

Index

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

A

- a and A option and flag
 - in arp, 242, 491
 - for chains, 446
 - in exportfs, 338–339
 - in fdisk, 540
 - in mailer definitions, 175
 - in netstat, 506
 - in procmail, 418
 - in routing tables, 247
 - in umount, 342
- %a and A% variable
 - for shell, 438
 - in smb.conf, 356
- A (Address) records, 126, 131
- A Shell, 84
- abandoned value, 296
- abort command, 382
- accept keyword, 446
- accept_unqualified_senders feature, 596, 601
- accept_unresolvable_domains feature, 405–406, 596, 601
- Acceptable Use Policies (AUPs), 404
- access.conf file, 198
- access control
 - for Apache web server, 219–221, 220
 - with iptables, 445–448
 - for shares, 363
 - with tcpd, 433–442
 - with xinetd, 442–445
- access control files, 435–441
- Access databases, 409–411
- access_db feature, 411, 597, 600–601, 608
- access_list option, 578
- access_times attribute, 444
- AccessFileName directive, 218
- Account Info tab, 62
- accounts, user. *See* user accounts
- Accounts tab, 62
- acdirmax option, 345
- acdirmin option, 345
- acl command, 116, 121, 578
- acregmax option, 346
- acregmin option, 346
- actimeo option, 346
- action field, 24–25
- active command, 382
- active routers, 256
- adapter card configuration, 488–490, 547
- add option, 223
- AddEncoding option, 208–209
- AddHandler option, 209
- AddIcon option, 208
- AddIconByEncoding option, 208
- AddIconByType option, 208
- additional-from-auth option, 567
- additional-from-cache option, 567
- AddLanguage option, 209
- AddModule directive
 - in http.conf, 201–202
 - in mod_ssl, 225
- address field, 59
- address-list option, 560
- address masks, 42–44
- address_match_list option, 560
- Address Resolution Protocol (ARP), 242–243
 - for address conflicts, 491–495
 - for network troubleshooting, 485
 - proxy, 244–245
- Address (A) records, 126, 131
- addresses
 - IP. *See* IP addresses
 - in rulesets, 172
- AddType option, 209
- adduser option, 223
- adm group, 86
- Advanced tab, 63
- af parameters, 380
- AFSTokenPassing option
 - in ssh_config, 466
 - in sshd_config, 459
- age in days option, 416
- aggregate statements in gated.conf, 276
- aging passwords, 452–453
- algorithm option, 579
- algorithm_id option, 578
- alias declaration, 320–321
- Alias directive, 207
- ALIAS_FILE parameter, 601
- aliases
 - in dhclient.conf, 320–321
 - in hosts, 102
 - in http.conf, 207, 214
 - mail, 158–162, 513
- aliases database, 153
- aliases file, 158–161
- all and ALL keywords
 - for AllowOverride, 218
 - for gated, 282
 - in hosts.allow, 436–437
 - in lpc, 384
 - in Options, 217

- all_squash setting, 336
- all-subnets-local option, 301
- allmasquerade feature, 597, 599
- Allow directive, 219–222
- allow option
 - in dhcpd, 298
 - in hosts.allow, 439–440
 - in named.conf, 580
 - in rndc.conf, 149
- allow-gid option, 98
- Allow incoming option, 549
- allow-notify option, 567
- allow-query option, 121, 562
- allow-recursion option, 563
- allow-transfer option, 562
- allow-uid command, 98
- allow-update option, 119–120, 130, 574
- allow-update-forwarding option, 576
- Allowable Drives list, 540
- AllowGroups value, 459
- AllowOverride directive, 218–219
- AllowTcpForwarding value, 459
- AllowUsers value, 459
- also-notify option, 119, 562
- always_add_domain feature, 597, 601
- always-reply-rfc1048 parameter, 298
- Amateur radio support kernel category, 480
- amd (automounter daemon), 331, 348–349
- amd.conf file, 348
- anonymous FTP, 68, 95–96, 96, 98
- Apache web server, 191
 - configuring. *See* http.conf file
 - httpd for, 194–195, 194, 196
 - installing, 191–194, 193
 - logging in, 235–238
 - monitoring, 233–235, 234
 - security for, 214
 - access controls, 219–221, 220
 - CGI and SSI threats, 215–216
 - directory-level configuration, 218–219
 - document and directory options, 216–218
 - SSL for, 224–233, 230, 232
 - user authentication, 221–224
- APOP command, 395
- append and APPEND command
 - in dhclient.conf, 321
 - in IMAP, 398
 - in lilo.conf, 14, 16
- areas in routing, 255
- Arguments field, 74
- ARP (Address Resolution Protocol), 242–243
 - for address conflicts, 491–495
 - for network troubleshooting, 485
 - proxy, 56, 244–245
- arp-cache-timeout option, 301
- arp command, 242–243
 - for address conflicts, 491–495
 - for network troubleshooting, 485
- arp.dat file, 492–494
- arpwatch utility
 - for address conflicts, 492–495
 - for network troubleshooting, 485
- ASE (autonomous system external) routes, 282
- ASNs (autonomous system numbers)
 - in bgpd.conf, 272
 - for gated, 281
- ASs (autonomous systems), 255
- asterisks (*) in resource records, 131
- async option, 340
- at-signs (@) in resource records, 131
- ATA/IDE/MFM/RLL support kernel category, 479
- atime option, 340
- ATTEMPT log value, 443
- attempts option, 108
- AUPs (Acceptable Use Policies), 404
- auth option, 56, 58
- auth-nxdomain option, 561
- AuthConfig option, 218
- AuthDBUserFile option, 223
- AUTHENTICATE command, 397
- authentication, 449–450
 - for Apache web server, 221–224
 - in Linux installation, 550–551, 551
 - one-time passwords, 453–456
 - in PPP
 - CHAP, 58–59
 - PAP, 57–58
 - for RIPv2, 277
 - shadow passwords, 450–453
 - SSH for, 457–458, 457
 - ssh client, 466–471
 - sshd, 459–465
 - user keys for, 458–459
- Authentication Configuration window, 550–551, 551
- authentication parameter, 277
- authkey clause, 279
- AuthName directive, 221
- authoritative statement, 298
- authpriv facility, 434
- AuthType directive, 221–222
- authype simple clause, 279
- AuthUserFile directive, 223
- auto filesystem type, 344
- auto.master file, 349–350
- auto option in mount, 340
- auto-probing, protection from, 18
- autoifs script, 331
- automount mounter, 348–349
- automounter daemon (amd), 331, 348–349
- automounters for NFS directories, 348–350
- autonomous system external (ASE) routes, 282
- autonomous system numbers (ASNs)
 - in bgpd.conf, 272
 - for gated, 281
- autonomous systems (ASs), 255
- autonomoussystem statement, 281
- availability of data, threats to, 426

B

- b and B option and flag
 - in dhcpcd, 311
 - in fdisk, 540
 - in procmail, 419
- \b escape sequence in chat, 61
- b-node (broadcast-node) in NBT, 351
- %b parameter in LogFormat, 236
- B Shell, 84
- backbone areas, 255
- backoff-cutoff command, 321
- bad blocks, 540
- Banner value, 459
- banners option, 440
- .bash_profile file, 49
- .bashrc file, 49
- Basic authentication, 222
- BatchMode option, 466
- bd option in sendmail, 162
- Begin Connection When the Computer Is Turned On option, 63
- begins with option, 417
- Berkeley Internet Name Domain (BIND) software, 105, 557–558
 - named.conf commands. *See* named.conf file
 - resolver in. *See* resolver
- bestmx_is_local feature, 597, 601
- bg option in fstab, 346
- BGP (Border Gateway Protocol), 251, 279–282
- bgpd.conf file, 271–272
- bgpd program, 270–272
- /bin/ash shell, 84
- /bin/bash shell, 84
- /bin/bash2 shell, 84
- /bin/bsh shell, 84
- /bin/csh shell, 84
- /bin/ksh shell, 85
- /bin/sh shell, 84
- /bin/tcsh shell, 84
- /bin/zsh shell, 85
- BIND (Berkeley Internet Name Domain) software, 105, 557–558
 - named.conf commands. *See* named.conf file
 - resolver in. *See* resolver
- bind value, 151
- BindAddress option, 206
- bitdomain feature, 597, 600
- BITNET_RELAY macro, 606
- blackhole option, 563
- blacklist_recipients feature, 597, 601, 608
- Block devices kernel category, 479
- blocklist values, 9
- body option, 416
- bogus option, 577
- Boolean parameters, 378
- Boot action, 25
- boot disks, 527–528, 555
- boot loaders, 3
 - GRUB, 6–10
 - installing, 545–546
 - LILO, 10–14
- boot option, 11
- /boot partition, 533, 535
- boot process, 3–4
 - boot sector loading, 4–6, 5
 - hardware device driver initialization, 19–21
 - kernel loading, 10–16
 - Linux loading, 6–10
 - loadable modules in, 32–34
 - prompt, 16–19
 - services loading, 21–27
 - startup scripts in, 27–32, 32
- boot prompt, 16–19
- boot sectors, 4–6, 5
- boot security, 15–16
- boot-size option, 303
- bootfile-name option, 303
- booting
 - installation programs, 528–530
 - interface configuration at, 45
 - kernel, 481–483
- booting keyword, 298
- BootP (Bootstrap Protocol), 290–291
- bootp command
 - in dhclient.leases, 317
 - in dhcpcd, 298
- BootPrompt-HOWTO document, 19
- BOOTPROTO statement, 314, 486
- BOOTREPLY packets, 290
- BOOTREQUEST packets, 290
- bootstrap loaders, 3
- Bootstrap Protocol (BootP), 290–291, 298, 317
- Bootwait action, 25
- Border Gateway Protocol (BGP), 251, 279–282
- Bourne-Again Shell, 84
- Bourne Shell, 84
- Bring Link Up And Down Automatically option, 64
- broadcast-address option, 300
- broadcast and BROADCAST option
 - for gated, 279
 - in ifcfg-eth0, 313
 - in ifconfig, 487
- broadcast-node (b-node) in NBT, 351
- broadcasts
 - addresses for, 44
 - in NBT, 351
- browsable parameter, 361
- BrowserMatch directive, 211–212
- bt option in sendmail, 177–179, 408
- bug information, 428–431, 430–431
- Bugtraq Archives, 428–430, 428
- bv option in sendmail, 177

C

- c and C option and flag
 - in dhcpd, 311
 - in fdisk, 541
 - in lwresd, 113
 - in Mask field, 243
 - in procmail, 419
 - in routing tables, 247
 - in sendmail, 179
 - in sendmail.cf, 164
 - in useradd, 90
 - in usermod, 89
- \c escape sequence in chat, 61
- C Shell, 84
- %c variable for shell, 438
- ca entry in inittab, 26
- CacheDefaultExpire directive, 213
- CacheGcInterval directive, 212
- CacheLastModifiedFactor directive, 212
- CacheMaxEmpire directive, 212
- CacheRoot directive, 212
- CacheSize directive, 212
- caching, 212–213
- caching-only configuration, 120–121
 - hints file for, 125–126
 - named.local for, 126–127
 - Red Hat, 121–125, 121
- Canonical Name (CNAME) records, 131, 139, 143, 214
- CANONIFY_DOMAIN macro, 584, 609
- CANONIFY_DOMAIN_FILE macro, 584, 609
- canonify ruleset, 171
- CAPABILITY command, 397
- Carrier Sense Multiple Access with Collision Detection (CSMA/CD), 488–489
- CAs (certificate authorities), 227, 229, 231–233, 232
- categories for kernel configuration, 478–481
- category clause in named.conf, 571–572
- CC option for spam filters, 416
- CD-ROM
 - characteristics of, 525
 - installation from, 526
- certificate authorities (CAs), 227, 229, 231–233, 232
- certificates for SSL, 227–233, 230
- cf option in dhcpd, 295
- CGI (Common Gateway Interface) threats, 215–216
- chainloader command, 9
- chains, 284, 446
- Challenge Handshake Authentication (CHAP) security, 58–59
- challenge string, 58
- challenger field, 58
- ChallengeResponseAuthentication option
 - in ssh_config, 469
 - in sshd_config, 459
- change priority action, 417
- changed date in shadow, 451
- CHAP (Challenge Handshake Authentication) security, 58–59
- chap-secrets file, 58–59
- Character devices kernel category, 480
- chat scripts, 60–62, 495–496
- CHECK command, 398
- check option, 223
- check-names option, 562
- check-names fail option, 119
- CheckHostIP option, 466
- CheckMail value, 460
- chgrp command, 328–329
- child processes, 209–210
- chkconfig tool
 - for Apache web server, 194
 - for dhcpd, 295
 - for gated, 275
 - for Samba, 355
 - for scripts, 30–31, 332
 - for xinetd, 80–81
- chmod command
 - in DOMAIN, 184
 - for permissions, 325–326
- Cipher option, 466
- Ciphers option
 - in ssh_config, 466
 - in sshd_config, 459
- circuit switching, 239–240, 240
- class option
 - in ftpaccess, 98
 - in lpc, 382
 - in resource records, 131
 - in sendmail.cf, 164
- classless IP addresses, 43
- cleaning-interval option, 564
- clear-text passwords, 360
- Clear To Send (CTS) hardware flow control, 54
- Clear To Send (CTS) pin, 48, 48
- ClearModuleList directive, 204
- CLF (Common Log Format), 236–237
- client option
 - in dhcpd.leases, 296
 - in lpc, 382
 - in named.conf, 572
- ClientAliveCountMax value, 460
- ClientAliveInterval value, 460
- clients entry in hosts.allow, 436
- close and CLOSE option
 - in IMAP, 398, 400
 - in shadow, 451–452
- CLOSE_WAIT state, 505
- CLOSED state, 505
- CLOSING state, 505
- CNAME (Canonical Name) records, 131, 139, 143, 214
- cname option, 569
- Code maturity level options kernel category, 478
- collisions in Ethernet networks, 488–489

- comment parameter in smb.conf, 361
 - comments
 - in ftpaccess, 97
 - in gated, 277
 - in grub.conf, 7
 - in http.conf, 199
 - in inetd.conf, 75
 - in inittab, 24
 - in lilo.conf, 11
 - in login.defs, 92–93
 - in named.conf, 115, 123
 - in passwd, 83
 - in printcap, 378
 - in protocols, 70
 - in pump.conf, 316
 - in sendmail.cf, 164
 - in services, 72
 - in sshd_config, 465
 - in useradd, 90
 - in wu-ftpd, 79
 - in xinetd.conf, 76
 - Common Gateway Interface (CGI) threats, 215–216
 - Common Log Format (CLF), 236–237
 - compat source value, 154
 - compiling
 - device drivers, 41
 - kernel, 481–483
 - compress command, 99
 - Compression option, 466
 - CompressionLevel option, 466
 - compute servers, 67
 - conditional logging, 237–238
 - condrestart argument, 144
 - conf directory, 228
 - conf parameters, 588–596
 - config and #config option
 - in named.conf, 569
 - for SSIs, 215
 - config-file option, 314
 - configuration protocols
 - BootP, 290–291
 - DHCP, 291–292
 - RARP, 292
 - Configure Name Resolution Automatically option, 64
 - configure terminal command, 265
 - conflicts, address, 489–495
 - ConnectionAttempts option, 466
 - connections
 - serial interface, 49–50
 - troubleshooting, 498–500
 - Console drivers kernel category, 480
 - control statements in gated.conf, 276
 - controls statement
 - in named.conf, 116, 579–580
 - in rndc.conf, 149
 - converting IP addresses to Ethernet addresses, 242–245
 - cookie-servers option, 303
 - COPY command, 398
 - coresize option, 564
 - counting to infinity problem, 253
 - cps attribute, 77
 - crashes, 17
 - CREATE command, 397
 - CREATE_HOME parameter, 93–94
 - create mode parameter, 361–362
 - cross-over cables, 48
 - crtsects option, 54, 56
 - CSMACD (Carrier Sense Multiple Access with Collision Detection), 488–489
 - Ctrlaltdel action, 25
 - CTS (Clear To Send) hardware flow control, 54
 - CTS (Clear To Send) pin, 48, 48
 - CustomLog directive, 235–237
 - cyrus mailer, 611
 - CYRUS_ parameters, 601
- ## D
- d and D option and flag
 - for chains, 446
 - in dhcpcd, 310, 312
 - in dhcpcd, 295
 - in fdisk, 541
 - in iptables, 447
 - in lwresd, 113
 - in nmbd, 353
 - in procmail, 419
 - in routing tables, 247
 - in sendmail.cf, 164
 - in useradd, 90
 - in Zebra, 259
 - \d escape sequence in chat, 61
 - %d variable
 - for shell, 438
 - in smb.conf, 356
 - daemon group, 86
 - DAEMON_OPTIONS macro, 584, 611–612
 - Data Carrier Detect (DCD) pin, 48, 48
 - data communication equipment (DCE), 47
 - data field in SOA records, 135–136
 - Data Link layer for PPP, 50
 - Data Set Ready (DSR) pin, 48, 48
 - data terminal equipment (DTE), 47
 - Data Terminal Ready (DTR) pin, 48, 48
 - database option in named.conf, 576
 - databases and database records
 - Access, 409–411
 - K commands for, 164–165
 - in master server configuration, 130–132, 134–137
 - nsswitch.conf for, 153
 - datagrams, 69
 - datasize option, 564

- date option for spam filters, 416
- db option
 - in named.conf, 570
 - in nsswitch.conf, 154
- dbmmanage command, 223–224
- DCD (Data Carrier Detect) pin, 48, 48
- DCE (data communication equipment), 47
- dd command, 527–528
- DDNS (Dynamic DNS), 292
- deallocate-on-exit option, 561
- debug option
 - in LogLevel, 235
 - in lpc, 383
 - in resolv.conf, 107
- default option
 - in dhclient.conf, 321
 - in grub.conf, 7
 - in lilo.conf, 12
 - in named.conf, 570
- default-ip-ttl option, 301
- default-key option, 148
- default-lease-time statement
 - in dhcp.conf, 305
 - in dhcpd, 298
- default-server option, 148
- default-tcp-ttl option, 301
- Defaultlcon option, 208
- defaultmetric clause, 279
- defaultq command, 382
- defaultroute option, 54
- defaults
 - resolver configuration, 106
 - routes, 250, 256
- defaults option
 - in fstab, 344
 - in lpc, 382
 - in mount, 340
 - in wu-ftpd, 79
 - in xinetd.conf, 76–77
- DefaultType option, 208
- define macro, 584, 587–596
- define statement
 - in DOMAIN, 184–185
 - in OSTYPE, 182–183
- delay_checks feature, 597
- DELE command, 394, 396
- delete and DELETE option
 - in dbmmanage, 224
 - in Disk Druid, 539
 - in IMAP, 397, 400
- deleting
 - groups, 88
 - partitions, 539
 - user accounts, 94
- delivery addresses in rulesets, 172
- demultiplexed data streams, 69
- Denial of Service (DOS) attacks, 426
- Deny directive, 219–220, 222
- deny option
 - in dhcpd, 298
 - in hosts.allow, 439–440
- deny-gid option, 98
- deny-uid option, 98
- DenyGroups value, 460
- DenyUsers value, 460
- dependencies, module, 33
- desktop configuration servers, 289
 - BootP for, 290–291
 - DHCP for. *See* DHCP (Dynamic Host Configuration Protocol)
 - RARP for, 292
- destination addresses in routing, 241, 246
- Destination field, 246
- detach parameter in pppd, 496
- dev option in mount, 341
- device directive, 315–316
- device drivers
 - compiling, 41
 - initializing, 19–21
 - loadable, 38–45, 40
 - printer, 372–373, 373
- Device field, 538
- DEVICE statement, 314
- Devices tab, 46
- devpts filesystem type, 344
- dhclient, 317–321
- dhclient.conf file, 318–321
- dhclient.leases file, 317–318
- DHCP (Dynamic Host Configuration Protocol), 291–292
 - clients
 - dhclient, 317–321
 - dhcpd for, 310–314
 - pump, 314–317
 - for Ethernet, 547
 - servers
 - dhcpd for. *See* dhcpd script
 - installing, 292–294
 - leases for, 296
 - placing, 308–309
 - server and protocol operations for, 297–300
- dhcp-client-identifier option, 300, 311
- dhcpd program, 310–314
- dhcpd.conf file, 295, 297, 304–306
- dhcpd-eth0.cache file, 312
- dhcpd-eth0.info file, 312–314
- dhcpd.leases file, 296
- dhcpd script
 - configuration options for
 - basic, 300–301
 - diskless client, 303
 - miscellaneous, 303–304
 - NetBIOS, 302–303
 - routing, 302
 - tuning, 301–302

- with older kernels, 293–294
 - running**, 295
 - dhcrelay server, 307–309
 - dial-up configuration, 55–57
 - dialup option, 561
 - Dialup Configuration option, 62
 - dictionary attacks, 450
 - dig utility
 - for DNS, 516–517
 - for network troubleshooting, 485
 - Digest authentication, 222
 - Dijkstra Shortest Path First algorithm, 254
 - dip command, 495
 - direct connect cables, 48
 - Direct Memory Access Request (DRQ) numbers, 489
 - directories, sharing, 361–363
 - Directory directive in http.conf, 199
 - directory-level web server configuration, 218–219
 - directory mode parameter, 361
 - directory option
 - for Apache web server, 216–218
 - in exports, 333
 - in named.conf, 117, 121, 123, 560
 - DirectoryIndex option, 207–208
 - disable option
 - in lpc, 383
 - in wu-ftpd, 80
 - disabling unneeded services, 75
 - DISCARD keyword, 410
 - Disk Druid program, 537–540, 537, 539
 - diskless client options, 303
 - disks, partitioning. *See* partitioning disks
 - dispatch option, 572
 - distance-vector algorithms, 252
 - distances in Zebra, 257
 - distinguished names on certificates, 229
 - divert macro, 181–182, 584, 586
 - DMA Request (DRQ) numbers, 489
 - dmesg command, 20
 - DNAT policy, 284
 - dn1 macro, 181, 584, 586
 - DNS (Domain Name System), 101–103
 - answering queries in, 104
 - BIND for, 105, 557–558
 - named.conf for. *See* named.conf file
 - resolver in. *See* resolver
 - configuration, 114–115
 - caching-only. *See* caching-only configuration
 - master server. *See* master server configuration
 - slave server, 127–129
 - dig for, 516–517
 - hierarchy, 103–104
 - host for, 515–516
 - host.conf for, 150–152
 - nslookup for, 512–515
 - nsswitch.conf for, 152–154
 - DNS NOTIFY message, 119
 - dns proxy option, 352, 359
 - DNS tab, 46
 - dnsbl feature, 407–408, 597, 601, 608
 - dnskeygen utility, 123
 - dnssec option, 572
 - DocumentRoot directive, 197, 206, 227
 - documents in http.conf, 200, 216–218
 - doesn't contain option, 417
 - domain database file, 134–137
 - DOMAIN macro, 184–187, 584, 587, 606–609
 - domain option
 - in resolv.conf, 106, 112
 - in smb.conf, 359
 - domain-name option, 300
 - domain-name-servers option, 300
 - Domain Name System. *See* DNS (Domain Name System)
 - domainsearch directive, 315
 - domaintable feature, 597, 600
 - DOS (Denial of Service) attacks, 426
 - dots setting, 107–108
 - down command, 383
 - dport parameter, 447
 - Driver tab, 374
 - Driver Options tab, 375
 - drivers
 - compiling, 41
 - initializing, 19–21
 - loadable, 38–45, 40
 - printer, 372–373, 373
 - drop keyword, 446
 - dsmtmp command, 174
 - DSMTMP_MAILER_ARGS parameter, 602
 - DSO (Dynamic Shared Object), 201–204
 - DSR (Data Set Ready) pin, 48, 48
 - dst filter, 509
 - DTE (data terminal equipment), 47
 - DTR (Data Terminal Ready) pin, 48, 48
 - dual-boot systems, 484, 531
 - dump command, 345
 - dump-file option, 561
 - dumpdb argument, 147
 - dynamic-bootp-lease-cutoff parameter, 298
 - dynamic-bootp-lease-length parameter, 299
 - Dynamic DNS (DDNS), 292
 - Dynamic Host Configuration Protocol. *See* DHCP (Dynamic Host Configuration Protocol)
 - dynamic routing, 250–255
 - Dynamic Shared Object (DSO), 201–204
- ## E
- e and E option and flag
 - for chains, 446
 - flag in procmail, 419
 - in mailer definitions, 175
 - in rpm, 192
 - in useradd, 90
 - e-mail. *See* mail services

- e2label command, 343
 - echo and #echo option
 - for SSIs, 215
 - in stty, 55
 - Edit Internet Connections window, 62
 - Edit option in Disk Druid, 538
 - Edit Queue window, 374–377, 374–376
 - elm program for spam, 413–415
 - email command, 99
 - emerg setting, 235
 - enable command, 383
 - Enable MD5 Passwords option, 550
 - enable mode for Zebra, 263
 - enable password command, 261, 263
 - Enable Shadow Passwords option, 450, 550
 - enabling IP packet forwarding, 245–246
 - encrypt passwords parameter, 359
 - encryption
 - in SSH, 458
 - in SSL, 224
 - End field, 538
 - ends option, 296
 - ends with option, 417
 - ErrorLog directive, 235
 - EscapeChar option, 466
 - esmtplib command, 174
 - ESMTP_MAILER_ARGS parameter, 602
 - ESTABLISHED state, 505
 - /etc/aliases file, 158–161
 - /etc/amd.conf file, 348
 - etc directory, 260
 - /etc/ethers file, 292
 - /etc/exports file, 333–335
 - /etc/fstab file, 28, 342–348
 - /etc/ftpaccess file, 96–100
 - /etc/gateways file, 255–257
 - /etc/group file, 86–89
 - /etc/grub.conf file, 7–10, 482–483
 - /etc/hosts file, 101–102
 - /etc/inetd.conf file, 73–75
 - /etc/inittab file, 21–23
 - runlevels for, 23–26
 - special-purpose entries in, 26–27
 - /etc/login.defs file, 91–94
 - /etc/mstab file, 348
 - /etc/named.conf. *See* named.conf file
 - /etc/passwd file. *See* passwd file
 - /etc/ppp directory, 59
 - /etc/printcap file, 377–381
 - /etc/printcap.local file, 377
 - /etc/protocols file, 69–71
 - /etc/reconfigSys file, 39
 - /etc/resolv.conf file, 105–106, 111, 312
 - configuration commands in, 106–110
 - sample, 111–112
 - timeouts in, 110–111
 - /etc/services file, 71–73, 263
 - /etc/shadow file, 88, 450–452
 - /etc/shells file, 83–85
 - /etc/skel directory, 82
 - /etc/sysconfig file, 485
 - /etc/sysctl.conf file, 246
 - /etc/xinetd.conf file, 75–81, 442–445
 - ether argument, 19
 - Ethernet adapters
 - configuring, 547
 - in installation, 524
 - prompts from, 19
 - Ethernet addresses, converting IP addresses to, 242–245
 - Ethernet interface
 - configuration, 37
 - loadable drivers for, 38–45, 40
 - tools for, 45–47
 - troubleshooting, 486–489
 - ethers database, 153
 - ethers file, 292
 - eventlib option, 570
 - EXAMINE command, 397
 - exclamation points (!) in routing tables, 247
 - exec and #exec option
 - in mount, 341
 - for SSIs, 215–216
 - ExecCGI setting, 217
 - execute permission, 324–326
 - exit command
 - in lpc, 383
 - in zebra.conf, 265
 - EXIT log value, 443
 - expert option, 554
 - expiration time, 136–137
 - expire command, 317
 - export statements, 282
 - exportfs command, 338–339
 - exporting directories, 329
 - exports file, 333–335
 - EXPOSED_USER macro, 186, 584, 607
 - EXPUNGE command, 398, 400
 - ext2 filesystem, 538
 - ext3 filesystem, 344, 538
 - ExtendedStatus directive, 233
 - extensions in http.conf, 208
 - exterior protocols, 251
- ## F
- f and F option and flag
 - for chains, 446
 - in dhcpd, 295
 - in iptables, 447
 - in lwresd, 113
 - in mailer definitions, 174
 - in procmail, 419
 - in sendmail.cf, 164–165
 - in tail, 235
 - in umount, 342
 - in useradd, 90
 - in Zebra, 259–260

- fake-iquery option, 561
 - FallBackToRsh option, 466
 - Family value, 612
 - fancy indexing, 208, 220, 220
 - FancyIndexing option, 208
 - fax mailer, 610
 - FAX_MAILER_ parameters, 602
 - FAX_RELAY macro, 606
 - fdisk program, 532, 540–545
 - FEATURE macro, 584, 587, 596–601
 - in DOMAIN, 185–186, 607–609
 - in OSTYPE, 183
 - in tcpproto.mc, 181
 - FETCH command, 398, 400
 - fetch-glue option, 561
 - fg option in fstab, 346
 - file clause in named.conf, 128–129, 574
 - File Transfer Protocol (FTP), 67–68, 79
 - configuration
 - anonymous FTP, 94–96, 96
 - ftpaccess file, 96–100
 - installation from, 526
 - file types in http.conf, 208–209
 - FILE value in xinetd.conf, 77
 - FileInfo option, 218
 - filename parameter
 - in dhclient.leases, 317
 - in dhcpd, 299
 - files
 - F commands for, 164–165
 - permissions for, 324–325, 362
 - changing, 325–327
 - chgrp command for, 328–329
 - hidden, 327–328
 - sharing, 323
 - NetBIOS for, 351–354
 - Samba for. *See* Samba services
 - Files directive in http.conf, 199
 - files option in named.conf, 564
 - filesystems, 324
 - in fstab, 344
 - NFS. *See* NFS (Network File System)
 - permissions in, 324–329
 - preparing, 28
 - Filesystems kernel category, 480
 - filter-rules file, 414–415
 - Filter Rules window, 415–417, 415
 - filter tool, 413–415
 - filters
 - firewalls. *See* firewalls
 - spam, 413
 - elm for, 413–415
 - Netscape for, 415–418, 415
 - procmail for, 418–422
 - tcpdump, 509–511
 - FIN_WAIT1 state, 505
 - FIN_WAIT2 state, 505
 - final ruleset, 171
 - find command, 196
 - finger-server option, 303
 - fips program, 6, 532
 - firewalls
 - configuring, 547–551, 548, 550
 - in DNS configuration, 123
 - iptables rules for, 445–447
 - fixed-address option
 - in dhclient.leases, 318
 - in dhcpd, 299
 - flags and Flags option
 - in arp, 243
 - in named.conf, 579
 - in routing tables, 247
 - #flastmod command, 216
 - flip flop messages, 493, 495
 - flooding, 254
 - floppy disks
 - boot, 527–528, 555
 - boot sectors on, 4
 - flow control, 54
 - FollowSymLinks setting, 217–218
 - font-servers option, 303
 - Format field, 538
 - Format of Headers section, 167–169
 - formats, log, 236–237
 - .forward file, 161–162, 414
 - forward option, 562
 - forward first option, 117
 - forward only option, 117
 - ForwardAgent option, 466
 - forwarders option, 117, 562
 - forwarders only option, 117
 - forwarding firewalls, 445–446
 - forwarding mail, aliases for, 158
 - ForwardX11 option, 467, 471
 - FQDNs (fully qualified domain names), 103
 - fsck command, 28, 345
 - #fsize command, 216
 - fstab file, 28, 342–348
 - FTP (File Transfer Protocol), 67–68, 79
 - configuration
 - anonymous FTP, 94–96, 96
 - ftpaccess file, 96–100
 - installation from, 526
 - ftpchroot command, 98
 - fully qualified domain names (FQDNs), 103
- ## G
- g and G option and flag
 - in lwresd, 113
 - in routing tables, 247
 - in useradd, 90
 - in usermod, 89
 - %g and %G variable in smb.conf, 356
 - g permissions, 326

- gated.conf file, 275–276
 - gated package, 272–274
 - for BGP, 279–282
 - gated.conf for, 275–276
 - installing, 274–275, 274
 - for OSPF, 278–279
 - for RIPv2, 277–278
 - Gateway field, 247
 - GatewayPort option in ssh_config, 467
 - GatewayPorts value in sshd_config, 460
 - gateways, 240
 - gateways file, 255–257
 - general option in named.conf, 572
 - General setup kernel category, 479
 - General tab, 46
 - \$GENERATE directive, 133, 143
 - GENERICS_DOMAIN macro, 584
 - GENERICS_DOMAIN_FILE macro, 584
 - generics_entire_domain feature, 597
 - genericstable feature, 188–189, 597, 600
 - Genmask field, 247
 - get-lease-hostnames parameter, 299
 - getty program
 - in inittab, 26–27
 - for serial interfaces, 49
 - GID entry, 83
 - GID_MAX parameter, 93
 - GID_MIN parameter, 93
 - gid option in fstab, 345
 - GIDs (group IDs), 87
 - for files, 324
 - mapping, 335–338
 - for NFS, 85
 - for user accounts, 86–88
 - User directive for, 210
 - global section
 - in lilo.conf, 11
 - in pump.conf, 316
 - in smb.conf, 358–360
 - GlobalKnownHostsFile option, 467
 - GlobalKnownHostsFile2 option, 467
 - glue records, 141
 - gnorpm tool, 292
 - Grand Unified Bootloader (GRUB), 6–10, 545
 - grep command, 20
 - group database, 153
 - Group directive in http.conf, 210
 - group file, 86–89
 - group IDs (GIDs), 87
 - for files, 324
 - mapping, 335–338
 - for NFS, 85
 - for user accounts, 86–88
 - User directive for, 210
 - group option
 - in dhcpd, 297
 - for gated, 281
 - groupadd command, 87
 - groupdel command, 88
 - groupmod command, 88
 - groups
 - creating, 86–88
 - permissions for, 324, 326
 - GRUB (Grand Unified Bootloader), 6–10, 545
 - grub.conf file, 7–10, 482–483
 - guest FTP, 98
 - guest ok option, 389
 - guestgroup command, 98
- ## H
- h and H option and flag
 - in dhcpd, 311–312
 - in nmbd, 353
 - in procmail, 419
 - in routing tables, 247
 - %h and %H variable
 - in LogFormat, 236
 - for shell, 438
 - in smb.conf, 356–357
 - h-node (hybrid-node) in NBT, 352
 - HACK macro, 587
 - HACKS macro, 584
 - halt argument, 147
 - hard drive characteristics, 524
 - hard option in fstab, 346
 - Hardware Device tab, 46
 - hardware devices
 - driver initialization for, 19–21
 - information for installing, 523–525
 - hardware flow control, 54
 - hardware options
 - in dhcpd, 299
 - in dhcpd.leases, 296
 - for lilo.conf file, 13–14
 - Hardware tab, 45
 - has-old-clients option, 561
 - HDLC (High-Level Data Link Control) protocol, 50–51
 - HeaderName option, 208
 - headers in sendmail.cf, 167–169
 - heartbeat-interval option, 564
 - help and --help option
 - in lpc, 383
 - in pump, 314
 - HELP_FILE parameter, 602
 - hesiod source value, 154
 - High-Level Data Link Control (HDLC) protocol, 50–51
 - High security level, 548–549
 - hints files
 - caching-only configuration, 125–126
 - for DNS, 104, 114
 - hints value for type master, 118
 - hmac-md5 algorithm, 123
 - holdall command, 383

- home directories
 - automounting, 350
 - for ftp, 95
 - /home directory, 536
 - home entry in passwd, 83
 - /home partition, 533, 535
 - HOME variable, 49
 - homes section in smb.conf, 360–361
 - hop counts, 252
 - host and HOST option
 - in dhcp.conf, 306
 - in dhcpd, 297
 - for DNS testing, 485, 515–516
 - in exports, 334
 - in ssh, 467, 471
 - host.conf file, 150–152
 - host filter, 509
 - Host IP field, 376
 - HOST log value, 443
 - host-name option, 300
 - host portion of IP addresses, 43
 - host-statistics option, 561
 - host table, 150
 - host.conf file, 150–152
 - nsswitch.conf file, 152–154
 - HostbasedAuthentication option
 - in ssh_config, 467
 - in sshd_config, 460
 - hostip entry, 391
 - HostKey value, 460
 - HostKeyAlgorithms option, 467
 - HostKeyAlias option, 467
 - hostname and HostName option
 - in dhcpd.leases, 296
 - in pump, 315
 - in resolv.conf, 106
 - in ssh_config, 467
 - in zebra.conf, 261, 265
 - hosts
 - aliases for, 214
 - in gateways, 256
 - in master server configuration, 139
 - hosts allow command
 - for printers, 389
 - in smb.conf, 363
 - hosts.allow file, 435–437, 439–443, 445
 - hosts database, 153
 - hosts deny command, 363
 - hosts.deny file, 435–436, 438, 441–443, 445
 - hosts files, 101–102
 - Hosts tab, 46
 - hosts value, 151
 - .htaccess file, 218
 - html directory, 197
 - HTML (HyperText Markup Language) documents, 198
 - htpasswd command, 223
 - http.conf file, 196–198
 - for caching, 212–213
 - for child processes, 209–210
 - contents of, 198–200
 - directives in, 204–206
 - for document and directory options, 216–218
 - for dynamic shared objects, 201–204
 - for fancy indexes, 208
 - for file types, 208–209
 - for performance, 211–212
 - for storage locations, 206–208
 - for virtual hosts, 213–214
 - http_core.c file, 201
 - HTTP installations, 526
 - httpd.conf file, 196–197
 - httpd script, 30, 194–195, 194, 196
 - hwconf file, 39
 - hybrid-node (h-node) in NBT, 352
 - HyperText Markup Language (HTML) documents, 198
- I**
- i and I option and flag
 - for chains, 446
 - in dhcpd, 311
 - in dhcrelay, 307
 - in iptables, 447
 - in lwresd, 113
 - in procmail, 419
 - in pump, 314–315
 - in rpm, 192
 - I/O port addresses, 489–490
 - %I variable in smb.conf, 357
 - I2O device support kernel category, 479
 - IBGP (internal BGP), 281
 - ICMP Time Exceeded errors, 502
 - icmp-type parameter, 447
 - ICMP Unreachable Port errors, 502
 - id entry in inittab, 26
 - identd (identification daemon), 404–405
 - IdentityFile option, 467
 - ieee802-3-encapsulation option, 301
 - ien116-name-servers option, 303
 - if parameters, 380
 - Iface field, 248
 - ifcfg-eth0 file, 313
 - ifcfg.interface file, 45
 - ifconfig command, 41–42, 486–487
 - consistency of, 45
 - for Ethernet interface, 488
 - for IP addresses, 42–44, 291
 - for network troubleshooting, 485
 - for routes, 249
 - ifdef command, 183
 - IfDefine directive, 199–200
 - IfModule directive, 200
 - ifup script, 314
 - ifup-ppp script, 52
 - ignore thread action, 417
 - IgnoreRhosts value, 460

- IgnoreUserKnownHosts value, 460
- image statement, 12
- IMAP (Internet Message Access Protocol), 393
 - clients for, 402–403, 403
 - commands for, 397–400
 - daemon for, 400–402, 401
- imap file, 401
- imapd program, 400–402
- imaps file, 402
- import option, 224
- impress-servers option, 303
- in keyword, 118
- inactive entry, 451–452
- inbox, 400
- include and #include command
 - in named.conf, 116
 - for SSIs, 216
- \$INCLUDE directive, 133
- includedir statement, 77
- Includes setting, 217
- IncludesNOEXEC setting, 216–217
- index.html file, 197
- Indexes option
 - for AllowOverride, 219
 - in Options, 217
- IndexIgnore option, 208
- IndexOptions directive, 208
- inet and --inet option
 - in named.conf, 580
 - in netstat, 504
 - in rndc.conf, 149
- inet6 option, 109
- inetd.conf file, 73–75
- inetd script, 68–69, 432
- init process, 17–18, 21–23
 - runlevels for, 23–26
 - for serial interfaces, 49
 - special-purpose entries, 26–27
- Initdefault action, 25
- initial-interval command, 321
- initialization
 - DHCP leases, 296
 - hardware device drivers, 19–21
 - runlevel, 28–30
 - system, 28
- initrd command, 9
- inittab file, 21–23
 - runlevels for, 23–26
 - special-purpose entries in, 26–27
- Input core support kernel category, 480
- input firewalls, 445–446
- INPUT_MAIL_FILTER macro, 584
- insist option, 570
- insmod command, 34, 40
- install option in lilo.conf, 11
- installing, 521–522
 - Apache web server, 191–194, 193
 - DHCP servers, 292–294
 - gated package, 274–275, 274
 - kernel, 481–483
 - Linux 521–523
 - boot disks for, 527–528, 555
 - boot loader, 545–546
 - booting installation programs, 528–530
 - disk partitioning. *See* partitioning disks
 - Ethernet adapter configuration, 547
 - firewall configuration, 547–551, 548, 550
 - hardware information for, 523–525
 - methods for, 526–527
 - network information for, 525
 - planning, 523
 - software components, 551–552
 - software considerations for, 525–526
 - X Windows configuration, 552–554, 553
 - NFS, 331–333, 332
 - PPP, 51–53, 51
 - printers, 369–377, 370, 372–376
 - Samba, 354–355, 354
 - Zebra package, 258–259, 258
- instances attribute, 76
- integrity of data, threats to, 426
- interface and --interface option
 - in dhclient.leases, 318
 - for gated, 277, 279
 - in pump, 315
 - in zebra.conf, 261, 265–267
- interface declarations in dhclient.conf, 319–320
- interface-interval option, 564
- interface-mtu option, 301
- interface statement in ospfd.conf, 269
- interfaces statement for gated, 278
- interior protocols, 251
- internal BGP (IBGP), 281
- Internet Connections window, 62–63, 63
- Internet Message Access Protocol (IMAP), 393
 - clients for, 402–403, 403
 - commands for, 397–400
 - daemon for, 400–402, 401
- Internet Protocol Control Protocol (IPCP), 50
- Interrupt Request (IRQ) numbers, 489
- intr option, 346–347
- ip address command, 261, 265
- IP addresses, 42
 - broadcast, 44
 - conflicts in, 488–495
 - converting to Ethernet addresses, 242–245
 - for datagrams, 69
 - DHCP for. *See* DHCP (Dynamic Host Configuration Protocol)
 - in hosts, 102
 - in master server configuration, 139
 - network masks for, 42–44
 - in zebra.conf, 261, 265
- ip broadcast filter, 510
- IP broadcasts in NBT, 351
- ip-down script, 59

- ip_forward file, 245–246
- ip-forwarding option, 302
- ip ospf authentication-key clause, 269
- ip ospf priority clause, 269
- IP packet forwarding, 245–246
- ip_port option, 559
- ip proto filter, 510
- ip route command, 261
- IP routers, 240
- ip-up script, 59
- IPADDR statement, 313
- IPCP (Internet Protocol Control Protocol), 50
- ipop2 file, 401
- ipop3 file, 401
- iptables command, 445
 - for firewalls, 445–447, 547
 - for NAT, 284–285
 - sample commands, 447–448
- IPv6 addresses
 - in resolv.conf, 109
 - in resolver, 112
- irc-server option, 303
- IrDA (infrared) support kernel category, 480
- IRQ (Interrupt Request) numbers, 489
- is option, 417
- ISDN subsystem kernel category, 480
- isn't option, 417
- iso9660 filesystem type, 344
- Issuer field, 229
- ixfr-base option, 574

J

- j parameter in iptables, 446–447
- JetDirect printer queues, 371

K

- k and K option
 - in dhcpcd, 310
 - in sendmail.cf, 164–165
- \K escape sequence in chat, 61
- Kbrequest action, 25
- KeepAlive option
 - in hosts.allow, 439
 - in http.conf, 211
 - in ssh_config, 467
 - in sshd_config, 460
- Kerberos 5 password server, 551
- KerberosAuthentication option
 - in ssh_config, 467
 - in sshd_config, 460
- KerberosOrLocalPasswd value, 460
- KerberosTgtPassing option
 - in ssh_config, 468
 - in sshd_config, 460
- KerberosTicketCleanup value, 461

- kernel
 - compiling and installing, 481–483
 - configuration
 - categories for, 478–481
 - troubleshooting, 476–483, 477–478
 - xconfig for, 476–478, 477–478
 - for hardware device driver initialization, 19–20
 - loading, 10–16
 - for TCP/IP, 20–21
 - kernel command, 9, 16–17
 - Kernel Configuration window, 476–477, 477
 - Kernel hacking category, 480
 - kernel module for PPP, 52
 - kernel panic, 17
 - key_id option, 578
 - key statement
 - in named.conf, 116, 123, 577–579
 - in rndc.conf, 148
 - KeyRegenerationInterval value, 461
 - keys and keys option
 - in named.conf, 124, 577
 - in rndc.conf, 149
 - in SSH, 458–459
 - in SSL, 224
 - kill and --kill option
 - in lpc, 383
 - for named, 146
 - in pump, 315
 - KNOWN keyword, 437
 - Korn Shell, 85
 - kudzu program, 39

L

- l and L option
 - for chains, 446
 - in dhcpcd, 311
 - in fdisk, 541
 - in ls, 324–325
 - in mailer definitions, 175
- %l parameter in LogFormat, 236
- %L variable in smb.conf, 357
- label option, 12
- labels
 - in CLF files, 236
 - in inittab, 24
 - in lilo.conf, 12
- lame-servers option, 570
- lame-ttl option, 563
- LanguagePriority option, 209
- laptops for troubleshooting, 484
- LAST_ACK state, 505
- last and LAST command
 - for logins, 471
 - in POP3, 394
- lba32 option, 13
- LCP (Link Control Protocol), 50

- LDAP (Lightweight Directory Access Protocol), 551
 - password server, 551
 - for sendmail, 613
- ldap_routing feature, 597
- ldap source value, 154
- LDAPROUTE_DOMAIN macro, 584, 613
- LDAPROUTE_DOMAIN_FILE macro, 584, 613
- lease option, 315
- leases for DHCP servers, 296
- leassecs option, 315
- less command, 20
- Let PPP Do All Authentication option, 63
- Let The User Start The Connection option, 63
- level option, 30
- lf option, 295
- Lightweight Directory Access Protocol (LDAP), 551
 - password server, 551
 - for sendmail, 613
- lightweight resolver, 112–113
- LILO boot loader, 10–14, 545–546
- lilo.conf file, 10, 481–482
 - boot security in, 15–16
 - hardware options for, 13–14
 - sample, 11–13
- Limit option, 219
- limited_masquerade feature, 597, 599
- Line Printer Control (lpc) program, 382–385
- Line Printer daemon (lpd), 381–386
- Line Printer Remote (lpr) program, 382
- linear option, 13–14
- linger option, 439
- Link Control Protocol (LCP), 50
- link-state protocols, 254
- Linux Hardware Compatibility HOWTO, 37, 523
- Linux services
 - loading, 21–23
 - runlevels for, 23–26
 - special-purpose entries, 26–27
- LIST and --list option
 - in chkconfig, 30
 - in IMAP, 398
 - in POP3, 394, 396
- Listen option, 206
- listen-on option, 563
- listen-on-v6 option, 566
- LISTEN state, 505
- ListenAddress value, 461
- listing loaded modules, 33–34
- literals
 - in named.conf, 115
 - for rewrite rule patterns, 169
- lmhosts file, 351, 353–354
- load option, 570
- load printers option, 388–389
- loadable drivers for Ethernet, 38–45, 40
- Loadable module support kernel category, 479
- loadable modules, 32–34
- loading
 - boot sector, 4–6, 5
 - dynamic shared objects, 201–204
 - kernel, 10–16
 - Linux, 6–10
 - Linux services, 21–27
- LoadModule directive
 - in http.conf, 201
 - for mod_ssl, 225
- Local_check_mail ruleset, 412
- Local_check_rcpt ruleset, 412
- Local_check_relay ruleset, 412
- Local Code macros, 611
- LOCAL_CONFIG macro, 585, 611
- LOCAL_DOMAIN macro, 585, 609
- local domains in resolv.conf, 106
- local host files, 114, 126–127
- Local Info section, 163–165
- local_lmtp feature, 597
- LOCAL_MAILER_ parameters, 602–603
- LOCAL_NET_CONFIG macro, 585, 611
- Local Printer option, 371
- local printer queues, 370
- local_procmail feature, 597
- LOCAL_RELAY macro, 606
- LOCAL_RULE_ macros, 585, 611
- LOCAL_RULESETS macro, 585, 611
- LOCAL_RULESETS section, 413
- LOCAL_SHELL_ parameters, 603
- LOCAL_USER macro, 585, 607
- LocalForward option, 468
- localhost. file, 124
- localhost.zone file, 124
- Location directive, 199
- lockfiles, 419
- log command, 99
- log file command
 - in smb.conf, 358
 - in zebra.conf, 261
- log_on_failure attribute
 - in wu-ftpd, 80
 - in xinetd.conf, 77, 443
- log_on_success attribute
 - in wu-ftpd, 80
 - in xinetd.conf, 77, 443
- log-servers option, 304
- log syslog command, 261
- log_type attribute, 77
- LogFormat directive, 235–237
- logging
 - in Apache web server, 235–238
 - in Bind8, 116, 568–572
 - in Samba, 358
 - in zebra, 261
- logging command, 116, 568–572

- logical addresses, 242
- logical partitions
 - in Disk Druid, 540
 - in fdisk, 542–543
- LOGIN command, 397
- login.defs file, 91–94
- login program, 49–50
- login services, 67–68
 - FTP configuration
 - anonymous FTP, 94–96, 96
 - ftpassess file, 96–100
 - starting on-demand rev, 68–69
 - user accounts. *See* user accounts
- login shells, 83–85
- loginfails command, 99
- LoginGraceTime value, 461
- LogLevel option
 - in http.conf, 235
 - in ssh_config, 468
 - in sshd_config, 461
- LOGNAME variable, 49
- LOGOUT command, 397, 400
- lookup-hostname option, 315
- loopback addresses, 102
- loopback domains, 126
- loose_relay_check feature, 597
- lpc (Line Printer Control) program, 382–385
- lpchains script, 31
- lpd_bounce parameters, 380
- lpd.conf file, 382
- lpd program, 381–386
- lpq command, 383, 386
- lpr (Line Printer Remote) program, 382
- lpr-servers option, 300
- lprm command, 383, 386
- ls command, 324–325
- lsmmod command, 33
- LSUB command, 398
- LUSER_RELAY macro, 606
- lwres command, 116
- lwresd command, 112–113

M

- m and M option and flag
 - in DAEMON_OPTIONS, 612
 - in fdisk, 541
 - in mailer definitions, 172
 - in Mask field, 243
 - in routing tables, 247
 - in useradd, 90, 93–94
- %m and %M variable in smb.conf, 357
- M (Mail Exchanger) records, 131
- m-node (mixed-node) in NBT, 351–352
- m4 macros, 180–181, 180, 583–587
 - configuration file for, 187–188
 - DAEMON_OPTIONS, 611–612
 - define, 587–596
 - DOMAIN, 184–187, 584, 587, 606–609
 - FEATURE, 596–601
 - Local Code, 611
 - macro control file in, 181–182
 - MAILER, 609–611
 - OSTYPE, 182–184, 601–605
 - sendmail database for, 188–189
 - testing, 189–190
- macro control file, 181–182
- macros in header templates, 168
- MACs option
 - in ssh_config, 468
 - in sshd_config, 461
- Mail Abuse Prevention System (MAPS), 407
- MAIL_DIR parameter, 93
- Mail Exchanger (M) records, 131
- MAIL_FILTER macro, 585
- mail group, 86
- MAIL_HUB macro, 606
- mail relay settings, 405–406
- mail servers, 157
 - aliases for, 158–162
 - in master server configuration, 138
 - sendmail. *See* sendmail program
- mail services, 393
 - IMAP, 393
 - clients for, 402–403, 403
 - commands for, 397–400
 - daemon for, 400–402, 401
 - POP, 393
 - clients for, 402–403
 - commands for, 394–396
 - daemon for, 400–402
 - spam prevention. *See* spam
- MAIL variable, 49
- mail11 mailer, 611
- MAIL11_MAILER_parameters, 603
- mailer command, 172
- MAILER_DEFINITIONS macro, 585, 611
- Mailer Definitions section, 172–175
- MAILER macros, 182, 585, 587, 609–611
- mailertable feature, 597, 599–600
- mailing lists, aliases for, 158
- mainframe technique for file sharing, 323
- maintain-ixfr-base option, 564
- maintenance option, 570
- make command, 227–228, 476
- Make RAID option, 539
- Make This Connection The Default Route option, 63
- make xconfig command, 476
- Makefile, 227–228, 476
- makemap command, 188
- many-answers option, 576
- map files, 349–350
- map option, 11
- mapper, 13

- mapping user IDs and group IDs, 335–338
- MAPS (Mail Abuse Prevention System), 407
- mark read action, 417
- Mask field, 243–244
- mask-supplier option, 301
- masks, IP, 42–44, 243–244
- MASQUERADE_AS macro, 585, 607
- MASQUERADE_DOMAIN macro, 585, 607
- MASQUERADE_DOMAIN_FILE macro, 585, 607
- masquerade_entire_domain feature, 598–599
- masquerade_envelope feature, 598
- MASQUERADE_EXCEPTION macro, 585, 607
- MASQUERADE policy, 284–285
- masquerading
 - in DOMAIN, 186
 - in sendmail, 176, 179, 598–599, 607
- master boot record (MBR), 4, 5, 545–546
- master server configuration, 129–130
 - database records in, 130–132
 - domain database file in, 134–137
 - host information definition in, 139
 - mail server definition in, 138
 - name server definition in, 137–138
 - reverse domain file in, 141–143
 - reverse subdomain delegation in, 143–144
 - subdomain delegation in, 139–141
 - zone file directives in, 132–134
- masters clause, 129
- Match All Of The Following option, 417
- match-clients option, 581
- max option in shadow, 451
- max-cache-ttl option, 568
- max-dgram-reassembly option, 301
- max-ixfr-log-size option, 564
- max-lease-time option
 - in dhcp.conf, 305, 311
 - in dhcpd, 299
- max log size parameter, 358
- max-ncache-ttl option, 563
- max-refresh-time option, 567
- max-retry-time option, 567
- max-transfer-idle-in option, 567
- max-transfer-idle-out option, 567
- max-transfer-time-in option, 563
- max-transfer-time-out option, 567
- MaxClients option, 210
- MaxKeepAliveRequests directive, 211
- MaxRequestsPerChild option, 210
- MaxSpareServers option, 209
- MaxStartups value, 461
- MBR (master boot record), 4, 5, 545–546
- MD5 (Message Digest 5) algorithm, 222, 550
- media command, 321
- Medium security level, 548–549
- Mell, Peter, 427
- memory for video, 554
- Memory Technology Devices (MTDs) kernel category, 479
- memstatistics-file option, 561
- merit-dump option, 303
- mesg command, 55
- Message Digest 5 (MD5) algorithm, 222, 550
- message option, 12
- Message Precedence section, 166
- metric and Metric option
 - for Ethernet interface, 487
 - in gateways, 256
- metrics in routing tables, 247, 252, 256
- Microsoft network file sharing technique, 323
- min option in shadow, 451
- min-refresh-time option, 568
- min-retry-time option, 568
- min-roots option, 563
- mingetty program, 26
- minicom program, 496–497
- MinSpareServers option, 209
- mixed-node (m-node) in NBT, 351–352
- mknod command, 343
- ml parameters, 380
- mobile-ip-home-agent option, 304
- mod_modules, 202–204
- mod_auth_db module, 223
- mod_auth_dbm module, 223
- mod_auth module, 222
- mod_so.c file, 201
- mod_ssl package, 225
- mode option in fstab, 345
- modem option, 56
- modems for PPP, 56, 62
- Modems tab, 62
- MODIFY_MAILER_FLAGS macro, 585
- modprobe command, 34, 52
- modules, loadable, 32–34
- monitor characteristics, 524
- monitoring
 - Apache web server, 233–235, 234
 - system, 471–472
- mount command, 340–341, 533
- Mount Point field, 538
- mount points, 340, 344, 533, 538
- mount.smbfs program, 366
- mountd daemon, 330
- mounthost option, 346
- mounting
 - directories, 329, 342–350
 - SMB shares, 365–366
- mountport option, 346
- mountprog option, 346
- mountvers option, 346
- move command, 383
- move to folder action, 417
- Movemail, 403
- msg command, 383

- mtab file, 348
 - MTU flag, 487
 - multi-homed servers, 206
 - multi option in `host.conf`, 151–152
 - multicast clause
 - for `gated`, 277
 - in `zebra.conf`, 261, 265
 - multihomed hosts, 151
 - Multimedia devices kernel category, 480
 - multiple-cnames option, 561
 - multiplexed data streams, 69
 - MultiViews setting, 217–218
 - mx parameters, 380
 - MX records, 138
- N**
- `\n` and `\N` escape sequences in `chat`, 61
 - `n` and `N` option
 - in `arp`, 243
 - for chains, 446
 - in `dhcpcd`, 310
 - in `fdisk`, 541
 - in `lwresd`, 113
 - in `mesg`, 55
 - in `route`, 246, 501
 - in `useradd`, 90
 - `%n` and `N` variable
 - for shell, 438
 - in `smb.conf`, 357
 - Name and Aliases tab, 374
 - name and Name option
 - for `DAEMON_OPTIONS`, 612
 - in `inetd.conf`, 73
 - in `named.conf`, 578
 - in resource records, 130–131
 - Name Daemon Control (`ndc`) tool, 146, 150, 579
 - name server definition, 137–138
 - Name Server (NS) records, 126, 131, 137–138, 513
 - name services, 101
 - DNS. *See* DNS (Domain Name System)
 - hosts files, 102
 - named script for. *See* named script
 - NetBIOS, 352–354
 - `named.conf` file, 114–116, 145, 558
 - acl statement, 578
 - caching-only configuration, 120–124
 - controls statement, 579–580
 - key statement, 577–578
 - logging statement, 568–572
 - for master server configuration. *See* master server configuration
 - options statement, 558–568
 - server statement, 576–577
 - for slave server configuration, 127–129
 - trusted-key statement, 578–579
 - view statement, 580–581
 - zone statement, 118–120, 572–576
 - `named_dump.db` file, 145
 - `named.local` file, 126–127
 - `named.root` file, 126
 - named script, 30, 144–145
 - control tools for, 146–150
 - host table for, 150–154
 - signal processing in, 145–146
 - `named-xfer` option, 561
 - names
 - in group, 87
 - printers, 378
 - `nameserver` command, 106, 111
 - `NameVirtualHost` directive, 213
 - `namlen` option, 346
 - NAT (Network Address Translation), 282–285
 - NBNS (NetBIOS Name Server), 351
 - NBT (NetBIOS over TCP/IP), 302–303, 351–352
 - `ncache` option, 570
 - `ndc` (Name Daemon Control) tool, 146, 150, 579
 - `ndots` option, 107–108
 - neighbor clauses, 272
 - Nessus tool, 472
 - net address filter, 510
 - net and `-net` option
 - in gateways, 256
 - in `route`, 249
 - net directory, 38
 - NetBIOS
 - name service, 352–354
 - operation of, 351–352
 - `netbios-dd-server` option, 302
 - NetBIOS Name Server (NBNS), 351
 - NetBIOS Name Server daemon (`nmbd`), 352–354
 - `netbios-name-servers` option, 303
 - `netbios-mode-type` option, 303
 - NetBIOS over TCP/IP (NBT), 302–303, 351–352
 - `netbios-scope` option, 303
 - `_netdev` option, 341
 - `netfs` script, 331
 - netgroup database, 153
 - netmask and `NETMASK` option
 - in `ifcfg-eth0`, 313
 - for IP addresses, 42–44
 - Netscape for spam filtering, 415–418, 415
 - `netstat` utility
 - for network troubleshooting, 485
 - for socket status, 504–507
 - Network Address Translation (NAT), 282–285
 - network category, 572
 - network clause
 - in `ospfd.conf`, 270
 - in `ripd.conf`, 268
 - Network Configuration tool, 40, 40, 45–46
 - Network Control layer for PPP, 50
 - network database, 153
 - Network device support kernel category, 480
 - Network Device Support window, 477–478, 477

- network file, 45
- Network File System. *See* NFS (Network File System)
- network gateway services, 239–241, 240–241. *See also*
 - routes and routing
- network information for installation, 525
- Network Information System (NIS), 152–153, 551
- network interfaces, 37
 - analyzing, 503–511
 - Ethernet
 - configuration, 37–47, 40
 - troubleshooting, 486–489
 - PPP. *See* PPP (Point-to-Point Protocol)
 - serial, 47–48, 48
 - connecting through, 49–50
 - TCP/IP over, 50–51
 - troubleshooting, 485–489
- network masks, 42–44
- network portion of IP addresses, 43
- network servers, troubleshooting, 483–485
- NETWORK statement, 313
- network unreachable message, 500
- Networking options kernel category, 479
- new activity reports, 493
- New option in Disk Druid, 538
- new station reports, 493
- newaliases command, 160
- news group, 86
- next-server parameter, 299
- NFS (Network File System), 329–331, 527
 - client configuration, 339–340
 - mount for, 340–341
 - umount for, 342
 - installing, 331–333, 332
 - mounting directories for, 342–350
 - server configuration, 333–335
 - exportfs for, 338–339
 - user IDs and group IDs in, 85, 335–338
- nfs script, 30, 331
- nfslock script, 331
- nfsprog option, 346
- nfsvers option, 346
- nice option
 - in hosts.allow, 440
 - in wu-ftpd, 80
- nicknames, aliases for, 158
- NIS (Network Information System), 152–153, 551
- nis option
 - in host.conf, 151
 - in nsswitch.conf, 154
- nis-domain option, 304
- nis-servers option, 304
- nisplus option, 154
- nisplus-domain option, 304
- nisplus-servers option, 304
- nlockmgr daemon, 331
- Nmap tool, 472
- nmbd (NetBIOS Name Server daemon), 352–354
- nntp-servers option, 300
- no_access attribute, 444–445
- no answer message, 500
- no-check-names option, 109
- no_default_msa feature, 598
- no-dns option, 315
- No firewall security level, 548
- no-gateway option, 315
- no_root_squash setting, 336
- noac option, 346
- noatime option, 341
- noauto option
 - in fstab, 345
 - in mount, 341
- nobroadcast clause, 277
- NoCache directive, 213
- nocanonify feature, 598
- nocto option, 346
- nodev option, 341
- nodns feature, 598
- noexec option, 341
- nogateway directive, 316
- noholdall command, 383
- nolock option, 346
- non-local-source option, 302
- non-recursive servers, 141
- None setting
 - for AllowOverride, 218
 - in Options, 217
- nonisdomain directive, 316
- NOOP command
 - in IMAP, 397
 - in POP3, 394
- nospoof option, 152
- nosuid option, 341
- not authoritative statement, 298
- notify option, 119, 561, 570
- notify-source option, 567
- notify-source-v6 option, 566
- notrace argument, 147
- NOTAILERS flag, 487
- nouser option, 341
- noucup feature, 598
- Novell printer queues, 371
- NS (Name Server) records, 126, 131, 137–138, 513
- nslookup utility
 - for DNS, 512–515
 - for network troubleshooting, 485
- nsswitch.conf file, 152–154, 292
- nntp-servers option, 301
- null-modem cables, 48
- nullclient feature, 598
- NumberOfPasswordPrompts option, 468
- Numeric parameters in printcap, 378

O

- o and O option
 - in exportfs, 338
 - in iptables, 447
 - in mount, 340
 - in sendmail.cf, 166
- o permissions, 326
- Off action, 25
- OK keyword, 410
- Old CD-ROM drivers kernel category, 480
- old command, 383
- ONBOOT statement, 314
- Once action, 25
- Ondemand action, 25
- one-answer option, 576
- one-time passwords, 453–456
- One-time Passwords In Everything (OPIE) program, 454–456
- only_from attribute, 443–445
- Open Shortest Path First (OSPF) protocol
 - gated for, 278–279
 - operation of, 254–255
- openssh package, 457
- openssh-clients package, 457
- openssh-server package, 457
- OpenSSL, 225
- openssl command, 228–229, 231–233
- OPIE (One-time Passwords In Everything) program, 454–456
- opiekey program, 454–456
- opiepasswd program, 455
- /opt partition, 534
- option command in dhclient.leases, 318
- option variable in exports, 334
- optional command, 13
- Options directive in http.conf, 216–217
- options file, 53
- Options section, 165–166
- options statement
 - in gated.conf, 276
 - in named.conf, 116–117, 123, 558–568
 - in resolv.conf, 107
 - in rndc.conf, 148
- Order directive, 219–220, 222
- order option, 151–152
- order_spec option, 560
- \$ORIGIN directive, 132–133
- os option, 570
- OSPF (Open Shortest Path First) protocol
 - gated for, 278–279
 - operation of, 254–255
- ospf6d program, 258
- ospfd.conf file, 269–271
- ospfd program, 267–270
- OSTYPE file, 182–184
- OSTYPE macro, 181, 585, 587, 601–605

- other option, 13
- Other Options window, 62
- other permissions, 324, 326
- Other ports setting, 549
- output firewalls, 445–446
- owner permissions, 324, 326
- owner-staff alias, 161

P

- p and P option and flag
 - for chains, 446
 - in dhcpd, 295
 - in fdisk, 541
 - in iptables, 447
 - in lpq, 386
 - in lwresd, 113
 - in mailer definitions, 173–174
 - in Mask field, 243
 - in netstat, 507
 - in useradd, 90
- %p and %P variable
 - for shell, 438
 - in smb.conf, 357
- \p escape sequence in chat, 61
- p-node (point-to-point-node) in NBT, 351
- packet forwarding, 245–246
- packet option, 570
- packet switching, 239–240, 240
- pam_cracklib module, 450
- PAMAuthenticationViaKbdInt value, 461
- panic option
 - for boot prompt, 17
 - in named.conf, 570
- PAP (Password Authentication Protocol), 57–58
- pap-secrets file, 57–59
- Parallel port support kernel category, 479
- parse ruleset, 171
- parser option, 570
- Partition Magic program, 532
- partitioning disks, 530–532
 - with Disk Druid, 537–540, 537, 539
 - with fdisk, 540–545
 - planning, 532–534
 - schemes for, 535–537
- partitions
 - root, 534–535
 - swap, 534
- PASS command, 394, 396
- PASS_MAX_DAYS parameter, 93
- PASS_MIN_DAYS parameter, 93
- PASS_MIN_LEN parameter, 93
- PASS_WARN_AGE parameter, 93
- passive-interface clause, 266
- passive option, 56
- passive routers, 256
- passphrases for SSH, 458–459

- passwd-check command, 99–100
- passwd database, 153
- passwd file
 - dictionary attacks on, 450
 - limitations of, 550
 - login for, 49
 - for PPP, 55
 - shadow files for, 452
 - for user accounts, 82–83
 - useradd for, 88–89
- Password Authentication Protocol (PAP), 57–58
- password option
 - in lilo.conf, 15
 - for queues, 377
 - in script.cfg, 392
 - in zebra.conf, 261
- PasswordAuthentication option
 - in ssh_config, 468
 - in sshd_config, 461
- passwords
 - aging, 452–453
 - for Apache web server, 222
 - clear-text, 360
 - in group, 87
 - in GRUB, 8, 545
 - in lilo.conf, 15–16
 - one-time, 453–456
 - for PPP, 57–58
 - servers for, 551
 - shadow, 450–453
 - storing, 550
 - for user accounts, 82–83
 - weak and strong, 449–450
 - in zebra.conf, 261, 263
- path option, 388
- path-mtu-aging-timeout option, 301
- path-mtu-plateau-table option, 301
- PATH variable, 49
- path-vector protocols, 251
- pathnames of processes, 26
- patterns for rewrite rules, 169–171
- peers for gated, 281
- perform-mask-discovery option, 302
- performance, http.conf for, 211–212
- permissions, 324–325
 - changing, 325–327
 - chgrp command for, 328–329
 - for directories, 362
 - for files, 362
 - with GIDs, 86
 - hidden, 327–328
- PermitEmptyPasswords value, 461
- PermitRootLogin value, 461
- personal mail aliases, 161–162
- pf entry in inittab, 26
- PH_MAILER_ parameters, 603
- phquery mailer, 611
- physical partitions, 542
- pid-file option, 561
- PID log value, 443
- pidentd, 404–405
- PidFile directive
 - in http.conf, 206
 - in sshd_config, 462
- ping tool, 485, 498–500
- Plug and Play configuration kernel category, 479
- point-to-point-node (p-node) in NBT, 351
- Point-to-Point Protocol. *See* PPP (Point-to-Point Protocol)
- Pointer (PTR) records, 131, 142–143
- poison reverse, 253
- policies
 - with iptables, 284
 - for routing, 251
- policy-based routing, 251
- policy-filter option, 302
- POP (Post Office Protocol), 393
 - clients for, 402–403
 - commands for, 394–396
 - daemon for, 400–402
- pop mailer, 611
- POP_MAILER_ parameters, 603–604
- pop-server option, 301
- pop3s file, 402
- port and Port option
 - for DAEMON_OPTIONS, 612
 - in fstab, 347
 - in named.conf, 567, 580
 - in ssh_config, 468
 - in sshd_config, 462
- Port directive, 205
- port filter, 510
- portmap program, 329
- portmapper program, 441
- ports and port numbers
 - in firewalls, 549
 - for login services on-demand, 69–73
 - printer, 371
 - for Zebra, 263
- PortSentry tool, 472
- posix option, 347
- Post Office Protocol (POP), 393
 - clients for, 402–403
 - commands for, 394–396
 - daemon for, 400–402
- postrouting chains, 284
- poweredby.png file, 197
- Powerfail action, 25
- Powerokwait action, 25
- Powerwait action, 25
- PPP (Point-to-Point Protocol)
 - clients, 59–60
 - chat scripts for, 60–62
 - X tools for, 62–64, 63

- installation, 51–52, 51
 - kernel module, 52
 - PPP daemon, 52–53
 - servers, 54–55
 - dial-up configuration, 55–57
 - security for, 57–59
 - troubleshooting, 495–498
 - ppp directory, 59
 - pppd command, 51–58, 60
 - ppplogin script, 55–56
 - .ppprc file, 53
 - pr entry, 26
 - preference value, 273–274
 - PreferredAuthentications option, 468
 - prepend command, 320
 - prerouting chains, 284
 - primary partitions, 540
 - printable option, 389
 - printcap file, 377–381
 - printcap.local file, 381
 - printcap name setting, 388
 - printconf command, 369–370
 - printconf-gui command, 369
 - printconf-tui command, 369
 - printers
 - installing, 369–377, 370, 372–376
 - services for, 369, 377–381
 - sharing
 - with lpd, 381–386
 - with Samba, 386–392
 - printers section, 388–389
 - printing setting, 388
 - PrintLastLog value, 462
 - PrintMotd value, 462
 - priority
 - for gated, 279
 - in ospfd.conf, 269
 - in sendmail, 166
 - in spam filters, 416
 - Priority option, 416
 - private network numbers, 283
 - privileged ports, 548
 - probe argument, 144
 - /proc filesystem, 28, 344, 365
 - process field, 25–26
 - PROCESS_OPTIONS option, 439
 - processes
 - child, 209–210
 - pathnames of, 26
 - status of, 332–333
 - Processor type and features kernel category, 479
 - procmail mailer, 611
 - for filtering out spam, 418–422
 - in mailer definitions, 174
 - PROCMAIL_MAILER_ parameters, 604
 - .procmailrc file, 418–422
 - PROMISC flag, 488
 - promiscuous_relay feature, 405–406, 598, 608
 - prompt
 - boot, 16–19
 - in lilo.conf, 11–12
 - protocol operations for DHCP servers, 297–300
 - Protocol option
 - in inetd.conf, 73
 - in named.conf, 579
 - in ssh_config, 468
 - in sshd_config, 462
 - protocol timers, 319
 - protocols
 - configuration
 - Bootstrap Protocol, 290–291
 - DHCP, 291–292
 - RARP, 292
 - for dynamic routing, 250–255
 - network. *See* network interfaces
 - in starting login services on-demand, 69–73
 - protocols database, 153
 - protocols file, 69–71
 - Protocols tab, 46
 - provide-ixfr option, 577
 - proxy ARP, 56, 244–245
 - ProxyCommand option, 468
 - ProxyRequests directive, 212
 - ProxyVia directive, 212
 - ps command, 332–333, 471
 - PTR (Pointer) records, 131, 142–143
 - pubkey option, 574
 - PubkeyAuthentication option
 - in ssh_config, 468
 - in sshd_config, 462
 - public command, 362
 - public key cryptography, 224
 - publickey database, 153
 - pump command, 314–317
 - pump.conf file, 315–316
- ## Q
- q and Q option
 - in dhcpcd, 295
 - in dhcrelay, 307
 - in fdisk, 541
 - in routed, 255
 - in rpm, 192
 - in sendmail, 162
 - \q escape sequence in chat, 61
 - qa option in rpm, 192
 - QPAGE_MAILER_ parameters, 604
 - queries option, 570
 - query-source option, 123, 563
 - query-source-v6 option, 566
 - querylog argument, 147
 - QUEUE_DIR_ parameter, 604
 - queue keyword, 446

Queue Type tab, 374–376, 375
 queue types, 370
 quit and QUIT command
 in lpc, 383
 in POP3, 395

R

r and R option and flag
 for chains, 446
 in dhcpcd, 311–312
 in exportfs, 338–339
 in mailer definitions, 175
 in procmail, 419
 in routing tables, 247
 in useradd, 90
 \r escape sequence in chat, 61
 %r parameter in LogFormat, 236
 r permission, 326
 %R variable in smb.conf, 357
 RAID devices, 539
 RAM disk files, 483
 range option
 in dhcp.conf, 306
 in dhcpcd, 299
 in subnet, 297
 RARP (Reverse Address Resolution Protocol), 292
 rawrite program, 527
 RBL (Realtime Blackhole List), 407–409, 598
 RBL feature, 598
 rc.inet1 file, 45
 rc script, 28–29
 rc.local script, 32, 45, 54
 rc.sysinit script, 27–28
 rc5.d directory, 29
 RD (Receive Data) pin, 47, 48
 read-only option, 12
 read permission, 324–326
 readme command, 99
 ReadmeName option, 208
 real FTP, 98
 realms, 221–222
 Realtime Blackhole List (RBL), 407–409, 598
 rebind command, 318
 reboot setting, 319
 Receive Data (RD) pin, 47, 48
 recipient addresses in rulesets, 172
 recipient ruleset, 171
 reconfigSys file, 39
 RECORD log value, 443
 recursion option, 562
 recursive-clients option, 567
 recursive servers, 141
 Red Hat, caching-only configuration in, 121–125, 121
 redirect command
 in lpc, 383
 in sendmail, 598

redistribute clause
 in bgpd.conf, 272
 in rdpd.conf, 268
 redistribute bgp clause, 271
 redo command, 383
 Ref field, 248
 refresh cycle in SOA records, 136
 Reijnen, Patrick, 37
 reject and REJECT option
 for Access databases, 410
 in dhclient.conf, 321
 relay and RELAY option
 for Access databases, 410–411
 in mailer definitions, 174
 relay_based_on_MX feature, 405, 598, 608
 RELAY_DOMAIN macro, 586, 607
 RELAY_DOMAIN_FILE macro, 586, 607
 relay_entire_domain feature, 405–406, 598, 608
 relay_host_only feature, 598
 relay_hosts_only feature, 608
 relay_local_from feature, 405–406, 598, 608
 relay_mail_from feature, 598
 RELAY_MAIL_MAXMSG parameter, 604
 RELAY_MAILER_ parameters, 604
 relay settings for spam, 405–406
 release and --release option
 in lpc, 383
 in pump, 315
 reload argument
 for named, 144
 for rndc, 147, 150
 remote access, tracking, 434–435
 Remote Name Daemon Control (rndc) tool, 146–147
 remote printers, 375–377, 375–376
 remote procedure call (RPC) protocols, 329
 RemoteForward option, 468
 remount option, 341
 RENAME command, 397
 renew and --renew option
 in dhclient.leases, 318
 in pump, 315
 reorder option, 152
 request command, 320
 request-ixfr option, 577
 Request To Send (RTS) hardware flow control, 54
 Request To Send (RTS) pin, 48, 48
 require command in dhclient.conf, 320
 Require directive for Apache web server, 222
 reread command, 383
 reserve argument, 18
 Reset option, 539
 resolver, 105–106
 lightweight, 112–113
 resolv.conf for, 105–106, 111, 312
 configuration commands in, 106–110
 sample, 111–112
 timeouts in, 110–111

- resolver code, 105
- resolver option, 572
- resource-location-servers option, 304
- resource records (RRs), 130
- Respawn action, 25
- respondent field, 58
- response-checks option, 570
- restrict option
 - for gated, 282
 - in lilo.conf, 15
- RETR command, 394, 396
- retrans option, 347
- retries directive, 316
- retry cycle in SOA records, 136
- retry option
 - in dhclient.conf, 319
 - in fstab, 347
 - in resolv.conf, 110
- return keyword, 446
- Reverse Address Resolution Protocol (RARP), 292
- reverse domain file, 141–143
- reverse domains, 126
- reverse subdomain delegation, 143–144
- reverse zone files, 115
- ReverseMappingCheck value, 462
- rewrite rules, 169–172, 172, 412–413
- Rewriting Rules section, 169–172, 172
- rfc931 option, 440
- rfc2308-type1 option, 562
- RhostsAuthentication option
 - in ssh_config, 468
 - in sshd_config, 462
- RhostsRSAAuthentication option
 - in ssh_config, 469
 - in sshd_config, 462
- RIP (Routing Information Protocol), 252
 - counting to infinity problem in, 253
 - with routed, 255–257
 - version 2, 253–254, 277–278
- ripd.conf file, 266–267
- ripd program, 266–267
- ripngd program, 258
- rmmod command, 34
- rndc.conf file, 147–149
- rndc (Remote Name Daemon Control) tool, 146–147
- ro option
 - in fstab, 345
 - in mount, 341
- ROM BIOS
 - for boot sector, 4
 - bootstrap loader in, 3
 - limitations from, 5
- root files in DNS, 103
- root option
 - in grub.conf, 9
 - in lilo.conf, 12
- root partitions, 533–535
- root-path option, 303
- root servers, 104
- root_squash setting, 336
- rootverify command, 9
- rotate option, 108–109
- route command, 246, 249–250, 501
- routed program, 255–257
- router bgp statement, 272
- router-discovery option, 302
- router ospf statement, 269–270
- router rip statement, 268
- router-solicitation-address option, 302
- routerid definition statement, 279
- routers, 245, 256
- routers option, 301
- routes and routing, 241–242
 - converting IP addresses to Ethernet, 242–245
 - dynamic, 250–255
 - with gated. *See* gated package
 - IP packet forwarding in, 245–246
 - NAT for, 282–285
 - routing tables in, 246–248
 - static, 248–250
 - troubleshooting, 501–503
 - with Zebra. *See* Zebra package
- Routing Information Protocol (RIP), 252
 - counting to infinity problem in, 253
 - with routed, 255–257
 - version 2, 253–254, 277–278
- routing metrics, 247, 252, 256
- routing options for dhcpd, 302
- routing tables, 246–248
- RPC (remote procedure call) protocols, 329
- rpc database, 153
- rpc.nfsd command, 333
- rpc.portmap program, 329
- rpcinfo command, 329–330
- rpm command, 192
 - .rpmnew extension, 530
 - .rpmsave extension, 530
- rquotad daemon, 330
- RRs (resource records), 130
- rrset-order option, 565
- RS-232 connector, 47
- RSAAuthentication option
 - in ssh_config, 469
 - in sshd_config, 462
- RSET command, 394
- rsize option, 347
- RTS (Request To Send) hardware flow control, 54
- RTS (Request To Send) pin, 48, 48
- rules
 - iptables, 445–447
 - rewrite, 169–172, 172, 412–413
 - wrapper, 441–442
- runlevel field, 24
- runlevels
 - initialization, 28–30
 - for inittab, 23–26

RUNNING flag, 487
 rw option in mount, 341

S

s and S option

- in arp, 245
- in dhcpcd, 311
- in fdisk, 541
- in iptables, 447
- in lwresd, 113
- in mailer definitions, 174
- in minicom, 496
- in routed, 255
- in useradd, 90

%s and S variable
 for shell, 439
 in smb.conf, 357

\s escape sequence in chat, 61

%>s parameter in LogFormat, 236

s permission, 326, 328

safe_finger program, 438–439

SAINT (Security Administrator's Integrated Network Tool), 472

Samba services

- clients, 363
 - smbclient for, 364–365
 - smbmount for, 365–366
- installing, 354–355, 354
- servers
 - configuring, 355–356
 - smb.conf. *See* smb.conf file
 - sharing printers with, 386–392

SARA (Security Auditor's Research Assistant), 472

SATAN (Security Administrator's Tool for Analyzing Networks), 472

Scheck_MID_header command, 413

ScoreBoardFile directive, 206

script.cfg file, 391–392

script kiddies, 427

script option

- in dhclient.conf, 321
- in pump.conf, 316

ScriptAlias directive, 207

ScriptAlias directory, 215

scripts

- removing, 432
- startup, 27
 - controlling, 30–31, 32
 - for runlevel initialization, 28–30
 - for system initialization, 28

SCSI adapter information, 524

SCSI support kernel category, 479

sd parameters in printcap, 380

search and SEARCH command

- in IMAP, 398
- in resolv.conf, 107, 112

secrecy of data, threats to, 426

secret field, 58

secret_key option, 578

secure file, 471

secure shell (SSH) program, 457–458, 457

for sharing files, 324

ssh for, 466–471

sshd for, 459–465

user keys for, 458–459

Secure Sockets Layer (SSL), 224–233, 230, 232

security, 425

access control

- with iptables, 445–448
- for shares, 363
- with tcpd, 433–442
- with xinetd, 442–445

Apache web server. *See* Apache web server

authentication. *See* authentication

in lilo.conf, 15–16

monitoring system for, 471–472

for PPP servers, 57–59

software in

- removing, 432–433
- updating, 430–431, 430–431

threats to

- basic, 426–427
- information for, 427–429, 428–429
- reality check for, 427

Security Administrator's Integrated Network Tool (SAINT), 472

Security Administrator's Tool for Analyzing Networks (SATAN), 472

Security Auditor's Research Assistant (SARA), 472

security option

- in named.conf, 570
- in smb.conf, 358–359

SELECT command, 397, 400

select-timeout setting, 319

self-signed certificates, 233

send script, 30

send statements, 320

sender addresses

- in rulesets, 172
- in sendmail.cf, 177

sender option, 416

sender ruleset, 171

sendmail.cf file, 163, 411

configuring, 175–176

Format of Headers section, 167–169

Local Info section, 163–165

m4 for. *See* m4 macros

Mailer Definitions section, 172–175

Message Precedence section, 166

Options section, 165–166

Rewriting Rules section, 169–172, 172

testing, 176–180

Trusted Users section, 167

- sendmail program, 29–30, 162, 393–394, 406
 - Access databases with, 409–411
 - attacks on, 432
 - LDAP for, 613
 - m4 for. *See* m4 macros
 - RBL with, 407–409
 - rewrite rules for, 412–413
 - for SMTP support, 157
- serial interface, 47–48, 48
 - connecting through, 49–50
 - TCP/IP over, 50–51
- serial numbers in SOA records, 136
- serial-queries option, 563
- server and Server option
 - for DNS testing, 513–514
 - in inetd.conf, 74
 - in lpc, 383
 - in named.conf, 116, 576–577
 - in rndc.conf, 148
 - in smb.conf, 358
- server attribute, 79
- server_args attribute, 79
- server-identifier parameter, 299
- Server Message Block (SMB) protocol, 351–352, 527, 551. *See also* Samba services
- server-name option
 - in dhclient.leases, 318
 - in dhcpd, 299
- server operations for DHCP servers, 297–300
- Server Parsed HTML, 215
- Server Side Includes (SSI) threats, 215–216
- server string parameter, 358
- ServerAdmin directive, 204
- ServerKeyBits value, 462
- ServerName directive, 204–205
- ServerRoot directive, 205
- serverstatus monitor, 233, 234
- ServerType directive, 205–206
- service statement, 79
- services
 - in hosts.allow, 436
 - loading, 21–23
 - runlevels for, 23–26
 - special-purpose entries, 26–27
 - troubleshooting, 511–512
 - in wu-ftpd, 79
- services database, 153
- services file, 71–73, 263
- setenv option, 440
- SetGID permission, 326–328
- SetUID permission, 326–328
- sf parameter in printcap, 380
- sh parameter in printcap, 380
- shadow database, 153
- shadow file, 88, 450–452
- shadow passwords, 450–453
- share option
 - for queues, 376
 - in script.cfg, 391
 - in smb.conf, 358
- shared objects, loading, 201–204
- shares, 355, 363
- sharing
 - files, 323, 351–354
 - printers, 381–386
 - with Samba. *See* Samba services
- shell option
 - for access control, 437–439
 - in hosts.allow, 436–439
 - in passwd, 83
- SHELL variable, 49
- shells for user accounts, 83–85
- showmount command, 339–340
- shutdown command, 99
- sig-validity-interval option, 568
- SIGHUP signal, 145
- signal processing, 145–146
- SIGTERM signal, 145
- SIGUSR1 signal, 145
- SIGUSR2 signal, 145
- Simple Mail Transfer Protocol (SMTP), 157
- single argument, 17–18
- SITE macro, 586–587
- SITECONFIG macro, 586–587
- size, partition, 538, 540
- Size field, 538
- skel directory, 82
- slave server configuration, 127–129
- slave value for type master, 118
- SMART_HOST macro, 606
- smb.conf file, 352, 355, 387–388
 - global section in, 358–360
 - homes section in, 360–361
 - printer configuration options in, 389–390
 - printers section in, 388–389
 - for sharing directories, 361–363
 - variables for, 356–357
- smb password file parameter, 359
- SMB printer entry, 376
- SMB (Server Message Block) protocol, 351–352, 527, 551. *See also* Samba services
- smbclient program, 364–365
- smbd, 354
- smbfs program, 366
- smbmount program, 365–366
- smbprint script, 391
- smc-ultra module, 33
- smrsh program, 183, 598
- SMTP (Simple Mail Transfer Protocol), 157
- smtp command, 174
- SMTP_MAIL_MAXMSG parameter, 605
- SMTP_MAILER_ parameters, 605

- smtp-server option, 301
- smtp8 command, 174
- SMTP8_MAILER_ARGS parameter, 604
- SNAT policy, 284
- SO_ATTACH_FILTER undeclared error, 294
- SOA (Start of Authority) records, 131, 135–137
- socket options parameter, 359
- socket status, 504–507
- socket_type attribute, 79
- soft option, 347
- software
 - installing, 551–552
 - in Linux installations, 525–526
- software filesystem, 538
- software flow control, 54
- sortlist option
 - in named.conf, 565
 - in resolv.conf, 110
- Sound kernel category, 480
- spam, 403
 - filtering, 413
 - elm for, 413–415
 - Netscape for, 415–418, 415
 - procmail for, 418–422
 - mail relay settings for, 405–406
 - sendmail for, 406–413
 - sources of, 404–406
- spawn option, 439
- special-purpose entries in inittab, 26–27
- splashimage command, 8
- split horizon rule, 253
- spoofalert option, 152
- spoofing, 283
- sport parameter, 447
- src filter, 509
- srm.conf file, 198
- SSH (secure shell) program, 457–458, 457
 - for sharing files, 324
 - ssh for, 466–471
 - sshd for, 459–465
 - user keys for, 458–459
- ssh client, 466–471
- ssh_config file, 466–471
- ssh-keygen program, 458
- sshd_config file, 459–465
- sshd program, 459–465
- SSI (Server Side Includes) threats, 215–216
- SSL (Secure Sockets Layer), 224–233, 230, 232
- ssl-unclean-shutdown directive, 227
- SSLCertificateFile directive, 227–228
- SSLCertificateKeyFile directive, 227–228
- SSLEngine directive, 227
- SSLOptions directive, 227
- stacksize option, 564
- staff-request alias, 161
- standard resource records, 130
- start and Start option
 - in Disk Druid, 538
 - in lpc, 384
 - for named, 144
 - for rndc, 147
- Start of Authority (SOA) records, 131, 135–137
- starting login services on-demand, 68–69
 - inetd configuration, 73–75
 - protocol and port numbers in, 69–73
 - xinetd configuration, 75–81
- starts value in dhcpd.leases, 296
- StartServers option, 209–210
- startup scripts, 27
 - controlling, 30–31, 32
 - for runlevel initialization, 28–30
 - for system initialization, 28
- STAT command, 394, 396
- State field, 504, 507
- statements in named.conf, 115
- static routes, 248–250, 302
- static-routes option, 302
- static statements in gated.conf, 276
- statistics option, 570
- statistics-file option, 561
- statistics-interval option, 564
- stats argument, 147
- status and STATUS option
 - in IMAP, 398
 - in lpc, 384
 - for named, 144
 - in NFS, 330
 - in pump, 315
 - for rndc, 147
 - for spam filters, 416
- status codes for conditional logging, 237–238
- STATUS_FILE parameter, 605
- sticky bit, 326–327
- stickyhost feature, 598–599
- stop argument
 - in lpc, 384
 - for named, 144
 - for rndc, 147
- STORE command, 398
- streetwork-directory-assistance-server option, 304
- streetwork-server option, 304
- StrictHostKeyChecking option, 469
- StrictModes value, 462
- String parameters in printcap, 378
- stty command, 55
- stub resolvers, 105
- stub value for type master, 118
- subdomain delegation, 139–141
- subject option
 - for certificates, 230
 - for spam filters, 416

- subnet option
 - in dhcp.conf, 306
 - in dhcpcd, 297
- subnet-mask option, 301
- subnet masks, 42–44, 301
- subnetting, 43
- SUBSCRIBE command, 398
- Subsystem value, 462
- suid option, 341
- supersede command, 320
- support-ixfr option, 577
- swap files
 - activation of, 28
 - in fstab, 344
- swap filesystem type, 344, 538
- swap partitions, 533–534
- swap-server option, 303
- symbolic links, 536
- SymLinksIfOwnerMatch setting, 217
- SYN (synchronize sequence numbers) packets, 508
- SYN_RECV state, 505
- SYN_SENT state, 505
- sync option, 341
- synchronization in IMAP, 397
- synchronize sequence numbers (SYN) packets, 508
- sysconfig file, 485
- sysctl.conf file, 246
- sysinit action, 25
- SYSLOG value, 77
- syslogd program, 60
- SyslogFacility value, 463
- system
 - initializing, 28
 - monitoring, 471–472
- SYSV Runlevel Manager window, 31, 32

T

- t and T option
 - in dhcpcd, 310–311
 - in fdisk, 541
 - in lwresd, 113
 - in mailer definitions, 175
 - in sendmail.cf, 167
 - in umount, 342
- \t escape sequence in chat, 61
- t-key-dhkey option, 568
- t nat option, 285
- %t parameter in LogFormat, 236
- t permission, 326–327
- %T variable in smb.conf, 357
- tail command
 - in DOMAIN, 184
 - for log files, 235
- tar command, 99
- TARA (Tiger Auditors Research Assistant), 472
- targets with iptables, 284
- tcp-clients option, 567
- TCP/IP
 - kernel for, 20–21
 - NetBIOS over TCP/IP, 302–303, 351–352
 - over serial ports, 50–51
- tcp option
 - in fstab, 347
 - in protocols, 71
- tcp-keepalive-garbage option, 302
- tcp-keepalive-interval option, 302
- tcpd, 433–434
 - access control files for, 435–441
 - tracking remote access with, 434–435
- tcpdump tool, 488
 - for network troubleshooting, 485
 - for protocol monitoring, 507–511
- tcpproto.mc file, 181–182
- TD (Transmit Data) pin, 47, 48
- Telephony support kernel category, 479
- telnet
 - for IMAP, 399, 402
 - for POP3, 395–396
 - for sharing files, 324
- telnetd program, 67–68
- templates for rewrite rules, 169–171
- Tenex C Shell, 84
- TERM variable, 49
- terminal servers, 67
- tftp-server-name option, 304
- threats
 - basic, 426–427
 - information for, 427–429, 428–429
 - reality check for, 427
- Tiger Auditors Research Assistant (TARA), 472
- time-offset option, 301
- time-servers option, 304
- time-to-live (ttl) and TTL field
 - in resource records, 131
 - in SOA records, 137
 - for traceroute, 501–502
- TIME_WAIT state, 505
- timeo option, 347
- Timeout directive in http.conf, 211
- timeout option
 - in dhclient.conf, 319
 - in grub.conf, 8
 - in lilo.conf, 12
 - in pump.conf, 316
 - in resolv.conf, 108
- timeouts in resolver, 108, 110–111
- title command, 8–9
- tkey-domain option, 568
- tksysv tool
 - for Apache web server, 194, 194
 - for dhcpcd, 295
 - for gated, 275
 - for Samba, 355
 - for startup script, 332

- TLDs (top-level domains), 103
 - tmp directory, 55
 - tmpfs filesystem type, 344
 - to option, 416
 - to or CC option, 416
 - tokens for rewrite rule patterns, 170
 - TOP command, 394
 - top-level domains (TLDs), 103
 - Top Ten Vulnerabilities site, 430
 - topology option, 564
 - topq command, 384
 - trace argument, 147
 - traceroute command, 485, 501–503
 - tracing, turning on, 145
 - tracking remote access, 434–435
 - trailer-encapsulation option, 302
 - transaction signatures (TSIGs), 123
 - transactions, 123
 - transfer-format option, 563, 576
 - transfer-source option, 564
 - transfer-source-v6 option, 566
 - TransferLog directive, 235
 - transfers option, 576
 - transfers-in option, 563
 - transfers-out option, 563
 - transfers-per-ns option, 564
 - translate entry, 392
 - Transmit Data (TD) pin, 47, 48
 - treat-cr-as-space option, 562
 - triggered updates, 253
 - trim option, 152
 - troubleshooting, 475–476
 - address conflicts, 489–495
 - connections, 498–500
 - DNS, 512–517
 - kernel configuration, 476–483, 477–478
 - network interface, 485–489
 - network protocols, 503–511
 - network servers, 483–485
 - PPP interfaces, 495–498
 - routing, 501–503
 - services, 511–512
 - TRUST_AUTH_MECH macro, 586–587
 - Trusted devices setting, 549
 - trusted-key statement, 116, 578–579
 - Trusted Users section, 167
 - /try command, 177–178
 - /tryflags command, 178
 - TSIGs (transaction signatures), 123
 - ttl (time-to-live) and TTL field
 - in resource records, 131
 - in SOA records, 137
 - for traceroute, 501–502
 - \$TTL directive, 132
 - tuning options for dhcpd, 301–302
 - twist option, 439, 441
 - type and Type option
 - in Disk Druid, 538
 - in inetd.conf, 73
 - in named.conf, 128, 573
 - in resource records, 131
 - type external parameter for gated, 281
 - type master option, 118
- ## U
- u and U option
 - in exportfs, 339
 - in fdisk, 541
 - in lwresd, 113
 - in routing tables, 247
 - in smbclient, 364
 - in useradd, 90
 - %u and %U variable
 - for shell, 439
 - in smb.conf, 357
 - %u parameter in LogFormat, 236
 - u permissions, 326
 - UARTs (Universal Asynchronous Receiver Transmitters), 20
 - ud entry, 26
 - udp option
 - in fstab, 347
 - in protocols, 71
 - uid and UID option
 - in dhcpd.leases, 296
 - in IMAP, 398
 - in inetd.conf, 74
 - in passwd, 83
 - UID_MAX option, 93
 - UID_MIN option, 93
 - UIDL command, 395
 - UIDs (user IDs)
 - for files, 324
 - mapping, 335–338
 - for NFS, 85
 - User directive for, 210
 - umask option, 440
 - umount command, 342
 - uname command, 193
 - unauthorized access, 426
 - undefine macro, 586
 - underscores (_) in hostnames, 109
 - Universal Asynchronous Receiver Transmitters (UARTs), 20
 - unix network technique for file sharing, 323
 - Unix printer queues, 370
 - unknown-clients keyword, 298
 - unknown host message, 500
 - UNKNOWN option
 - in hosts.allow, 437
 - in netstat, 505

- unmount command, 533
 - UNSUBSCRIBE command, 398
 - up and UP option and flag
 - for Ethernet interface, 487
 - in lpc, 384
 - update option
 - in dbmmanage, 224
 - in named.conf, 570
 - update-policy option, 120
 - Upgrade Existing System option, 530
 - usage option, 315
 - USB support kernel category, 480
 - use_ct_file feature, 599
 - use_cw_file feature, 599
 - Use field, 248
 - use-host-decl-name parameter, 306
 - use-host-decl-names parameter, 299
 - use-id-pool option, 562
 - use-lease-addr-for-default-route parameter, 299
 - UseCanonicalName directive, 205
 - UseLogin value, 463
 - usenet mailer, 610
 - USENET_MAILER_ parameters, 605
 - UsePrivilegedPort option, 469
 - user accounts, 81
 - creating, 81–82
 - group IDs for, 86–88
 - login shells for, 83–85
 - passwd for, 82–83
 - tools for, 88–94
 - user IDs for, 85
 - user and User option
 - in hosts.allow, 440
 - in mount, 341
 - in passwd, 83
 - for queues, 376
 - in script.cfg, 391
 - in smb.conf, 358
 - in ssh_config, 469
 - user attribute, 79
 - user authentication, 221–224
 - USER command, 394, 396
 - User directive, 210
 - user IDs (UIDs)
 - for files, 324
 - mapping, 335–338
 - for NFS, 85
 - for user accounts, 85
 - user keys for SSH, 458–459
 - useradd command, 88–91, 94
 - USERCTL statement, 314
 - USERDEL_CMD parameter, 94
 - userdel command, 94
 - UserDir directive, 207
 - UserKnownHostsFile option, 469
 - UserKnownHostsFile2 option, 469
 - usermod command, 89, 94, 452–453
 - usernames in shadow, 451
 - users
 - in group, 87
 - permissions for, 324, 326
 - users group, 86
 - UseRsh option, 469
 - /usr partition, 533, 535–536
 - uucp mailer, 610
 - UUCP_MAILER_ parameters, 605
 - UUCP_RELAY macro, 606
 - uucpdomain feature, 599–600
 - UUCPSMTP macro, 586–587
- ## V
- v and V option
 - in chat, 60, 495–496
 - in dip, 495
 - in fdisk, 541
 - in lwresd, 113
 - %v variable in smb.conf, 357
 - valid users parameter, 361
 - Validity field, 230
 - /var partition, 534–535
 - version option, 560
 - VERSIONID macro, 181, 186, 586
 - vfat filesystem type, 344, 538
 - video interface characteristics, 524
 - video mode, selecting, 554
 - video monitor characteristics, 524
 - view mode in zebra.conf, 265
 - view option
 - in dbmmanage, 224
 - in named.conf file, 116, 580–581
 - view-name option, 581
 - view-option option, 581
 - virtual hosts, 213–214
 - virtual memory, 534
 - VirtualHost directive, 214
 - VIRTUSER_DOMAIN macro, 586
 - VIRTUSER_DOMAIN_FILE macro, 586
 - virtuser_entire_domain feature, 599
 - virtusertable feature, 599–600
 - vttysh tool, 262–265
- ## W
- W and W option and flag
 - in fdisk, 541, 544
 - in procmail, 419
 - in smbclient, 364
 - w permission, 326
 - wait action, 25
 - wait attribute, 79
 - Wait-status field, 74
 - warn entry
 - for LogLevel, 235
 - in shadow, 451

watch thread action, 417
 who command, 471
 --win-client-id option, 315
 Windows Internet Name Service (WINS), 352
 Windows partitions, 531
 Windows printer queues, 371
 Windows sharing applications, 351
 WINS (Windows Internet Name Service), 352
 wins proxy option, 352
 wins server option, 352
 wins support option, 352
 workgroup option
 for queues, 376
 in script.cfg, 392
 in smb.conf, 358
 world permissions, 324, 326
 wrapper rules, 441–442
 wrapper variables for shell, 438
 writable parameter, 361, 389
 write file command, 265
 write permission, 324–326
 write terminal command, 264
 wsize option, 347
 wu-ftpd file, 78–81
 WU-FTPD service, 96, 98
 www-server option, 304

X

x and X option
 for chains, 446
 in dig, 516
 in fdisk, 541
 x-display-manager option, 304
 x permission, 326
 X tools, 62–64, 63

X Windows, 552–554, 553
 X11DisplayOffset value, 463
 X11Forwarding value, 463
 XAuthentication value, 463
 XAuthLocation option, 469
 xconfig command, 476–478, 477
 XConfigurator program, 554
 xfer-in option, 571
 xfer-out option, 571
 xinet script, 30
 xinetd.conf file, 75–81, 442–445
 xinetd script, 68–69
 for access control, 442–445
 configuration files for, 401–402
 disabling, 432
 xtab file, 338

Z

Z option for chains, 446
 Z Shell, 85
 zebra.conf file, 260–268
 Zebra package, 257–258
 for bgpd, 270–272
 configuration files for, 260–265
 installing, 258–259, 258
 for ospfd, 267–270
 for ripd, 266–267
 zone file transfers, 129
 zone-statement option, 581
 zone-statistics option, 568
 zones and zone files, 115
 in master server configuration, 132–134
 in named.conf, 116, 118–121, 123–124, 128, 130,
 572–576, 581