Appendix C

IRIX Directories and Files

This section briefly describes the directories and files that a system administrator uses frequently. For additional information on the formats of the system files, refer to the IRIX section 4 reference pages.

IRIX Root Directories

The main directories of the *root* file system (/) are as follows:

/	Contains hardware-specific files and files required to start the system.
bin	Contains publicly executable commands. (Some are *root*-only.)
debug	Provides a link to */proc*.
dev	Contains special files that define all of the devices on the system.
etc	Contains administrative programs and tables.
lib	Contains public libraries.
lost+found	Used by *fsck*(1M) to save disconnected files and directories.
proc	Provides an interface to running processes that may be used by debuggers such as *dbx*(1).
tmp	Used for temporary files.
usr	Used to mount the */usr* file system and for files that are the same from system to system. These files are not writable.
var	Used for files that are specific to each system. There is typically a symbolic link to */usr* for each file in */var*.

Other Important IRIX System Directories

The following directories are important in the administration of your system:

/etc/init.d Contains shell scripts used in upward and downward transitions to all system run levels. These files are linked to files beginning with *S* (start) or *K* (kill) in */etc/rcn.d*, where *n* is replaced by the appropriate run level number.

/etc/config Contains start-up and run-time configuration information.

/etc/rc0.d Contains files executed by */etc/rc0* to bring the system to run-level 0. Files in this directory are linked from files in the */etc/init.d* directory and begin with either a *K* or an *S*. *K* indicates processes that are killed, and *S* indicates processes that are started when entering run-level 0.

/etc/rc2.d Contains files executed by */etc/rc2* for transitions to system run-level 2. Files in this directory are linked from files in the */etc/init.d* directory and begin with either a *K* or an *S*. *K* indicates processes that should be killed, and *S* indicates processes that should be started, when entering run-level 2.

/etc/rc3.d Contains files executed by */etc/rc3* for transitions to system run-level 3. Files in this directory are linked from files in the */etc/init.d* directory and begin with either a *K* or an *S*. *K* indicates processes that should be stopped, and *S* indicates processes that should be started when entering run-level 3.

/var/adm/acct
Contains information collected by the accounting subsystem.

/var/adm/crash
Contains crash dumps of the system. After analysis, and if appropriate, these dumps can safely be removed unless your support provider has requested otherwise. See the *savecore*(1) reference page for more information.

/var/adm/sa Contains information collected by *sar*(1).

/usr/people Contains the home directories of users of the system or network. This directory can be a link to */var/people* or a mount point for a totally separate file system.

/usr/share This directory contains files that are the same on all systems.

/var/spool Contains spooling directories. The directories in this directory hold outbound mail, print requests, and other data.

/var/spool/cron/crontabs
Contains *crontab* files for the *adm*, *root*, and *sys* logins and ordinary users listed in *cron.allow*.

/var/sysgen/master.d
Contains files that define the configuration of hardware devices, software services and utilities, and aliases.

/var/sysgen/stune
Contains files that define the default settings of all kernel tunable parameters.

/var/sysgen/mtune
Contains files that define the current settings of all kernel tunable parameters.

Important IRIX System Files

The following files are important in the administration of your system:

/etc/cshrc Contains the standard (default) environment for */bin/csh* users.

/etc/exports Contains the list of NFS file systems exported at boot time to NFS clients if the optional NFS software is installed.

/etc/fstab Specifies the filesystem(s) to be mounted.

/etc/gettydefs Contains information used by *getty* to set the speed and terminal settings for a line.

/etc/group Describes each group to the system.

/etc/hosts Contains information about the known hosts on the network.

/etc/hosts.equiv
Contains a list of hosts trusted for non-superuser *rlogin* and *rsh* execution.

/etc/inittab Contains the instructions to define the processes created or terminated by *init* for each initialization state.

/etc/issue Displays a message to users before logging in to the system over the network or on serial lines.

/etc/lvtab Contains information describing the logical volumes used by the workstation. This file is read by the logical volumes utilities.

/etc/motd Contains a brief "message of the day."

/etc/passwd Identifies each user to the system.

/etc/profile Contains the standard (default) environment for */bin/sh* users.

/etc/rc0 Contains a script that executes shell scripts in */etc/rc0.d* to bring the system to run-level 0.

/etc/rc2 Contains a script that executes shell scripts in */etc/rc2.d* and */etc/rc.d* on transitions to system run-level 2.

/etc/shutdown
Contains a shell script that gracefully shuts down the system in preparation for system backup or for scheduled downtime.

/etc/sys_id Contains the system name.

/etc/ttytype Contains a list, ordered by terminal port, of what kind of terminal is likely to log in to that port.

/etc/TIMEZONE
Used to set the default time zone shell variable *TZ*.

/etc/utmp Contains the information on the current runstate of the system.

/etc/wtmp Contains a history of system logins.

/etc/xwtmp Contains an extended history of system logins.

/var/adm/sulog
Contains a history of *su* command usage. This file should be checked periodically for excessive size and archived.

/var/adm/SYSLOG
Contains system and daemon error messages.

/var/yp/ypdomain
Contains the domain name if the workstation is using NIS.

/var/cron/log
Contains a history of all the actions taken by *cron*. This file should be checked periodically for excessive size and reduced if necessary.

/usr/lib/cron/cron.allow
Contains a list of users allowed to use *crontab*(1). This file cannot exist on the system at the same time as *cron.deny*.

*/usr/lib/cron/cron.den*y
Contains a list of users who are denied access to *crontab*(1). It is checked if */usr/lib/cron/cron.allow* does not exist.

IRIX Device Special Files

This section contains a listing of many of the most important device files and directories that reside in the */dev* directory structure.

dsk/ Directory containing block device files for disks; see *ips*(7), *dks*(7), and *xyl*(7) for disk partition device names.

rdsk/ Directory containing raw (character) device files for disks; see *ips*(7), *dks*(7), and *xyl*(7) for disk partition device names.

root Generic *root* partition (block device).

rroot Generic *root* partition (raw device).

usr Generic *usr* partition (block device).

rusr Generic *usr* partition (raw device).

swap Generic *swap* partition (block device).

rswap Generic *swap* partition (raw device).

vh Generic *root* volume header (block device).

rvh Generic *root* volume header (raw device).

mt/ directory containing block device files for tapes; see *ts*(7) for ISI quarter-inch tape drive device names; see *tps*(7) for SCSI quarter-inch tape drive device names; see *xmt*(7) for Xylogics half-inch tape drive names.

rmt/ directory containing raw device files for tapes; see *ts*(7) for ISI quarter-inch tape drive device names; see *tps*(7) for SCSI quarter-inch tape drive device names; see *xmt*(7) for Xylogics half-inch tape drive names.

tape	Generic tape device; bytes are swapped in order to be backward-compatible with the IRIS Series 2000 and 3000 workstations; see *mtio*(7).
nrtape	Generic no-rewind tape device; bytes are swapped in order to be backward-compatible with the IRIS Series 2000 and 3000 workstations; see *mtio*(7).
tapens	Generic tape device; bytes are not swapped; see *mtio*(7).
nrtapens	Generic no-rewind tape device; bytes are not swapped; see *mtio*(7).
mem	Memory; see *mem*(7).
mmem	Mappable memory; see *mmem*(7).
kmem	Kernel memory; see *kmem*(7).
null	Null device (zero length on input, data sink on output); see *null*(7).
SA/	Block devices used by system administration tools; see *sysadm*(1M) and *sa*(7).
rSA/	Raw devices used by system administration tools; see *sysadm*(1M) and *sa*(7).
audio	Audio interface.
dn_ll	File used to create 4DDN logical links; see *dn_ll*(7).
dn_netman	File used by 4DDN network management software; see *dn_netman*(7).
cent	Centronics® color graphics printer device.
tek	Tektronics color graphics printer device.
vers	Versatek color graphics printer device.
vp0	Hard link to *vers*.
*gpib**	GPIB (IEEE-488) device; see *gpib*(7).
gse	Spectragraphics coax device; see *gse*(7).
plp	Parallel line printer interface; see *plp*(7).
prf	File used by operating system profiler; see *prf*(7).
t3270	Raw device file for IBM 3270™ Cluster Controller; see *t3270*(7).
hl/	Directory containing files used by IRIS GTX series machines hardware spinlock driver; see *usnewlock*(3P).

log	Named pipe that is read by the system logging daemon; see *syslogd*(1M).
ptc	Clonable pseudo-tty controller; see *clone*(7), *ptc*(7).
grconc	Master pseudo-teletype for the graphics console; see *pty*(7).
grcons	Slave pseudo-teletype for the graphics console; see *pty*(7).
gm	Logical console device for the Graphics Manager on the IRIS GT and GTX model machines. Messages from the software running on the 68020 on the GM board will appear as output on this device.
grin/	Directory containing the individual logical graphics input devices.
console	System console device.
syscon	Hard link to */dev/console*.
systty	Hard link to */dev/console*.
queue	Graphics queue device. Graphics programs call "select" on this device in order to be notified when there is input in their graphics queue. This device can't be actually read or written.
dials	Device for serial port connected to dial and button box.
keybd	Device for serial port connected to keyboard.
mouse	Device for serial port connected to mouse.
tablet	Device for serial port connected to digitizing tablet.
ttyd[*1-12*]	Serial ports 1–12.
ttyf[*1-12*]	Serial ports 1–12 for devices that understand hardware flow control.
ttym[*1-12*]	Serial ports 1–12 for modems.
*ttyq**	Pseudo tty devices; see *pty*(7).
zero	Zero device (infinite zeros on reads); see *zero*(7).

ASCII Conversion Table

The ASCII character set defines a 1-to-1 mapping of characters to 8-bit values. The following tables provide an easy reference for converting the ASCII characters into their octal, hexadecimal, and decimal equivalents. These tables are also available in the *ascii*(5) reference page.

Table C-1 ASCII map to Octal Values

000 nul	001 soh	002 stx	003 etx	004 eot	005 enq	006 ack	007 bel
010 bs	011 ht	012 nl	013 vt	014 np	015 cr	016 so	017 si
020 dle	021 dc1	022 dc2	023 dc3	024 dc4	025 nak	026 syn	027 etb
030 can	031 em	032 sub	033 esc	034 fs	035 gs	036 rs	037 us
040 sp	041 !	042 “	043 #	044 $	045 %	046 &	047 ‘
050 (	051)	052 *	053 +	054 ,	055 -	056 .	057 /
060 0	061 1	062 2	063 3	064 4	065 5	066 6	067 7
070 8	071 9	072 :	073 ;	074 <	075 =	076 >	077 ?
100 @	101 A	102 B	103 C	104 D	105 E	106 F	107 G
110 H	111 I	112 J	113 K	114 L	115 M	116 N	117 O
120 P	121 Q	122 R	123 S	124 T	125 U	126 V	127 W
130 X	131 Y	132 Z	133 [	134 \	135]	136 ^	137 _
140 `	141 a	142 b	143 c	144 d	145 e	146 f	147 g
150 h	151 i	152 j	153 k	154 l	155 m	156 n	157 o
160 p	161 q	162 r	163 s	164 t	165 u	166 v	167 w
170 x	171 y	172 z	173 {	174 |	175 }	176 ~	177 del

Table C-2 ASCII map to Hexadecimal Values

00 nul	01 soh	02 stx	03 etx	04 eot	05 enq	06 ack	07 bel
08 bs	09 ht	0a nl	0b vt	0c np	0d cr	0e so	0f si
10 dle	11 dc1	12 dc2	13 dc3	14 dc4	15 nak	16 syn	17 etb
18 can	19 em	1a sub	1b esc	1c fs	1d gs	1e rs	1f us
20 sp	21 !	22 “	23 #	24 $	25 %	26 &	27 ‘
28 (	29)	2a *	2b +	2c ,	2d -	2e .	2f /
30 0	31 1	32 2	33 3	34 4	35 5	36 6	37 7
38 8	39 9	3a :	3b ;	3c <	3d =	3e >	3f ?
40 @	41 A	42 B	43 C	44 D	45 E	46 F	47 G
48 H	49 I	4a J	4b K	4c L	4d M	4e N	4f O
50 P	51 Q	52 R	53 S	54 T	55 U	56 V	57 W
58 X	59 Y	5a Z	5b [	5c \	5d]	5e ^	5f _
60 `	61 a	62 b	63 c	64 d	65 e	66 f	67 g
68 h	69 i	6a j	6b k	6c l	6d m	6e n	6f o
70 p	71 q	72 r	73 s	74 t	75 u	76 v	77 w
78 x	79 y	7a z	7b {	7c |	7d }	7e ~	7f del

Table C-3 ASCII map to Decimal Values

0 nul	1 soh	2 stx	3 etx	4 eot	5 enq	6 ack	7 bel
8 bs	9 ht	10 nl	11 vt	12 np	13 cr	14 so	15 si
16 dle	17 dc1	18 dc2	19 dc3	20 dc4	21 nak	22 syn	23 etb
24 can	25 em	26 sub	27 esc	28 fs	29 gs	30 rs	31 us
32 sp	33 !	34 “	35 #	36 $	37 %	38 &	39 ‘
40 (	41)	42 *	43 +	44 ,	45 -	46 .	47 /

Table C-3 (continued) ASCII map to Decimal Values

48 0	49 1	50 2	51 3	52 4	53 5	54 6	55 7
56 8	57 9	58 :	59 ;	60 <	61 =	62 >	63 ?
64 @	65 A	66 B	67 C	68 D	69 E	70 F	71 G
72 H	73 I	74 J	75 K	76 L	77 M	78 N	79 O
80 P	81 Q	82 R	83 S	84 T	85 U	86 V	87 W
88 X	89 Y	90 Z	91 [	92 \	93]	94 ^	95 _
96 `	97 a	98 b	99 c	100 d	101 e	102 f	103 g
104 h	105 i	106 j	107 k	108 l	109 m	110 n	111 o
112 p	113 q	114 r	115 s	116 t	117 u	118 v	119 w
120 x	121 y	122 z	123 {	124 |	125 }	126 ~	127 del