatory compliance and, 30 restoration defined in, 373
personnel status assessment in, 398 team assembly at command center in, 399–400 geographic risks in, 29–30 high-availability (H/A) servers and, 232–234 historical risks in, 29	risk assessment for, Phase 2 of, 26–33, 27. See also risk assessment sequence of events/timeline for recovery/restoration in, 418–421, 418, 422 server criticality and recovery strategies in, Phase 3 in, 33–40, 33
hotsites defined in, 371 authorization list for, 406, 407 , 408–409 directions and map to, 409–410, 410 , 411 opening of, 411–412 vendor information necessary for, 406 human error risks in, 30	server restoration process in, definition and documentation of, 352 site restoration activities in, 413–422. <i>See also</i> restoration software overview in, 376–378, 379 staff commitment to, 22–24
initiating, checklist for, 422–423 introductory text in, 366–367 IT management team's role in, 371, 382–383, 383 <i>t</i>	structural attributes of, 345–346 structure of (in outline form), 359–365 style of, 357–358 supported services in, 375–376
IT technical recovery team role's in, 383–384, 384t maintaining, 42–43, 312–314, 539–561. <i>See also</i> maintaining the DRP mission statement of, 368–369, 369	table of contents of, 366 team overview in, 381–388, 382 , 392–393 technological risks in, 30 technology requirements for, 37 test defined in, 373

testing and recovery validation defined for, 352–353 testing, 44–45, 312–314, 507–538. See also testing the DRP title page of, 365–366 tools to aid in writing, 357–358 types of risk, 29–30 validation of, Phase 5 of, 43–46, 43 writing of, 353–359	network system information for, 440–441 Print System Information (PRTSYSINF) command for, 431, 432–434 site vs. server loss and, 434–441 dollar value benefit, 225 Domino Servers backup and recovery tips, 209–213, 211 backup lists for, 213, 213 <i>t</i> control groups for, 212, 212 <i>t</i>
disasters	Restore Object Using BRMS (RSTBRM) in,
cost of, 36 death or serious injury in, 282	212 Start Backup Using BRMS (STRBKUBRM)
declaration of, 369–370	in, 210
definition of, 4–5, 5	doors, 69–71
effects of, 8–9, 280	downtime costs, 31–33, 79, 90–93, 92 , 131–132
IT impact and, 9–11	218–219, 220–231
loss of life or missing people during, 281–284 types of, planning for, 11–12	downtime, planned vs. unplanned, 220–231, 22 1 DR operations phase of DRP, 349
who to contact in event of, 323–329, 324	drop-ship solutions, 152
disk configuration build at home system Backup Recovery and Media Services	dry-pipe fire suppression/sprinkler systems, 67–68
(BRMS) and, using Option 3, 487–492, 487–491	DSPLOGBRM, 170
disk configuration build at hotsite	-
Backup Recovery and Media Services	E
(BRMS) and, using Option 2, 484–487,	earthquakes, 71
484, 485	e-business, 217
484 , 485 i5/iSeries restoration, using Option 2,	e-business, 217 effects of disaster, 8–9, 280
484, 485 i5/iSeries restoration, using Option 2, 451–454, 451, 452 i5/iSeries restoration, using Option 3,	e-business, 217 effects of disaster, 8–9, 280 electrical power supplies, 55–62, 568 batteries in, 56–57. <i>See also</i> uninterruptible
484 , 485 i5/iSeries restoration, using Option 2, 451–454, 451 , 452 i5/iSeries restoration, using Option 3, 454–459, 454 –458	e-business, 217 effects of disaster, 8–9, 280 electrical power supplies, 55–62, 568
484, 485 i5/iSeries restoration, using Option 2, 451–454, 451, 452 i5/iSeries restoration, using Option 3, 454–459, 454–458 disposing of batteries, 58	e-business, 217 effects of disaster, 8–9, 280 electrical power supplies, 55–62, 568 batteries in, 56–57. <i>See also</i> uninterruptible power supplies (UPS)
484 , 485 i5/iSeries restoration, using Option 2, 451–454, 451 , 452 i5/iSeries restoration, using Option 3, 454–459, 454 –458	e-business, 217 effects of disaster, 8–9, 280 electrical power supplies, 55–62, 568 batteries in, 56–57. <i>See also</i> uninterruptible power supplies (UPS) diesel and natural-gas generator backups for, 61–62 failures in, 56
484, 485 i5/iSeries restoration, using Option 2, 451–454, 451, 452 i5/iSeries restoration, using Option 3, 454–459, 454–458 disposing of batteries, 58 distributing the DRP, 46, 388, 388t, 557–558 distribution list for the DRP, 388, 388t document library restore, in i5/iSeries	e-business, 217 effects of disaster, 8–9, 280 electrical power supplies, 55–62, 568 batteries in, 56–57. See also uninterruptible power supplies (UPS) diesel and natural-gas generator backups for, 61–62 failures in, 56 frequency fluctuations in, 57
484, 485 i5/iSeries restoration, using Option 2, 451–454, 451, 452 i5/iSeries restoration, using Option 3, 454–459, 454–458 disposing of batteries, 58 distributing the DRP, 46, 388, 388t, 557–558 distribution list for the DRP, 388, 388t document library restore, in i5/iSeries restoration, 473	e-business, 217 effects of disaster, 8–9, 280 electrical power supplies, 55–62, 568 batteries in, 56–57. <i>See also</i> uninterruptible power supplies (UPS) diesel and natural-gas generator backups for, 61–62 failures in, 56 frequency fluctuations in, 57 harmonic distortion in, 57
484, 485 i5/iSeries restoration, using Option 2, 451–454, 451, 452 i5/iSeries restoration, using Option 3, 454–459, 454–458 disposing of batteries, 58 distributing the DRP, 46, 388, 388t, 557–558 distribution list for the DRP, 388, 388t document library restore, in i5/iSeries restoration, 473 documentation, system-related, 425–441, 556	e-business, 217 effects of disaster, 8–9, 280 electrical power supplies, 55–62, 568 batteries in, 56–57. See also uninterruptible power supplies (UPS) diesel and natural-gas generator backups for, 61–62 failures in, 56 frequency fluctuations in, 57 harmonic distortion in, 57 highly redundant power supply configuration
484, 485 i5/iSeries restoration, using Option 2, 451–454, 451, 452 i5/iSeries restoration, using Option 3, 454–459, 454–458 disposing of batteries, 58 distributing the DRP, 46, 388, 388t, 557–558 distribution list for the DRP, 388, 388t document library restore, in i5/iSeries restoration, 473 documentation, system-related, 425–441, 556 backup tape system and, 429–431	e-business, 217 effects of disaster, 8–9, 280 electrical power supplies, 55–62, 568 batteries in, 56–57. See also uninterruptible power supplies (UPS) diesel and natural-gas generator backups for, 61–62 failures in, 56 frequency fluctuations in, 57 harmonic distortion in, 57 highly redundant power supply configuration and, 60, 61–62
484, 485 i5/iSeries restoration, using Option 2, 451–454, 451, 452 i5/iSeries restoration, using Option 3, 454–459, 454–458 disposing of batteries, 58 distributing the DRP, 46, 388, 388t, 557–558 distribution list for the DRP, 388, 388t document library restore, in i5/iSeries restoration, 473 documentation, system-related, 425–441, 556 backup tape system and, 429–431 changes in i5 philosophy silos and, 427–428	e-business, 217 effects of disaster, 8–9, 280 electrical power supplies, 55–62, 568 batteries in, 56–57. See also uninterruptible power supplies (UPS) diesel and natural-gas generator backups for, 61–62 failures in, 56 frequency fluctuations in, 57 harmonic distortion in, 57 highly redundant power supply configuration and, 60, 61–62 over-voltage conditions in, 56–57
484, 485 i5/iSeries restoration, using Option 2, 451–454, 451, 452 i5/iSeries restoration, using Option 3, 454–459, 454–458 disposing of batteries, 58 distributing the DRP, 46, 388, 388t, 557–558 distribution list for the DRP, 388, 388t document library restore, in i5/iSeries restoration, 473 documentation, system-related, 425–441, 556 backup tape system and, 429–431 changes in i5 philosophy silos and, 427–428 collecting and maintaining information for,	e-business, 217 effects of disaster, 8–9, 280 electrical power supplies, 55–62, 568 batteries in, 56–57. See also uninterruptible power supplies (UPS) diesel and natural-gas generator backups for, 61–62 failures in, 56 frequency fluctuations in, 57 harmonic distortion in, 57 highly redundant power supply configuration and, 60, 61–62 over-voltage conditions in, 56–57 sags/drops in, 56
484, 485 i5/iSeries restoration, using Option 2, 451–454, 451, 452 i5/iSeries restoration, using Option 3, 454–459, 454–458 disposing of batteries, 58 distributing the DRP, 46, 388, 388t, 557–558 distribution list for the DRP, 388, 388t document library restore, in i5/iSeries restoration, 473 documentation, system-related, 425–441, 556 backup tape system and, 429–431 changes in i5 philosophy silos and, 427–428 collecting and maintaining information for, 431–432	e-business, 217 effects of disaster, 8–9, 280 electrical power supplies, 55–62, 568 batteries in, 56–57. See also uninterruptible power supplies (UPS) diesel and natural-gas generator backups for, 61–62 failures in, 56 frequency fluctuations in, 57 harmonic distortion in, 57 highly redundant power supply configuration and, 60, 61–62 over-voltage conditions in, 56–57 sags/drops in, 56 shock hazards and, 55
484, 485 i5/iSeries restoration, using Option 2, 451–454, 451, 452 i5/iSeries restoration, using Option 3, 454–459, 454–458 disposing of batteries, 58 distributing the DRP, 46, 388, 388t, 557–558 distribution list for the DRP, 388, 388t document library restore, in i5/iSeries restoration, 473 documentation, system-related, 425–441, 556 backup tape system and, 429–431 changes in i5 philosophy silos and, 427–428 collecting and maintaining information for, 431–432 detailing and, 428–429	e-business, 217 effects of disaster, 8–9, 280 electrical power supplies, 55–62, 568 batteries in, 56–57. See also uninterruptible power supplies (UPS) diesel and natural-gas generator backups for, 61–62 failures in, 56 frequency fluctuations in, 57 harmonic distortion in, 57 highly redundant power supply configuration and, 60, 61–62 over-voltage conditions in, 56–57 sags/drops in, 56 shock hazards and, 55 spikes in, 56
484, 485 i5/iSeries restoration, using Option 2, 451–454, 451, 452 i5/iSeries restoration, using Option 3, 454–459, 454–458 disposing of batteries, 58 distributing the DRP, 46, 388, 388t, 557–558 distribution list for the DRP, 388, 388t document library restore, in i5/iSeries restoration, 473 documentation, system-related, 425–441, 556 backup tape system and, 429–431 changes in i5 philosophy silos and, 427–428 collecting and maintaining information for, 431–432	e-business, 217 effects of disaster, 8–9, 280 electrical power supplies, 55–62, 568 batteries in, 56–57. See also uninterruptible power supplies (UPS) diesel and natural-gas generator backups for, 61–62 failures in, 56 frequency fluctuations in, 57 harmonic distortion in, 57 highly redundant power supply configuration and, 60, 61–62 over-voltage conditions in, 56–57 sags/drops in, 56 shock hazards and, 55

electrical power supplies, continued uninterruptible power supplies (UPS) in, 56–62, 568. See also uninterruptible power supplies (UPS) email, as mission-critical application, 135 emergency supplies, 585–587 employee call sheets, 319–323, 320, 339–340 end-user acceptance of DRP, 45 Enterprise Resource Planning (ERP), 10, 192, 217 environmental controls, vital records management and, 267 equipment assessing status of, 413–414 hotsite requirements of, 570–571 replacement of, 414–415 equipping the command center, 331–333 essential systems, in server recovery, 124–125. See also servers established organization of DR, understanding, 350–351 evacuation drills, 537–538 evaluating risks, 81–82 executive sponsor of DRP, 19–20 expiry dates, vital records management and, 261 exposure, in risk assessment, 82–84	Federal Emergency Management Agency (FEMA), 11–12, 589 fences, 69–71 fire drills, 537–53 fire suppression systems, 65–68 pre-action sprinklers in, 68 wet vs. dry pipe systems in, 67–68 first-aid supplies, 586–587 first-alert response, 396–405 assessing damage in, 401–404 hotsite alerted to disaster in, 400–401 hotsite call-up procedures in, 406–412 initial assessment, verifying disaster in, 396–398 notifying personnel in, 404–405 personnel status assessment in, 398 team assembly at command center in, 399–400 flexibility of recovery strategy, 142 flooding. See water damage food supplies, 586 team for disaster recovery and, 306–307 frequency fluctuations, electrical power supplies and, 57 frequency, in risk assessment, 82–84 full-system backups, 193
F facilities restoration phase of DRP, 350 facility monitoring devices/alarms, 68–69 facility recovery team, 303. <i>See also</i> teams for disaster recovery family DRP, 583–590 awareness training in, 589 documents, 587	gates, 69–71 geographic risks, 29–30 GO SAVE command, 192–195, 213–214 goal setting for disaster recovery team, 289 grandfather, father, son (GFS) strategy, tape backup media, 262–263, 263
emergency supplies for, 585–587 first aid supplies for, 586–587 food supplies for, 586 Hurricane Rita example of, 588–589 information to help create, 589 issues to cover in, 585 maintaining, 587 personal and family requirements for, 588 practice for, 587 water supplies for, 586	H hardware maintenance and change management, 550–551 hardware failure, 4, 12 alternate installation devices and, 71–72 license internal code CD and, 72–73 Hardware Management Console (HMC), 213–214, 214 hardware recovery team, 301–302. See also teams for disaster recovery

hardware requirements for mission-critical	internal vs. external hotsites, 566-567,
servers, 135–136	566–567 <i>t</i>
harmonic distortion, electrical power supplies	opening of, 411–412
and, 57	vendor information necessary for, 406
hazardous materials, 69	human error risks, 30
Health Insurance Portability and Accountability	humidity levels, site vulnerability assessment
Act (HIPAA), 15, 16, 35, 253	and, 52–54
heating systems, 52. See also humidity levels;	hurricanes, 71. See natural disasters; weather
temperature levels	related disasters
high-availability (H/A) servers, 35–36, 39–40,	HVAC, 52. See also humidity levels;
143, 145, 217–250, 249 <i>t</i>	temperature levels
assessing level of availability in, 231–248	
backup partitioning and, 235, 235	1
Business Impact Analysis (BIA) and, 220	•
Capacity Backup system from IBM and,	i5/iSeries restoration
248–250, 249 <i>t</i>	backup strategy and, 444
communications needs in, 244–245	BRMS restoration in, 477–506. See Backup
connectivity needs in, 245	Recovery and Media Services
continuous systems availability and, 234–235	case study sample of, 444
cost justification for, 230–231, 231	device configuration restore in, 470–471
Disaster Recovery plans and, 232–234	disk configuration build at hotsite and, using
downtime vs., 218–219, 220–231	Option 2, 451–454, 451 , 452
importance of, 219	disk configuration build at hotsite and, using
iSeries, 249, 249 <i>t</i>	Option 3, 454–459, 454–458
maintenance cost benefits for, 226, 226	library restore, IBM and user (NONSYS),
monitoring and maintenance for, 241-243	471–472
Recovery Point Objectives (RPO) and, 231	document library, 473
Recovery Time Objectives (RTO) and, 231	user library, 472
replication vs., 234–235	LIC restore, 445–450, 447 , 449 , 450
Return on Investment (ROI) and, 221-231	operating system restore in, 459–469,
side-by-side systems and, 236–239, 236	460–467
size of target machine in, 239-241, 240	procedures for, 444
target/source compatibility in, 243-244	system security rebuild in, 474–475
testing of, 245–248	user profile restore in, 469–470, 470
workload balancing cost benefit of, 227-230,	verification of restore in, 473–474
227, 228	IBM compliance for DR, 14
highly redundant power supply configuration,	impact analysis, 79–80
60 , 61–62	impact of outages/downtime, 9, 30. See also
historical risks, 29	Business Impact Analysis (BIA)
hotsites, 35, 145, 153-154, 371. See also	cost assessment of, 100-104
commercial hotsite providers	planned vs. unplanned, 102-104, 104
alerting to disaster, 400-401	incremental backups, 193-194
authorization list for, 406, 407, 408–409	Independent Auxiliary Storage Pools (IASPs), 127
call-up procedures in, 406-412	individual media vaulting, vital records
directions and map to, 409–410, 410 , 411	management and, 267

Information Technology (IT)	L
business impact analysis (BIA) and, verifying	labor costs/overtime, 92–93
business data, 102	late fees and penalties in, 93
disaster's effect on, 9–11	leader selection, for teams, 285–287
evolution of importance of, 10–11, 10t	legal costs, 93
infrastructure of commercial hotsites, 568-569	legal issues of DRP, 14, 15–16
Initialize Tape (INZTAP) command, 177–180,	levels of disaster preparedness, 6–8, 7
180 , 182, 259	libraries
initial assessment, verifying disaster, 396-398	Save Libraries (SAVLIB) in, 194, 199
initial response phase of DRP, 348	Virtual Tape Libraries (VTL) in, 200–203,
injury, serious, 282	201, 203
installing backups, alternate installation devices	library restore, 443–475
for, 71–72	document library, in i5/iSeries restoration, 473
insurance, 84–85	i5/iSeries restoration, 471–472
insurance inspection, 415–416	user library, in i5/iSeries restoration, 472
intangible cost analysis, 94-95	Licensed Internal Code (LIC), 72–73
Integrated Auxiliary Storage Pools (IASP), 111	Backup Recovery and Media Services (BRMS) and, 478–484, 480 <i>t</i> , 481–484
Integrated File System (IFS), backup and, 209	i5/iSeries restoration, 445–450, 447, 449, 450
Intel system information for documentation,	lifecycle program, backup and, 169–170
437–440	likelihood measurement, 79–80
internal vs. external hotsites, 566–567, 566–567 <i>t</i>	load balancing, 145
interview approach to mission-critical function	locks, 69–71
identification, 99–100	logs
introduction text of DRP, 366-367	backup and, 170
IPL, alternate system for, 71–72	DSPLOGBRM and, 170
iSeries/400 system information for	loss of life or missing people, 281–284
documentation, 434–437	
issue identification, in risk assessment/analysis, 78–79	M
IT management team, 293–298, 371, 382–383,	maintaining the DRP, 42–43, 312–314,
383 <i>t. See also</i> teams for disaster recovery	539–561, 587
IT recovery team personnel, 554–555	change control process and, 544-545, 545
IT technical recovery team, 298–300, 383–384,	change management as part of, 549-560
384 <i>t. See also</i> teams for disaster recovery	company data and, 553-554
to in see that to the first to	design of plan and, 541–542
	Disaster Recovery Coordinator's role in,
J	558–559
Just-In-Time (JIT) industries, costs of	distribution technology and, 557–558
downtime to, 93	documentation and, 556 frequency of, 547
	hardware and, 550–551
K	importance of, 540–541
key areas of risk, identifying, 79	IT recovery team personnel and, 554–555
key personnel lost/missing, 281–284	"maintenance mode" for, 545–548

need for, 540 philosophy of, implementing, 542–545 reasons for, 547, 547–548 <i>t</i> revision tracking in, 560, 560 <i>t</i> revisiting the plan for, 545–548 scheduled vs. unscheduled, 548 software and, 551–553	network recovery team, 300–301. <i>See also</i> teams for disaster recovery network system information for documentation 440–441 "next off the line" solutions, 151 notification of personnel in disasters, 327–329, 327t, 404–405
timeframe for, 560–561, 561	notification solution design, 338-340
vital record management and, 555	
maintenance cost benefits, 226, 226	0
"maintenance mode,", 545–548	objectives of DRP, 20–22, 345, 367–368
map to hotsite, 409–410, 410 , 411	objectives of Esting, 531–532, 532 , 531
market trends in disaster recovery, 144–145, 144	off-site storage, recalling tapes from, 412–413
marketing and impact of DR, 4	off-site storage provider, choosing, 271–273.
Maximum Availability, 249 media class, BRMS and, 192	See also commercial hotsite providers;
media condition, for tapes, magnetic storage, etc., 73	hotsites
media coverage, facing and dealing with, 334–337	off-site tape pickup schedule, 267–268, 268
media identifier, BRMS and, 192	official privacy notice, 323
media management, 265–266	open-book testing, 514–515
media spokesman, 336–337	opening the hotsite, 411–412
media, backup, 192	operating system restore
meeting place for command center, selecting, 329–333, 334	Backup Recovery and Media Services (BRMS) and, 492–503, 493–502
meeting place for recovery team, in event of	i5/iSeries restoration, 459–469, 460–467
disaster, 310–314	operations phase of DRP, 349
mirroring, 145, 154–155	opportunity loss, 94–95
missing people and, 281–284	optional systems, in server recovery, 124–125.
mission statement of DRP, 368–369, 369	See also servers
mission-critical servers, 125–127	orphan data, backup of, 172–173
mission-critical function identification, 96–100,	outline of the DRP, 359–365
118–120, 119	over-voltage conditions, 56–57
monitoring and maintenance of H/A	
systems/servers, 241–243 monitoring devices/alarms, 68–69	P
monitoring risks, 81–82	partitioning, backup, 235, 235
monthly backups, 193	passive testing or tabletop exercise, 518-524,
Murphy's Law, 12, 81, 85, 534	525–528 <i>t</i>
	Personal Information Protection and Electronic
N.	Documents Act (PIPEDA), 15
N	personnel
natural disasters, 4, 11–12, 71. <i>See also</i> weather related disasters	involved in DRP, 24–26, 89–90. <i>See also</i> teams for disaster recovery, 24
necessary systems, in server recovery, 125,	loss of, 281–284
134–135, 134–135 <i>t. See also</i> servers	notifying of disaster, 404–405
need for disaster recovery plan, 1–47	status assessment of, 398

phases of DRP, 17–18, 17 , 341–342, 346–350, 347 philosophy of maintenance, 542–545 physical security, 69–71 physical threats, 74 planned downtime/maintenance, 102–104, 104 , 147, 220–231, 221 , 223	Q QINTER, 170 QSYSOPR, 73, 170 questionnaire, Business Impact Analysis (BIA), 117, 591–597
backup and, 199–200, 224–226, 224 , 225 dollar value benefit and, 225 impact of, 102–104, 104 maintenance cost benefits for, 226, 226 program temporary fix (PTF) installation and, 199–200 planning for disaster recovery (DR), 2–47, 142	R Ragged enhancement for SWA saves, 198 RAID disks, 202 reasons for planning, 13–16 reciprocal agreements, 151 recovery, 204–214, 372. <i>See also</i> backup
planning team for DRP, 24–26, 89–90. <i>See also</i> teams for disaster recovery	access path restoration in, 209 backup lists for Domino and, 213, 213 <i>t</i>
plumbing leaks. <i>See</i> water damage points of failure, site vulnerability assessment and, 50–51	BRMS system recovery report and, 207, 208 control groups for Domino and, 212, 212 <i>t</i> Critical Control Data (CCD) and, 213–214
policies, in BRMS, 192	Domino Servers and, tips for, 209–213
political threats, 75	elements in, 206
power outages, 4, 12. <i>See also</i> electrical power supplies	Hardware Management Console (HMC) for, 213–214, 214
practicing the family DRP, 587	RESTORE commands and, 204–206, 205t
pre-action fire-suppression sprinklers, 68	Restore Object Using BRMS (RSTBRM) in, 212
preparedness, 279–280, 304–305	system recovery report in, 207, 208
levels of, 6–8, 7	Recovery Coordinator, 295–296, 297t, 307–308,
questions about, 8	312–314
testing the DRP and, 507–508	Recovery Point Objective (RPO), 32, 36–37,
prevention, 372	104–115, 106 , 111 , 113
prevention phase, DRP, 347–348	24-hour, 112–115, 113
primary site restoration team (IT management team), 384	backup systems and, 129–132, 131 <i>t</i> , 164 Business Impact Analysis (BIA) and, 88
Print System Information (PRTSYSINF)	communications and, 318
command, 431, 432–434	high-availability (H/A) servers and, 231
prioritization of risk, 77–78	recovery points defined in, 111–112
prioritizing backups, 187–192, 188–191	servers and, 129–132, 131 <i>t</i>
prioritizing recovery systems, 124-125	strategies for recovery and, 141, 143, 146,
privacy issues, 15, 16	147, 159
contact lists/employee call sheets and, 322–323 official privacy notice for, 323	vital records management and, 255 recovery progression, 384, 385 , 386 , 387
productivity losses, 92–93	recovery script, 417–422
Program Temporary Fix (PTF), backup and, 199–200	recovery strategies, 34–37 business impact assessment (BIA) and, 34
progression of recovery, 384, 385 , 386 , 387 PRTDSKINF, 173	Recovery Time Objective (RTO), 31, 36–37, 104–115, 106 , 107 , 108 , 139, 373

backup systems and, 129–132, 131 <i>t</i> , 164 Business Impact Analysis (BIA) and, 88 communications and, 318 Disaster Recovery Plan (DRP) and, 345 high-availability (H/A) servers and, 231 restoration and, 417 servers and, 125–127, 129–132, 131 <i>t</i> strategies for recovery and, 141, 143, 146–147, 159 team for disaster recovery and, 277 vital records management and, 255 Red Cross, 589 regulatory compliance, 14, 15–16, 30, 35, 166 vital records management and, 253 remedial expenses, as cost of downtime, 95 removable media backups and duplication, 203–204 replacement equipment, 304, 414–415 replication, 150 Capacity Backup system from IBM and, 248–250, 249 <i>t</i> high-availability (H/A) servers and vs., 234–235 side-by-side systems and, 236–239, 236 resiliency level of recovery, 156–158, 156 responsibilities allocation, for DR team, 291–293 restoration, 373, 413–422, 443–475 equipment assessment in, 413–414 i5/iSeries–specific. <i>See</i> i5/iSeries restoration insurance inspection before, 415–416	Annualized Loss Exposure (ALE) in, 82–84 avoiding risk and, 80 Business Impact Analysis (BIA) vs., 76 cost of downtime and, 79 evaluating risks and, 81–82 example of, 82–84 insurance and, 84–85 issue identification in, 78–79 key area identification in, 79 levels of risk and, 74 measuring likelihood and impact in, 79–80 monitoring risks and, 81–82 physical threats in, 74 political threats in, 75 prioritization of risk in, 77–78 purposes of, 77 risk, frequency, and exposure elements in, 82–84 site vulnerability assessment in, 50–73 solution development and, 80–81 steps/processes in, 77–78, 78 strategy implementation for, 81 strategy selection for, 81 technological threats in, 74 threat assessment in, 74–75 vulnerability assessment in, 27–28, 49–85 worst case scenarios in, 74 role assignment for DR teams, 289, 291–293 rotating tape media, 251–263 RS232 interface for USP, 60
phases of, 416–417	rules of communication, 331
recovery script in, 417–422 Recovery Time Objectives (RTOs) and, 417	
replacing equipment in, 414–415 safety and security established during, 415 sequence of events/timeline in, 418–421, 418, 422	S safety, 415 sags in electrical power supplies, 56 sales and impact of DR, 4
RESTORE commands, 204–206, 205 <i>t</i>	Sarbanes-Oxley (SOX) legislation, 15, 166, 253
Restore Object Using BRMS (RSTBRM), 212	Save Changed Objects (SAVCHGOBJ), 193–194
retention program, vital records, 253–255 Return on Investment (ROI), 36, 88, 105–116, 106	Save Libraries (SAVLIB), 194, 199 Save Option, backup and, 188–192, 188 , 189
high-availability (H/A) servers and, 221–231 planned outages and, 147	Save Security Data (SAVSECDTA), 194–195, 198–199, 199
revenue losses, 91–92	save windows, for backup, 163
revising the DRP. See changes/updates to DRP	save-while-active (SWA) saves, 195–198, 197 , 198
revision tracking, 560, 560t	SAVSECDTA, 430
risk assessment/analysis, 12, 26–33, 27 , 74–85	SAVSTG, 142

SAVSYS, 73	monitoring and maintenance for, 241-243
scheduled maintenance, 548	necessary systems in, 125, 134–135, 134–135 <i>t</i>
secure transport of vital records, 266	optional systems in, 124–125
security, 415	prioritizing recovery of systems in, 124–125
of data, 15, 16	ranking criticality of, 123–137
of hotsite, 568–569	Recovery Point Objectives (RPO) and,
i5/iSeries restoration, rebuild, 474–475	129–132, 131 <i>t</i>
Save Security Data (SAVSECDTA) in,	recovery strategies for, 34–37
194–195	Recovery Time Objectives (RTO) and,
Security and Exchange Commission (SEC), 15–16	125–127, 129–132, 131 <i>t</i>
security guards, 69–71	regulatory compliance and, 35
selection criteria for teams, desirable vs.	replication in, 234–235
undesirable traits, 277–280, 277t	restoration process definition and
sequence of events/timeline in	documentation for, 352
recovery/restoration, 418–421, 418 , 422	size of, in H/A systems, 239–241, 240
serious injury, 282	system priority in, classifying for recovery,
servers, 33–40, 123–137, 139	124–125
A-list recovery strategy for, 124, 132–134,	tape-based recovery for, 35
133 <i>t</i> , 380, 380 <i>t</i>	target/source compatibility in, 243–244
alternate installation devices for, 71–72	workload balancing in, cost benefit of,
B-list recovery strategy in, 125, 134–135,	227–230, 227 , 228
134–135 <i>t</i> , 381, 381 <i>t</i>	Service Level Agreement (SLA), 40
backup partitioning and, 235, 235	shadowing, 145
backup priorities for, ranking, 127–129, 129 <i>t</i>	shift work schedules, for DR teams, 306
backup strategies for, 37–38	shock, physiologic, 9
Business Impact Analysis (BIA) and, 124	shock hazards, electrical, 55
clustering of, 35	side-by-side systems, 236–239, 236
commitment control, transaction processing	site vulnerability assessment, 50-73
and, 35	alternate installation devices and, 71–72
continuous systems availability and, 234-235	electrical power supplies in, 55-62
cost of downtime and, 131-132	facility monitoring devices/alarms in, 68-69
critical systems in, 124–125, 132–134, 133 <i>t</i>	fire suppression systems in, 65-68
criticality assessment of, 33-40, 123-137	humidity levels in, 52–54
Domino. See Domino Servers	license internal code CD and, 72-73
email and, as mission-critical application, 135	media condition in, 73
essential systems in, 124-125	natural disaster safeguards in, 71
hardware requirements for mission-critical,	physical security in, 69–71
135–136	points of failure in, 50–51
high-availability techniques for, 35, 36,	smoke detection for, 63, 66
39–40, 143	temperature levels in, 52–54
hotsites and, 35	water detection for, 62-65
license internal code CD and, 72-73	size of H/A servers, 239–241, 240
loss of, vs. server, 434–441	smoke detectors, 63, 66
maintenance cost benefits for, 226, 226	software
mission-critical systems in, 125-127	disaster recovery plan (DRP) and, 376–378, 379

maintenance and change management in, 551–553 spikes, 56 sprinkler systems, 65–68. <i>See also</i> fire-suppression systems staff commitment to DRP, 22–24 staffing of command center, 330 Start Backup Using BRMS (STRBKUBRM), 210 static electricity, 55 steps of risk management, 77–78, 78	stress management, 283–284 structural attributes of DRP, 345–346 structure/outline of the DRP, 359–365 style of the DRP plan, in writing, 357–358 supported services in DRP, 375–376 surges and surge suppression, 55, 56 system recovery report, BRMS, 207, 208 system security rebuild, i5/iSeries restoration 474–475 systems documentation. <i>See</i> documentation,
storage time for tapes, 264, 264 strategies for recovery, 139–159, 146 alternate sites in, 154	system-related systems priority in recovery, 124–125
backup, 148-150	
checklist for, 157, 158 <i>t</i>	Т
cold sites in, 152–153	table of contents of DRP, 366
comprehensive nature of, 143	tabletop exercise, 518–524, 525–528 <i>t</i>
cost of, 143–144, 147	tangible cost analysis, 90–93, 91
data center solutions for, 150-155	tape backup, 72–72, 145, 147–148, 162
definition of, 140–141	alternate installation devices for, 71–72
determining resiliency level for, 156-158, 156	alternate sites in, 154
drop ship solutions in, 152	authorization list for, 412–413, 413
flexibility of, 142	Backup and Recovery Media Services and
flowchart/sample of, 158, 159	BRMS command for, 181, 260
goals of, 141, 143	cold sites in, 152–153
high availability (HA) and, 143, 145	condition of tapes for, 259–260
hotsites in, 153-154	documentation vs., 429–431
information required for, 139	drive maintenance for, 260–261
load balancing and, 145	
market trends in, 144-145, 144	drop ship solutions in, 152
mirroring and, 145, 154-155	duplicate volumes in, 184
"next off the line" in, 151	error monitoring in, 182–184, 183
planned outages and ROI in, 147	expiration dates in, 180–181
planning for, 142	expiry dates for, 261
reciprocal agreements in, 151	grandfather, father, son (GFS) strategy for
Recovery Point Objectives (RPO) in, 141,	262–263, 263
143, 146, 147, 159	hotsites form, 153–154
Recovery Time Objectives (RTO) in, 141,	Initialize Tape (INZTAP) command and,
143, 146–147, 159	177–180, 180 , 182, 259
replication in, 150	labeling tapes for, 260
requirements of, 139–159	maintaining drives for, 181
selection guidelines for, 141–144	media condition in, 73
shadowing and, 145	mirroring in, 154–155
tape backups and, 145, 147–148	naming and labeling of, 177
warm/hot sites in, 145	"next off the line" strategy and, 151

tape backup, 72–72, 145, 147–148, 162	facility recovery team in, 303
off-site tape pickup schedule for, 267–268, 268	food supplies for, 306–307
preparing, 177–180	goal setting for, 289
pros and cons of, 166	hardware recovery team in, 301–302
protecting tapes from corruption in, 171–172,	importance of, 275–277
171	IT recovery management team in, 293-298,
recalling tapes from off-site storage provider	371, 382–383, 383 <i>t</i>
in, 412–413	IT recovery team personnel and, 554-555
reciprocal agreements in, 151	IT technical recovery team in, 298–300,
retention of backup tapes used in, 176-177	383–384, 384 <i>t</i>
rotating off-site tapes for, 251–263	leader selection for, 285–287
storage of tapes in, 182	loss of life or missing people and, 281–284
storage time for tapes containing, 264, 264	meeting of, in event of disaster, 311–312
tape media management policies for,	meeting place for, in event of disaster, 310–314
265–266	network recovery team in, 300–301
timeline to rebuild, 108–109, 109 <i>t</i>	overview of, 290–291
Virtual Tape Libraries (VTL) in, 200–203,	preparation of, 279–280
201, 203	preparedness of, 304–305
vital records management and, 259–260	primary site restoration team (IT management
tape-based recovery, 35	team) in, 384
tape media management policies, 265–266	Recovery Coordinator and, 295–296, 297 <i>t</i> ,
target/source compatibility, in H/A systems,	307–308, 312–314
243–244	Recovery Time Objectives (RTOs) and, 277
tasks assignment, for disaster recovery teams,	reducing numbers of, for testing, 524–525
291–293	replacement equipment for, 304
teams for DR, 24–26, 275–315, 327–373,	responsibilities allocated among, 291–293
381–388, 382 , 392–393 administrative responsibilities in, 305	role assignment in, 289, 291–293 selection criteria for, desirable vs. undesirable
alert notification procedure for, 393–396	traits, 277–280, 277 <i>t</i>
application recovery team in, 302	shift work schedules for, 306
assembly of, at command center, 399–400	tasks assignment in, 291–293
building of, 284–289	Technical Recovery Manager in, 299, 300,
call sheet for, who to contact in event of	312–314
emergency, 323–329, 324	test teams and, 517–518
caring for, during disaster, 305–310	travel guidelines for, 309, 310
chain of command established for, 297–298	working together as, 289–293
command-center stress and, 283–284	Technical Recovery Manager, 299, 300, 312–314
communication between leaders and	technological risks, 30
members of, 287–288	technological threats, 74
death or serious injury in, 282	technology recovery from backup 164–165
disaster recovery plan (DRP) and, 381–388, 382	technology requirements for DRP, 37
DR testing and plan maintenance by, 312–314	telephone service notification, 1-800 services, 339
effect of disaster on people and, 280	temperature levels
established organization of, understanding,	fire-suppression systems and, 65–66
350–351	portable cooling units and, 54-55

site vulnerability assessment and, 52–54 UPS and, cooling the UPS room, 58–59 tendering an offer for hotsite services, 574–576 testing call-notification process, 318, 318 testing H/A systems, 245–248 testing hotsite access, 573 testing the DRP, 44–46, 312–314, 352–353, 373, 507–538 active, 529–532 benefits of, 536–538 consistency of plan and, 515 defining a complete project for, 515–518 Disaster Recovery Coordinator's role in, 533–534 evaluating results of, 535–536 failure shown by, 512–514 frequency of, 510, 536 goals of, 512	under-voltage conditions, 56–57 uninterruptible power supplies (UPS), 56–62, 81, 568 battery replacement in, 57 disposal of batteries in, 58 air conditioning for, 58–59 RS232 interface for, 60 highly redundant power supply configuration and, 60, 61–62 diesel and natural-gas generator backups for, 61–62 unscheduled maintenance/downtime, 548 updating the DRP. See changes/updates to DRP user library restore, in i5/iSeries restoration, 472 user profile restore, in i5/iSeries restoration, 469–470, 470
importance of, 508–509 Murphy's Law and, 534 need for, 511–512 objectives and goals for, 531–532, 532 open-book, 514–515 passive or tabletop exercise, 518–524, 525–528 <i>t</i> preparedness and, 507–508 reducing the team for, 524–525 responsibilities during, 514 staffing required for, 517–518 Three-Step Special, 529–531 types of, 516	validating the DRP, 43–46, 43 , 352–353 vendor information for hotsite, 406 verification of restore, in i5/iSeries restoration, 473–474 Virtual Tape Libraries (VTL), 200–203, 201 , 203 Vision Solutions, 249 vital records management, 251–273 barcode support for, 266 Business Impact Analysis (BIA) and, 252 container identification tag for, 271
threat assessment, 74–75 Three-Step Special testing, 529–531 time to recovery. <i>See</i> recovery time objective (RTO) timeframe for maintenance, 560–561, 561 timeline in recovery/restoration, 418–421,	container vaulting for, 266 defining vital records for, 252, 253 environmental controls for, 267 expiry dates for, 261 family documents as, 587
418, 422 title page of DRP, 365–366 tools to aid in DRP writing, 357–358 tornadoes, 12, 71 touring hotsite facilities, 569–570 transaction processing, commitment control and, 35	grandfather, father, son (GFS) strategy for, 262–263, 263 individual media vaulting for, 267 maintaining the DRP and, 555 media management in, 265–266, 265 off-site storage considerations for, 268–271, 258 off-site storage provider for, choosing, 271–273
travel guidelines, team for disaster recovery and, 309, 310 types of disasters, 11–12	off-site tape pickup schedule for, 267–268, 268 on-site storage of, vs. off-site, 255–259 on-site vulnerability assessment for, 266

vital records management, *continued*Recovery Point Objectives (RPOs) for, 255
Recovery Time Objectives (RTOs) for, 255
regulatory compliance and, 253
retention program for, 253–255
rotating off-site tapes for, 251–263
secure transport of, 266
storage time for tapes containing, 264, **264**tape condition for, 259–260
tape drive maintenance for, 260–261
tape media management policies for, 265–266
vulnerability assessment, 27–28, 48–85. *See also* risk assessment physical security in, 69–71

site vulnerability assessment, 50–73

vital records management and, 266

W

warm sites, 145 water damage, 12, 62-65 water detection systems, 62–65 water supplies, 586 weather-related disasters, 4, 11–12, 71. See also natural disasters web site notification in regional disasters, 338 weekly backups, 193 wet-pipe fire suppression/sprinkler systems, 67 who to contact in event of emergency, 323–329, 324 windows, 69–71 workload balancing, cost benefit of, 227–230, 227, 228 workshop approach to mission-critical function identification, 97-99 worst-case scenarios, 74 writing the DRP, 353–359