

Index

A

Accounting
base record, 246
billing unit (SBU)
 and CSA setup, 203
boot log, 260
checking file size, 204
connect time SBUs, 235
Cray system (CSA)
 allowing non-super users to execute, 244
 commands, 217
 daily operation overview, 201
 data processing, 220
 description, 195
 file structure, 198
 location of configurable parameters, 219
 reports, 201
 setting up, 203
 tailoring, 229
 tailoring commands and shell scripts, 243
cron
 command, 204
 log, 260
csainfo file, 202
csarun command
 executing, 243
 restarting, 210
daemon, 202, 203, 241
daily, 197
device, 254
 acct.h header file, 257
 categories, 255
 configuration, 256
 description, 254
devacct command, 257
implications, 259
param.h header file, 257
SBUs, 237

system header files, 256
dodisk command, 202
dump log, 261
editing data files, 212
end-of-job record, 249
error log, 264
fee file, 202
log files, 259, 266
memory integrals, 252
message log, 265
MPP record, 250
multilevel security (MLS) log, 264
multiple / and /usr file systems, 259
multitasking
 incentives, 251
 SBUs, 233
Network Queuing System (NQS)
 description, 241, 242
 enabling, 203
 log, 267
 SBUs, 235
new user log, 261
OLDSu log, 262
pacct
 file, 246
 SBUs, 231
per-process
 data, 246
periodic, 197, 205
process, 202
SDS SBUs, 233
session data, 197
shutdown, 203
socket, 203, 236, 241, 254
su log, 261
system
 activity log, 265
 logs, 262

- system billing unit (SBU), 230
 - connect time, 235
 - device, 237
 - MPP, 234
 - multitasking, 233
 - NQS, 235
 - pacct, 231
 - SDS, 233
 - tape subsystem, 236
 - tailoring, 243
 - CSA shell scripts, 243
 - UNICOS tape subsystem
 - description, 241
 - enabling, 203
 - SBUs, 236
 - unprocessed files, 199
 - user disk space, 202
 - /usr/adm/acct/day files, 199
 - /usr/adm/acct/work files, 199
 - verifying data files, 212
 - acct.h header file, 257
 - ACCT_FS
 - setting free blocks, 243
 - ACCT_FS file system, 243
 - ACID, 299
 - Allocating devices to file systems, 73
-
- B**
 - Back up file system without tpddaemon, 116
 - Backplane configurations, 329
 - Backup /usr file system
 - recommendations, 45
 - Backup root (/) file system
 - recommendations, 45
 - Backup/restore utilities, 106
 - Backups
 - definition, 105
 - dump routine, 113
 - full, 113
 - logs, 2
 - partial, 113
-
- types, 113
 - Banding, 44
 - /bin/passwd
 - using to change password, 166
 - Binary hosts file
 - compile, 272
 - biod daemon, 301
 - bkroot file system
 - change to rootb, 107
 - bkusr file system
 - change to usrb, 107
 - Block, 37
 - Block allocation bit map, 40
 - Block special files, 38
 - bmap, 41
 - Booting, 25, 26
 - bootsys, 26
 - Building file system, 91

C

- Cache process, 321
- cat /etc/exports, 305
- Character special files, 38
- Character-special tape interface, 23
- chargefee command, 202
- CHIPSZ values, 329
- chown utility, 22
- ckdacct shell script, 204
- ckpacct shell script, 204
- Commands
 - /bin/df, 41
 - /bin/fck, 42
 - bootj90, 26
 - bootsys, 26
 - cat /etc/exports, 305
 - /ce/bin/olhpa, 42
 - cpio, 170
 - Cray system accounting (CSA), 217
 - diskusg, 40
 - du, 41

- dumpj90, 331
dumpsys, 331
/etc/bconfig, 69
/etc/bmap, 41
/etc/ddstat, 42
/etc/dmap, 41
/etc/econfig, 41
/etc/errpt, 41
/etc/fsck, 95
/etc/fsmap, 41
/etc/fstab, 100
/etc/init, 30
/etc/install, 74
/etc/ldcache, 322
/etc/mkfs, 91
/etc/mount, 41
/etc/nu, 130, 134
/etc/pddconf, 42
/etc/pddstat, 42
/etc/rpcbind, 290
/etc/setfs, 40
/etc/stor, 41
/etc/udbggen, 130
/etc/xadmin, 130, 134
labelit, 94
ldsync, 325
mkdir, 143
mount, 99, 100
nu, 140, 143
rpcbstart, 290
topology, 331
udbggen, 155, 163
udbsee, 294
umount, 100
yppasswd, 295
- Comments in
 CSL, 48
- Communicating with users, 173
- Communication
 immediate person-to-person, 176
 person-to-person, 178
 users, 173
- Communication with */etc/issue*, 175
- Communication with */etc/motd*, 175
config/atm.pvc, 285
config/daemons, 285
config/hostname.txt, 285
config/interfaces, 285
- Configuration
 Cray system accounting (CSA) parameters, 219
 /etc/nu parameters
 DefaultAcids, 141
 DefaultDr, 141
 DefaultGids, 141
 DefaultHome, 141
 DefaultShell, 141
 GroupHome, 141
 Security feature variables, 141
 HIPPI disk, 47
 network disk array, 47
 run level, 30
 TCP/IP path, 275
- Configuration files
 modifying, 76
 parameter file, 46
 summarized, 284
 transferring, 274
- Configuration Specification Language, 46
- Configuring
 file systems, 35
 system
 as NFS client, , 299
 as NFS server, , 304
- Constants in CSL, 48
- cpio, 107
- CRAY J90se systems considerations, 310
- Cray System Accounting, 195
- Cray system accounting (CSA), see
 Accounting, Cray system (CSA), 195
- Creating file systems
 summary, 90
- cron, 188
 command, 204
 log, 260
 cronlog file, 189

CSA

 Cray system accounting, 195
 csa.archive1 user exit, 218
 csa.archive2 user exit, 218
 csa.fef user exit, 219
 csa.user user exit, 219
 csaaddir shell script, 217
 csaboots command, 198, 202
 csabuild command, 217
 csacon command, 217
 csaconvert command, 217
 csacrep command, 217
 csadrep command, 218
 csaedit command, 212, 218
 csafef command, 218
 csafef2 command, 218
 csaibm command, 218
 csainfo file, 202
 csajrep command, 218
 csaline command, 218
 csanqs command, 218
 csapacct command, 212, 218
 csaperiod command, 218
 csaperiod shell script
 tailoring, 243
 csaperm command, 218
 csarecy command, 218
 csarun command, 197, 198, 207, 218
 tailoring, 243
 csaswitch command, 218
 csaverify command, 212, 218
 cshrc file, 21
 CSL, 46

D

 Daemon accounting, 202, 203, 241
 Daemons
 rpcbind, 290
 Daily
 accounting
 operation, 201

 Data migration facility, 4
 dd utility, 107
 ddstat, 42
 Dedicated system, , 30
 Default route
 creating, 273
 define command, 8
 /dev/dsk/opt file system
 recommendations, 44
 devacct command, 257
 Device
 accounting, 254
 Device recommendations
 /tmp file system, 44
 Devices
 allocating to file systems, 73
 device numbers, 38
 identifying, 73
 logical, 37
 cache process, 321
 physical, 37
 df, 41
 Directories
 Cray system accounting (CSA), 198, 214
 /dev, 39
 /dev/dsk, 39
 location of
 news files, 175
 Disk allocation
 banding, 44
 Disk banding, 3, 46
 Disk devices, , 3
 Disk storage requirements, 43
 Disk striping, 3, 45
 Disk usage
 site-configurable reports, 245
 Disk use
 monitoring, 40
 diskusg, 40
 dmap, 41
 DMF, 4
 log file, 191

- dodisk command, 202
- Domain
 - administrative, 298
- du, 41
- dump device
 - recommendations, 45
- Dump file system without tpdaemon, 116
- Dump log, 261
- dump utility, 106
- dumpj90, 331
- Dumps
 - IOS, 331
 - mainframe, 331
- dumpsys, 331
- Dynamic block, 40

- E**
- econfig, 41
- Email log file, 193
- errfile file, 264
- Error
 - log (accounting), 264
- Error log file, 190
- erprt, 41
 - files, 193
- /etc/bconfig command, 69
- /etc/boot.log file, 180
- /etc/config directory, 219
- /etc/config/daemons file, 292, 307
- /etc/config/interfaces file
 - updating, 272
- /etc/dump.log, 185
- /etc/dump, 114
 - options, 112
- /etc/exports file, 305
- /etc/fsck command, 95
- /etc/fstab, 100
- /etc/fstab file, 299, 300
- /etc/hosts file
 - creating, 271
- /etc/initif, 272

- F**
- Fair-share scheduler, , 4
- fck, 42
- FDDI, 276
- FIFO special files, 37
- File system
 - check, 120
 - fragmentation reduction, 115
 - free flock list, 96
 - increase/decrease space, 115
 - maintenance
 - backing up, 105
 - restoring, 105
 - planning change, 86

.Quota60 file, 78
quotas, 3, 78
 commands, 79
 monitoring, 85
 soft, 81
 warning windows, 84
reconfiguration, 86
remake, 120
remount, 123
reorganizing, 115
restoring, 114, 122
section in CSL, 56
Setting up a quota control file, , 81
unmount, 119, 123
File system quotas, 78
File systems
 allocating devices to, 73
 block allocation bit map, 40
 booting bkroot and rootb, 109
 booting bkusr and usrb, 109
 checking, 95
 composition, 39
 creating, 90
 creating bkroot and rootb, 107
 creating bkusr and usrb, 107
 creating root and usr, 107
 current configuration, 73
 disk storage requirements, 43
 display mounted disk files (/etc/mount), 41
 dynamic blocks, 40
 examining, 40
 inode, 37
 inode region, 40
 labeling, 94
 map blocks, 40
 mount table, 36
 mounting, 99
 mounting automatically
 procedure, 101
 overview, 36
 partition data blocks, 40
 planning and configuring, 35
 planning issues, 42
 regular files, 37
 size recommendations, 43, 44
 special files, 37
 strategies, 35
 structure, 39
 super block, 39
 terminology, 37
 unmounting, 102
File-owner fraud, 22
Files
 accounting log, 260
 Cray system accounting (CSA), 198, 214
 editing accounting data, 212
 email log, 193
 errpt, 193
 /etc/acid, 139
 /etc/cshrc, 169
 /etc/fstab, 100
 /etc/group, 130, 138
 /etc/inittab, 30
 /etc/mnttab, 100
 /etc/nu.cf60, 141
 /etc/passwd, 130
 /etc/profile, 168
 example, 169
 /etc/udb, 130
 holidays file (accounting) updating, 205
 \$HOME/.cshrc, 170
 \$HOME/.login, 170
 MLS log, 195
 NQS log, 193
 options, 26
 topology, 26
 unprocessed accounting, 199
 user environment, 167
 user mail, 193
 verifying accounting data, 212
Flushing data, 325
FMAILLIST variable, 243
Fraud, 22
Free block list, 96
fsck

command, 95
 phases, 96
fsmap, 41
ftp, 274
Full backup, 113

G

gated.conf, 285
getconfig command, 218
ghippix.arp, 285
GID, 298
Glossary
 on-line, 8
group map, 288

H

Hardware failure, 97
HIPPI disk
 configuration, 47
Hit rate
 ldcache, 323
holidays file (accounting) updating, 205
/home file system
 recommendations, 45
\$HOME/.rhosts, 285
hosts, 285
hosts.equiv, 285

I

ID mapping, 298
Identifiers
 in CSL, 47
Identifying devices, 73
Improper system shutdown, 97
Incident report log, 2
inetd.conf, 285
Inode, 37

Inode region, 40
install, 74
Interactive restore, 122
ioctl requests, 23
IOS
 dumps, 331
 panics, 331
issue file, 175

L

Labeling a file system, 94
ldcache, 321
 assigning, 322
 setting up, 321
ldsync
 flushing data, 325
Link
 mainframe and SWS, 275
Log files, 179
 cleaning up, 192
 DMF - /usr/spool/dm/*, 191
 error log - /usr/adm/errfile, 190
 /etc/boot.log, 180
 /etc/dump.log, 185
 /etc/rc.log, 180
 examples, 184
 messages, 182
 priority levels, 182
 multilevel security - /usr/adm/sl/slogfile, 187
 new user log - /usr/adm/nu.log, 186
 NQS log - /usr/tmp/nqs.log, 189
 syslog daemon startup, 183
 system activity log - /usr/adm/sa/sadd, 187
 system logs, 181
 /usr/adm/sulog, 185
 /usr/spool/msg/msglog.log, 188
Logbooks, 1

Logical devices
 cache process, 321

M

Mail

list for accounting errors, 243

mail utility, 178

Main menu, X Window System version, 310

Mainframe

dumps, 331

Mainframe connection, 275

Major device number, 38

Management applications, 23

Map blocks, 40

Master server, 289

Memory

configuration parameters, 329

integrals for accounting, 252

Memory configuration parameters, 329

Menu system, , 4

Main menu, X Window System version, 310

Menu system navigation keys, , 311, 312

Message

accounting log, 265

Messages

priority levels, 182

sources, 182

Minor device number, 38

mkdir, 143

MLS log file, 187

/mnt, 120

Modifying configuration files, 76

Monitoring quotas, 85

Monitoring system security, 17

motd file, 175

mount, 41

Mount points

creating, 303

Mount table, 36

Mounted file systems, 36

display (/etc/mount), 41

Mounting a file system, 99

MPN

dump procedure, 331

MPP

accounting record, 250

system billing units (SBUs), 234

Multilevel security feature (MLS)

accounting log, 264

Multitasking

accounting incentives for, 251

Multiuser administration tasks, , 28

Multiuser mode, , 28

automatic file system mounting, 101

N

Named pipes, 37

Navigating keys for Menu System, , 311, 312

NBANKS values, 329

ND, 47

netgroup map, 288

netstat, 273

Network

testing, 273

Network disk array

configuration, 47

Network file system, 297

Network Information Service, 287

Network Queuing System (NQS)

accounting

charge for jobs, 242

enabling, 203

log, 267

requests and recycled data, 228

system billing units (SBUs), 236

networks, 285

New files, 175

New user log, 261

news directory, 175

NFS

configuring, 297

server daemons, 306

NIS

configuring, 287

configuring users, , 294

-
- daemons, 291, 293
 - domain, 289
 - map, 288
 - network information service, 287
 - slave server
 - configuring using menu system, , 290
 - configuring without using menu system, , 292
 - Nonprime time system billing units (SBUs), 231
 - NQS
 - log file, 189
 - nu, 130

 - O**
 - OLDsu log, 262
 - olhpa, 42
 - Online documentation
 - glossary, 8
 - Operators in CSL, 48

 - P**
 - pacct file, 246
 - PAN, 115
 - Panic
 - dump procedure, 331
 - param.h header file, 257
 - Partial backup, 113
 - Partition, 37
 - data blocks, 40
 - Partitions
 - security, 23
 - passwd
 - map, 288
 - Passwords
 - security, 18
 - pddconf, 42
 - pddstat, 42
 - Peripherals, , 3
 - Physical security, 19

 - Planning issues
 - file systems, 42
 - Prime time system billing units (SBUs), 231
 - Privileges
 - super user, 18
 - Procedure
 - Adding CRAY J90se to existing network, , 270
 - Procedures
 - add users with /etc/udbggen, 157
 - adding users using /etc/nu, 144
 - back up (dump) file system without tpdaemon, 116
 - backing up, 113
 - building the file system, 91
 - changing /etc/nu configuration parameters, 141
 - checking file system, 95
 - configuring file systems to mount automatically in multiuser mode, 101
 - configuring system as NFS client, , 299
 - configuring system as NFS server, , 304
 - configuring users to use NIS, , 294
 - creating a file system, 90
 - creating file system using /etc/nu, 143
 - delete users from UDB, 166
 - delete users with /etc/nu, 152
 - determine UDB settings, 134
 - /etc/acid
 - add entry to, 139
 - /etc/group
 - adding entry to, 138
 - identifying your system devices and file system allocation, 73
 - modify system configuration, 76
 - modify user information by using /etc/nu, 149
 - not using menus to configure system as NIS
 - slave server, , 292
 - restore full file system
 - without tpdaemon, 118
 - restore partial file system
 - using tpdaemon, 123
 - without tpdaemon, 118

- setting up /cshrc/profile file, 169
 - setting up /etc/profile file, 168
 - system shutdown, 31
 - transfer files to login directory, 163
 - transfer users to another file system, 170
 - UDB, summarized, 131
 - unmounting file systems, 102
 - update user logins by using /etc/udbggen, 164
 - using menus to configure system as NIS
 - slave server, , 290
 - Process
 - accounting, 202
 - Product Availability Notice (PAN), 115
 - profile file, 21
 - protocols, 285
 - publickey map, 288
- Q**
- qmgr set log_file command, 189
 - qmgr show parameters command, 190
 - Quota control file
 - setting up, , 81
 - Quotas
 - file system, 78
 - file systems
 - quota control file, , 81
 - monitoring, 85
- R**
- rdump utility, 106
 - Reconfiguration
 - file systems, 86
 - Recycled
 - log files, 192
 - Recycled data, 197, 222
 - deleting, 224, 226
 - NQS requests, 228
 - Regular files, 37
 - Resource control, 3
- Restore full file system
 - without tpdaemon, 118
 - Restore partial file system
 - using tpdaemon, 123
 - without tpdaemon, 118
 - Restore/backup utilities, 106
 - Restoring, 114
 - definition, 105
 - root (/) file system
 - recommendations, 43
 - root file system
 - change to roota, 107
 - roota file system, 107
 - Run levels
 - changing, , 30
 - multiuser mode, , 28
 - single-user mode, 32
 - strategies, , 31
 - Run-level configuration, , 30
- S**
- SAM, , 5
 - sar, 187
 - SBU, see System, billing unit, 203
 - Scripts
 - /bin/login, 168
 - /bin/passwd, 134
 - /bin/udbggen, 134
 - /bin/udbpl, 134
 - /bin/udbsee, 134
 - /etc/shutdown, 31
 - /etc/udbchain, 134
 - UDB, 133
 - Security
 - basic, 17
 - partition, 23
 - super-user privileges, 18
 - user, 21
 - Separators in CSL, 48
 - services, 285

- Set-user-ID (setuid)
 - programs, 19
- setfs, 40
- shells, 285
- Single-user mode, 32
- Size recommendations
 - file systems, 43, 44
- Slave server, 289
- Special files
 - block, character, 37
- SPN
 - dump procedure, 331
- Startup, 26
- stor, 41
- Striped file system
 - caching, 322
- su log, 261
- su utility, 20
- Super block, 39
- Super-user
 - privileges, 18
- swap device
 - recommendations, 44
- SWS connection, 275
- Synchronous write operations, 115
- Syntax
 - CSL UNICOS section, 53
- Syntax description
 - CSL, 47
- syslog configuration file, 180, 181
- syslog daemon, 181
 - startup, 183
- System
 - accounting logs, 262
 - activity log, 265
 - billing unit (SBU)
 - and CSA setup, 203
 - connect time, 235
 - defined, 230
 - device, 237
 - multitasking, 233
 - nonprime time, 231
 - NQS, 235
 - prime time, 231
 - SDS, 233
 - UNICOS tape subsystem, 236
 - security
 - monitoring, 17
 - users, 21
 - System accounting, , 4, 195
 - System activity monitoring, , 5
 - System administrator
 - logbook, 1
 - multiuser tasks, , 28
 - role, 1
 - System buffer cache
 - bypassing, 321
 - System crash log, 2
 - System security
 - basic, 17
 - System shutdown, 25
 - procedure, 31
 - System startup, 25

T

- Tailoring CSA, 229
- Tape devices, 106, 115
- Tape interfaces, 23
- Tape manipulations, 23
- Tapes
 - mounting, 121
 - preventing overwrites, 118
 - rewinding, 121
- tar, 107
- TCP/IP, 4, 269, 275
 - configuration files, 284
- tcpstart.mid, 285
- Testing
 - network, 273
- /tmp file system
 - recommendations, 44
- topology, 331

Topology file, 331
tpdaemon, 123
Transfer files, 274
Transmission Control Protocol/Internet Protocol, 4

U

UDB, 3
 adding user records, 131
 commands
 summarized, 134
 description, 130
 determining settings, 134
 /etc/xadmin command, 130
 files
 summarized, 131
 files and commands, 129
 nu utility, 130
 procedures
 summarized, 131
 scripts
 summarized, 133
 udbgen utility, 130

UDB fields
 Account ID field, 136
 adding user records, 144
 adding users, 157
 CPU limits, 137
 definition fields, 134
 deleting users, 152, 166
 Encrypted password field, 135
 File limits, 138
 Group ID field, 136
 Login (home) directory, 136
 Login name field, 135
 Login root directory, 137
 Memory limits, 137
 Nice value, 137
 Password, 135
 private UDB example, 163
 Process limits, 137

SDS limits, 137
Tape limits, 138
transfer initial files, 163
updating information, 149
updating user logins, 164
User comment field, 136
User ID field, 136
user resource limits, 137
User shell at login, 136
udbsee, 294
 using to add account ID (acid), , 166
UID, 298
umask utility, 21
UNICOS
 CSL section syntax, 53
 definition of, 2
 dumps, 331
 features, 2
 file system structure, 39
 menu system, , 4
 on-line glossary, , 8
 panics, 331
 unique features, , 2
UNICOS tape subsystem
 enabling accounting, 203
UNIX commands, 23
UNIX System V accounting, 195
Unmounted file systems, 36
Unmounting file systems, 102
User
 communications, 173
 groups, 22
 security, 22
User accounts
 definition fields, 134
User database, 130
User exits
 accounting, 209
 site-generated, 218, 241, 242
 csarun, 207
User mail files
 cleaning up, 193

User resource limits
 setting, 137

Users
 adding, 144
 deleting, 152, 166
 setting up environment, 168, 169
 transferring to another file system, 170
 update logins, 164
 updating information, 149

usr file system
 change to usra, 107

/usr file system
 recommendations, 43

/usr/adm/acct directory, 198, 214

/usr/adm/acct/day directory, 199

/usr/adm/acct/work directory, 199

/usr/adm/errfile, , 190

/usr/adm/nu.log, , 186

/usr/adm/sl/slogfile, , 187

/usr/adm/sulog, 185

/usr/lib/cron/cronlog, , 188

/usr/lib/cron/OLDLOG, 189

/usr/lib(sa, 187

/usr/spool/ccflogs, 192

/usr/spool/dm/*, , 191

/usr/spool/msg/msglog.log, 188

/usr/spool/nqs/log, 189

/usr/src file system
 recommendations, 43

/usr/tmp/nqs.log, , 189

/usr/ucb/logger, 181

usra file system, 107

W

wall command, 174

Warning windows, 84

Warnings
 login messages, 175
 wall command, 174

WMAILLIST variable, 243

write utility, 176

wtmp
 file, 212

Y

Yellow Pages, 287

ypinit, 291

yppasswd, 295

ypwhich command, 292