

new/usr/src/cmd/init/init.c

1

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*****
115298 Wed Sep  4 20:45:58 2013
new/usr/src/cmd/init/init.c
2989 Eliminate use of LOGNAME_MAX in ON
1166 useradd have warning with name more 8 chars
*****
1 /*
2  * CDDL HEADER START
3  *
4  * The contents of this file are subject to the terms of the
5  * Common Development and Distribution License (the "License").
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15 * If applicable, add the following below this CDDL HEADER, with the
16 * fields enclosed by brackets "[]" replaced with your own identifying
17 * information: Portions Copyright [yyyy] [name of copyright owner]
18 *
19 * CDDL HEADER END
20 */
21
22 /*
23  * Copyright (c) 2013 Gary Mills
24  *
25  * Copyright (c) 1988, 2010, Oracle and/or its affiliates. All rights reserved.
26  */
27
28 /*      Copyright (c) 1984, 1986, 1987, 1988, 1989 AT&T */
29 /*      All Rights Reserved  */
30
31 /*
32  * University Copyright- Copyright (c) 1982, 1986, 1988
33  * The Regents of the University of California
34  * All Rights Reserved
35  *
36  * University Acknowledgment- Portions of this document are derived from
37  * software developed by the University of California, Berkeley, and its
38  * contributors.
39  */
40
41 /*
42  * init(1M) is the general process spawning program. Its primary job is to
43  * start and restart svc.startd for smf(5). For backwards-compatibility it also
44  * spawns and respawns processes according to /etc/inittab and the current
45  * run-level. It reads /etc/default/inittab for general configuration.
46  *
47  * To change run-levels the system administrator runs init from the command
48  * line with a level name. init signals svc.startd via libscf and directs the
49  * zone's init (pid 1 in the global zone) what to do by sending it a signal;
50  * these signal numbers are commonly referred to in the code as 'states'. Valid
51  * run-levels are [sS0123456]. Additionally, init can be given directives
52  * [qQabc], which indicate actions to be taken pertaining to /etc/inittab.
53  *
54  * When init processes inittab entries, it finds processes that are to be
55  * spawned at various run-levels. inittab contains the set of the levels for
56  * which each inittab entry is valid.
57  *
58  * State File and Restartability
59  * Premature exit by init(1M) is handled as a special case by the kernel:
60  * init(1M) will be immediately re-executed, retaining its original PID. (PID
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61 * 1 in the global zone.) To track the processes it has previously spawned,
62 * as well as other mutable state, init(1M) regularly updates a state file
63 * such that its subsequent invocations have knowledge of its various
64 * dependent processes and duties.
65 *
66 * Process Contracts
67 * We start svc.startd(1M) in a contract and transfer inherited contracts when
68 * restarting it. Everything else is started using the legacy contract
69 * template, and the created contracts are abandoned when they become empty.
70 *
71 * utmpx Entry Handling
72 * Because init(1M) no longer governs the startup process, its knowledge of
73 * when utmpx becomes writable is indirect. However, spawned processes
74 * expect to be constructed with valid utmpx entries. As a result, attempts
75 * to write normal entries will be retried until successful.
76 *
77 * Maintenance Mode
78 * In certain failure scenarios, init(1M) will enter a maintenance mode, in
79 * which it invokes sulogin(1M) to allow the operator an opportunity to
80 * repair the system. Normally, this operation is performed as a
81 * fork(2)-exec(2)-waitpid(3C) sequence with the parent waiting for repair or
82 * diagnosis to be completed. In the cases that fork(2) requests themselves
83 * fail, init(1M) will directly execute sulogin(1M), and allow the kernel to
84 * restart init(1M) on exit from the operator session.
85 *
86 * One scenario where init(1M) enters its maintenance mode is when
87 * svc.startd(1M) begins to fail rapidly, defined as when the average time
88 * between recent failures drops below a given threshold.
89 */
90
91 #include <sys/contract/process.h>
92 #include <sys/ctfs.h>
93 #include <sys/stat.h>
94 #include <sys/statvfs.h>
95 #include <sys/stropts.h>
96 #include <sys/systeminfo.h>
97 #include <sys/time.h>
98 #include <sys/termios.h>
99 #include <sys/tty.h>
100 #include <sys/types.h>
101 #include <sys/utsname.h>
102
103 #include <bsm/adt_event.h>
104 #include <bsm/libbsm.h>
105 #include <security/pam_appl.h>
106
107 #include <assert.h>
108 #include <ctype.h>
109 #include <dirent.h>
110 #include <errno.h>
111 #include <fcntl.h>
112 #include <libcontract.h>
113 #include <libcontract_priv.h>
114 #include <libintl.h>
115 #include <libscf.h>
116 #include <libscf_priv.h>
117 #include <poll.h>
118 #include <procfs.h>
119 #include <signal.h>
120 #include <stdarg.h>
121 #include <stdio.h>
122 #include <stdio_ext.h>
123 #include <stdlib.h>
124 #include <string.h>
125 #include <strings.h>
126 #include <syslog.h>
```

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127 #include <time.h>
128 #include <ulimit.h>
129 #include <unistd.h>
130 #include <utmpx.h>
131 #include <wait.h>
132 #include <zone.h>
133 #include <ucontext.h>

135 #undef sleep

137 #define fioctrl(p, sptr, cmd)    ioctl(fileno(p), sptr, cmd)
138 #define min(a, b)                (((a) < (b)) ? (a) : (b))

140 #define TRUE    1
141 #define FALSE   0
142 #define FAILURE -1

144 #define UT_USER_SZ    32    /* Size of a utmpx ut_user field */
145 #define UT_LINE_SZ    32    /* Size of a utmpx ut_line field */

147 /*
148  * SLEEPTIME    The number of seconds "init" sleeps between wakeups if
149  *              nothing else requires this "init" wakeup.
150  */
151 #define SLEEPTIME    (5 * 60)

153 /*
154  * MAXCMDL      The maximum length of a command string in inittab.
155  */
156 #define MAXCMDL    512

158 /*
159  * EXEC          The length of the prefix string added to all comamnds
160  *              found in inittab.
161  */
162 #define EXEC        (sizeof ("exec ") - 1)

164 /*
165  * TWARN          The amount of time between warning signal, SIGTERM,
166  *              and the fatal kill signal, SIGKILL.
167  */
168 #define TWARN        5

170 #define id_eq(x, y)    ((x[0] == y[0] && x[1] == y[1] && x[2] == y[2] && \
171                        x[3] == y[3]) ? TRUE : FALSE)

173 /*
174  * The kernel's default umask is 022 these days; since some processes inherit
175  * their umask from init, init will set it from CMASK in /etc/default/init.
176  * init gets the default umask from the kernel, it sets it to 022 whenever
177  * it wants to create a file and reverts to CMASK afterwards.
178  */

180 static int cmask;

182 /*
183  * The following definitions, concluding with the 'lvls' array, provide a
184  * common mapping between level-name (like 'S'), signal number (state),
185  * run-level mask, and specific properties associated with a run-level.
186  * This array should be accessed using the routines lvlname_to_state(),
187  * lvlname_to_mask(), state_to_mask(), and state_to_flags().
188  */

190 /*
191  * Correspondence of signals to init actions.
192  */
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193 #define LVLQ          SIGHUP
194 #define LVL0          SIGINT
195 #define LVL1          SIGQUIT
196 #define LVL2          SIGILL
197 #define LVL3          SIGTRAP
198 #define LVL4          SIGIOT
199 #define LVL5          SIGEMT
200 #define LVL6          SIGFPE
201 #define SINGLE_USER   SIGBUS
202 #define LVL7          SIGSEGV
203 #define LVLb          SIGSYS
204 #define LVLc          SIGPIPE

206 /*
207  * Bit Mask for each level.  Used to determine legal levels.
208  */
209 #define MASK0    0x0001
210 #define MASK1    0x0002
211 #define MASK2    0x0004
212 #define MASK3    0x0008
213 #define MASK4    0x0010
214 #define MASK5    0x0020
215 #define MASK6    0x0040
216 #define MASKSU   0x0080
217 #define MASKa    0x0100
218 #define MASKb    0x0200
219 #define MASKc    0x0400

221 #define MASK_NUMERIC (MASK0 | MASK1 | MASK2 | MASK3 | MASK4 | MASK5 | MASK6)
222 #define MASK_abc (MASKa | MASKb | MASKc)

224 /*
225  * Flags to indicate properties of various states.
226  */
227 #define LSEL_RUNLEVEL    0x0001 /* runlevels you can transition to */

229 typedef struct lvl {
230     int    lvl_state;
231     int    lvl_mask;
232     char    lvl_name;
233     int    lvl_flags;
234 } lvl_t;
    unchanged_portion_omitted

1506 /*
1507  * getcmd() parses lines from inittab.  Each time it finds a command line
1508  * it will return TRUE as well as fill the passed CMD_LINE structure and
1509  * the shell command string.  When the end of inittab is reached, FALSE
1510  * is returned inittab is automatically opened if it is not currently open
1511  * and is closed when the end of the file is reached.
1512  */
1513 static FILE *fp_inittab = NULL;

1515 static int
1516 getcmd(struct CMD_LINE *cmd, char *shcmd)
1517 {
1518     char    *ptr;
1519     int    c, lastc, state;
1520     char    *ptr1;
1521     int    answer, i, proceed;
1522     struct stat sbuf;
1523     static char *actions[] = {
1524         "off", "respawn", "ondemand", "once", "wait", "boot",
1525         "bootwait", "powerfail", "powerwait", "initdefault",
1526         "sysinit",
1527     };
    };
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1528     static short act_masks[] = {
1529         M_OFF, M_RESPAWN, M_ONDEMAND, M_ONCE, M_WAIT, M_BOOT,
1530         M_BOOTWAIT, M_PF, M_PWAIT, M_INITDEFAULT, M_SYSINIT,
1531     };
1532     /*
1533      * Only these actions will be allowed for entries which
1534      * are specified for single-user mode.
1535      */
1536     short su_acts = M_INITDEFAULT | M_PF | M_PWAIT | M_WAIT;

1538     if (fp_inittab == NULL) {
1539         /*
1540          * Before attempting to open inittab we stat it to make
1541          * sure it currently exists and is not empty. We try
1542          * several times because someone may have temporarily
1543          * unlinked or truncated the file.
1544          */
1545         for (i = 0; i < 3; i++) {
1546             if (stat(INITTAB, &sbuf) == -1) {
1547                 if (i == 2) {
1548                     console(B_TRUE,
1549                         "Cannot stat %s, errno: %d\n",
1550                         INITTAB, errno);
1551                     return (FAILURE);
1552                 } else {
1553                     timer(3);
1554                 }
1555             } else if (sbuf.st_size < 10) {
1556                 if (i == 2) {
1557                     console(B_TRUE,
1558                         "%s truncated or corrupted\n",
1559                         INITTAB);
1560                     return (FAILURE);
1561                 } else {
1562                     timer(3);
1563                 }
1564             } else {
1565                 break;
1566             }
1567         }

1569         /*
1570          * If unable to open inittab, print error message and
1571          * return FAILURE to caller.
1572          */
1573         if ((fp_inittab = fopen(INITTAB, "r")) == NULL) {
1574             console(B_TRUE, "Cannot open %s errno: %d\n", INITTAB,
1575                 errno);
1576             return (FAILURE);
1577         }
1578     }

1580     /*
1581      * Keep getting commands from inittab until you find a
1582      * good one or run out of file.
1583      */
1584     for (answer = FALSE; answer == FALSE; ) {
1585         /*
1586          * Zero out the cmd itself before trying next line.
1587          */
1588         bzero(cmd, sizeof (struct CMD_LINE));

1590         /*
1591          * Read in lines of inittab, parsing at colons, until a line is
1592          * read in which doesn't end with a backslash. Do not start if
1593          * the first character read is an EOF. Note that this means

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1594         * that lines which don't end in a newline are still processed,
1595         * since the "for" will terminate normally once started,
1596         * regardless of whether line terminates with a newline or EOF.
1597         */
1598         state = FAILURE;
1599         if ((c = fgetc(fp_inittab)) == EOF) {
1600             answer = FALSE;
1601             (void) fclose(fp_inittab);
1602             fp_inittab = NULL;
1603             break;
1604         }

1606         for (proceed = TRUE, ptr = shcmd, state = ID, lastc = '\0';
1607             proceed && c != EOF;
1608             lastc = c, c = fgetc(fp_inittab)) {
1609             /* If we're not in the FAILURE state and haven't */
1610             /* yet reached the shell command field, process */
1611             /* the line, otherwise just look for a real end */
1612             /* of line. */
1613             if (state != FAILURE && state != COMMAND) {
1614                 /*
1615                  * Squeeze out spaces and tabs.
1616                  */
1617                 if (c == ' ' || c == '\t')
1618                     continue;

1620                 /*
1621                  * Ignore characters in a comment, except for the \n.
1622                  */
1623                 if (state == COMMENT) {
1624                     if (c == '\n') {
1625                         lastc = ' ';
1626                         break;
1627                     } else {
1628                         continue;
1629                     }
1630                 }

1632                 /*
1633                  * Detect comments (lines whose first non-whitespace
1634                  * character is '#') by checking that we're at the
1635                  * beginning of a line, have seen a '#', and haven't
1636                  * yet accumulated any characters.
1637                  */
1638                 if (state == ID && c == '#' && ptr == shcmd) {
1639                     state = COMMENT;
1640                     continue;
1641                 }

1643                 /*
1644                  * If the character is a ':', then check the
1645                  * previous field for correctness and advance
1646                  * to the next field.
1647                  */
1648                 if (c == ':') {
1649                     switch (state) {

1651                         case ID :
1652                             /*
1653                              * Check to see that there are only
1654                              * 1 to 4 characters for the id.
1655                              */
1656                             if ((i = ptr - shcmd) < 1 || i > 4) {
1657                                 state = FAILURE;
1658                             } else {
1659                                 bcopy(shcmd, &cmd->c_id[0], i);

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1660         ptr = shcmd;
1661         state = LEVELS;
1662     }
1663     break;

1665     case LEVELS :
1666     /*
1667      * Build a mask for all the levels for
1668      * which this command will be legal.
1669      */
1670     for (cmd->c_levels = 0, ptr1 = shcmd;
1671          ptr1 < ptr; ptr1++) {
1672         int mask;
1673         if (lvlname_to_mask(*ptr1,
1674                             &mask) == -1) {
1675             state = FAILURE;
1676             break;
1677         }
1678         cmd->c_levels |= mask;
1679     }
1680     if (state != FAILURE) {
1681         state = ACTION;
1682         ptr = shcmd; /* Reset the buffer */
1683     }
1684     break;

1686     case ACTION :
1687     /*
1688      * Null terminate the string in shcmd buffer and
1689      * then try to match against legal actions. If
1690      * the field is of length 0, then the default of
1691      * "RESPAWN" is used if the id is numeric,
1692      * otherwise the default is "OFF".
1693      */
1694     if (ptr == shcmd) {
1695         if (isdigit(cmd->c_id[0]) &&
1696             (cmd->c_id[1] == '\0' ||
1697              isdigit(cmd->c_id[1])) &&
1698             (cmd->c_id[2] == '\0' ||
1699              isdigit(cmd->c_id[2])) &&
1700             (cmd->c_id[3] == '\0' ||
1701              isdigit(cmd->c_id[3])))
1702             cmd->c_action = M_RESPAWN;
1703         else
1704             cmd->c_action = M_OFF;
1705     } else {
1706         for (cmd->c_action = 0, i = 0,
1707              *ptr = '\0';
1708              i <
1709              sizeof (actions)/sizeof (char *);
1710              for (cmd->c_action = 0, i = 0, *ptr = '\0';
1711                  i < sizeof (actions)/sizeof (char *);
1712                  i++) {
1713             if (strcmp(shcmd, actions[i]) == 0) {
1714                 if ((cmd->c_levels & MASKSU) &&
1715                     !(act_masks[i] & su_acts))
1716                     cmd->c_action =
1717                         act_masks[i];
1718                 cmd->c_action = act_masks[i];
1719                 break;
1720             }
1721         }
1722     }

```

```

1723     /*
1724      * If the action didn't match any legal action,
1725      * set state to FAILURE.
1726      */
1727     if (cmd->c_action == 0) {
1728         state = FAILURE;
1729     } else {
1730         state = COMMAND;
1731         (void) strcpy(shcmd, "exec ");
1732     }
1733     ptr = shcmd + EXEC;
1734     break;
1735 }
1736 continue;
1737 }
1738 }

1740 /* If the character is a '\n', then this is the end of a */
1741 /* line. If the '\n' wasn't preceded by a backslash, */
1742 /* it is also the end of an inittab command. If it was */
1743 /* preceded by a backslash then the next line is a */
1744 /* continuation. Note that the continuation '\n' falls */
1745 /* through and is treated like other characters and is */
1746 /* stored in the shell command line. */
1747 if (c == '\n' && lastc != '\\') {
1748     proceed = FALSE;
1749     *ptr = '\0';
1750     break;
1751 }

1753 /* For all other characters just stuff them into the */
1754 /* command as long as there aren't too many of them. */
1755 /* Make sure there is room for a terminating '\0' also. */
1756 if (ptr >= shcmd + MAXCMDL - 1)
1757     state = FAILURE;
1758 else
1759     *ptr++ = (char)c;

1761 /* If the character we just stored was a quoted */
1762 /* backslash, then change "c" to '\0', so that this */
1763 /* backslash will not cause a subsequent '\n' to appear */
1764 /* quoted. In otherwords '\ ' '\ ' '\n' is the real end */
1765 /* of a command, while '\ ' '\n' is a continuation. */
1766 if (c == '\\' && lastc == '\\')
1767     c = '\0';
1768 }

1770 /*
1771  * Make sure all the fields are properly specified
1772  * for a good command line.
1773  */
1774 if (state == COMMAND) {
1775     answer = TRUE;
1776     cmd->c_command = shcmd;

1778     /*
1779      * If no default level was supplied, insert
1780      * all numerical levels.
1781      */
1782     if (cmd->c_levels == 0)
1783         cmd->c_levels = MASK_NUMERIC;

1785     /*
1786      * If no action has been supplied, declare this
1787      * entry to be OFF.
1788      */

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1789         if (cmd->c_action == 0)
1790             cmd->c_action = M_OFF;

1792         /*
1793          * If no shell command has been supplied, make sure
1794          * there is a null string in the command field.
1795          */
1796         if (ptr == shcmd + EXEC)
1797             *shcmd = '\0';
1798     } else
1799         answer = FALSE;

1801     /*
1802     * If we have reached the end of inittab, then close it
1803     * and quit trying to find a good command line.
1804     */
1805     if (c == EOF) {
1806         (void) fclose(fp_inittab);
1807         fp_inittab = NULL;
1808         break;
1809     }
1810     return (answer);
1811 }
1812 }

```

unchanged portion omitted

```

2041 /*
2042  * boot_init(): Do initialization things that should be done at boot.
2043  */
2044 void
2045 boot_init()
2046 {
2047     int i;
2048     struct PROC_TABLE *process, *oprocess;
2049     struct CMD_LINE cmd;
2050     char line[MAXCMDL];
2051     char svc_aux[SVC_AUX_SIZE];
2052     char init_svc_fmri[SVC_FMRI_SIZE];
2053     char *old_path;
2054     int maxfiles;

2056     /* Use INIT_PATH for sysinit cmds */
2057     old_path = glob_envp[0];
2058     glob_envp[0] = malloc((unsigned)(strlen(INIT_PATH)+2));
2059     (void) strcpy(glob_envp[0], INIT_PATH);

2061     /*
2062     * Scan inittab(4) and process the special svc.startd entry, initdefault
2063     * and sysinit entries.
2064     */
2065     while (getcmd(&cmd, &line[0]) == TRUE) {
2066         if (startd_tmpl >= 0 && id_eq(cmd.c_id, "smf")) {
2067             process_startd_line(&cmd, line);
2068             (void) snprintf(startd_svc_aux, SVC_AUX_SIZE,
2069                 INITTAB_ENTRY_ID_STR_FORMAT, cmd.c_id);
2070         } else if (cmd.c_action == M_INITDEFAULT) {
2071             /*
2072              * initdefault is no longer meaningful, as the SMF
2073              * milestone controls what (legacy) run level we
2074              * boot to.
2075              */
2076             console(B_TRUE,
2077                 "Ignoring legacy \"initdefault\" entry.\n");
2078         } else if (cmd.c_action == M_SYSINIT) {
2079             /*
2080              * Execute the "sysinit" entry and wait for it to

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2081     * complete. No bookkeeping is performed on these
2082     * entries because we avoid writing to the file system
2083     * until after there has been a chance to check it.
2084     */
2085     if (process = findpslot(&cmd)) {
2086         (void) sighold(SIGCLD);
2087         (void) snprintf(svc_aux, SVC_AUX_SIZE,
2088             INITTAB_ENTRY_ID_STR_FORMAT, cmd.c_id);
2089         (void) snprintf(init_svc_fmri, SVC_FMRI_SIZE,
2090             SVC_INIT_PREFIX INITTAB_ENTRY_ID_STR_FORMAT,
2091             cmd.c_id);
2092         if (legacy_tmpl >= 0) {
2093             (void) ct_pr_tmpl_set_svc_fmri(
2094                 legacy_tmpl, init_svc_fmri);
2095             (void) ct_pr_tmpl_set_svc_aux(
2096                 legacy_tmpl, svc_aux);
2097         }

2099         for (oprocess = process;
2100             (process = efork(M_OFF, oprocess,
2101                 (NAMED|NOCLEANUP))) == NO_ROOM;
2102             /* CSTYLED */)
2103             ;
2104         (void) sigrelse(SIGCLD);

2106         if (process == NULLPROC) {
2107             maxfiles = ulimit(UL_GDES LIM, 0);

2109             for (i = 0; i < maxfiles; i++)
2110                 (void) fcntl(i, F_SETFD,
2111                     FD_CLOEXEC);
2112             (void) execle(SH, "INITSH", "-c",
2113                 cmd.c_command,
2114                 (char *)0, glob_envp);
2115             console(B_TRUE,
2116                 "Command\n\"%s\"\n failed to execute.  errno = %d (exec of shell failed)\n",
2117                 cmd.c_command, errno);
2118             exit(1);
2119         } else
2120             while (waitproc(process) == FAILURE)
2121                 ;
2122         } else while (waitproc(process) == FAILURE);
2123         process->p_flags = 0;
2124         st_write();
2125     }
2126 }

2128 /* Restore the path. */
2129 free(glob_envp[0]);
2130 glob_envp[0] = old_path;

2132 /*
2133  * This will enable st_write() to complain about init_state_file.
2134  */
2135 booting = 0;

2137 /*
2138  * If the /etc/ioctl.syscon didn't exist or had invalid contents write
2139  * out a correct version.
2140  */
2141 if (write_ioctl)
2142     write_ioctl_syscon();

2144 /*
2145  * Start svc.startd(1M), which does most of the work.

```

```

2146      */
2147      if (startd_cline[0] != '\0' && startd_tmpl >= 0) {
2148          /* Start svc.startd. */
2149          if (startd_run(startd_cline, startd_tmpl, 0) == -1)
2150              cur_state = SINGLE_USER;
2151      } else {
2152          console(B_TRUE, "Absent svc.startd entry or bad "
2153              "contract template. Not starting svc.startd.\n");
2154          enter_maintenance();
2155      }
2156 }

```

unchanged portion omitted

```

2811 /*
2812  * prog_name() searches for the word or unix path name and
2813  * returns a pointer to the last element of the pathname.
2814  */
2815 static char *
2816 prog_name(char *string)
2817 {
2818     char *ptr, *ptr2;
2819     static char word[UT_USER_SZ + 1];
2820     /* XXX - utmp - fix name length */
2821     static char word[_POSIX_LOGIN_NAME_MAX];
2822
2823     /*
2824      * Search for the first word skipping leading spaces and tabs.
2825      */
2826     while (*string == ' ' || *string == '\t')
2827         string++;
2828
2829     /*
2830      * If the first non-space non-tab character is not one allowed in
2831      * a word, return a pointer to a null string, otherwise parse the
2832      * pathname.
2833      */
2834     if (*string != '.' && *string != '/' && *string != '_' &&
2835         (*string < 'a' || *string > 'z') &&
2836         (*string < 'A' || *string > 'Z') &&
2837         (*string < '0' || *string > '9'))
2838         return ("");
2839
2840     /*
2841      * Parse the pathname looking forward for '/', ' ', '\t', '\n' or
2842      * '\0'. Each time a '/' is found, move "ptr" to one past the
2843      * '/', thus when a ' ', '\t', '\n', or '\0' is found, "ptr" will
2844      * point to the last element of the pathname.
2845      */
2846     for (ptr = string; *string != ' ' && *string != '\t' &&
2847         *string != '\n' && *string != '\0'; string++) {
2848         if (*string == '/')
2849             ptr = string+1;
2850     }
2851
2852     /*
2853      * Copy out up to the size of the "ut_user" array into "word",
2854      * null terminate it and return a pointer to it.
2855      */
2856     for (ptr2 = &word[0]; ptr2 < &word[UT_USER_SZ] &&
2857         /* XXX - utmp - fix name length */
2858         for (ptr2 = &word[0]; ptr2 < &word[_POSIX_LOGIN_NAME_MAX - 1] &&
2859             ptr < string; /* CSTYLED */)
2860         *ptr2++ = *ptr++;
2861
2862     *ptr2 = '\0';
2863     return (&word[0]);

```

```

2860 }
    unchanged portion omitted
2861
2862 /*
2863  * /etc/inittab has more entries and we have run out of room in the proc_table
2864  * array. Double the size of proc_table to accomodate the extra entries.
2865  */
2866 static void
2867 increase_proc_table_size()
2868 {
2869     sigset_t block, unblock;
2870     void *ptr;
2871     size_t delta = num_proc * sizeof (struct PROC_TABLE);
2872
2873     /*
2874      * Block signals for realloc.
2875      */
2876     (void) sigfillset(&block);
2877     (void) sigprocmask(SIG_BLOCK, &block, &unblock);
2878
2879     /*
2880      * On failure we just return because callers of this function check
2881      * for failure.
2882      */
2883     do
2884         ptr = realloc(g_state, g_state_sz + delta);
2885     while (ptr == NULL && errno == EAGAIN);
2886
2887     if (ptr != NULL) {
2888         /* ensure that the new part is initialized to zero */
2889         bzero((caddr_t)ptr + g_state_sz, delta);
2890
2891         g_state = ptr;
2892         g_state_sz += delta;
2893         num_proc <= 1;
2894     }
2895
2896     /* unblock our signals before returning */
2897     (void) sigprocmask(SIG_SETMASK, &unblock, NULL);
2898 }
    unchanged portion omitted
2899
2900 /*
2901  * Initialize our state.
2902  */
2903 * If the system just booted, then init_state_file, which is located on an
2904 * everpresent tmpfs filesystem, should not exist.
2905 *
2906 * If we were restarted, then init_state_file should exist, in
2907 * which case we'll read it in, sanity check it, and use it.
2908 *
2909 * Note: You can't call console() until proc_table is ready.
2910 */
2911 void
2912 st_init()
2913 {
2914     struct stat stb;
2915     int ret, st_fd, insane = 0;
2916     size_t to_be_read;
2917     char *ptr;

```

```

3900     booting = 1;

3902     do {
3903         /*
3904          * If we can exclusively create the file, then we're the
3905          * initial invocation of init(1M).
3906          */
3907         st_fd = open(init_state_file, O_RDWR | O_CREAT | O_EXCL,
3908             S_IRUSR | S_IWUSR);
3909     } while (st_fd == -1 && errno == EINTR);
3910     if (st_fd != -1)
3911         goto new_state;

3913     booting = 0;

3915     do {
3916         st_fd = open(init_state_file, O_RDWR, S_IRUSR | S_IWUSR);
3917     } while (st_fd == -1 && errno == EINTR);
3918     if (st_fd == -1)
3919         goto new_state;

3921     /* Get the size of the file. */
3922     do
3923         ret = fstat(st_fd, &stb);
3924     while (ret == -1 && errno == EINTR);
3925     ;
3926     while (ret == -1 && errno == EINTR);
3927     if (ret == -1)
3928         goto new_state;

3929     do
3930         g_state = malloc(stb.st_size);
3931     while (g_state == NULL && errno == EAGAIN);
3932     ;
3933     while (g_state == NULL && errno == EAGAIN);
3934     if (g_state == NULL)
3935         goto new_state;

3936     to_be_read = stb.st_size;
3937     ptr = (char *)g_state;
3938     while (to_be_read > 0) {
3939         ssize_t read_ret;

3941         read_ret = read(st_fd, ptr, to_be_read);
3942         if (read_ret < 0) {
3943             if (errno == EINTR)
3944                 continue;

3946             goto new_state;
3947         }

3949         to_be_read -= read_ret;
3950         ptr += read_ret;
3951     }

3953     (void) close(st_fd);

3955     g_state_sz = stb.st_size;

3957     if (st_sane()) {
3958         console(B_TRUE, "Restarting.\n");
3959         return;
3960     }

```

```

3962         insane = 1;

3964     new_state:
3965         if (st_fd >= 0)
3966             (void) close(st_fd);
3967         else
3968             (void) unlink(init_state_file);

3970         if (g_state != NULL)
3971             free(g_state);

3973         /* Something went wrong, so allocate new state. */
3974         g_state_sz = sizeof (struct init_state) +
3975             ((init_num_proc - 1) * sizeof (struct PROC_TABLE));
3976         do
3977             g_state = calloc(1, g_state_sz);
3978         while (g_state == NULL && errno == EAGAIN);
3979         ;
3980         while (g_state == NULL && errno == EAGAIN);
3981         if (g_state == NULL) {
3982             /* Fatal error! */
3983             exit(errno);
3984         }

3985         g_state->ist_runlevel = -1;
3986         num_proc = init_num_proc;

3988         if (!booting) {
3989             console(B_TRUE, "Restarting.\n");

3991             /* Overwrite the bad state file. */
3992             st_write();

3994             if (!insane) {
3995                 console(B_TRUE,
3996                     "Error accessing persistent state file '%s'. "
3997                     "Ignored.\n", init_state_file);
3998             } else {
3999                 console(B_TRUE,
4000                     "Persistent state file '%s' is invalid and was "
4001                     "ignored.\n", init_state_file);
4002             }
4003         }
4004     }
4005     _____unchanged_portion_omitted_____

4073     /*
4074      * Create a contract with these parameters.
4075      */
4076     static int
4077     contract_make_template(uint_t info, uint_t critical, uint_t fatal,
4078         uint64_t cookie)
4079     {
4080         int fd, err;

4082         char *ioctl_tset_emsg =
4083             "Couldn't set \"%s\" contract template parameter: %s.\n";

4085         do
4086             fd = open64(CTFS_ROOT "/process/template", O_RDWR);
4087         while (fd < 0 && errno == EINTR);
4088         ;
4089         while (fd < 0 && errno == EINTR);
4090         if (fd < 0) {
4091             console(B_TRUE, "Couldn't create process template: %s.\n",
4092                 strerror(errno));

```

```

4092         return (-1);
4093     }

4095     if (err = ct_pr_tmpl_set_param(fd, CT_PR_INHERIT | CT_PR_REGENT))
4096         console(B_TRUE, "Contract set template inherit, regent "
4097             "failed: %s.\n", strerror(err));

4099     /*
4100      * These errors result in a misconfigured template, which is better
4101      * than no template at all, so warn but don't abort.
4102      */
4103     if (err = ct_tmpl_set_informative(fd, info))
4104         console(B_TRUE, ioctl_tset_msg, "informative", strerror(err));

4106     if (err = ct_tmpl_set_critical(fd, critical))
4107         console(B_TRUE, ioctl_tset_msg, "critical", strerror(err));

4109     if (err = ct_pr_tmpl_set_fatal(fd, fatal))
4110         console(B_TRUE, ioctl_tset_msg, "fatal", strerror(err));

4112     if (err = ct_tmpl_set_cookie(fd, cookie))
4113         console(B_TRUE, ioctl_tset_msg, "cookie", strerror(err));

4115     (void) fcntl(fd, F_SETFD, FD_CLOEXEC);

4117     return (fd);
4118 }

4120 /*
4121  * Create the templates and open an event file descriptor. We use dup2(2) to
4122  * get these descriptors away from the stdin/stdout/stderr group.
4123  */
4124 static void
4125 contracts_init()
4126 {
4127     int err, fd;

4129     /*
4130      * Create & configure a legacy template. We only want empty events so
4131      * we know when to abandon them.
4132      */
4133     legacy_tmpl = contract_make_template(0, CT_PR_EV_EMPTY, CT_PR_EV_HWERR,
4134         ORDINARY_COOKIE);
4135     if (legacy_tmpl >= 0) {
4136         err = ct_tmpl_activate(legacy_tmpl);
4137         if (err != 0) {
4138             (void) close(legacy_tmpl);
4139             legacy_tmpl = -1;
4140             console(B_TRUE,
4141                 "Couldn't activate legacy template (%s); "
4142                 "legacy services will be in init's contract.\n",
4143                 strerror(err));
4144         }
4145     } else {
4146         console(B_TRUE,
4147             "Legacy services will be in init's contract.\n");
4148     }

4149     if (dup2(legacy_tmpl, 255) == -1) {
4150         console(B_TRUE, "Could not duplicate legacy template: %s.\n",
4151             strerror(errno));
4152     } else {
4153         (void) close(legacy_tmpl);
4154         legacy_tmpl = 255;
4155     }

4157     (void) fcntl(legacy_tmpl, F_SETFD, FD_CLOEXEC);

```

```

4159     startd_tmpl = contract_make_template(0, CT_PR_EV_EMPTY,
4160         CT_PR_EV_HWERR | CT_PR_EV_SIGNAL | CT_PR_EV_CORE, STARTD_COOKIE);

4162     if (dup2(startd_tmpl, 254) == -1) {
4163         console(B_TRUE, "Could not duplicate startd template: %s.\n",
4164             strerror(errno));
4165     } else {
4166         (void) close(startd_tmpl);
4167         startd_tmpl = 254;
4168     }

4170     (void) fcntl(startd_tmpl, F_SETFD, FD_CLOEXEC);

4172     if (legacy_tmpl < 0 && startd_tmpl < 0) {
4173         /* The creation errors have already been reported. */
4174         console(B_TRUE,
4175             "Ignoring contract events. Core smf(5) services will not "
4176             "be restarted.\n");
4177         return;
4178     }

4180     /*
4181      * Open an event endpoint.
4182      */
4183     do
4184         fd = open64(CTFS_ROOT "/process/pbundle", O_RDONLY);
4185     while (fd < 0 && errno == EINTR);
4186     ;
4187     while (fd < 0 && errno == EINTR);
4188     if (fd < 0) {
4189         console(B_TRUE,
4190             "Couldn't open process pbundle: %s. Core smf(5) services "
4191             "will not be restarted.\n", strerror(errno));
4192         return;
4193     }

4194     if (dup2(fd, 253) == -1) {
4195         console(B_TRUE, "Could not duplicate process bundle: %s.\n",
4196             strerror(errno));
4197     } else {
4198         (void) close(fd);
4199         fd = 253;
4200     }

4202     (void) fcntl(fd, F_SETFD, FD_CLOEXEC);

4204     /* Reset in case we've been restarted. */
4205     (void) ct_event_reset(fd);

4207     poll_fds[0].fd = fd;
4208     poll_fds[0].events = POLLIN;
4209     poll_nfds = 1;
4210 }

4212 static int
4213 contract_getfile(ctid_t id, const char *name, int oflag)
4214 {
4215     int fd;

4217     do
4218         fd = contract_open(id, "process", name, oflag);
4219     while (fd < 0 && errno == EINTR);
4220     ;
4221     while (fd < 0 && errno == EINTR);

```



new/usr/src/cmd/init/init.c

17

```
4222         if (fd < 0)
4223             console(B_TRUE, "Couldn't open %s for contract %ld: %s.\n",
4224                     name, id, strerror(errno));
4226         return (fd);
4227 }
unchanged_portion_omitted
```

new/usr/src/cmd/last/last.c

1

```
*****
13232 Wed Sep  4 20:45:58 2013
new/usr/src/cmd/last/last.c
2989 Eliminate use of LOGNAME_MAX in ON
1166 useradd have warning with name more 8 chars
*****
1 /*
2  * CDDL HEADER START
3  *
4  * The contents of this file are subject to the terms of the
5  * Common Development and Distribution License, Version 1.0 only
6  * (the "License").  You may not use this file except in compliance
7  * with the License.
8  *
9  * You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE
10  * or http://www.opensolaris.org/os/licensing.
11  * See the License for the specific language governing permissions
12  * and limitations under the License.
13  *
14  * When distributing Covered Code, include this CDDL HEADER in each
15  * file and include the License file at usr/src/OPENSOLARIS.LICENSE.
16  * If applicable, add the following below this CDDL HEADER, with the
17  * fields enclosed by brackets "[]" replaced with your own identifying
18  * information: Portions Copyright [yyyy] [name of copyright owner]
19  *
20  * CDDL HEADER END
21  */
22 /*
23  * Copyright (c) 2013 Gary Mills
24  *
25  * Copyright 2004 Sun Microsystems, Inc.  All rights reserved.
26  * Use is subject to license terms.
27  */
28
29 /*
30  *      Copyright (c) 1984, 1986, 1987, 1988, 1989 AT&T
31  *      All Rights Reserved
32  */
33
34 /*
35  * University Copyright- Copyright (c) 1982, 1986, 1988
36  * The Regents of the University of California
37  * All Rights Reserved
38  *
39  * University Acknowledgment- Portions of this document are derived from
40  * software developed by the University of California, Berkeley, and its
41  * contributors.
42  */
43
44 #pragma ident      "%Z%M% %I%      %E% SMI"
45
46 /*
47  * last
48  */
49 #include <sys/types.h>
50 #include <stdio.h>
51 #include <stdlib.h>
52 #include <unistd.h>
53 #include <strings.h>
54 #include <signal.h>
55 #include <sys/stat.h>
56 #include <pwd.h>
57 #include <fcntl.h>
58 #include <utmpx.h>
59 #include <locale.h>
60 #include <ctype.h>
```

new/usr/src/cmd/last/last.c

2

```
60 /*
61  * Use the full lengths from utmpx for NMAX, LMAX and HMAX .
62  * NMAX, LMAX and HMAX are set to these values for now. They
63  * should be much higher because of the max allowed limit in
64  * utmpx.h
65  */
66 #define NMAX      (sizeof (((struct utmpx *)0)->ut_user))
67 #define LMAX      (sizeof (((struct utmpx *)0)->ut_line))
68 #define NMAX      8
69 #define LMAX      12
70 #define HMAX      (sizeof (((struct utmpx *)0)->ut_host))
71
72 /* Print minimum field widths. */
73 #define LOGIN_WIDTH      8
74 #define LINE_WIDTH      12
75
76 #define SECDAY (24*60*60)
77 #define CHUNK_SIZE 256
78
79 #define lineq(a, b)      (strncmp(a, b, LMAX) == 0)
80 #define nameq(a, b)      (strncmp(a, b, NMAX) == 0)
81 #define hosteq(a, b)      (strncmp(a, b, HMAX) == 0)
82 #define linehostnameq(a, b, c, d) \
83     (lineq(a, b)&&hosteq(a+LMAX+1, c)&&nameq(a+LMAX+HMAX+2, d))
84
85 #define USAGE      "usage: last [-n number] [-f filename] [-a ] [name | tty] ...\n"
86
87 /* Beware: These are set in main() to exclude the executable name. */
88 static char      **argv;
89 static int      argc;
90 static char      **names;
91 static int      names_num;
92
93 static struct      utmpx buf[128];
94
95 /*
96  * ttnames and logouts are allocated in the blocks of
97  * CHUNK_SIZE lines whenever needed. The count of the
98  * current size is maintained in the variable "lines"
99  * The variable bootxtime is used to hold the time of
100  * the last BOOT_TIME
101  * All elements of the logouts are initialised to bootxtime
102  * everytime the buffer is reallocated.
103  */
104
105 static char      **ttnames;
106 static time_t      *logouts;
107 static time_t      bootxtime;
108 static int      lines;
109 static char      timef[128];
110 static char      hostf[HMAX + 1];
111
112 static char *strspl(char *, char *);
113 static void onintr(int);
114 static void reallocate_buffer();
115 static void memory_alloc(int);
116 static int want(struct utmpx *, char **, char **);
117 static void record_time(time_t *, int *, int, struct utmpx *);
118
119 int
120 main(int ac, char **av)
121 {
122     int i, j;
123     int aflag = 0;
124     int fpos; /* current position in time format buffer */
125 }
```

```

120     int chrcnt;      /* # of chars formatted by current sprintf */
121     int bl, wtmp;
122     char *ct;
123     char *ut_host;
124     char *ut_user;
125     struct utmpx *bp;
126     time_t otime;
127     struct stat stb;
128     int print = 0;
129     char *crmsg = (char *)0;
130     long outrec = 0;
131     long maxrec = 0x7fffffffL;
132     char *wtmpfile = "/var/adm/wtmpx";
133     size_t hostf_len;

135     (void) setlocale(LC_ALL, "");
136 #if !defined(TEXT_DOMAIN)      /* Should be defined by cc -D */
137 #define TEXT_DOMAIN "SYS_TEST" /* Use this only if it weren't. */
138 #endif
139     (void) textdomain(TEXT_DOMAIN);

141     (void) time(&buf[0].ut_xtime);
142     ac--, av++;
143     argc = ac;
144     argv = av;
145     names = malloc(argc * sizeof (char *));
146     if (names == NULL) {
147         perror("last");
148         exit(2);
149     }
150     names_num = 0;
151     for (i = 0; i < argc; i++) {
152         if (argv[i][0] == '-' ) {

154             /* -[0-9]* sets max # records to print */
155             if (isdigit(argv[i][1])) {
156                 maxrec = atoi(argv[i]+1);
157                 continue;
158             }

160             for (j = 1; argv[i][j] != '\0'; ++j) {
161                 switch (argv[i][j]) {

163                     /* -f name sets filename of wtmp file */
164                     case 'f':
165                         if (argv[i][j+1] != '\0') {
166                             wtmpfile = &argv[i][j+1];
167                         } else if (i+1 < argc) {
168                             wtmpfile = argv[i+1];
169                         } else {
170                             (void) fprintf(stderr,
171                                 gettext("last: argument to "
172                                     "-f is missing\n"));
173                             (void) fprintf(stderr,
174                                 gettext(USAGE));
175                             exit(1);
176                         }
177                         goto next_word;

179                     /* -n number sets max # records to print */
180                     case 'n': {
181                         char *arg;

183                         if (argv[i][j+1] != '\0') {
184                             arg = &argv[i][j+1];
185                         } else if (i+1 < argc) {

```

```

186             arg = argv[++i];
187         } else {
188             (void) fprintf(stderr,
189                 gettext("last: argument to "
190                     "-n is missing\n"));
191             (void) fprintf(stderr,
192                 gettext(USAGE));
193             exit(1);
194         }

196         if (!isdigit(*arg)) {
197             (void) fprintf(stderr,
198                 gettext("last: argument to "
199                     "-n is not a number\n"));
200             (void) fprintf(stderr,
201                 gettext(USAGE));
202             exit(1);
203         }
204         maxrec = atoi(arg);
205         goto next_word;
206     }

208     /* -a displays hostname last on the line */
209     case 'a':
210         aflag++;
211         break;

213     default:
214         (void) fprintf(stderr, gettext(USAGE));
215         exit(1);
216     }
217 }

219 next_word:
220     continue;
221 }

223     if (strlen(argv[i]) > 2 || strcmp(argv[i], "~") == 0 ||
224         getpwnam(argv[i]) != NULL) {
225         /* Not a tty number. */
226         names[names_num] = argv[i];
227         ++names_num;
228     } else {
229         /* tty number. Prepend "tty". */
230         names[names_num] = strspl("tty", argv[i]);
231         ++names_num;
232     }
233 }

235     wtmp = open(wtmpfile, 0);
236     if (wtmp < 0) {
237         perror(wtmpfile);
238         exit(1);
239     }
240     (void) fstat(wtmp, &stb);
241     bl = (stb.st_size + sizeof (buf)-1) / sizeof (buf);
242     if (signal(SIGINT, SIG_IGN) != SIG_IGN) {
243         (void) signal(SIGINT, onintr);
244         (void) signal(SIGQUIT, onintr);
245     }
246     lines = CHUNK_SIZE;
247     tttnames = calloc(lines, sizeof (char *));
248     logouts = calloc(lines, sizeof (time_t));
249     if (tttnames == NULL || logouts == NULL) {
250         (void) fprintf(stderr, gettext("Out of memory \n "));
251         exit(2);

```

```

252     }
253     for (bl--; bl >= 0; bl--) {
254         (void) lseek(wtmp, (off_t)(bl * sizeof (buf)), 0);
255         bp = &buf[read(wtmp, buf, sizeof (buf)) / sizeof (buf[0]) - 1];
256         for (; bp >= buf; bp--) {
257             if (want(bp, &ut_host, &ut_user)) {
258                 for (i = 0; i <= lines; i++) {
259                     if (i == lines)
260                         reallocate_buffer();
261                     if (ttnames[i] == NULL) {
262                         memory_alloc(i);
263                         /*
264                          * LMAX+HMAX+NMAX+3 bytes have been
265                          * allocated for ttnames[i].
266                          * If bp->ut_line is longer than LMAX,
267                          * ut_host is longer than HMAX,
268                          * and ut_user is longer than NMAX,
269                          * truncate it to fit ttnames[i].
270                          */
271                         (void) strncpy(ttnames[i], bp->ut_line,
272                                         LMAX+1);
273                         (void) strncpy(ttnames[i]+LMAX+1,
274                                         ut_host, HMAX+1);
275                         (void) strncpy(ttnames[i]+LMAX+HMAX+2,
276                                         ut_user, NMAX+1);
277                         record_time(&otime, &print,
278                                     i, bp);
279                         break;
280                     } else if (linehostnameeq(ttnames[i],
281                                                 bp->ut_line, ut_host, ut_user)) {
282                         record_time(&otime,
283                                     &print, i, bp);
284                         break;
285                     }
286                 }
287             }
288             if (print) {
289                 if (strcmp(bp->ut_line, "ftp", 3) == 0)
290                     bp->ut_line[3] = '\0';
291                 if (strcmp(bp->ut_line, "uucp", 4) == 0)
292                     bp->ut_line[4] = '\0';
293
294                 ct = ctime(&bp->ut_xtime);
295                 (void) printf(gettext("%-*.s %-*.s "),
296                               LOGIN_WIDTH, NMAX, bp->ut_name,
297                               LINE_WIDTH, LMAX, bp->ut_line);
298                 NMAX, NMAX, bp->ut_name,
299                 LMAX, LMAX, bp->ut_line);
300                 hostf_len = strlen(bp->ut_host);
301                 (void) snprintf(hostf, sizeof (hostf),
302                                 "%-*.s", hostf_len, hostf_len,
303                                 bp->ut_host);
304                 fpos = snprintf(timef, sizeof (timef),
305                                 "%10.10s %5.5s ",
306                                 ct, 11 + ct);
307                 if (!lineeq(bp->ut_line, "system boot") &&
308                     !lineeq(bp->ut_line, "system down")) {
309                     if (otime == 0 &&
310                         bp->ut_type == USER_PROCESS) {
311
312                     if (fpos < sizeof (timef)) {
313                         /* timef still has room */
314                         (void) snprintf(timef + fpos, sizeof (timef) - fpos,
315                                         gettext(" still logged in"));
316                     }
317                 }
318             }
319         }
320     }

```

```

316     } else {
317         time_t delta;
318         if (otime < 0) {
319             otime = -otime;
320             /*
321              * TRANSLATION_NOTE
322              * See other notes on "down"
323              * and "- %5.5s".
324              * "-" means "until". This
325              * is displayed after the
326              * starting time as in:
327              * 16:20 - down
328              * You probably don't want to
329              * translate this. Should you
330              * decide to translate this,
331              * translate "- %5.5s" too.
332              */
333
334         if (fpos < sizeof (timef)) {
335             /* timef still has room */
336             chrnt = snprintf(timef + fpos, sizeof (timef) - fpos,
337                             gettext("- %s"), crmsg);
338             fpos += chrnt;
339         }
340
341         } else {
342
343         if (fpos < sizeof (timef)) {
344             /* timef still has room */
345             chrnt = snprintf(timef + fpos, sizeof (timef) - fpos,
346                             gettext("- %5.5s"), ctime(&otime) + 11);
347             fpos += chrnt;
348         }
349
350         }
351         delta = otime - bp->ut_xtime;
352         if (delta < SECDAY) {
353
354         if (fpos < sizeof (timef)) {
355             /* timef still has room */
356             (void) snprintf(timef + fpos, sizeof (timef) - fpos,
357                             gettext(" (%5.5s)", asctime(gmtime(&delta)) + 11);
358         }
359
360         } else {
361
362         if (fpos < sizeof (timef)) {
363             /* timef still has room */
364             (void) snprintf(timef + fpos, sizeof (timef) - fpos,
365                             gettext(" (%1d%5.5s)", delta / SECDAY,
366                                     asctime(gmtime(&delta)) + 11);
367         }
368
369         }
370
371         }
372         if (aflag)
373             (void) printf("%-35.35s %-*.s\n",
374                             timef, strlen(hostf), hostf);
375         else
376             (void) printf("%-16.16s %-*.35s\n",
377                             hostf, timef);
378         (void) fflush(stdout);
379         if (++outrec >= maxrec)
380             exit(0);
381     }

```

```
382      /*
383      * when the system is down or crashed.
384      */
385      if (bp->ut_type == BOOT_TIME) {
386          for (i = 0; i < lines; i++)
387              logouts[i] = -bp->ut_xtime;
388          bootxtime = -bp->ut_xtime;
389          /*
390          * TRANSLATION_NOTE
391          * Translation of this "down " will replace
392          * the %s in "- %s". "down" is used instead
393          * of the real time session was ended, probably
394          * because the session ended by a sudden crash.
395          */
396          crmsg = gettext("down ");
397      }
398      print = 0;      /* reset the print flag */
399  }
400  }
401  ct = ctime(&buf[0].ut_xtime);
402  (void) printf(gettext("\nwtm begins %10.10s %5.5s \n"), ct, ct + 11);

404  /* free() called to prevent lint warning about names */
405  free(names);

407  return (0);
408 }
```

unchanged\_portion\_omitted

new/usr/src/cmd/newtask/newtask.c

```
*****
21455 Wed Sep  4 20:45:58 2013
new/usr/src/cmd/newtask/newtask.c
2989 Eliminate use of LOGNAME_MAX in ON
1166 useradd have warning with name more 8 chars
*****
1 /*
2  * CDDL HEADER START
3  *
4  * The contents of this file are subject to the terms of the
5  * Common Development and Distribution License, Version 1.0 only
6  * (the "License").  You may not use this file except in compliance
7  * with the License.
8  *
9  * You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE
10 * or http://www.opensolaris.org/os/licensing.
11 * See the License for the specific language governing permissions
12 * and limitations under the License.
13 *
14 * When distributing Covered Code, include this CDDL HEADER in each
15 * file and include the License file at usr/src/OPENSOLARIS.LICENSE.
16 * If applicable, add the following below this CDDL HEADER, with the
17 * fields enclosed by brackets "[]" replaced with your own identifying
18 * information: Portions Copyright [yyyy] [name of copyright owner]
19 *
20 * CDDL HEADER END
21 */
22 /*
23  * Copyright (c) 2013 Gary Mills
24  *
25  * Copyright 2005 Sun Microsystems, Inc.  All rights reserved.
26  * Use is subject to license terms.
27  */

27 #pragma ident      "%Z%M% %I%      %E% SMI"

29 #include <sys/types.h>
30 #include <sys/task.h>

32 #include <alloca.h>
33 #include <libproc.h>
34 #include <libintl.h>
35 #include <libgen.h>
36 #include <limits.h>
37 #include <project.h>
38 #include <pwd.h>
39 #include <secdb.h>
40 #include <stdio.h>
41 #include <stdlib.h>
42 #include <string.h>
43 #include <sys/varargs.h>
44 #include <unistd.h>
45 #include <errno.h>
46 #include <signal.h>
47 #include <priv_utils.h>

49 #include "utils.h"

51 #define OPTIONS_STRING  "Fc:lp:v"
52 #define NENV            8
53 #define ENVSIZE         255
54 #define PATH             "PATH=/usr/bin"
55 #define SUPATH          "PATH=/usr/sbin:/usr/bin"
56 #define SHELL            "/usr/bin/sh"
57 #define SHELL2          "/sbin/sh"
58 #define TIMEZONEFILE    "/etc/default/init"
```

1

new/usr/src/cmd/newtask/newtask.c

```
59 #define LOGINFILE      "/etc/default/login"
60 #define GLOBAL_ERR_SZ   1024
61 #define GRAB_RETRY_MAX  100

63 static const char *pname;
64 extern char **environ;
65 static char *supath = SUPATH;
66 static char *path = PATH;
67 static char global_error[GLOBAL_ERR_SZ];
68 static int verbose = 0;

70 static priv_set_t *nset;

72 /* Private definitions for libproject */
73 extern projid_t setproject_proc(const char *, const char *, int, pid_t,
74     struct ps_prochandle *, struct project *);
75 extern priv_set_t *setproject_initpriv(void);

77 static void usage(void);

79 static void preserve_error(const char *format, ...);

81 static int update_running_proc(int, char *, char *);
82 static int set_ids(struct ps_prochandle *, struct project *,
83     struct passwd *);
84 static struct passwd *match_user(uid_t, char *, int);
85 static void setproject_err(char *, char *, int, struct project *);

87 static void
88 usage(void)
89 {
90     (void) fprintf(stderr, gettext("usage: \n\t%s [-v] [-p project] "
91     "[-c pid] [-Fl] [command [args ...]]\n"), pname);
92     exit(2);
93 }

unchanged_portion_omitted

649 /*
650  * Given the input arguments, return the passwd structure that matches best.
651  * Also, since we use getpwnam() and friends, subsequent calls to this
652  * function will re-use the memory previously returned.
653  */
654 static struct passwd *
655 match_user(uid_t uid, char *projname, int is_my_uid)
656 {
657     char prbuf[PROJECT_BUFSZ], username[LOGNAME_MAX+1];
658     struct project prj;
659     char *tmp_name;
660     struct passwd *pw = NULL;

662     /*
663      * In order to allow users with the same UID but distinguishable
664      * user names to be in different projects we play a guessing
665      * game of which username is most appropriate.  If we're checking
666      * for the uid of the calling process, the login name is a
667      * good starting point.
668      */
669     if (is_my_uid) {
670         if ((tmp_name = getlogin()) == NULL ||
671             (pw = getpwnam(tmp_name)) == NULL || (pw->pw_uid != uid) ||
672             (pw->pw_name == NULL))
673             pw = NULL;
674     }

676     /*
677      * If the login name doesn't work, we try the first match for
```

2

```

678     * the current uid in the password file.
679     */
680     if (pw == NULL) {
681         if (((pw = getpwuid(uid)) == NULL) || pw->pw_name == NULL) {
682             preserve_error(gettext("cannot find username "
683                                   "for uid %d"), uid);
684             return (NULL);
685         }
686     }
687
688     /*
689     * If projname wasn't supplied, we've done our best, so just return
690     * what we've got now. Alternatively, if newtask's invoker has
691     * superuser privileges, return the pw structure we've got now, with
692     * no further checking from inproj(). Superuser should be able to
693     * join any project, and the subsequent call to setproject() will
694     * allow this.
695     */
696     if (projname == NULL || getuid() == (uid_t)0)
697         return (pw);
698
699     (void) strcpy(username, pw->pw_name, sizeof (username));
700     (void) strcpy(username, pw->pw_name);
701
702     if (inproj(username, projname, prbuf, PROJECT_BUFSZ) == 0) {
703         char **u;
704         tmp_name = NULL;
705
706         /*
707         * If the previous guesses didn't work, walk through all
708         * project members and test for UID-equivalence.
709         */
710
711         if (getprojbyname(projname, &prj, prbuf,
712                           PROJECT_BUFSZ) == NULL) {
713             preserve_error(gettext("unknown project \"%s\""),
714                           projname);
715             return (NULL);
716         }
717
718         for (u = prj.pj_users; *u; u++) {
719             if ((pw = getpwnam(*u)) == NULL)
720                 continue;
721
722             if (pw->pw_uid == uid) {
723                 tmp_name = pw->pw_name;
724                 break;
725             }
726         }
727
728         if (tmp_name == NULL) {
729             preserve_error(gettext("user \"%s\" is not a member of "
730                                   "project \"%s\""), username, projname);
731             return (NULL);
732         }
733     }
734
735     return (pw);
736 }

```

unchanged\_portion\_omitted

new/usr/src/cmd/oamuser/inc/users.h

1

```
*****
2641 Wed Sep  4 20:45:58 2013
new/usr/src/cmd/oamuser/inc/users.h
2989 Eliminate use of LOGNAME_MAX in ON
1166 useradd have warning with name more 8 chars
*****
1 /*
2  * CDDL HEADER START
3  *
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5  * Common Development and Distribution License (the "License").
6  * You may not use this file except in compliance with the License.
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8  * You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE
9  * or http://www.opensolaris.org/os/licensing.
10 * See the License for the specific language governing permissions
11 * and limitations under the License.
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13 * When distributing Covered Code, include this CDDL HEADER in each
14 * file and include the License file at usr/src/OPENSOLARIS.LICENSE.
15 * If applicable, add the following below this CDDL HEADER, with the
16 * fields enclosed by brackets "[]" replaced with your own identifying
17 * information: Portions Copyright [yyyy] [name of copyright owner]
18 *
19 * CDDL HEADER END
20 */
21 /*
22  * Copyright (c) 2013 Gary Mills
23  *
24  * Copyright (c) 1989, 2010, Oracle and/or its affiliates. All rights reserved.
25  */

27 /*      Copyright (c) 1984, 1986, 1987, 1988, 1989 AT&T */
28 /*      All Rights Reserved  */

31 #ifndef _USERS_H
32 #define _USERS_H

35 #include <pwd.h>
36 #include <grp.h>
37 #include <project.h>

39 #define GROUP          "/etc/group"

41 /* max number of projects that can be specified when adding a user */
42 #define NPROJECTS_MAX  1024

44 /* validation returns */
45 #define NOTUNIQUE      0      /* not unique */
46 #define RESERVED      1      /* reserved */
47 #define UNIQUE         2      /* is unique */
48 #define TOOBIG         3      /* number too big */
49 #define INVALID        4
50 #define LONGNAME       5      /* string too long */

52 /*
53  * Note: constraints checking for warning (release 2.6),
54  * and these may be enforced in the future releases.
55  */
56 #define WARN_NAME_TOO_LONG      0x1
57 #define WARN_BAD_GROUP_NAME     0x2
58 #define WARN_BAD_LOGNAME_CHAR   0x4
59 #define WARN_BAD_LOGNAME_FIRST  0x8
60 #define WARN_NO_LOWERCHAR       0x10
```

new/usr/src/cmd/oamuser/inc/users.h

2

```
61 #define WARN_BAD_PROJ_NAME      0x20
62 #define WARN_LOGGED_IN          0x40

64 /* Exit codes from passmgmt */
65 #define PEX_SUCCESS              0
66 #define PEX_NO_PERM              1
67 #define PEX_SYNTAX              2
68 #define PEX_BADARG              3
69 #define PEX_BADUID              4
70 #define PEX_HOSED_FILES         5
71 #define PEX_FAILED              6
72 #define PEX_MISSING            7
73 #define PEX_BUSY               8
74 #define PEX_BADNAME            9

76 #define REL_PATH(x)             (x && *x != '/')

78 /*
79  * interfaces available from the library
80  */
81 extern int valid_login(char *, struct passwd **, int *);
82 extern int valid_gname(char *, struct group **, int *);
83 extern int valid_group(char *, struct group **, int *);
84 extern int valid_project(char *, struct project *, void *buf, size_t, int *);
85 extern int valid_projname(char *, struct project *, void *buf, size_t, int *);
86 extern void warningmsg(int, char *);
87 extern void putgrent(struct group *, FILE *);

89 /* passmgmt */
90 #define PASSMGMT                "/usr/lib/passmgmt";
91 #endif /* _USERS_H */
```



new/usr/src/cmd/oamuser/lib/vlogin.c

\*\*\*\*\*  
2682 Wed Sep 4 20:45:58 2013

new/usr/src/cmd/oamuser/lib/vlogin.c

2989 Eliminate use of LOGNAME\_MAX in ON

1166 useradd have warning with name more 8 chars

\*\*\*\*\*

```
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16  * If applicable, add the following below this CDDL HEADER, with the
17  * fields enclosed by brackets "[]" replaced with your own identifying
18  * information: Portions Copyright [yyyy] [name of copyright owner]
19  *
20  * CDDL HEADER END
21  */
22 /*
23  * Copyright (c) 2013 Gary Mills
24  *
25  * Copyright (c) 1997, by Sun Microsystems, Inc.
26  * All rights reserved.
27  */

29 /*      Copyright (c) 1984, 1986, 1987, 1988, 1989 AT&T */
30 /*      All Rights Reserved      */
```

```
31 #pragma ident      "%Z%M% %I%      %E% SMI"      /* SVr4.0 1.3 */
```

```
32 /*LINTLIBRARY*/
```

```
34 #include      <sys/types.h>
35 #include      <stdio.h>
36 #include      <ctype.h>
37 #include      <userdefs.h>
38 #include      <users.h>
39 #include      <deflt.h>
40 #include      <limits.h>
```

```
42 /* Defaults file */
43 #define DEFAULT_USERADD "/etc/default/useradd"
```

```
45 /*
46  * validate string given as login name.
47  */
48 int
49 valid_login(char *login, struct passwd **pptr, int *warning)
50 {
51     struct passwd *t_pptr;
52     char *ptr = login;
53     int badlchar, badc, clower, len;
54     char c;
55     char action;
```

```
57     len = 0; clower = 0; badc = 0; badlchar = 0;
```

1

new/usr/src/cmd/oamuser/lib/vlogin.c

```
58     *warning = 0;
59     if (!login || !*login)
60         return (INVALID);

62     c = *ptr;
63     if (!isalpha(c))
64         badlchar++;
65     for (; c != NULL; ptr++, c = *ptr) {
66         len++;
67         if (!isprint(c) || (c == ':' || (c == '\n'))
68             return (INVALID);
69         if (!isalnum(c) && c != '_' && c != '-' && c != '.')
70             badc++;
71         if (islower(c))
72             clower++;
73     }

75     action = 'w';
76     if (defopen(DEFAULT_USERADD) == 0) {
77         char *defptr;

79         if ((defptr = defread("EXCEED_TRAD=")) != NULL) {
80             char let = tolower(*defptr);

82             switch (let) {
83                 case 'w':      /* warning */
84                 case 'e':      /* error */
85                 case 's':      /* silent */
86                     action = let;
87                     break;
88             }
89         }
90         (void) defopen((char *)NULL);
91     }

93     /*
94     * XXX length checking causes some operational/compatibility problem.
95     * This has to be revisited in the future as ARC/standards issue.
96     */
97     if (len > LOGNAME_MAX)
98         return (LONGNAME);

100     if (len > LOGNAME_MAX_TRAD) {
101         if (action == 'w')
102             *warning = *warning | WARN_NAME_TOO_LONG;
103         else if (action == 'e')
104             return (LONGNAME);
105     }

107     if (clower == 0)
108         *warning = *warning | WARN_NO_LOWERCHAR;
109     if (badc != 0)
110         *warning = *warning | WARN_BAD_LOGNAME_CHAR;
111     if (badlchar != 0)
112         *warning = *warning | WARN_BAD_LOGNAME_FIRST;

114     if ((t_pptr = getpwnam(login)) != NULL) {
115         if (pptr) *pptr = t_pptr;
116         return (NOTUNIQUE);
117     }
118     return (UNIQUE);
119 }
```

\_\_\_\_\_unchanged\_portion\_omitted\_\_\_\_\_

2

new/usr/src/cmd/oamuser/user/Makefile

1

```
*****
3238 Wed Sep  4 20:45:58 2013
new/usr/src/cmd/oamuser/user/Makefile
2989 Eliminate use of LOGNAME_MAX in ON
1166 useradd have warning with name more 8 chars
*****
1 #
2 # CDDL HEADER START
3 #
4 # The contents of this file are subject to the terms of the
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16 # fields enclosed by brackets "[]" replaced with your own identifying
17 # information: Portions Copyright [yyyy] [name of copyright owner]
18 #
19 # CDDL HEADER END
20 #
21 # Copyright (c) 2013 Gary Mills
22 #
23 # Copyright (c) 1990, 2010, Oracle and/or its affiliates. All rights reserved.
24 #
25 # cmd/oamuser/user/Makefile
26 #
27
28 DEFAULTFILES= useradd.dfl
29
30 include ../../Makefile.cmd
31
32 GREP=      grep
33
34 USERADD=   useradd
35 USERDEL=   userdel
36 USERMOD=   usermod
37 ROLEADD=   roleadd
38 ROLEDEL=   roledel
39 ROLEMOD=   rolemod
40
41 SBINPROG=  $(USERADD) $(USERDEL) $(USERMOD)
42 #
43 # Removing sysadm: deleted $(SYSADMPROG) from this target.
44 #
45 PROG=      $(SBINPROG)
46 PRODUCT=   $(PROG)
47
48 ADD_OBJ=   useradd.o      uid.o      homedir.o \
49            groups.o      call_pass.o userdefs.o  messages.o \
50            val_lgrp.o     funcs.o     val_lprj.o  proj.o
51
52 DEL_OBJ=   userdel.o      call_pass.o  rmfiles.o  isbusy.o \
53            groups.o      messages.o   funcs.o    proj.o
54
55 MOD_OBJ=   usermod.o      uid.o      movedir.o  groups.o \
56            rmfiles.o      call_pass.o isbusy.o  homedir.o \
57            userdefs.o     messages.o val_lgrp.o funcs.o \
58            val_lprj.o     proj.o
59
60 OBJECTS=   $(ADD_OBJ)     $(DEL_OBJ)     $(MOD_OBJ)
```

new/usr/src/cmd/oamuser/user/Makefile

2

```
62 SRCS=      $(OBJECTS:.o=.c)
63
64 LIBDIR=     ../lib
65 LIBUSRGRP=  $(LIBDIR)/lib.a
66 LIBADM=     -ladm
67 LOCAL=     ../inc
68 HERE=      .
69 LINTFLAGS=  -u
70
71 ROOTSKEL=   $(ROOTETC)/skel
72 INSSBINPROG=$(SBINPROG:%=$(ROOTUSRSBIN)/%)
73 INSSKELFILE=$(SKELFILE:%=$(ROOTSKEL)/%)
74
75 CPPFLAGS=   -I$(HERE) -I$(LOCAL) $(CPPFLAGS.master)
76 CERRWARN += -_gcc=-Wno-implicit-function-declaration
77 CERRWARN += -_gcc=-Wno-type-limits
78 CERRWARN += -_gcc=-Wno-uninitialized
79 CERRWARN += -_gcc=-Wno-parentheses
80
81 $(INSSBINPROG) := FILEMODE = 0555
82 $(INSSYSADMPROG) := FILEMODE = 0500
83 $(INSSKELFILE) := FILEMODE = 0644
84
85 $(USERADD) := OBJS = $(ADD_OBJ)
86 $(USERADD) := LIBS = $(LIBUSRGRP)
87
88 $(USERDEL) := OBJS = $(DEL_OBJ)
89 $(USERDEL) := LIBS = $(LIBUSRGRP)
90
91 $(USERMOD) := OBJS = $(MOD_OBJ)
92 $(USERMOD) := LIBS = $(LIBUSRGRP)
93
94 LDLIBS +=   -lbsd -lnsl -lsecdb -lproject -ltsol
95
96 .PARALLEL: $(OBJECTS)
97
98 all:        $(PRODUCT)
99
100 $(PROG):    $$$(OBJ) $$$(LIBS)
101             $(LINK.c) $(OBJ) -o $$@ $(LIBS) $(LDLIBS)
102             $(POST_PROCESS)
103
104 $(USERADD): $(ADD_OBJ)
105 $(USERMOD): $(MOD_OBJ)
106 $(USERDEL): $(DEL_OBJ)
107
108 install:    all $(ROOTETCDEFAULTFILES) .WAIT \
109             $(ROOTSKEL) $(INSSBINPROG) $(INSSKELFILE)
110 install:    all .WAIT $(ROOTSKEL) $(INSSBINPROG) $(INSSKELFILE)
111             $(RM) $(ROOTUSRSBIN)/$(ROLEADD)
112             $(LN) $(ROOTUSRSBIN)/$(USERADD) $(ROOTUSRSBIN)/$(ROLEADD)
113             $(RM) $(ROOTUSRSBIN)/$(ROLEDEL)
114             $(LN) $(ROOTUSRSBIN)/$(USERDEL) $(ROOTUSRSBIN)/$(ROLEDEL)
115             $(RM) $(ROOTUSRSBIN)/$(ROLEMOD)
116             $(LN) $(ROOTUSRSBIN)/$(USERMOD) $(ROOTUSRSBIN)/$(ROLEMOD)
117
118 clean:
119             $(RM) $(OBJECTS)
120
121 lint:       lint_SRCS
122
123 include ../../Makefile.targ
```

```

25 /*
26  * Copyright (c) 2013 Gary Mills
27  *
28  * Copyright 2006 Sun Microsystems, Inc. All rights reserved.
29  * Use is subject to license terms.
30 */

```

```

32 char *errmsgs[] = {
33     "WARNING: uid %ld is reserved.\n",
34     "WARNING: more than NGROUPS_MAX(%d) groups specified.\n",
35     "ERROR: invalid syntax.\n"
36     "usage: useradd [-u uid [-o] | -g group | -G group[[,group]...] |"
37     "-d dir | -b base_dir | \n"
38     "\t\t-s shell | -C comment | -m [-k skel_dir] | -f inactive | \n"
39     "\t\t-e expire | -A authorization [, authorization ...] | \n"
40     "\t\t-P profile [, profile ...] | -R role [, role ...] | \n"
41     "\t\t-K key=value | -p project | [project ...] login\n"
42     "\tuseradd -D [-g group | -b base_dir | -f inactive | -e expire\n"
43     "\t\t-A authorization [, authorization ...] | \n"
44     "\t\t-P profile [, profile ...] | -R role [, role ...] | \n"
45     "\t\t-K key=value ... -p project] | [-s shell] | [-k skel_dir]\n",
46     "ERROR: Invalid syntax.\nusage: userdel [-r] login\n",
47     "ERROR: Invalid syntax.\n"
48     "usage: usermod -u uid [-o] | -g group | -G group[[,group]...] | \n"
49     "\t\t-d dir [-m] | -s shell | -c comment | \n"
50     "\t\t-l new_logname | -f inactive | -e expire | \n"
51     "\t\t-A authorization [, authorization ...] | -K key=value ... | \n"
52     "\t\t-P profile [, profile ...] | -R role [, role ...] login\n",
53     "ERROR: Unexpected failure. Defaults unchanged.\n",
54     "ERROR: Unable to remove files from home directory.\n",
55     "ERROR: Unable to remove home directory.\n",
56     "ERROR: Cannot update system files - login cannot be %s.\n",
57     "ERROR: uid %ld is already in use. Choose another.\n",
58     "ERROR: %s is already in use. Choose another.\n",

```

unchanged portion omitted

new/usr/src/cmd/oamuser/user/messages.h

1

```
*****
4075 Wed Sep  4 20:45:58 2013
new/usr/src/cmd/oamuser/user/messages.h
2989 Eliminate use of LOGNAME_MAX in ON
1166 useradd have warning with name more 8 chars
*****
1 /*
2  * CDDL HEADER START
3  *
4  * The contents of this file are subject to the terms of the
5  * Common Development and Distribution License (the "License").
6  * You may not use this file except in compliance with the License.
7  *
8  * You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE
9  * or http://www.opensolaris.org/os/licensing.
10 * See the License for the specific language governing permissions
11 * and limitations under the License.
12 *
13 * When distributing Covered Code, include this CDDL HEADER in each
14 * file and include the License file at usr/src/OPENSOLARIS.LICENSE.
15 * If applicable, add the following below this CDDL HEADER, with the
16 * fields enclosed by brackets "[]" replaced with your own identifying
17 * information: Portions Copyright [yyyy] [name of copyright owner]
18 *
19 * CDDL HEADER END
20 */
21 /*      Copyright (c) 1984, 1986, 1987, 1988, 1989 AT&T */
22 /*      All Rights Reserved */

25 /*
26  * Copyright (c) 2013 Gary Mills
27  *
28  * Copyright 2006 Sun Microsystems, Inc. All rights reserved.
29  * Use is subject to license terms.
30  */

32 #ifndef _MESSAGES_H
33 #define _MESSAGES_H

33 #pragma ident      "%Z%M% %I%      %E% SMI"

35 extern void errmsg(int, ...);

37 /* WARNING: uid %d is reserved. */
38 #define M_RESERVED      0

40 /* WARNING: more than NGROUPS_MAX(%d) groups specified. */
41 #define M_MAXGROUPS      1

43 /* ERROR: invalid syntax.\nusage:  useradd ... */
44 #define M_AUSAGE      2

46 /* ERROR: Invalid syntax.\nusage:  userdel [-r] login\n" */
47 #define M_DUSAGE      3

49 /* ERROR: Invalid syntax.\nusage:  usermod ... */
50 #define M_MUSAGE      4

53 /* ERROR: Unexpected failure. Defaults unchanged. */
54 #define M_FAILED      5

56 /* ERROR: Unable to remove files from home directory. */
57 #define M_RMFILES      6
```

new/usr/src/cmd/oamuser/user/messages.h

2

```
59 /* ERROR: Unable to remove home directory. */
60 #define M_RMHOME      7

62 /* ERROR: Cannot update system files - login cannot be %s. */
63 #define M_UPDATE      8

65 /* ERROR: uid %d is already in use. Choose another. */
66 #define M_UID_USED      9

68 /* ERROR: %s is already in use. Choose another. */
69 #define M_USED      10

71 /* ERROR: %s does not exist. */
72 #define M_EXIST      11

74 /* ERROR: %s is not a valid %s. Choose another. */
75 #define M_INVALID      12

77 /* ERROR: %s is in use. Cannot %s it. */
78 #define M_BUSY      13

80 /* WARNING: %s has no permissions to use %s. */
81 #define M_NO_PERM      14

83 /* ERROR: There is not sufficient space to move %s home directory to %s */
84 #define M_NOSPACE      15

86 /* ERROR: %s %d is too big. Choose another. */
87 #define M_TOOBIG      16

89 /* ERROR: group %s does not exist. Choose another. */
90 #define M_GRP_NOTUSED      17

92 /* ERROR: Unable to %s: %s */
93 #define M_OOPS      18

95 /* ERROR: %s is not a full path name. Choose another. */
96 #define M_RELPATH      19

98 /* ERROR: %s is the primary group name. Choose another. */
99 #define M_SAME_GRP      20

101 /* ERROR: Inconsistent password files. See pwconv(1M). */
102 #define M_HOSSED_FILES      21

104 /* ERROR: %s is not a local user. */
105 #define M_NONLOCAL      22

107 /* ERROR: Permission denied. */
108 #define M_PERM_DENIED      23

110 /* WARNING: Group entry exceeds 2048 char: /etc/group entry truncated. */
111 #define M_GROUP_ENTRY_OVF      24

113 /* ERROR: invalid syntax.\nusage:  roleadd ... */
114 #define M_ARUSAGE      25

116 /* ERROR: Invalid syntax.\nusage:  roledel [-r] login\n" */
117 #define M_DRUSAGE      26

119 /* ERROR: Invalid syntax.\nusage:  rolemod -u ... */
120 #define M_MRUSAGE      27

122 /* ERROR: project %s does not exist. Choose another. */
123 #define M_PROJ_NOTUSED      28
```

new/usr/src/cmd/oamuser/user/messages.h

3

```
125 /* WARNING: more than NPROJECTS_MAX(%d) projects specified. */
126 #define M_MAXPROJECTS    29

128 /* WARNING: Project entry exceeds 512 char: /etc/project entry truncated. */
129 #define M_PROJ_ENTRY_OVF  30

131 /* ERROR: Invalid key. */
132 #define M_INVALID_KEY    31

134 /* ERROR: Missing value specification. */
135 #define M_INVALID_VALUE  32

137 /* ERROR: Multiple definitions of key ``%s''. */
138 #define M_REDEFINED_KEY  33

140 /* ERROR: Roles must be modified with rolemod */
141 #define M_ISROLE         34

143 /* ERROR: Users must be modified with usermod */
144 #define M_ISUSER         35

146 /* WARNING: gid %d is reserved. */
147 #define M_RESERVED_GID   36

149 /* ERROR: Failed to read /etc/group file due to invalid entry or read error. */
150 #define M_READ_ERROR     37

152 /* ERROR: %s is too long. Choose another. */
153 #define M_TOO_LONG       38

155 #endif /* _MESSAGES_H */
```

new/usr/src/cmd/oamuser/user/useradd.c

1

```
*****
17433 Wed Sep  4 20:45:58 2013
new/usr/src/cmd/oamuser/user/useradd.c
2989 Eliminate use of LOGNAME_MAX in ON
1166 useradd have warning with name more 8 chars
*****

1 /*
2  * CDDL HEADER START
3  *
4  * The contents of this file are subject to the terms of the
5  * Common Development and Distribution License (the "License").
6  * You may not use this file except in compliance with the License.
7  *
8  * You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE
9  * or http://www.opensolaris.org/os/licensing.
10 * See the License for the specific language governing permissions
11 * and limitations under the License.
12 *
13 * When distributing Covered Code, include this CDDL HEADER in each
14 * file and include the License file at usr/src/OPENSOLARIS.LICENSE.
15 * If applicable, add the following below this CDDL HEADER, with the
16 * fields enclosed by brackets "[]" replaced with your own identifying
17 * information: Portions Copyright [yyyy] [name of copyright owner]
18 *
19 * CDDL HEADER END
20 */
21 /*
22  * Copyright (c) 2013 Gary Mills
23  *
24  * Copyright 2008 Sun Microsystems, Inc. All rights reserved.
25  * Use is subject to license terms.
26  */

28 /*      Copyright (c) 1984, 1986, 1987, 1988, 1989 AT&T */
29 /*      All Rights Reserved      */

32 #include      <sys/types.h>
33 #include      <sys/stat.h>
34 #include      <sys/param.h>
35 #include      <stdio.h>
36 #include      <stdlib.h>
37 #include      <ctype.h>
38 #include      <limits.h>
39 #include      <string.h>
40 #include      <userdefs.h>
41 #include      <errno.h>
42 #include      <project.h>
43 #include      <unistd.h>
44 #include      <user_attr.h>
45 #include      "users.h"
46 #include      "messages.h"
47 #include      "userdisp.h"
48 #include      "funcs.h"

50 /*
51  * useradd [-u uid [-o] | -g group | -G group [[, group]...] | -d dir [-m]
52  *          | -s shell | -c comment | -k skel_dir | -b base_dir] ]
53  *          [ -A authorization [, authorization ...]]
54  *          [ -P profile [, profile ...]]
55  *          [ -K key=value ]
56  *          [ -R role [, role ...]] [-p project [, project ...]] login
57  * useradd -D [ -g group ] [ -b base_dir | -f inactive | -e expire |
58  *          -s shell | -k skel_dir ]
59  *          [ -A authorization [, authorization ...]]
60  *          [ -P profile [, profile ...]] [ -K key=value ]
```

new/usr/src/cmd/oamuser/user/useradd.c

2

```
61 *          [ -R role [, role ...]] [-p project [, project ...]] login
62 *
63 *      This command adds new user logins to the system.  Arguments are:
64 *
65 *      uid - an integer
66 *      group - an existing group's integer ID or char string name
67 *      dir - home directory
68 *      shell - a program to be used as a shell
69 *      comment - any text string
70 *      skel_dir - a skeleton directory
71 *      base_dir - a directory
72 *      login - a string of printable chars except colon(:)
73 *      authorization - One or more comma separated authorizations defined
74 *                      in auth_attr(4).
75 *      profile - One or more comma separated execution profiles defined
76 *                in prof_attr(4)
77 *      role - One or more comma-separated role names defined in user_attr(4)
78 *      project - One or more comma-separated project names or numbers
79 *
80 */

82 extern struct userdefs *getusrdef();
83 extern void dispusrdef();

85 static void cleanup();

87 extern uid_t findnextuid(void);
88 extern int check_perm(), valid_expire();
89 extern int putusrdef(), valid_uid();
90 extern int call_passmgmt(), edit_group(), create_home();
91 extern int edit_project();
92 extern int **valid_lgroup();
93 extern projid_t **valid_lproject();
94 extern void update_def(struct userdefs *);
95 extern void import_def(struct userdefs *);

97 static uid_t uid; /* new uid */
98 static char *logname; /* login name to add */
99 static struct userdefs *usrdefs; /* defaults for useradd */

101 char *cmdname;

103 static char homedir[ PATH_MAX + 1 ]; /* home directory */
104 static char gidstring[32]; /* group id string representation */
105 static gid_t gid; /* gid of new login */
106 static char uidstring[32]; /* user id string representation */
107 static char *uidstr = NULL; /* uid from command line */
108 static char *base_dir = NULL; /* base_dir from command line */
109 static char *group = NULL; /* group from command line */
110 static char *grps = NULL; /* multi groups from command line */
111 static char *dir = NULL; /* home dir from command line */
112 static char *shell = NULL; /* shell from command line */
113 static char *comment = NULL; /* comment from command line */
114 static char *skel_dir = NULL; /* skel dir from command line */
115 static long inact; /* inactive days */
116 static char *inactstr = NULL; /* inactive from command line */
117 static char inactstring[10]; /* inactivity string representation */
118 static char *expirestr = NULL; /* expiration date from command line */
119 static char *projects = NULL; /* project id's from command line */

121 static char *usertype = NULL; /* type of user, either role or normal */

123 typedef enum {
124     BASEDIR = 0,
125     SKELDIR,
126     SHELL
```

```

127 } path_opt_t;

130 static void valid_input(path_opt_t, const char *);

132 int
133 main(argc, argv)
134 int argc;
135 char *argv[];
136 {
137     int ch, ret, mflag = 0, oflag = 0, Dflag = 0, **gidlist;
138     projid_t **projlist;
139     char *ptr; /* loc in a str, may be set by strtol */
140     struct group *g_ptr;
141     struct project p_ptr;
142     char mybuf[PROJECT_BUFSZ];
143     struct stat statbuf; /* status buffer for stat */
144     int warning;
145     int busy = 0;
146     char **nargv; /* arguments for execvp of passmgmt */
147     int argindex; /* argument index into nargv */

149     cmdname = argv[0];

151     if (geteuid() != 0) {
152         errmsg(M_PERM_DENIED);
153         exit(EX_NO_PERM);
154     }

156     opterr = 0; /* no print errors from getopt */
157     usertype = getusertype(argv[0]);

159     change_key(USERATTR_TYPE_KW, usertype);

161     while ((ch = getopt(argc, argv,
162         "b:c:Dd:e:f:G:g:k:mop:s:u:A:P:R:K:") != EOF)
163     {
164         switch (ch) {
165             case 'b':
166                 base_dir = optarg;
167                 break;

168             case 'c':
169                 comment = optarg;
170                 break;

172             case 'D':
173                 Dflag++;
174                 break;

176             case 'd':
177                 dir = optarg;
178                 break;

180             case 'e':
181                 expirestr = optarg;
182                 break;

184             case 'f':
185                 inactstr = optarg;
186                 break;

188             case 'G':
189                 grps = optarg;
190                 break;

192             case 'g':

```

```

193         group = optarg;
194         break;

196     case 'k':
197         skel_dir = optarg;
198         break;

200     case 'm':
201         mflag++;
202         break;

204     case 'o':
205         oflag++;
206         break;

208     case 'p':
209         projects = optarg;
210         break;

212     case 's':
213         shell = optarg;
214         break;

216     case 'u':
217         uidstr = optarg;
218         break;

220     case 'A':
221         change_key(USERATTR_AUTHS_KW, optarg);
222         break;

224     case 'P':
225         change_key(USERATTR_PROFILES_KW, optarg);
226         break;

228     case 'R':
229         if (is_role(usertype)) {
230             errmsg(M_ARUSAGE);
231             exit(EX_SYNTAX);
232         }
233         change_key(USERATTR_ROLES_KW, optarg);
234         break;

236     case 'K':
237         change_key(NULL, optarg);
238         break;

240     default:
241     case '?':
242         if (is_role(usertype))
243             errmsg(M_ARUSAGE);
244         else
245             errmsg(M_AUSAGE);
246         exit(EX_SYNTAX);
247     }

249     /* get defaults for adding new users */
250     usrdefs = getusrdef(usertype);

252     if (Dflag) {
253         /* DISPLAY mode */

255         /* check syntax */
256         if (optind != argc) {
257             if (is_role(usertype))
258                 errmsg(M_ARUSAGE);

```

```

259         else
260             errmsg(M_AUSAGE);
261         exit(EX_SYNTAX);
262     }
263
264     if (uidstr != NULL || oflag || grps != NULL ||
265         dir != NULL || mflag || comment != NULL) {
266         if (is_role(usertype))
267             errmsg(M_ARUSAGE);
268         else
269             errmsg(M_AUSAGE);
270         exit(EX_SYNTAX);
271     }
272
273     /* Group must be an existing group */
274     if (group != NULL) {
275         switch (valid_group(group, &g_ptr, &warning)) {
276             case INVALID:
277                 errmsg(M_INVALID, group, "group id");
278                 exit(EX_BADARG);
279                 /*NOTREACHED*/
280             case TOOBIG:
281                 errmsg(M_TOOBIG, "gid", group);
282                 exit(EX_BADARG);
283                 /*NOTREACHED*/
284             case RESERVED:
285             case UNIQUE:
286                 errmsg(M_GRP_NOTUSED, group);
287                 exit(EX_NAME_NOT_EXIST);
288             }
289             if (warning)
290                 warningmsg(warning, group);
291
292             usrdefs->defgroup = g_ptr->gr_gid;
293             usrdefs->defgname = g_ptr->gr_name;
294
295         }
296
297     /* project must be an existing project */
298     if (projects != NULL) {
299         switch (valid_project(projects, &p_ptr, mybuf,
300             sizeof (mybuf), &warning)) {
301             case INVALID:
302                 errmsg(M_INVALID, projects, "project id");
303                 exit(EX_BADARG);
304                 /*NOTREACHED*/
305             case TOOBIG:
306                 errmsg(M_TOOBIG, "projid", projects);
307                 exit(EX_BADARG);
308                 /*NOTREACHED*/
309             case UNIQUE:
310                 errmsg(M_PROJ_NOTUSED, projects);
311                 exit(EX_NAME_NOT_EXIST);
312             }
313             if (warning)
314                 warningmsg(warning, projects);
315
316             usrdefs->defproj = p_ptr.pj_projid;
317             usrdefs->defprojname = p_ptr.pj_name;
318         }
319
320     /* base_dir must be an existing directory */
321     if (base_dir != NULL) {
322         valid_input(BASEDIR, base_dir);
323         usrdefs->defparent = base_dir;
324     }

```

```

326         /* inactivity period is an integer */
327         if (inactstr != NULL) {
328             /* convert inactstr to integer */
329             inact = strtol(inactstr, &ptr, 10);
330             if (*ptr || inact < 0) {
331                 errmsg(M_INVALID, inactstr,
332                     "inactivity period");
333                 exit(EX_BADARG);
334             }
335
336             usrdefs->definact = inact;
337         }
338
339     /* expiration string is a date, newer than today */
340     if (expirestr != NULL) {
341         if (*expirestr) {
342             if (valid_expire(expirestr, (time_t *)0)
343                 == INVALID) {
344                 errmsg(M_INVALID, expirestr,
345                     "expiration date");
346                 exit(EX_BADARG);
347             }
348             usrdefs->defexpire = expirestr;
349         } else
350             /* Unset the expiration date */
351             usrdefs->defexpire = "";
352     }
353
354     if (shell != NULL) {
355         valid_input(SHELL, shell);
356         usrdefs->defshell = shell;
357     }
358     if (skel_dir != NULL) {
359         valid_input(SKELDIR, skel_dir);
360         usrdefs->defskel = skel_dir;
361     }
362     update_def(usrdefs);
363
364     /* change defaults for useradd */
365     if (putusrdef(usrdefs, usertype) < 0) {
366         errmsg(M_UPDATE, "created");
367         exit(EX_UPDATE);
368     }
369
370     /* Now, display */
371     dispusrdef(stdout, (D_ALL & ~D_RID), usertype);
372     exit(EX_SUCCESS);
373
374 }
375
376 /* ADD mode */
377
378 /* check syntax */
379 if (optind != argc - 1 || (skel_dir != NULL && !mflag)) {
380     if (is_role(usertype))
381         errmsg(M_ARUSAGE);
382     else
383         errmsg(M_AUSAGE);
384     exit(EX_SYNTAX);
385 }
386
387 logname = argv[optind];
388 switch (valid_login(logname, (struct passwd **)NULL, &warning)) {
389     case INVALID:
390         errmsg(M_INVALID, logname, "login name");

```



```

391         exit(EX_BADARG);
392         /*NOTREACHED*/

394     case NOTUNIQUE:
395         errmsg(M_USED, logname);
396         exit(EX_NAME_EXISTS);
397         /*NOTREACHED*/

399     case LONGNAME:
400         errmsg(M_TOO_LONG, logname);
401         exit(EX_BADARG);
402         /*NOTREACHED*/
403     }

405     if (warning)
406         warningmsg(warning, logname);
407     if (uidstr != NULL) {
408         /* convert uidstr to integer */
409         errno = 0;
410         uid = (uid_t)strtol(uidstr, &ptr, (int)10);
411         if (*ptr || errno == ERANGE) {
412             errmsg(M_INVALID, uidstr, "user id");
413             exit(EX_BADARG);
414         }

416         switch (valid_uid(uid, NULL)) {
417             case NOTUNIQUE:
418                 if (!oflag) {
419                     /* override not specified */
420                     errmsg(M_UID_USED, uid);
421                     exit(EX_ID_EXISTS);
422                 }
423                 break;
424             case RESERVED:
425                 errmsg(M_RESERVED, uid);
426                 break;
427             case TOOBIG:
428                 errmsg(M_TOOBIG, "uid", uid);
429                 exit(EX_BADARG);
430                 break;
431         }

433     } else {

435         if ((uid = findnextuid()) < 0) {
436             errmsg(M_INVALID, "default id", "user id");
437             exit(EX_ID_EXISTS);
438         }
439     }

441     if (group != NULL) {
442         switch (valid_group(group, &g_ptr, &warning)) {
443             case INVALID:
444                 errmsg(M_INVALID, group, "group id");
445                 exit(EX_BADARG);
446                 /*NOTREACHED*/
447             case TOOBIG:
448                 errmsg(M_TOOBIG, "gid", group);
449                 exit(EX_BADARG);
450                 /*NOTREACHED*/
451             case RESERVED:
452             case UNIQUE:
453                 errmsg(M_GRP_NOTUSED, group);
454                 exit(EX_NAME_NOT_EXIST);
455                 /*NOTREACHED*/
456         }

```

```

458         if (warning)
459             warningmsg(warning, group);
460         gid = g_ptr->gr_gid;

462     } else gid = usrdefs->defgroup;

464     if (grps != NULL) {
465         if (!*grps)
466             /* ignore -G "" */
467             grps = (char *)0;
468         else if (!(gidlist = valid_lgroup(grps, gid)))
469             exit(EX_BADARG);
470     }

472     if (projects != NULL) {
473         if (!*projects)
474             projects = (char *)0;
475         else if (!(projlist = valid_lproject(projects)))
476             exit(EX_BADARG);
477     }

479     /* if base_dir is provided, check its validity; otherwise default */
480     if (base_dir != NULL)
481         valid_input(BASEDIR, base_dir);
482     else
483         base_dir = usrdefs->defparent;

485     if (dir == NULL) {
486         /* set homedir to home directory made from base_dir */
487         (void) sprintf(homedir, "%s/%s", base_dir, logname);

489     } else if (REL_PATH(dir)) {
490         errmsg(M_RELPATH, dir);
491         exit(EX_BADARG);

493     } else
494         (void) strcpy(homedir, dir);

496     if (mflag) {
497         /* Does home dir. already exist? */
498         if (stat(homedir, &statbuf) == 0) {
499             /* directory exists - don't try to create */
500             mflag = 0;

502             if (check_perm(statbuf, uid, gid, S_IXOTH) != 0)
503                 errmsg(M_NO_PERM, logname, homedir);
504         }
505     }
506     /*
507     * if shell, skel_dir are provided, check their validity.
508     * Otherwise default.
509     */
510     if (shell != NULL)
511         valid_input(SHELL, shell);
512     else
513         shell = usrdefs->defshell;

515     if (skel_dir != NULL)
516         valid_input(SKELDIR, skel_dir);
517     else
518         skel_dir = usrdefs->defskel;

520     if (inactstr != NULL) {
521         /* convert inactstr to integer */
522         inact = strtol(inactstr, &ptr, 10);

```

```

523         if (*ptr || inact < 0) {
524             errmsg(M_INVALID, inactstr, "inactivity period");
525             exit(EX_BADARG);
526         }
527     } else inact = usrdefs->definact;

529     /* expiration string is a date, newer than today */
530     if (expirestr != NULL) {
531         if (*expirestr) {
532             if (valid_expire(expirestr, (time_t *)0) == INVALID) {
533                 errmsg(M_INVALID, expirestr, "expiration date");
534                 exit(EX_BADARG);
535             }
536             usrdefs->defexpire = expirestr;
537         } else
538             /* Unset the expiration date */
539             expirestr = (char *)0;

541     } else expirestr = usrdefs->defexpire;

543     import_def(usrdefs);

545     /* must now call passmgmt */

547     /* set up arguments to passmgmt in nargv array */
548     nargv = malloc((30 + nkeys * 2) * sizeof(char *));
549     argindex = 0;
550     nargv[argindex++] = PASSMGMT;
551     nargv[argindex++] = "-a";          /* add */

553     if (comment != NULL) {
554         /* comment */
555         nargv[argindex++] = "-c";
556         nargv[argindex++] = comment;
557     }

559     /* flags for home directory */
560     nargv[argindex++] = "-h";
561     nargv[argindex++] = homedir;

563     /* set gid flag */
564     nargv[argindex++] = "-g";
565     (void) sprintf(gidstring, "%u", gid);
566     nargv[argindex++] = gidstring;

568     /* shell */
569     nargv[argindex++] = "-s";
570     nargv[argindex++] = shell;

572     /* set inactive */
573     nargv[argindex++] = "-f";
574     (void) sprintf(inactstring, "%ld", inact);
575     nargv[argindex++] = inactstring;

577     /* set expiration date */
578     if (expirestr != NULL) {
579         nargv[argindex++] = "-e";
580         nargv[argindex++] = expirestr;
581     }

583     /* set uid flag */
584     nargv[argindex++] = "-u";
585     (void) sprintf(uidstring, "%u", uid);
586     nargv[argindex++] = uidstring;

588     if (oflag) nargv[argindex++] = "-o";

```

```

590     if (nkeys > 1)
591         addkey_args(nargv, &argindex);

593     /* finally - login name */
594     nargv[argindex++] = logname;

596     /* set the last to null */
597     nargv[argindex++] = NULL;

599     /* now call passmgmt */
600     ret = PEX_FAILED;
601     /*
602     * If call_passmgmt fails for any reason other than PEX_BADUID, exit
603     * is invoked with an appropriate error message. If PEX_BADUID is
604     * returned, then if the user specified the ID, exit is invoked
605     * with an appropriate error message. Otherwise we try to pick a
606     * different ID and try again. If we run out of IDs, i.e. no more
607     * users can be created, then -1 is returned and we terminate via exit.
608     * If PEX_BUSY is returned we increment a count, since we will stop
609     * trying if PEX_BUSY reaches 3. For PEX_SUCCESS we immediately
610     * terminate the loop.
611     */
612     while (busy < 3 && ret != PEX_SUCCESS) {
613         switch (ret = call_passmgmt(nargv)) {
614             case PEX_SUCCESS:
615                 break;
616             case PEX_BUSY:
617                 busy++;
618                 break;
619             case PEX_HOSED_FILES:
620                 errmsg(M_HOSED_FILES);
621                 exit(EX_INCONSISTENT);
622                 break;

624             case PEX_SYNTAX:
625             case PEX_BADARG:
626                 /* should NEVER occur that passmgmt usage is wrong */
627                 if (is_role(usertype))
628                     errmsg(M_ARUSAGE);
629                 else
630                     errmsg(M_AUSAGE);
631                 exit(EX_SYNTAX);
632                 break;

634             case PEX_BADUID:
635                 /*
636                 * The uid has been taken. If it was specified by a
637                 * user, then we must fail. Otherwise, keep trying
638                 * to get a good uid until we run out of IDs.
639                 */
640                 if (uidstr != NULL) {
641                     errmsg(M_UID_USED, uid);
642                     exit(EX_ID_EXISTS);
643                 } else {
644                     if ((uid = findnextuid()) < 0) {
645                         errmsg(M_INVALID, "default id",
646                             "user id");
647                         exit(EX_ID_EXISTS);
648                     }
649                     (void) sprintf(uidstring, "%u", uid);
650                 }
651                 break;

653             case PEX_BADNAME:
654                 /* invalid lname */

```

```
655         errmsg(M_USED, logname);
656         exit(EX_NAME_EXISTS);
657         break;

659         default:
660             errmsg(M_UPDATE, "created");
661             exit(ret);
662             break;
663     }
664 }
665 if (busy == 3) {
666     errmsg(M_UPDATE, "created");
667     exit(ret);
668 }

670 /* add group entry */
671 if ((grps != NULL) && edit_group(logname, (char *)0, gidlist, 0)) {
672     errmsg(M_UPDATE, "created");
673     cleanup(logname);
674     exit(EX_UPDATE);
675 }

677 /* update project database */
678 if ((projects != NULL) &&
679     edit_project(logname, (char *)NULL, projlist, 0)) {
680     errmsg(M_UPDATE, "created");
681     cleanup(logname);
682     exit(EX_UPDATE);
683 }

685 /* create home directory */
686 if (mflag &&
687     (create_home(homedir, skel_dir, uid, gid) != EX_SUCCESS)) {
688     (void) edit_group(logname, (char *)0, (int **)0, 1);
689     cleanup(logname);
690     exit(EX_HOMEDIR);
691 }

693     return (ret);
694 }
```

---

unchanged portion omitted

new/usr/src/cmd/oamuser/user/useradd.dfl

1

\*\*\*\*\*

1242 Wed Sep 4 20:45:59 2013

new/usr/src/cmd/oamuser/user/useradd.dfl

2989 Eliminate use of LOGNAME\_MAX in ON

1166 useradd have warning with name more 8 chars

\*\*\*\*\*

```
1 #
2 # CDDL HEADER START
3 #
4 # The contents of this file are subject to the terms of the
5 # Common Development and Distribution License (the "License").
6 # You may not use this file except in compliance with the License.
7 #
8 # You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE
9 # or http://www.opensolaris.org/os/licensing.
10 # See the License for the specific language governing permissions
11 # and limitations under the License.
12 #
13 # When distributing Covered Code, include this CDDL HEADER in each
14 # file and include the License file at usr/src/OPENSOLARIS.LICENSE.
15 # If applicable, add the following below this CDDL HEADER, with the
16 # fields enclosed by brackets "[]" replaced with your own identifying
17 # information: Portions Copyright [yyyy] [name of copyright owner]
18 #
19 # CDDL HEADER END
20 #
21 #
22 # Copyright (c) 2013 Gary Mills

24 # The EXCEED_TRAD indicates the action when the traditional login name
25 # length limit of eight characters is exceeded. The value "warning"
26 # means to issue a warning message and continue. This is the default.
27 # The value "error" means to issue an error message and terminate.
28 # The value "silent" means to continue without issuing any message.
29 #
30 EXCEED_TRAD=warning
31 #EXCEED_TRAD=error
32 #EXCEED_TRAD=silent
```

new/usr/src/cmd/oamuser/user/usermod.c

1

```
*****
15671 Wed Sep  4 20:45:59 2013
new/usr/src/cmd/oamuser/user/usermod.c
2989 Eliminate use of LOGNAME_MAX in ON
1166 useradd have warning with name more 8 chars
*****
1 /*
2  * CDDL HEADER START
3  *
4  * The contents of this file are subject to the terms of the
5  * Common Development and Distribution License (the "License").
6  * You may not use this file except in compliance with the License.
7  *
8  * You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE
9  * or http://www.opensolaris.org/os/licensing.
10 * See the License for the specific language governing permissions
11 * and limitations under the License.
12 *
13 * When distributing Covered Code, include this CDDL HEADER in each
14 * file and include the License file at usr/src/OPENSOLARIS.LICENSE.
15 * If applicable, add the following below this CDDL HEADER, with the
16 * fields enclosed by brackets "[]" replaced with your own identifying
17 * information: Portions Copyright [yyyy] [name of copyright owner]
18 *
19 * CDDL HEADER END
20 */
21 /*
22  * Copyright (c) 2013 Gary Mills
23  *
24  * Copyright 2008 Sun Microsystems, Inc. All rights reserved.
25  * Use is subject to license terms.
26  */

28 /*      Copyright (c) 1984, 1986, 1987, 1988, 1989 AT&T */
29 /*      All Rights Reserved  */

33 #include <sys/types.h>
34 #include <sys/stat.h>
35 #include <sys/param.h>
36 #include <stdio.h>
37 #include <stdlib.h>
38 #include <ctype.h>
39 #include <limits.h>
40 #include <string.h>
41 #include <userdefs.h>
42 #include <user_attr.h>
43 #include <nss_dbdefs.h>
44 #include <errno.h>
45 #include <project.h>
46 #include "users.h"
47 #include "messages.h"
48 #include "funcc.h"

50 /*
51  * usermod [-u uid [-o] | -g group | -G group [[,group]...] | -d dir [-m]
52  *          | -s shell | -c comment | -l new_logname]
53  *          | -f inactive | -e expire ]
54  *          | -A authorization [, authorization ...]]
55  *          | -P profile [, profile ...]]
56  *          | -R role [, role ...]]
57  *          | -K key=value ]
58  *          | -p project [, project]] login
59  *
60  *      This command adds new user logins to the system.  Arguments are:
```

new/usr/src/cmd/oamuser/user/usermod.c

2

```
61 *
62 *      uid - an integer less than MAXUID
63 *      group - an existing group's integer ID or char string name
64 *      dir - a directory
65 *      shell - a program to be used as a shell
66 *      comment - any text string
67 *      skel_dir - a directory
68 *      base_dir - a directory
69 *      rid - an integer less than 2**16 (USHORT)
70 *      login - a string of printable chars except colon (:)
71 *      inactive - number of days a login maybe inactive before it is locked
72 *      expire - date when a login is no longer valid
73 *      authorization - One or more comma separated authorizations defined
74 *                      in auth_attr(4).
75 *      profile - One or more comma separated execution profiles defined
76 *                in prof_attr(4)
77 *      role - One or more comma-separated role names defined in user_attr(4)
78 *      key=value - One or more -K options each specifying a valid user_attr(4)
79 *                  attribute.
80 *
81 */

83 extern int **valid_lgroup(), isbusy();
84 extern int valid_uid(), check_perm(), create_home(), move_dir();
85 extern int valid_expire(), edit_group(), call_passmgmt();
86 extern projid_t **valid_lproject();

88 static uid_t uid;          /* new uid */
89 static gid_t gid;          /* gid of new login */
90 static char *new_logname = NULL; /* new login name with -l option */
91 static char *uidstr = NULL; /* uid from command line */
92 static char *group = NULL; /* group from command line */
93 static char *grps = NULL; /* multi groups from command line */
94 static char *dir = NULL; /* home dir from command line */
95 static char *shell = NULL; /* shell from command line */
96 static char *comment = NULL; /* comment from command line */
97 static char *logname = NULL; /* login name to add */
98 static char *inactstr = NULL; /* inactive from command line */
99 static char *expire = NULL; /* expiration date from command line */
100 static char *projects = NULL; /* project ids from command line */
101 static char *usertype;

103 char *cmdname;
104 static char gidstring[32], uidstring[32];
105 char inactstring[10];

107 char *
108 strcpmalloc(str)
109 char *str;
110 {
111     if (str == NULL)
112         return (NULL);
113
114     return (strdup(str));
115 }

unchanged_portion_omitted

141 int
142 main(argc, argv)
143 int argc;
144 char **argv;
145 {
146     int ch, ret = EX_SUCCESS, call_pass = 0, oflag = 0;
147     int tries, mflag = 0, inact, **gidlist, flag = 0;
148     boolean_t fail_if_busy = B_FALSE;
149     char *ptr;
```

```

150     struct passwd *pstruct;          /* password struct for login */
151     struct passwd *pw;
152     struct group *g_ptr;             /* validated group from -g */
153     struct stat statbuf;             /* status buffer for stat */
154 #ifndef att
155     FILE *pwf;                      /* fille ptr for opened passwd file */
156 #endif
157     int warning;
158     projid_t **projlist;
159     char **nargv;                    /* arguments for execvp of passgmt */
160     int argindex;                    /* argument index into nargv */
161     userattr_t *ua;
162     char *val;
163     int isrole;                      /* current account is role */

165     cmdname = argv[0];

167     if (geteuid() != 0) {
168         errmsg(M_PERM_DENIED);
169         exit(EX_NO_PERM);
170     }

172     opterr = 0;                      /* no print errors from getopt */
173     /* get user type based on the program name */
174     usertype = getusertype(argv[0]);

176     while ((ch = getopt(argc, argv,
177                          "c:d:e:f:G:g:l:mop:s:u:A:P:R:K:")) != EOF)
178         switch (ch) {
179             case 'c':
180                 comment = optarg;
181                 flag++;
182                 break;
183             case 'd':
184                 dir = optarg;
185                 fail_if_busy = B_TRUE;
186                 flag++;
187                 break;
188             case 'e':
189                 expire = optarg;
190                 flag++;
191                 break;
192             case 'f':
193                 inactstr = optarg;
194                 flag++;
195                 break;
196             case 'G':
197                 grps = optarg;
198                 flag++;
199                 break;
200             case 'g':
201                 group = optarg;
202                 fail_if_busy = B_TRUE;
203                 flag++;
204                 break;
205             case 'l':
206                 new_logname = optarg;
207                 fail_if_busy = B_TRUE;
208                 flag++;
209                 break;
210             case 'm':
211                 mflag++;
212                 flag++;
213                 fail_if_busy = B_TRUE;
214                 break;
215             case 'o':

```

```

216                 oflag++;
217                 flag++;
218                 fail_if_busy = B_TRUE;
219                 break;
220             case 'p':
221                 projects = optarg;
222                 flag++;
223                 break;
224             case 's':
225                 shell = optarg;
226                 flag++;
227                 break;
228             case 'u':
229                 uidstr = optarg;
230                 flag++;
231                 fail_if_busy = B_TRUE;
232                 break;
233             case 'A':
234                 change_key(USERATTR_AUTHS_KW, optarg);
235                 flag++;
236                 break;
237             case 'P':
238                 change_key(USERATTR_PROFILES_KW, optarg);
239                 flag++;
240                 break;
241             case 'R':
242                 change_key(USERATTR_ROLES_KW, optarg);
243                 flag++;
244                 break;
245             case 'K':
246                 change_key(NULL, optarg);
247                 flag++;
248                 break;
249             default:
250                 case '?':
251                     if (is_role(usertype))
252                         errmsg(M_MRUSAGE);
253                     else
254                         errmsg(M_MUSAGE);
255                     exit(EX_SYNTAX);
256                 }

258     if (optind != argc - 1 || flag == 0) {
259         if (is_role(usertype))
260             errmsg(M_MRUSAGE);
261         else
262             errmsg(M_MUSAGE);
263         exit(EX_SYNTAX);
264     }

266     if ((!uidstr && oflag) || (mflag && !dir)) {
267         if (is_role(usertype))
268             errmsg(M_MRUSAGE);
269         else
270             errmsg(M_MUSAGE);
271         exit(EX_SYNTAX);
272     }

274     logname = argv[optind];

276     /* Determine whether the account is a role or not */
277     if ((ua = getusernam(logname)) == NULL ||
278         (val = kva_match(ua->attr, USERATTR_TYPE_KW)) == NULL ||
279         strcmp(val, USERATTR_TYPE_NONADMIN_KW) != 0)
280         isrole = 0;
281     else

```

```

282         isrole = 1;

284     /* Verify that rolemod is used for roles and usermod for users */
285     if (isrole != is_role(usertype)) {
286         if (isrole)
287             errmsg(M_ISROLE);
288         else
289             errmsg(M_ISUSER);
290         exit(EX_SYNTAX);
291     }

293     /* Set the usertype key; defaults to the commandline */
294     usertype = getsetdefval(USERATTR_TYPE_KW, usertype);

296     if (is_role(usertype)) {
297         /* Roles can't have roles */
298         if (getsetdefval(USERATTR_ROLES_KW, NULL) != NULL) {
299             errmsg(M_MRUSAGE);
300             exit(EX_SYNTAX);
301         }
302         /* If it was an ordinary user, delete its roles */
303         if (!isrole)
304             change_key(USERATTR_ROLES_KW, "");
305     }

307 #ifdef att
308     pw = getpwnam(logname);
309 #else
310     /*
311     * Do this with fgetpwent to make sure we are only looking on local
312     * system (since passgmt only works on local system).
313     */
314     if ((pwf = fopen("/etc/passwd", "r")) == NULL) {
315         errmsg(M_OOPS, "open", "/etc/passwd");
316         exit(EX_FAILURE);
317     }
318     while ((pw = fgetpwent(pwf)) != NULL)
319         if (strcmp(pw->pw_name, logname) == 0)
320             break;

322     fclose(pwf);
323 #endif

325     if (pw == NULL) {
326         char          pwdb[NSS_BUFLen_PASSWD];
327         struct passwd  pwd;

329         if (getpwnam_r(logname, &pwd, pwdb, sizeof (pwdb)) == NULL) {
330             /* This user does not exist. */
331             errmsg(M_EXIST, logname);
332             exit(EX_NAME_NOT_EXIST);
333         } else {
334             /* This user exists in non-local name service. */
335             errmsg(M_NONLOCAL, logname);
336             exit(EX_NOT_LOCAL);
337         }
338     }

340     pstruct = passwd_cpmalloc(pw);

342     /*
343     * We can't modify a logged in user if any of the following
344     * are being changed:
345     * uid (-u & -o), group (-g), home dir (-m), loginname (-l).
346     * If none of those are specified it is okay to go ahead
347     * some types of changes only take effect on next login, some

```

```

348     * like authorisations and profiles take effect instantly.
349     * One might think that -K type=role should require that the
350     * user not be logged in, however this would make it very
351     * difficult to make the root account a role using this command.
352     */
353     if (isbusy(logname)) {
354         if (fail_if_busy) {
355             errmsg(M_BUSY, logname, "change");
356             exit(EX_BUSY);
357         }
358         warningmsg(WARN_LOGGED_IN, logname);
359     }

361     if (new_logname && strcmp(new_logname, logname)) {
362         switch (valid_login(new_logname, (struct passwd **)NULL,
363             &warning)) {
364             case INVALID:
365                 errmsg(M_INVALID, new_logname, "login name");
366                 exit(EX_BADARG);
367                 /*NOTREACHED*/

369             case NOTUNIQUE:
370                 errmsg(M_USED, new_logname);
371                 exit(EX_NAME_EXISTS);
372                 /*NOTREACHED*/

374             case LONGNAME:
375                 errmsg(M_TOO_LONG, new_logname);
376                 exit(EX_BADARG);
377                 /*NOTREACHED*/

379             default:
380                 call_pass = 1;
381                 break;
382         }
383         if (warning)
384             warningmsg(warning, logname);
385     }

387     if (uidstr) {
388         /* convert uidstr to integer */
389         errno = 0;
390         uid = (uid_t)strtol(uidstr, &ptr, (int)10);
391         if (*ptr || errno == ERANGE) {
392             errmsg(M_INVALID, uidstr, "user id");
393             exit(EX_BADARG);
394         }

396         if (uid != pstruct->pw_uid) {
397             switch (valid_uid(uid, NULL)) {
398                 case NOTUNIQUE:
399                     if (!oflag) {
400                         /* override not specified */
401                         errmsg(M_UID_USED, uid);
402                         exit(EX_ID_EXISTS);
403                     }
404                     break;
405                 case RESERVED:
406                     errmsg(M_RESERVED, uid);
407                     break;
408                 case TOOBIG:
409                     errmsg(M_TOOBIG, "uid", uid);
410                     exit(EX_BADARG);
411                     break;
412             }

```

```

414         call_pass = 1;
416     } else {
417         /* uid's the same, so don't change anything */
418         uidstr = NULL;
419         oflag = 0;
420     }
422 } else uid = pstruct->pw_uid;
424 if (group) {
425     switch (valid_group(group, &g_ptr, &warning)) {
426     case INVALID:
427         errmsg(M_INVALID, group, "group id");
428         exit(EX_BADARG);
429         /*NOTREACHED*/
430     case TOOBIG:
431         errmsg(M_TOOBIG, "gid", group);
432         exit(EX_BADARG);
433         /*NOTREACHED*/
434     case UNIQUE:
435         errmsg(M_GRP_NOTUSED, group);
436         exit(EX_NAME_NOT_EXIST);
437         /*NOTREACHED*/
438     case RESERVED:
439         gid = (gid_t)strtol(group, &ptr, (int)10);
440         errmsg(M_RESERVED_GID, gid);
441         break;
442     }
443     if (warning)
444         warningmsg(warning, group);
446     if (g_ptr != NULL)
447         gid = g_ptr->gr_gid;
448     else
449         gid = pstruct->pw_gid;
451     /* call passmgmt if gid is different, else ignore group */
452     if (gid != pstruct->pw_gid)
453         call_pass = 1;
454     else group = NULL;
456 } else gid = pstruct->pw_gid;
458 if (grps && *grps) {
459     if (!(gidlist = valid_lgroup(grps, gid)))
460         exit(EX_BADARG);
461 } else
462     gidlist = (int **)0;
464 if (projects && *projects) {
465     if (!(projlist = valid_lproject(projects)))
466         exit(EX_BADARG);
467 } else
468     projlist = (projid_t **)0;
470 if (dir) {
471     if (REL_PATH(dir)) {
472         errmsg(M_RELPATH, dir);
473         exit(EX_BADARG);
474     }
475     if (strcmp(pstruct->pw_dir, dir) == 0) {
476         /* home directory is the same so ignore dflag & mflag */
477         dir = NULL;
478         mflag = 0;
479     } else call_pass = 1;

```

```

480     }
482     if (mflag) {
483         if (stat(dir, &statbuf) == 0) {
484             /* Home directory exists */
485             if (check_perm(statbuf, pstruct->pw_uid,
486                 pstruct->pw_gid, S_IWOTH|S_IXOTH) != 0) {
487                 errmsg(M_NO_PERM, logname, dir);
488                 exit(EX_NO_PERM);
489             }
491         } else ret = create_home(dir, NULL, uid, gid);
493         if (ret == EX_SUCCESS)
494             ret = move_dir(pstruct->pw_dir, dir, logname);
496         if (ret != EX_SUCCESS)
497             exit(ret);
498     }
500     if (shell) {
501         if (REL_PATH(shell)) {
502             errmsg(M_RELPATH, shell);
503             exit(EX_BADARG);
504         }
505         if (strcmp(pstruct->pw_shell, shell) == 0) {
506             /* ignore s option if shell is not different */
507             shell = NULL;
508         } else {
509             if (stat(shell, &statbuf) < 0 ||
510                 (statbuf.st_mode & S_IFMT) != S_IFREG ||
511                 (statbuf.st_mode & 0555) != 0555) {
513                 errmsg(M_INVALID, shell, "shell");
514                 exit(EX_BADARG);
515             }
517             call_pass = 1;
518         }
519     }
521     if (comment)
522         /* ignore comment if comment is not changed */
523         if (strcmp(pstruct->pw_comment, comment))
524             call_pass = 1;
525     else
526         comment = NULL;
528     /* inactive string is a positive integer */
529     if (inactstr) {
530         /* convert inactstr to integer */
531         inact = (int)strtol(inactstr, &ptr, 10);
532         if (*ptr || inact < 0) {
533             errmsg(M_INVALID, inactstr, "inactivity period");
534             exit(EX_BADARG);
535         }
536         call_pass = 1;
537     }
539     /* expiration string is a date, newer than today */
540     if (expire) {
541         if (*expire &&
542             valid_expire(expire, (time_t *)0) == INVALID) {
543             errmsg(M_INVALID, expire, "expiration date");
544             exit(EX_BADARG);
545         }

```



```

546         call_pass = 1;
547     }

549     if (nkeys > 0)
550         call_pass = 1;

552     /* that's it for validations - now do the work */

554     if (grps) {
555         /* redefine login's supplementary group memberships */
556         ret = edit_group(logname, new_logname, gidlist, 1);
557         if (ret != EX_SUCCESS) {
558             errmsg(M_UPDATE, "modified");
559             exit(ret);
560         }
561     }
562     if (projects) {
563         ret = edit_project(logname, (char *)NULL, projlist, 0);
564         if (ret != EX_SUCCESS) {
565             errmsg(M_UPDATE, "modified");
566             exit(ret);
567         }
568     }

571     if (!call_pass) exit(ret);

573     /* only get to here if need to call passmgmt */
574     /* set up arguments to passmgmt in nargv array */
575     nargv = malloc((30 + nkeys * 2) * sizeof(char *));

577     argindex = 0;
578     nargv[argindex++] = PASSMGMT;
579     nargv[argindex++] = "-m";      /* modify */

581     if (comment) { /* comment */
582         nargv[argindex++] = "-c";
583         nargv[argindex++] = comment;
584     }

586     if (dir) {
587         /* flags for home directory */
588         nargv[argindex++] = "-h";
589         nargv[argindex++] = dir;
590     }

592     if (group) {
593         /* set gid flag */
594         nargv[argindex++] = "-g";
595         (void) sprintf(gidstring, "%u", gid);
596         nargv[argindex++] = gidstring;
597     }

599     if (shell) { /* shell */
600         nargv[argindex++] = "-s";
601         nargv[argindex++] = shell;
602     }

604     if (inactstr) {
605         nargv[argindex++] = "-f";
606         nargv[argindex++] = inactstr;
607     }

609     if (expire) {
610         nargv[argindex++] = "-e";
611         nargv[argindex++] = expire;

```

```

612     }

614     if (uidstr) { /* set uid flag */
615         nargv[argindex++] = "-u";
616         (void) sprintf(uidstring, "%u", uid);
617         nargv[argindex++] = uidstring;
618     }

620     if (oflag) nargv[argindex++] = "-o";

622     if (new_logname) { /* redefine login name */
623         nargv[argindex++] = "-l";
624         nargv[argindex++] = new_logname;
625     }

627     if (nkeys > 0)
628         addkey_args(nargv, &argindex);

630     /* finally - login name */
631     nargv[argindex++] = logname;

633     /* set the last to null */
634     nargv[argindex++] = NULL;

636     /* now call passmgmt */
637     ret = PEX_FAILED;
638     for (tries = 3; ret != PEX_SUCCESS && tries--;) {
639         switch (ret = call_passmgmt(nargv)) {
640             case PEX_SUCCESS:
641                 break;
642             case PEX_BUSY:
643                 break;
644             case PEX_HOSED_FILES:
645                 errmsg(M_HOSED_FILES);
646                 exit(EX_INCONSISTENT);
647                 break;
649             case PEX_SYNTAX:
650             case PEX_BADARG:
651                 /* should NEVER occur that passmgmt usage is wrong */
652                 if (is_role(usertype))
653                     errmsg(M_MRUSAGE);
654                 else
655                     errmsg(M_MUSAGE);
656                 exit(EX_SYNTAX);
657                 break;
659             case PEX_BADUID:
660                 /* uid in use - shouldn't happen print message anyway */
661                 errmsg(M_UID_USED, uid);
662                 exit(EX_ID_EXISTS);
663                 break;
665             case PEX_BADNAME:
666                 /* invalid loname */
667                 errmsg(M_USED, logname);
668                 exit(EX_NAME_EXISTS);
669                 break;
671             default:
672                 errmsg(M_UPDATE, "modified");
673                 exit(ret);
674                 break;
675         }
676     }
677     if (tries == 0) {

```

**new/usr/src/cmd/oamuser/user/usermod.c**

**11**

```
678             errmsg(M_UPDATE, "modified");
679         }

681         exit(ret);
682         /*NOTREACHED*/
683     }
unchanged_portion_omitted
```

```
new/usr/src/cmd/prstat/prstat.c
```

\*\*\*\*\*

44951 Wed Sep 4 20:45:59 2013

```
new/usr/src/cmd/prstat/prstat.c
```

2989 Eliminate use of LOGNAME\_MAX in ON

```
1166 useradd have warning with name more 8 chars
```

\*\*\*\*\*

```

1 /*
2  * CDDL HEADER START
3  *
4  * The contents of this file are subject to the terms of the
5  * Common Development and Distribution License (the "License").
6  * You may not use this file except in compliance with the License.
7  *
8  * You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE
9  * or http://www.opensolaris.org/os/licensing.
10 * See the License for the specific language governing permissions
11 * and limitations under the License.
12 *
13 * When distributing Covered Code, include this CDDL HEADER in each
14 * file and include the License file at usr/src/OPENSOLARIS.LICENSE.
15 * If applicable, add the following below this CDDL HEADER, with the
16 * fields enclosed by brackets "[]" replaced with your own identifying
17 * information: Portions Copyright [yyyy] [name of copyright owner]
18 *
19 * CDDL HEADER END
20 */

```

```
22 /*
23  * Copyright (c) 2013 Gary Mills
```

```
25 * Copyright 2009 Sun Microsystems, Inc. All rights reserved.
26 * Use is subject to license terms.
```

```

27 *
28 * Portions Copyright 2009 Chad Mynhier
29 */

```

```
31 #include <sys/types.h>
32 #include <sys/resource.h>
33 #include <sys/loadavg.h>
34 #include <sys/time.h>
35 #include <sys/pset.h>
36 #include <sys/vm_usage.h>
37 #include <zone.h>
38 #include <libzonecfg.h>
```

```
40 #include <stdio.h>
41 #include <stdlib.h>
42 #include <unistd.h>
43 #include <dirent.h>
44 #include <string.h>
45 #include <errno.h>
46 #include <poll.h>
47 #include <ctype.h>
48 #include <fcntl.h>
49 #include <limits.h>
50 #include <signal.h>
51 #include <time.h>
52 #include <project.h>
```

```
54 #include <langinfo.h>
55 #include <libintl.h>
56 #include <locale.h>
```

```
58 #include "prstat.h"
59 #include "prutil.h"
60 #include "prtable.h"
```

1

```
new/usr/src/cmd/prstat/prstat.c
```

```
61 #include "prsort.h"
62 #include "prfile.h"
```

```

64 /*
65  * x86 <sys/regs.h> ERR conflicts with <curses.h> ERR. For the purposes
66  * of this file, we care about the curses.h ERR so include that last.
67  */

```

```
69 #if      defined(ERR)
70 #undef    ERR
71 #endif
```

```
73 #ifndef TEXT_DOMAIN          /* should be defined by cc -D */
74 #define TEXT_DOMAIN          "SYS_TEST" /* use this only if it wasn't */
75 #endif
```

```
77 #include <urses.h>
78 #include <term.h>
```

```
80 #define LOGIN_WIDTH      8
81 #define ZONE_WIDTH       28
82 #define PROJECT_WIDTH     28
```

```

84 #define PSINFO_HEADER_PROC \
85 " PID USERNAME SIZE RSS STATE PRI NICE TIME CPU PROCESS/NLWP "
86 #define PSINFO_HEADER_PROC_LGRP \
87 " PID USERNAME SIZE RSS STATE PRI NICE TIME CPU LGRP PROCESS/NLWP "
88 #define PSINFO_HEADER_LWP \
89 " PID USERNAME SIZE RSS STATE PRI NICE TIME CPU PROCESS/LWPID "
90 #define PSINFO_HEADER_LWP_LGRP \
91 " PID USERNAME SIZE RSS STATE PRI NICE TIME CPU LGRP PROCESS/LWPID "
92 #define USAGE_HEADER_PROC \
93 " PID USERNAME USR SYS TRP TFL DFL LCK SLP LAT VCX ICX SCL SIG PROCESS/NLWP "
94 #define USAGE_HEADER_LWP \
95 " PID USERNAME USR SYS TRP TFL DFL LCK SLP LAT VCX ICX SCL SIG PROCESS/LWPID "
96 #define USER_HEADER_PROC \
97 " NPROC USERNAME SWAP RSS MEMORY TIME CPU "
98 #define USER_HEADER_LWP \
99 " NLWP USERNAME SWAP RSS MEMORY TIME CPU "
100 #define TASK_HEADER_PROC \
101 "TASKID NPROC SWAP RSS MEMORY TIME CPU PROJECT "
102 #define TASK_HEADER_LWP \
103 "TASKID NLWP SWAP RSS MEMORY TIME CPU PROJECT "
104 #define PROJECT_HEADER_PROC \
105 "PROJID NPROC SWAP RSS MEMORY TIME CPU PROJECT "
106 #define PROJECT_HEADER_LWP \
107 "PROJID NLWP SWAP RSS MEMORY TIME CPU PROJECT "
108 #define ZONE_HEADER_PROC \
109 "ZONEID NPROC SWAP RSS MEMORY TIME CPU ZONE "
110 #define ZONE_HEADER_LWP \
111 "ZONEID NLWP SWAP RSS MEMORY TIME CPU ZONE "
112 #define PSINFO_LINE \
113 "%6d %-8s %5s %5s %-6s %3s %3s %9s %3.3s%% %-.16s/%d"
114 #define PSINFO_LINE_LGRP \
115 "%6d %-8s %5s %5s %-6s %3s %3s %9s %3.3s%% %4d %-.16s/%d"
116 #define USAGE_LINE \
117 "%6d %-8s %3.3s %3.3s %3.3s %3.3s %3.3s %3.3s %3.3s %3.3s %3.3s %3.3s" \
118 "%3.3s %3.3s %-.12s/%d"
119 #define USER_LINE \
120 "%6d %-8s %5.5s %5.5s %3.3s%% %9s %3.3s%%"
121 #define TASK_LINE \
122 "%6d %8d %5s %5s %3.3s%% %9s %3.3s%% %28s"
123 #define PROJECT_LINE \
124 "%6d %8d %5s %5s %3.3s%% %9s %3.3s%% %28s"

```

2

```

125 #define ZONE_LINE \
126 "%6d %8d %5s %5s %3.3s%% %9s %3.3s%% %28s"

128 #define TOTAL_LINE \
129 "Total: %d processes, %d lwps, load averages: %3.2f, %3.2f, %3.2f"

131 /* global variables */

133 static char      *t_ulon;          /* termcap: start underline */
134 static char      *t_uloff;         /* termcap: end underline */
135 static char      *t_up;            /* termcap: cursor 1 line up */
136 static char      *t_eol;           /* termcap: clear end of line */
137 static char      *t_smcup;         /* termcap: cursor mvcap on */
138 static char      *t_rmcup;         /* termcap: cursor mvcap off */
139 static char      *t_home;          /* termcap: move cursor home */
140 static char      *movecur = NULL;  /* termcap: move up string */
141 static char      *empty_string = "\0"; /* termcap: empty string */
142 static uint_t    print_movecur = FALSE; /* print movecur or not */
143 static int       is_curses_on = FALSE; /* current curses state */

145 static table_t   pid_tbl = {0, 0, NULL}; /* selected processes */
146 static table_t   cpu_tbl = {0, 0, NULL}; /* selected processors */
147 static table_t   set_tbl = {0, 0, NULL}; /* selected processor sets */
148 static table_t   prj_tbl = {0, 0, NULL}; /* selected projects */
149 static table_t   tsk_tbl = {0, 0, NULL}; /* selected tasks */
150 static table_t   lgr_tbl = {0, 0, NULL}; /* selected lgroups */
151 static zonetbl_t zone_tbl = {0, 0, NULL}; /* selected zones */
152 static uidtbl_t  euidd_tbl = {0, 0, NULL}; /* selected effective users */
153 static uidtbl_t  ruid_tbl = {0, 0, NULL}; /* selected real users */

155 static uint_t     total_procs;      /* total number of procs */
156 static uint_t     total_lwps;      /* total number of lwps */
157 static float      total_cpu;       /* total cpu usage */
158 static float      total_mem;       /* total memory usage */

160 static list_t     lwps;             /* list of lwps/processes */
161 static list_t     users;            /* list of users */
162 static list_t     tasks;           /* list of tasks */
163 static list_t     projects;        /* list of projects */
164 static list_t     zones;           /* list of zones */
165 static list_t     lgroups;         /* list of lgroups */

167 static volatile uint_t sigwinch = 0;
168 static volatile uint_t sigtstp = 0;
169 static volatile uint_t sigterm = 0;

171 static long pagesize;

173 /* default settings */

175 static optdesc_t opts = {
176     5,                /* interval between updates, seconds */
177     15,               /* number of lines in top part */
178     5,                /* number of lines in bottom part */
179     -1,               /* number of iterations; infinitely */
180     OPT_PSINFO | OPT_FULLSCREEN | OPT_USEHOME | OPT_TERMCAP,
181     -1                /* sort in decreasing order */
182 };

```

unchanged portion omitted

```

350 /*
351  * A routine to display the contents of the list on the screen
352  */
353 static void
354 list_print(list_t *list)
355 {

```

```

356     lwp_info_t *lwp;
357     id_info_t *id;
358     char usr[4], sys[4], trp[4], tfl[4];
359     char dfl[4], lck[4], slp[4], lat[4];
360     char vcx[4], icx[4], scl[4], sig[4];
361     char psize[6], prssize[6], pmem[6], pcpu[6], ptime[12];
362     char pstate[7], pnice[4], ppri[4];
363     char pname[LOGNAME_MAX+1];
364     char projname[PROJNAME_MAX+1];
365     char zonename[ZONENAME_MAX+1];
366     float cpu, mem;
367     double loadavg[3] = {0, 0, 0};
368     int i, lwpid;

370     if (foreach_element(&set_tbl, &loadavg, psetloadavg) == 0) {
371         /*
372          * If processor sets aren't specified, we display system-wide
373          * load averages.
374          */
375         (void) getloadavg(loadavg, 3);
376     }

378     if (((opts.o_outpmode & OPT_UPDATE) || (opts.o_outpmode & OPT_DDATE)) &&
379         ((list->l_type == LT_LWPS) || !(opts.o_outpmode & OPT_SPLIT)))
380         print_timestamp();
381     if (opts.o_outpmode & OPT_TTY)
382         (void) putchar('\r');
383     (void) putp(t_ulon);

385     switch (list->l_type) {
386     case LT_PROJECTS:
387         if (opts.o_outpmode & OPT_LWPS)
388             (void) printf(PROJECT_HEADER_LWP);
389         else
390             (void) printf(PROJECT_HEADER_PROC);
391         break;
392     case LT_TASKS:
393         if (opts.o_outpmode & OPT_LWPS)
394             (void) printf(TASK_HEADER_LWP);
395         else
396             (void) printf(TASK_HEADER_PROC);
397         break;
398     case LT_ZONES:
399         if (opts.o_outpmode & OPT_LWPS)
400             (void) printf(ZONE_HEADER_LWP);
401         else
402             (void) printf(ZONE_HEADER_PROC);
403         break;
404     case LT_USERS:
405         if (opts.o_outpmode & OPT_LWPS)
406             (void) printf(USER_HEADER_LWP);
407         else
408             (void) printf(USER_HEADER_PROC);
409         break;
410     case LT_LWPS:
411         if (opts.o_outpmode & OPT_LWPS) {
412             if (opts.o_outpmode & OPT_PSINFO) {
413                 if (opts.o_outpmode & OPT_LGRP)
414                     (void) printf(PSINFO_HEADER_LWP_LGRP);
415                 else
416                     (void) printf(PSINFO_HEADER_LWP);
417             }
418             if (opts.o_outpmode & OPT_MSACCT)
419                 (void) printf(USAGE_HEADER_LWP);
420         } else {
421             if (opts.o_outpmode & OPT_PSINFO) {

```

```

422         if (opts.o_outpmode & OPT_LGRP)
423             (void) printf(PSINFO_HEADER_PROC_LGRP);
424         else
425             (void) printf(PSINFO_HEADER_PROC);
426     }
427     if (opts.o_outpmode & OPT_MSACCT)
428         (void) printf(USAGE_HEADER_PROC);
429 }
430     break;
431 }

433 (void) putp(t_uloff);
434 (void) putp(t_eol);
435 (void) putchar('\n');

437 for (i = 0; i < list->l_used; i++) {
438     switch (list->l_type) {
439     case LT_PROJECTS:
440     case LT_TASKS:
441     case LT_USERS:
442     case LT_ZONES:
443         id = list->l_ptrs[i];
444         /*
445          * CPU usage and memory usage normalization
446          */
447         if (total_cpu >= 100)
448             cpu = (100 * id->id_pctcpu) / total_cpu;
449         else
450             cpu = id->id_pctcpu;
451         if (id->id_sizematch == B_FALSE && total_mem >= 100)
452             mem = (100 * id->id_pctmem) / total_mem;
453         else
454             mem = id->id_pctmem;
455         if (list->l_type == LT_USERS) {
456             pwd_getname(id->id_uid, pname, sizeof (pname),
457                 opts.o_outpmode & OPT_NORESOLVE,
458                 opts.o_outpmode & (OPT_TERMCAP|OPT_TRUNC),
459                 LOGIN_WIDTH);
460         } else if (list->l_type == LT_ZONES) {
461             if (list->l_type == LT_USERS)
462                 pwd_getname(id->id_uid, pname, LOGNAME_MAX + 1,
463                     opts.o_outpmode & OPT_NORESOLVE);
464             else if (list->l_type == LT_ZONES)
465                 getzonename(id->id_zoneid, zonename,
466                     sizeof (zonename),
467                     opts.o_outpmode & (OPT_TERMCAP|OPT_TRUNC),
468                     ZONE_WIDTH);
469         } else {
470             ZONENAME_MAX;
471         }
472         else
473             getprojname(id->id_projid, projname,
474                 sizeof (projname),
475                 opts.o_outpmode & OPT_NORESOLVE,
476                 opts.o_outpmode & (OPT_TERMCAP|OPT_TRUNC),
477                 PROJECT_WIDTH);
478     }
479     PROJNAME_MAX,
480     opts.o_outpmode & OPT_NORESOLVE);
481     Format_size(psize, id->id_size, 6);
482     Format_size(prssize, id->id_rssize, 6);
483     Format_pct(pmem, mem, 4);
484     Format_pct(pcpu, cpu, 4);
485     Format_time(ptime, id->id_time, 10);
486     if (opts.o_outpmode & OPT_TTY)
487         (void) putchar('\r');
488     if (list->l_type == LT_PROJECTS)

```

```

480     (void) printf(PROJECT_LINE, (int)id->id_projid,
481         id->id_nproc, psize, prssize, pmem, ptime,
482         pcpu, projname);
483     else if (list->l_type == LT_TASKS)
484         (void) printf(TASK_LINE, (int)id->id_taskid,
485             id->id_nproc, psize, prssize, pmem, ptime,
486             pcpu, projname);
487     else if (list->l_type == LT_ZONES)
488         (void) printf(ZONE_LINE, (int)id->id_zoneid,
489             id->id_nproc, psize, prssize, pmem, ptime,
490             pcpu, zonename);
491     else
492         (void) printf(USER_LINE, id->id_nproc, pname,
493             psize, prssize, pmem, ptime, pcpu);
494     (void) putp(t_eol);
495     (void) putchar('\n');
496     break;
497 case LT_LWPS:
498     lwp = list->l_ptrs[i];
499     if (opts.o_outpmode & OPT_LWPS)
500         lwpid = lwp->li_info.pr_lwp.pr_lwpid;
501     else
502         lwpid = lwp->li_info.pr_nlwp +
503             lwp->li_info.pr_nzomb;
504     pwd_getname(lwp->li_info.pr_uid, pname, sizeof (pname),
505         opts.o_outpmode & OPT_NORESOLVE,
506         opts.o_outpmode & (OPT_TERMCAP|OPT_TRUNC),
507         LOGIN_WIDTH);
508     pwd_getname(lwp->li_info.pr_uid, pname, LOGNAME_MAX + 1,
509         opts.o_outpmode & OPT_NORESOLVE);
510     if (opts.o_outpmode & OPT_PSINFO) {
511         Format_size(psize, lwp->li_info.pr_size, 6);
512         Format_size(prssize, lwp->li_info.pr_rssize, 6);
513         Format_state(pstate,
514             lwp->li_info.pr_lwp.pr_sname,
515             lwp->li_info.pr_lwp.pr_onpro, 7);
516         if (strcmp(lwp->li_info.pr_lwp.pr_clname,
517             "RT") == 0 ||
518             strcmp(lwp->li_info.pr_lwp.pr_clname,
519             "SYS") == 0 ||
520             lwp->li_info.pr_lwp.pr_sname == 'Z')
521             (void) strcpy(pnice, " -");
522     } else
523         Format_num(pnice,
524             lwp->li_info.pr_lwp.pr_nice - NZERO,
525             4);
526     Format_num(ppri, lwp->li_info.pr_lwp.pr_pri, 4);
527     Format_pct(pcpu,
528         FRC2PCT(lwp->li_info.pr_lwp.pr_pctcpu), 4);
529     if (opts.o_outpmode & OPT_LWPS)
530         Format_time(ptime,
531             lwp->li_info.pr_lwp.pr_time.tv_sec,
532             10);
533     else
534         Format_time(ptime,
535             lwp->li_info.pr_time.tv_sec, 10);
536     if (opts.o_outpmode & OPT_TTY)
537         (void) putchar('\r');
538     stripfname(lwp->li_info.pr_fname);
539     if (opts.o_outpmode & OPT_LGRP) {
540         (void) printf(PSINFO_LINE_LGRP,
541             (int)lwp->li_info.pr_pid, pname,
542             psize, prssize, pstate,
543             ppri, pnice, ptime, pcpu,
544             psize, prssize, pstate, ppri, pnice,
545             ptime, pcpu,

```

```

542         (int)lwp->li_info.pr_lwp.pr_lgrp,
543         lwp->li_info.pr_fname, lwpid);
544     } else {
545         (void) printf(PSINFO_LINE,
546         (int)lwp->li_info.pr_pid, pname,
547         psize, prssize,
548         pstate, ppri, pnice,
549         psize, prssize, pstate, ppri, pnice,
550         ptime, pcpu,
551         lwp->li_info.pr_fname, lwpid);
552     }
553     (void) putp(t_eol);
554     (void) putchar('\n');
555 }
556 if (opts.o_outpmode & OPT_MSACCT) {
557     Format_pct(usr, lwp->li_usr, 4);
558     Format_pct(sys, lwp->li_sys, 4);
559     Format_pct(slp, lwp->li_slp, 4);
560     Format_num(vcx, lwp->li_vcx, 4);
561     Format_num(icx, lwp->li_icx, 4);
562     Format_num(scl, lwp->li_scl, 4);
563     Format_num(sig, lwp->li_sig, 4);
564     Format_pct(trp, lwp->li_trp, 4);
565     Format_pct(tfl, lwp->li_tfl, 4);
566     Format_pct(dfll, lwp->li_dfll, 4);
567     Format_pct(lck, lwp->li_lck, 4);
568     Format_pct(lat, lwp->li_lat, 4);
569     if (opts.o_outpmode & OPT_TTY)
570         (void) putchar('\r');
571     stripfname(lwp->li_info.pr_fname);
572     (void) printf(USAGE_LINE,
573     (int)lwp->li_info.pr_pid, pname,
574     usr, sys, trp, tfl, dfll, lck,
575     slp, lat, vcx, icx, scl, sig,
576     lwp->li_info.pr_fname, lwpid);
577     (void) putp(t_eol);
578     (void) putchar('\n');
579 }
580 break;
581 }
582 }
583 if (opts.o_outpmode & OPT_TTY)
584     (void) putchar('\r');
585 if (opts.o_outpmode & OPT_TERMCAP) {
586     switch (list->l_type) {
587     case LT_PROJECTS:
588     case LT_USERS:
589     case LT_TASKS:
590     case LT_ZONES:
591         while (i++ < opts.o_nbottom) {
592             (void) putp(t_eol);
593             (void) putchar('\n');
594         }
595         break;
596     case LT_LWPS:
597         while (i++ < opts.o_ntop) {
598             (void) putp(t_eol);
599             (void) putchar('\n');
600         }
601     }
602 }
603 if (opts.o_outpmode & OPT_TTY)
604     (void) putchar('\r');
605

```

```

607     if ((opts.o_outpmode & OPT_SPLIT) && list->l_type == LT_LWPS)
608         return;
609
610     (void) printf(TOTAL_LINE, total_procs, total_lwps,
611     loadavg[LOADAVG_1MIN], loadavg[LOADAVG_5MIN],
612     loadavg[LOADAVG_15MIN]);
613     (void) putp(t_eol);
614     (void) putchar('\n');
615     if (opts.o_outpmode & OPT_TTY)
616         (void) putchar('\r');
617     (void) putp(t_eol);
618     (void) fflush(stdout);
619 }
620 unchanged_portion_omitted
621
1363 int
1364 main(int argc, char **argv)
1365 {
1366     DIR *procdir;
1367     char *p;
1368     char *sortk = "cpu"; /* default sort key */
1369     int opt;
1370     int timeout;
1371     struct pollfd pollset;
1372     char key;
1373
1374     (void) setlocale(LC_ALL, "");
1375     (void) textdomain(TEXT_DOMAIN);
1376     Progname(argv[0]);
1377     lwpid_init();
1378     fd_init(Setrlimit());
1379
1380     pagesize = sysconf(_SC_PAGESIZE);
1381
1382     while ((opt = getopt(argc, argv,
1383     "vcd:HmarRLtu:U:n:p:C:P:h:s:S:j:k:TJWz:Z")) != (int)EOF) {
1384         switch (opt) {
1385         case 'r':
1386             opts.o_outpmode |= OPT_NORESOLVE;
1387             break;
1388         case 'R':
1389             opts.o_outpmode |= OPT_REALTIME;
1390             break;
1391         case 'c':
1392             opts.o_outpmode &= ~OPT_TERMCAP;
1393             opts.o_outpmode &= ~OPT_FULLSCREEN;
1394             break;
1395         case 'd':
1396             if (optarg) {
1397                 if (*optarg == 'u')
1398                     opts.o_outpmode |= OPT_UPDATE;
1399                 else if (*optarg == 'd')
1400                     opts.o_outpmode |= OPT_DDATE;
1401                 else
1402                     Usage();
1403             } else {
1404                 Usage();
1405             }
1406             break;
1407         case 'h':
1408             fill_table(&lgr_tbl, optarg, 'h');
1409             break;
1410         case 'H':
1411             opts.o_outpmode |= OPT_LGRP;
1412

```

```

1412         break;
1413     case 'm':
1414     case 'v':
1415         opts.o_outpmode &= ~OPT_PSINFO;
1416         opts.o_outpmode |= OPT_MSACCT;
1417         break;
1418     case 't':
1419         opts.o_outpmode &= ~OPT_PSINFO;
1420         opts.o_outpmode |= OPT_USERS;
1421         break;
1422     case 'a':
1423         opts.o_outpmode |= OPT_SPLIT | OPT_USERS;
1424         break;
1425     case 'T':
1426         opts.o_outpmode |= OPT_SPLIT | OPT_TASKS;
1427         break;
1428     case 'J':
1429         opts.o_outpmode |= OPT_SPLIT | OPT_PROJECTS;
1430         break;
1431     case 'n':
1432         if ((p = strtok(optarg, ",") == NULL)
1433             Die(gettext("invalid argument for -n\n"));
1434         opts.o_ntop = Atoi(p);
1435         if (p = strtok(NULL, ",")
1436             opts.o_nbottom = Atoi(p);
1437         opts.o_outpmode &= ~OPT_FULLSCREEN;
1438         break;
1439     case 's':
1440         opts.o_sortorder = -1;
1441         sortk = optarg;
1442         break;
1443     case 'S':
1444         opts.o_sortorder = 1;
1445         sortk = optarg;
1446         break;
1447     case 'u':
1448         if ((p = strtok(optarg, ",") == NULL)
1449             Die(gettext("invalid argument for -u\n"));
1450         add_uid(&euclid_tbl, p);
1451         while (p = strtok(NULL, ",")
1452             add_uid(&euclid_tbl, p);
1453         break;
1454     case 'U':
1455         if ((p = strtok(optarg, ",") == NULL)
1456             Die(gettext("invalid argument for -U\n"));
1457         add_uid(&ruid_tbl, p);
1458         while (p = strtok(NULL, ",")
1459             add_uid(&ruid_tbl, p);
1460         break;
1461     case 'p':
1462         fill_table(&pid_tbl, optarg, 'p');
1463         break;
1464     case 'C':
1465         fill_set_table(optarg);
1466         opts.o_outpmode |= OPT_PSETS;
1467         break;
1468     case 'P':
1469         fill_table(&cpu_tbl, optarg, 'P');
1470         break;
1471     case 'k':
1472         fill_table(&tsk_tbl, optarg, 'k');
1473         break;
1474     case 'j':
1475         fill_prj_table(optarg);
1476         break;
1477     case 'L':

```

```

1478         opts.o_outpmode |= OPT_LWPS;
1479         break;
1480     case 'W':
1481         opts.o_outpmode |= OPT_TRUNC;
1482         break;
1483     case 'z':
1484         if ((p = strtok(optarg, ",") == NULL)
1485             Die(gettext("invalid argument for -z\n"));
1486         add_zone(&zone_tbl, p);
1487         while (p = strtok(NULL, ",")
1488             add_zone(&zone_tbl, p);
1489         break;
1490     case 'Z':
1491         opts.o_outpmode |= OPT_SPLIT | OPT_ZONES;
1492         break;
1493     default:
1494         Usage();
1495     }
1496 }
1497
1498 (void) atexit(Exit);
1499 if ((opts.o_outpmode & OPT_USERS) &&
1500     !(opts.o_outpmode & OPT_SPLIT))
1501     opts.o_nbottom = opts.o_ntop;
1502 if (opts.o_ntop == 0 || opts.o_nbottom == 0)
1503     Die(gettext("invalid argument for -n\n"));
1504 if (!(opts.o_outpmode & OPT_SPLIT) && (opts.o_outpmode & OPT_USERS) &&
1505     ((opts.o_outpmode & (OPT_PSINFO | OPT_MSACCT)))
1506     Die(gettext("-t option cannot be used with -v or -m\n"));
1507
1508 if ((opts.o_outpmode & OPT_SPLIT) && (opts.o_outpmode & OPT_USERS) &&
1509     !(opts.o_outpmode & (OPT_PSINFO | OPT_MSACCT)))
1510     Die(gettext("-t option cannot be used with "
1511         "-a, -J, -T or -Z\n"));
1512
1513 if ((opts.o_outpmode & OPT_USERS) &&
1514     (opts.o_outpmode & (OPT_TASKS | OPT_PROJECTS | OPT_ZONES)))
1515     Die(gettext("-a option cannot be used with "
1516         "-t, -J, -T or -Z\n"));
1517
1518 if (((opts.o_outpmode & OPT_TASKS) &&
1519     (opts.o_outpmode & (OPT_PROJECTS | OPT_ZONES))) ||
1520     ((opts.o_outpmode & OPT_PROJECTS) &&
1521     (opts.o_outpmode & (OPT_TASKS | OPT_ZONES)))) {
1522     Die(gettext(
1523         "-J, -T and -Z options are mutually exclusive\n"));
1524 }
1525
1526 /*
1527  * There is not enough space to combine microstate information and
1528  * lgroup information and still fit in 80-column output.
1529  */
1530 if ((opts.o_outpmode & OPT_LGRP) && (opts.o_outpmode & OPT_MSACCT)) {
1531     Die(gettext("-H and -m options are mutually exclusive\n"));
1532 }
1533
1534 if (argc > optind)
1535     opts.o_interval = Atoi(argv[optind++]);
1536 if (argc > optind)
1537     opts.o_count = Atoi(argv[optind++]);
1538 if (opts.o_count == 0)
1539     Die(gettext("invalid counter value\n"));
1540 if (argc > optind)
1541     Usage();
1542 if (opts.o_outpmode & OPT_REALTIME)
1543     Prioctl("RT");

```

```

1544     if (isatty(STDOUT_FILENO) == 1 && isatty(STDIN_FILENO))
1545         opts.o_outpmode |= OPT_TTY;      /* interactive */
1546     if (!(opts.o_outpmode & OPT_TTY)) {
1547         opts.o_outpmode &= ~OPT_TERMCAP; /* no termcap for pipes */
1548         opts.o_outpmode &= ~OPT_FULLSCREEN;
1549     }
1550     if (opts.o_outpmode & OPT_TERMCAP)
1551         ldtermcap(); /* can turn OPT_TERMCAP off */
1552     if (opts.o_outpmode & OPT_TERMCAP)
1553         (void) setsize();
1554     list_alloc(&lwps, opts.o_ntop);
1555     list_alloc(&users, opts.o_nbottom);
1556     list_alloc(&tasks, opts.o_nbottom);
1557     list_alloc(&projects, opts.o_nbottom);
1558     list_alloc(&zones, opts.o_nbottom);
1559     list_alloc(&lgroups, opts.o_nbottom);
1560     list_setkeyfunc(sortk, &opts, &lwps, LT_LWPS);
1561     list_setkeyfunc(NULL, &opts, &users, LT_USERS);
1562     list_setkeyfunc(NULL, &opts, &tasks, LT_TASKS);
1563     list_setkeyfunc(NULL, &opts, &projects, LT_PROJECTS);
1564     list_setkeyfunc(NULL, &opts, &zones, LT_ZONES);
1565     list_setkeyfunc(NULL, &opts, &lgroups, LT_LGRPS);
1566     if (opts.o_outpmode & OPT_TERMCAP)
1567         curses_on();
1568     if ((procdir = opendir("/proc")) == NULL)
1569         Die(gettext("cannot open /proc directory\n"));
1570     if (opts.o_outpmode & OPT_TTY) {
1571         (void) printf(gettext("Please wait...\r"));
1572         if (!(opts.o_outpmode & OPT_TERMCAP))
1573             (void) putchar('\n');
1574         (void) fflush(stdout);
1575     }
1576     set_signals();
1577     pollset.fd = STDIN_FILENO;
1578     pollset.events = POLLIN;
1579     timeout = opts.o_interval * MILLISEC;

1581     /*
1582     * main program loop
1583     */
1584     do {
1585         if (sigterm == 1)
1586             break;
1587         if (sigtstp == 1) {
1588             curses_off();
1589             (void) signal(SIGTSTP, SIG_DFL);
1590             (void) kill(0, SIGTSTP);
1591             /*
1592              * prstat stops here until it receives SIGCONT signal.
1593              */
1594             sigtstp = 0;
1595             (void) signal(SIGTSTP, sig_handler);
1596             curses_on();
1597             print_movecur = FALSE;
1598             if (opts.o_outpmode & OPT_FULLSCREEN)
1599                 sigwinch = 1;
1600         }
1601         if (sigwinch == 1) {
1602             if (setsize() == 1) {
1603                 list_free(&lwps);
1604                 list_free(&users);
1605                 list_free(&tasks);
1606                 list_free(&projects);
1607                 list_free(&zones);
1608                 list_alloc(&lwps, opts.o_ntop);
1609                 list_alloc(&users, opts.o_nbottom);

```

```

1610         list_alloc(&tasks, opts.o_nbottom);
1611         list_alloc(&projects, opts.o_nbottom);
1612         list_alloc(&zones, opts.o_nbottom);
1613     }
1614     sigwinch = 0;
1615     (void) signal(SIGWINCH, sig_handler);
1616 }
1617 prstat_scandir(procdir);
1618 list_refresh(&lwps);
1619 if (print_movecur)
1620     (void) putp(movecur);
1621 print_movecur = TRUE;
1622 if ((opts.o_outpmode & OPT_PSINFO) ||
1623     (opts.o_outpmode & OPT_MSACCT)) {
1624     list_sort(&lwps);
1625     list_print(&lwps);
1626 }
1627 if (opts.o_outpmode & OPT_USERS) {
1628     list_getsize(&users);
1629     list_sort(&users);
1630     list_print(&users);
1631     list_clear(&users);
1632 }
1633 if (opts.o_outpmode & OPT_TASKS) {
1634     list_getsize(&tasks);
1635     list_sort(&tasks);
1636     list_print(&tasks);
1637     list_clear(&tasks);
1638 }
1639 if (opts.o_outpmode & OPT_PROJECTS) {
1640     list_getsize(&projects);
1641     list_sort(&projects);
1642     list_print(&projects);
1643     list_clear(&projects);
1644 }
1645 if (opts.o_outpmode & OPT_ZONES) {
1646     list_getsize(&zones);
1647     list_sort(&zones);
1648     list_print(&zones);
1649     list_clear(&zones);
1650 }
1651 if (opts.o_count == 1)
1652     break;
1653 /*
1654 * If poll() returns -1 and sets errno to EINTR here because
1655 * the process received a signal, it is Ok to abort this
1656 * timeout and loop around because we check the signals at the
1657 * top of the loop.
1658 */
1659 if (opts.o_outpmode & OPT_TTY) {
1660     if (poll(&pollset, (nfds_t)1, timeout) > 0) {
1661         if (read(STDIN_FILENO, &key, 1) == 1) {
1662             if (tolower(key) == 'q')
1663                 break;
1664         }
1665     }
1666     } else {
1667         (void) sleep(opts.o_interval);
1668     }
1669 } while (opts.o_count == (-1) || --opts.o_count);

1671 if (opts.o_outpmode & OPT_TTY)
1672     (void) putchar('\r');
1673 return (0);
1674 }

```

unchanged\_portion\_omitted



new/usr/src/cmd/prstat/prstat.h

1

```
*****
5877 Wed Sep  4 20:45:59 2013
new/usr/src/cmd/prstat/prstat.h
2989 Eliminate use of LOGNAME_MAX in ON
1166 useradd have warning with name more 8 chars
*****
1 /*
2  * CDDL HEADER START
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16 * fields enclosed by brackets "[]" replaced with your own identifying
17 * information: Portions Copyright [yyyy] [name of copyright owner]
18 *
19 * CDDL HEADER END
20 */
21
22 /*
23  * Copyright (c) 2013 Gary Mills
24  *
25  * Copyright 2009 Sun Microsystems, Inc. All rights reserved.
26  * Use is subject to license terms.
27  *
28  * Portions Copyright 2009 Chad Mynhier
29  */
30
31 #ifndef _PRSTAT_H
32 #define _PRSTAT_H
33
34 #include <sys/sysmacros.h>
35 #include <sys/time.h>
36 #include <sys/types.h>
37 #include <procfs.h>
38
39 #ifdef __cplusplus
40 extern "C" {
41 #endif
42
43 /*
44  * FRC2PCT macro is used to convert 16-bit binary fractions in the range
45  * 0.0 to 1.0 with binary point to the right of the high order bit
46  * (i.e. 1.0 == 0x8000) to percentage value.
47  */
48
49 #define FRC2PCT(pp)      (((float)(pp))/0x8000*100)
50
51 #define TIME2NSEC(__t)\
52 (hrtime_t)((hrtime_t)__t.tv_sec * (hrtime_t)NANOSEC) + (hrtime_t)__t.tv_nsec)
53 #define TIME2SEC(__t)\
54 (hrtime_t)(__t.tv_sec)
55
56 /*
57  * List of available output modes
58  */
59 #define OPT_PSINFO      0x0001      /* read process's data from "psinfo" */
60 #define OPT_LWPS        0x0002      /* report about all lwps */
```

new/usr/src/cmd/prstat/prstat.h

2

```
61 #define OPT_USERS       0x0004      /* report about most active users */
62 #define OPT_UNUSED      0x0008      /* reserved for future use */
63 #define OPT_REALTIME    0x0010      /* real-time scheduling class flag */
64 #define OPT_MSACCT      0x0020      /* microstate accounting flag */
65 #define OPT_TERMCAP      0x0040      /* use termcap data to move cursor */
66 #define OPT_SPLIT       0x0080      /* split-screen mode flag */
67 #define OPT_TTY          0x0100      /* report results to tty or file */
68 #define OPT_FULLSCREEN  0x0200      /* full-screen mode flag */
69 #define OPT_USEHOME      0x0400      /* use 'home' to move cursor up */
70 #define OPT_TASKS        0x0800      /* report about system tasks */
71 #define OPT_PROJECTS     0x1000      /* report about system projects */
72 #define OPT_ZONES        0x2000      /* report about zones */
73 #define OPT_PSETS        0x4000      /* report for specified psets */
74 #define OPT_LGRP         0x8000      /* report home lgroups */
75 #define OPT_UPDATE       0x20000     /* print unix timestamp */
76 #define OPT_DDATE        0x40000     /* print timestamp in date(1) format */
77 #define OPT_NOESOLVE     0x80000     /* no nsswitch lookups */
78 #define OPT_TRUNC        0x100000    /* truncate long names */
79
80 /*
81  * Flags to keep track of process or lwp status
82  */
83 #define LWP_ALIVE        0x0008      /* this pid/lwp still exists */
84 #define LWP_REPRESENT    0x0010      /* this LWP represents the process */
85
86 /*
87  * Possible list types
88  */
89 #define LT_LWPS          0x0001
90 #define LT_USERS         0x0002
91 #define LT_TASKS         0x0004
92 #define LT_PROJECTS      0x0008
93 #define LT_ZONES         0x0010
94 #define LT_LGRPS         0x0020
95
96 /*
97  * Linked list of per-process or per-lwp statistics
98  */
99 typedef struct lwp_info {
100     psinfo_t      li_info;          /* data read from psinfo file */
101     prusage_t      li_usage;        /* data read from usage file */
102     ulong_t        li_key;          /* value of the key for this lwp */
103     int            li_flags;        /* process/lwp flags */
104     float          li_usr;          /* user level CPU time */
105     float          li_sys;          /* system call CPU time */
106     float          li_trp;          /* other system trap CPU time */
107     float          li_tfl;          /* text page fault sleep time */
108     float          li_dfl;          /* data page fault sleep time */
109     float          li_lck;          /* user lock wait sleep time */
110     float          li_slp;          /* all other sleep time */
111     float          li_lat;          /* wait-cpu (latency) time */
112     ulong_t        li_vcx;          /* voluntary context switches */
113     ulong_t        li_icx;          /* involuntary context switches */
114     ulong_t        li_scl;          /* system calls */
115     ulong_t        li_sig;          /* received signals */
116     struct lwp_info *li_next;       /* pointer to next lwp */
117     struct lwp_info *li_prev;       /* pointer to previous lwp */
118 } lwp_info_t;
119
120 unchanged portion omitted
```

new/usr/src/cmd/prstat/prtable.c

1

```
*****
6954 Wed Sep  4 20:45:59 2013
new/usr/src/cmd/prstat/prtable.c
2989 Eliminate use of LOGNAME_MAX in ON
1166 useradd have warning with name more 8 chars
*****
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26  *
27  * Portions Copyright 2009 Chad Mynhier
28  */

30 #include <proefs.h>
31 #include <unistd.h>
32 #include <stdlib.h>
33 #include <pwd.h>
34 #include <ctype.h>
35 #include <string.h>
36 #include <libintl.h>
37 #include <errno.h>
38 #include <zone.h>
39 #include <libzonecfg.h>
40 #include <wchar.h>

42 #include "prstat.h"
43 #include "prutil.h"
44 #include "prtable.h"

46 static plwp_t    *plwp_tbl[PLWP_TBL_SZ];

48 void
49 lwpid_init()
50 {
51     (void) memset(&plwp_tbl, 0, sizeof (plwp_t *) * PLWP_TBL_SZ);
52 }
53
54 void
55 pwd_getname(uid_t uid, char *name, size_t length, int noresolve,
56             int trunc, size_t width)
57 {
58     struct passwd *pwd;
```

new/usr/src/cmd/prstat/prtable.c

2

```
69     size_t n;

71     if (noresolve || (pwd = getpwuid(uid)) == NULL) {
72         n = snprintf(NULL, 0, "%u", uid);
73         if (trunc && n > width)
74             (void) snprintf(name, length, "%.u%c",
75                             width - 1, uid, '*');
76     } else
77         (void) snprintf(name, length, "%u", uid);
78     } else {
79         n = mbstowcs(NULL, pwd->pw_name, 0);
80         if (n == (size_t)-1)
81             (void) snprintf(name, length, "%s", "ERROR");
82         else if (trunc && n > width)
83             (void) snprintf(name, length, "%.s%c",
84                             width - 1, pwd->pw_name, '*');
85     } else
86         (void) snprintf(name, length, "%s", pwd->pw_name);
87     }
88 }
_____unchanged_portion_omitted_____
```

new/usr/src/cmd/prstat/prtable.h

1

```
*****
2466 Wed Sep  4 20:45:59 2013
new/usr/src/cmd/prstat/prtable.h
2989 Eliminate use of LOGNAME_MAX in ON
1166 useradd have warning with name more 8 chars
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26  *
27  * Portions Copyright 2009 Chad Mynhier
28  */

30 #ifndef _PRTABLE_H
31 #define _PRTABLE_H

33 #ifdef __cplusplus
34 extern "C" {
35 #endif

37 #include <limits.h>
38 #include <zone.h>
39 #include "prstat.h"

41 #define PLWP_TBL_SZ      4096      /* hash table of plwp_t structures */
42 #define LWP_ACTIVE      1

44 typedef struct {
45     size_t      t_size;
46     size_t      t_nent;
47     long         *t_list;
48 } table_t;
    unchanged_portion_omitted_

75 extern void pwd_getname(uid_t, char *, size_t, int, int, size_t);
73 extern void pwd_getname(uid_t, char *, int, int);
76 extern void add_uid(uidtbl_t *, char *);
77 extern int has_uid(uidtbl_t *, uid_t);
78 extern void add_element(table_t *, long);
79 extern int has_element(table_t *, long);
80 extern void add_zone(zonetbl_t *, char *);
81 extern int has_zone(zonetbl_t *, zoneid_t);
82 extern void convert_zone(zonetbl_t *);
83 extern int foreach_element(table_t *, void *, void (*)(long, void *));
```

new/usr/src/cmd/prstat/prtable.h

2

```
84 extern void lwpid_init();
85 extern void lwpid_add(lwp_info_t *, pid_t, id_t);
86 extern lwp_info_t *lwpid_get(pid_t, id_t);
87 extern int lwpid_pidcheck(pid_t);
88 extern void lwpid_del(pid_t, id_t);
89 extern void lwpid_set_active(pid_t, id_t);
90 extern int lwpid_is_active(pid_t, id_t);

92 #ifdef __cplusplus
93 }
    unchanged_portion_omitted_
```



```
311         (void) snprintf(str, len, "%-6d", (int)zoneid);
312     } else {
313         n = mbstowcs(NULL, zone_name, 0);
314         if (n == (size_t)-1)
315             (void) snprintf(str, len, "%-28s", "ERROR");
316         else if (trunc && n > width)
317             (void) snprintf(str, len, "%.1s%c", width - 1,
318                             zone_name, '*');
319         else
320             (void) snprintf(str, len, "%-28s", zone_name);
321     }
322 }
```

unchanged\_portion\_omitted

new/usr/src/cmd/prstat/prutil.h

1

\*\*\*\*\*

1878 Wed Sep 4 20:45:59 2013

new/usr/src/cmd/prstat/prutil.h

2989 Eliminate use of LOGNAME\_MAX in ON

1166 useradd have warning with name more 8 chars

\*\*\*\*\*

```
1 /*
2  * CDDL HEADER START
3  *
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5  * Common Development and Distribution License (the "License").
6  * You may not use this file except in compliance with the License.
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15 * If applicable, add the following below this CDDL HEADER, with the
16 * fields enclosed by brackets "[]" replaced with your own identifying
17 * information: Portions Copyright [yyyy] [name of copyright owner]
18 *
19 * CDDL HEADER END
20 */
21 /*
22 * Copyright (c) 2013 Gary Mills
23 *
24 * Copyright 2009 Sun Microsystems, Inc. All rights reserved.
25 * Use is subject to license terms.
26 *
27 * Portions Copyright 2009 Chad Mynhier
28 */

30 #ifndef _PRUTIL_H
31 #define _PRUTIL_H

33 #include <sys/processor.h>
34 #include <sys/types.h>

36 #ifdef __cplusplus
37 extern "C" {
38 #endif

40 extern void Die(char *, ...);
41 extern void Warn(char *, ...);
42 extern void Progname(char *);
43 extern void Usage();
44 extern int Atoi(char *);
45 extern void Format_size(char *, size_t, int);
46 extern void Format_pct(char *, float, int);
47 extern void Format_num(char *, int, int);
48 extern void Format_time(char *, ulong_t, int);
49 extern void Format_state(char *, char, processorid_t, int);
50 extern void *Realloc(void *, size_t);
51 extern void *Malloc(size_t);
52 extern void *Zalloc(size_t);
53 extern int Setrlimit();
54 extern void Prioctl(char *);
55 extern void getprojname(projid_t, char *, size_t, int, int, size_t);
56 extern void getzonename(projid_t, char *, size_t, int, size_t);
57 extern void getprojname(projid_t, char *, int, int);
58 extern void getzonename(projid_t, char *, int);
59 extern void stripfname(char *);
```

new/usr/src/cmd/prstat/prutil.h

2

```
59 #ifdef __cplusplus
60 }
_____unchanged_portion_omitted_
```

new/usr/src/cmd/ps/ps.c

1

```
*****
61349 Wed Sep  4 20:45:59 2013
new/usr/src/cmd/ps/ps.c
2989 Eliminate use of LOGNAME_MAX in ON
1166 useradd have warning with name more 8 chars
*****
1 /*
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16 * fields enclosed by brackets "[]" replaced with your own identifying
17 * information: Portions Copyright [yyyy] [name of copyright owner]
18 *
19 * CDDL HEADER END
20 */
21
22 /*
23  * Copyright (c) 2013 Gary Mills
24  *
25  * Copyright 2009 Sun Microsystems, Inc. All rights reserved.
26  * Use is subject to license terms.
27  */
28
29 /*
30  * Copyright (c) 2012, Joyent, Inc. All rights reserved.
31  */
32
33 /*      Copyright (c) 1984, 1986, 1987, 1988, 1989 AT&T */
34 /*      All Rights Reserved */
35
36 /*
37  * ps -- print things about processes.
38  */
39 #include <stdio.h>
40 #include <ctype.h>
41 #include <string.h>
42 #include <errno.h>
43 #include <fcntl.h>
44 #include <pwd.h>
45 #include <grp.h>
46 #include <sys/types.h>
47 #include <sys/stat.h>
48 #include <sys/mkdev.h>
49 #include <unistd.h>
50 #include <stdlib.h>
51 #include <limits.h>
52 #include <dirent.h>
53 #include <sys/signal.h>
54 #include <sys/fault.h>
55 #include <sys/syscall.h>
56 #include <sys/time.h>
57 #include <procfs.h>
58 #include <locale.h>
59 #include <wctype.h>
60 #include <wchar.h>
```

new/usr/src/cmd/ps/ps.c

2

```
61 #include <libw.h>
62 #include <stdarg.h>
63 #include <sys/proc.h>
64 #include <sys/pset.h>
65 #include <project.h>
66 #include <zone.h>
67
68 #define min(a, b)      ((a) > (b) ? (b) : (a))
69 #define max(a, b)      ((a) < (b) ? (b) : (a))
70
71 #define NTTYS      20      /* initial size of table for -t option */
72 #define SIZ        30      /* initial size of tables for -p, -s, -g, -h and -z */
73
74 /*
75  * Size of buffer holding args for t, p, s, g, u, U, G, z options.
76  * Set to ZONENAME_MAX, the minimum value needed to allow any
77  * zone to be specified.
78  */
79 #define ARGSIZ ZONENAME_MAX
80
81 /* Max chars in a user/group name or printed u/g id */
82 #define MAXUGNAME (LOGNAME_MAX+2)
83 #define MAXUGNAME 10      /* max chars in a user/group name or printed u/g id */
84
85 /* Structure for storing user or group info */
86 struct ugdata {
87     id_t      id;          /* numeric user-id or group-id */
88     char      name[MAXUGNAME+1]; /* user/group name, null terminated */
89 };
90
91 /*
92  * unchanged portion omitted
93  */
94
95 #define NFIELDS (sizeof (fname) / sizeof (fname[0]))
96
97 static int      retcode = 1;
98 static int      lflg;
99 static int      Aflg;
100 static int      uflg;
101 static int      Uflg;
102 static int      Gflg;
103 static int      aflg;
104 static int      dflg;
105 static int      Lflg;
106 static int      Pflg;
107 static int      Wflg;
108 static int      yflg;
109 static int      pflg;
110 static int      fflg;
111 static int      cflg;
112 static int      jflg;
113 static int      gflg;
114 static int      sflg;
115 static int      tflg;
116 static int      zflg;
117 static int      Zflg;
118 static int      hflg;
119 static int      Hflg;
120 static uid_t    tuid = (uid_t)-1;
121 static int      errflg;
122
123 static int      ndev;      /* number of devices */
124 static int      maxdev;    /* number of devl structures allocated */
125
126 #define DNINCR 100
127 #define DNSIZE 14
128 static struct devl {
129     /* device list */
130     char      dname[DNSIZE]; /* device name */
131 }
```

```

253     dev_t    ddev;          /* device number */
254 } *devl;
    unchanged_portion_omitted

374 static int
375 stdmain(int argc, char **argv)
376 {
377     char      *p;
378     char      *pl;
379     char      *parg;
380     int       c;
381     int       i;
382     int       pgerrflg = 0; /* err flg: non-numeric arg w/p & g options */
383     size_t    size, len;
384     DIR       *dirp;
385     struct dirent *dentp;
386     pid_t     maxpid;
387     pid_t     id;
388     int       ret;
389     char      loc_stime_str[32];

391     (void) setlocale(LC_ALL, "");
392     #if !defined(TEXT_DOMAIN) /* Should be defined by cc -D */
393     #define TEXT_DOMAIN      "SYS_TEST" /* Use this only if it weren't */
394     #endif
395     (void) textdomain(TEXT_DOMAIN);

397     (void) memset(&euid_tbl, 0, sizeof (euid_tbl));
398     (void) memset(&ruid_tbl, 0, sizeof (ruid_tbl));
399     (void) memset(&egid_tbl, 0, sizeof (egid_tbl));
400     (void) memset(&rgid_tbl, 0, sizeof (rgid_tbl));

402     kbytes_per_page = sysconf(_SC_PAGESIZE) / 1024;

404     (void) gettimeofday(&now, NULL);

406     /*
407      * calculate width of pid fields based on configured MAXPID
408      * (must be at least 5 to retain output format compatibility)
409      */
410     id = maxpid = (pid_t)sysconf(_SC_MAXPID);
411     pidwidth = 1;
412     while ((id /= 10) > 0)
413         ++pidwidth;
414     pidwidth = pidwidth < 5 ? 5 : pidwidth;

416     fname[F_PID].width = fname[F_PPID].width = pidwidth;
417     fname[F_PGID].width = fname[F_SID].width = pidwidth;

419     /*
420      * TRANSLATION_NOTE
421      * Specify the printf format with width and precision for
422      * the STIME field.
423      */
424     len = snprintf(loc_stime_str, sizeof (loc_stime_str),
425         dcgettext(NULL, "%8.8s", LC_TIME), "STIME");
426     if (len >= sizeof (loc_stime_str))
427         len = sizeof (loc_stime_str) - 1;

429     fname[F_STIME].width = fname[F_STIME].minwidth = len;

431     while ((c = getopt(argc, argv, "jlfceAadLPWyZHh:t:p:g:u:U:G:n:s:o:z:"))
432         != EOF)
433         switch (c) {
434             case 'H':          /* Show home lgroups */

```

```

435         Hflg++;
436         break;
437     case 'h':
438         /*
439          * Show processes/threads with given home lgroups
440          */
441         hflg++;
442         pl = optarg;
443         do {
444             int id;

446             /*
447              * Get all IDs in the list, verify for
448              * correctness and place in lgrps array.
449              */
450             parg = getarg(&pl);
451             /* Convert string to integer */
452             ret = str2id(parg, (pid_t *)&id, 0,
453                 MAX_LGRP_ID);
454             /* Complain if ID didn't parse correctly */
455             if (ret != 0) {
456                 pgerrflg++;
457                 (void) fprintf(stderr,
458                     gettext("ps: %s ", parg);
459                     if (ret == EINVAL)
460                         (void) fprintf(stderr,
461                             gettext("is an invalid "
462                                 "non-numeric argument"));
463                 else
464                     (void) fprintf(stderr,
465                         gettext("exceeds valid "
466                             "range"));
467                 (void) fprintf(stderr,
468                     gettext(" for -h option\n"));
469                 continue;
470             }

472             /* Extend lgrps array if needed */
473             if (nlgrps == lgrps_size) {
474                 /* Double the size of the lgrps array */
475                 if (lgrps_size == 0)
476                     lgrps_size = SIZ;
477                 lgrps_size *= 2;
478                 lgrps = Realloc(lgrps,
479                     lgrps_size * sizeof (int));
480             }
481             /* place the id in the lgrps table */
482             lgrps[nlgrps++] = id;
483         } while (*pl);
484         break;
485     case 'l':          /* long listing */
486         lflg++;
487         break;
488     case 'f':          /* full listing */
489         fflg++;
490         break;
491     case 'j':
492         jflg++;
493         break;
494     case 'c':
495         /*
496          * Format output to reflect scheduler changes:
497          * high numbers for high priorities and don't
498          * print nice or p_cpu values. 'c' option only
499          * effective when used with 'l' or 'f' options.
500          */

```



```

501         cflg++;
502         break;
503     case 'A':                /* list every process */
504     case 'e':                /* (obsolete) list every process */
505         Aflg++;
506         tflg = Gflg = Uflg = uflg = pflg = gflg = sflg = 0;
507         zflg = hflg = 0;
508         break;
509     case 'a':
510         /*
511          * Same as 'e' except no session group leaders
512          * and no non-terminal processes.
513          */
514         aflg++;
515         break;
516     case 'd':                /* same as e except no session leaders */
517         dflg++;
518         break;
519     case 'L':                /* show lwps */
520         Lflg++;
521         break;
522     case 'P':                /* show bound processor */
523         Pflg++;
524         break;
525     case 'W':                /* truncate long names */
526         Wflg++;
527         break;
528     case 'y':                /* omit F & ADDR, report RSS & SZ in Kby */
529         yflg++;
530         break;
531     case 'n':                /* no longer needed; retain as no-op */
532         (void) fprintf(stderr,
533             gettext("ps: warning: -n option ignored\n"));
534         break;
535     case 't':                /* terminals */
536     #define TSZ
537     30
538         tflg++;
539         p1 = optarg;
540         do {
541             char nambuf[TSZ+6];    /* for "/dev/" + '\0' */
542             struct stat64 s;
543             parg = getarg(&p1);
544             p = Realloc(NULL, TSZ+1);    /* for '\0' */
545             /* zero the buffer before using it */
546             p[0] = '\0';
547             size = TSZ;
548             if (isdigit(*parg)) {
549                 (void) strcpy(p, "tty");
550                 size -= 3;
551             }
552             (void) strncat(p, parg, size);
553             if (ntty == ttysz) {
554                 if ((ttysz * 2) == 0)
555                     ttysz = NTTYs;
556                 tty = Realloc(tty,
557                     (ttysz + 1) * sizeof (struct tty));
558                 tty[ntty].tdev = PRNODDEV;
559                 (void) strcpy(nambuf, "/dev/");
560                 (void) strcat(nambuf, p);
561                 if (stat64(nambuf, &s) == 0)
562                     tty[ntty].tdev = s.st_rdev;
563                 tty[ntty++].tname = p;
564             } while (*p1);
565             break;
566     case 'p':                /* proc ids */

```

```

567         pflg++;
568         p1 = optarg;
569         do {
570             pid_t id;
571
572             parg = getarg(&p1);
573             if ((ret = str2id(parg, &id, 0, maxpid)) != 0) {
574                 pgerrflg++;
575                 (void) fprintf(stderr,
576                     gettext("ps: %s "), parg);
577                 if (ret == EINVAL)
578                     (void) fprintf(stderr,
579                         gettext("is an invalid "
580                             "non-numeric argument"));
581             } else
582                 (void) fprintf(stderr,
583                     gettext("exceeds valid "
584                         "range"));
585             (void) fprintf(stderr,
586                 gettext(" for -p option\n"));
587             continue;
588         }
589
590         if (npid == pidsz) {
591             if ((pidsz * 2) == 0)
592                 pidsz = SIZ;
593             pid = Realloc(pid,
594                 pidsz * sizeof (pid_t));
595         }
596         pid[npid++] = id;
597     } while (*p1);
598     break;
599     case 's':                /* session */
600         sflg++;
601         p1 = optarg;
602         do {
603             pid_t id;
604
605             parg = getarg(&p1);
606             if ((ret = str2id(parg, &id, 0, maxpid)) != 0) {
607                 pgerrflg++;
608                 (void) fprintf(stderr,
609                     gettext("ps: %s "), parg);
610                 if (ret == EINVAL)
611                     (void) fprintf(stderr,
612                         gettext("is an invalid "
613                             "non-numeric argument"));
614             } else
615                 (void) fprintf(stderr,
616                     gettext("exceeds valid "
617                         "range"));
618             (void) fprintf(stderr,
619                 gettext(" for -s option\n"));
620             continue;
621         }
622
623         if (nsessid == sessidsz) {
624             if ((sessidsz * 2) == 0)
625                 sessidsz = SIZ;
626             sessid = Realloc(sessid,
627                 sessidsz * sizeof (pid_t));
628         }
629         sessid[nsessid++] = id;
630     } while (*p1);
631     break;
632     case 'g':                /* proc group */

```

```

633         gflg++;
634         pl = optarg;
635         do {
636             pid_t id;
637
638             parg = getarg(&pl);
639             if ((ret = str2id(parg, &id, 0, maxpid)) != 0) {
640                 pgerrflg++;
641                 (void) fprintf(stderr,
642                     gettext("ps: %s "), parg);
643                 if (ret == EINVAL)
644                     (void) fprintf(stderr,
645                         gettext("is an invalid "
646                             "non-numeric argument"));
647                 else
648                     (void) fprintf(stderr,
649                         gettext("exceeds valid "
650                             "range"));
651                 (void) fprintf(stderr,
652                     gettext(" for -g option\n"));
653                 continue;
654             }
655
656             if (ngrpid == grpidsz) {
657                 if ((grpidsz *= 2) == 0)
658                     grpidsz = SIZ;
659                 grpuid = Realloc(grpuid,
660                     grpidsz * sizeof (pid_t));
661             }
662             grpuid[ngrpid++] = id;
663         } while (*pl);
664         break;
665     case 'u': /* effective user name or number */
666         uflg++;
667         pl = optarg;
668         do {
669             parg = getarg(&pl);
670             add_uentry(&euclid_tbl, parg);
671         } while (*pl);
672         break;
673     case 'U': /* real user name or number */
674         Uflg++;
675         pl = optarg;
676         do {
677             parg = getarg(&pl);
678             add_uentry(&ruuid_tbl, parg);
679         } while (*pl);
680         break;
681     case 'G': /* real group name or number */
682         Gflg++;
683         pl = optarg;
684         do {
685             parg = getarg(&pl);
686             add_gentry(&rgid_tbl, parg);
687         } while (*pl);
688         break;
689     case 'o': /* output format */
690         p = optarg;
691         while ((p = parse_format(p)) != NULL)
692             ;
693         break;
694     case 'z': /* zone name or number */
695         zflg++;
696         pl = optarg;
697         do {
698             zoneid_t id;

```

```

700             parg = getarg(&pl);
701             if (zone_get_id(parg, &id) != 0) {
702                 pgerrflg++;
703                 (void) fprintf(stderr,
704                     gettext("ps: unknown zone %s\n"),
705                     parg);
706                 continue;
707             }
708
709             if (nzoneid == zoneidsz) {
710                 if ((zoneidsz *= 2) == 0)
711                     zoneidsz = SIZ;
712                 zoneid = Realloc(zoneid,
713                     zoneidsz * sizeof (zoneid_t));
714             }
715             zoneid[nzoneid++] = id;
716         } while (*pl);
717         break;
718     case 'Z': /* show zone name */
719         Zflg++;
720         break;
721     default: /* error on ? */
722         errflg++;
723         break;
724     }
725
726     if (errflg || optind < argc || pgerrflg)
727         usage();
728
729     if (tflg)
730         tty[ntty].tname = NULL;
731     /*
732     * If an appropriate option has not been specified, use the
733     * current terminal and effective uid as the default.
734     */
735     if (!(aflg|Aflg|dflg|Gflg|hflg|Uflg|uflg|tflg|pflg|gflg|sflg|zflg)) {
736         psinfo_t info;
737         int procd;
738         char *name;
739         char pname[100];
740
741         /* get our own controlling tty name using /proc */
742         (void) snprintf(pname, sizeof (pname),
743             "%s/self/psinfo", procd);
744         if ((procd = open(pname, O_RDONLY)) < 0 ||
745             read(procd, (char *)&info, sizeof (info)) < 0 ||
746             info.pr_ttydev == PRNODEV) {
747             (void) fprintf(stderr,
748                 gettext("ps: no controlling terminal\n"));
749             exit(1);
750         }
751         (void) close(procd);
752
753         i = 0;
754         name = gettty(&info);
755         if (*name == '?') {
756             (void) fprintf(stderr,
757                 gettext("ps: can't find controlling terminal\n"));
758             exit(1);
759         }
760         if (ntty == ttysz) {
761             if ((ttysz *= 2) == 0)
762                 ttysz = NTTY;
763             tty = Realloc(tty, (ttysz + 1) * sizeof (struct tty));
764         }

```

```

765         tty[ntty].tdev = info.pr_ttydev;
766         tty[ntty++].tname = name;
767         tty[ntty].tname = NULL;
768         tflg++;
769         tuid = getuid();
770     }
771     if (Aflg) {
772         Gflg = Uflg = uflg = pflg = sflg = gflg = aflg = dflg = 0;
773         zflg = hflg = 0;
774     }
775     if (Aflg | aflg | dflg)
776         tflg = 0;

778     i = 0;          /* prepare to exit on name lookup errors */
779     i += uconv(&euid_tbl);
780     i += uconv(&ruid_tbl);
781     i += gconv(&egid_tbl);
782     i += gconv(&rgid_tbl);
783     if (i)
784         exit(1);

786     /* allocate a buffer for lwpsinfo structures */
787     lpbufsize = 4096;
788     if (Lflg && (lpsinfobuf = malloc(lpbufsize)) == NULL) {
789         (void) fprintf(stderr,
790             gettext("ps: no memory\n"));
791         exit(1);
792     }

794     if (fields) { /* print user-specified header */
795         if (do_header) {
796             struct field *f;

798             for (f = fields; f != NULL; f = f->next) {
799                 if (f != fields)
800                     (void) printf(" ");
801                 switch (f->fname) {
802                     case F_TTY:
803                         (void) printf("%-*s",
804                             f->width, f->header);
805                         break;
806                     case F_FNAME:
807                     case F_COMM:
808                     case F_ARGS:
809                         /*
810                          * Print these headers full width
811                          * unless they appear at the end.
812                          */
813                         if (f->next != NULL) {
814                             (void) printf("%-*s",
815                                 f->width, f->header);
816                         } else {
817                             (void) printf("%s",
818                                 f->header);
819                         }
820                         break;
821                     default:
822                         (void) printf("%*s",
823                             f->width, f->header);
824                         break;
825                 }
826             }
827             (void) printf("\n");
828         }
829     } else { /* print standard header */
830

```

```

831         * All fields before 'PID' are printed with a trailing space
832         * as a separator and that is how we print the headers too.
833         */
834         if (lflg) {
835             if (yflg)
836                 (void) printf("S ");
837             else
838                 (void) printf(" F S ");
839         }
840         if (zflg)
841             (void) printf("    ZONE ");
842         if (fflg) {
843             (void) printf("    UID ");
844         } else if (lflg)
845             (void) printf("    UID ");

847         (void) printf("%*s", pidwidth, "PID");
848         if (lflg || fflg)
849             (void) printf(" %*s", pidwidth, "PPID");
850         if (jflg)
851             (void) printf(" %*s %*s", pidwidth, "PGID",
852                 pidwidth, "SID");
853         if (Lflg)
854             (void) printf("    LWP");
855         if (Pflg)
856             (void) printf("    PSR");
857         if (Lflg && fflg)
858             (void) printf("    NLWP");
859         if (cflg)
860             (void) printf("    CLS PRI");
861         else if (lflg || fflg) {
862             (void) printf("    C");
863             if (lflg)
864                 (void) printf(" PRI NI");
865         }
866         if (lflg) {
867             if (yflg)
868                 (void) printf("    RSS    SZ    WCHAN");
869             else
870                 (void) printf("    ADDR    SZ    WCHAN");
871         }
872         if (fflg)
873             (void) printf(" %s", loc_stime_str);
874         if (Hflg)
875             (void) printf("    LGRP");
876         if (Lflg)
877             (void) printf("    TTY          LTIME CMD\n");
878         else
879             (void) printf("    TTY          TIME CMD\n");
880     }

883     if (pflg && !(aflg|Aflg|dflg|Gflg|Uflg|uflg|hflg|tflg|gflg|sflg|zflg) &&
884         npid <= PTHRESHOLD) {
885         /*
886          * If we are looking at specific processes go straight
887          * to their /proc entries and don't scan /proc.
888          */
889         int i;

891         (void) qsort(pid, npid, sizeof (pid_t), pidcmp);
892         for (i = 0; i < npid; i++) {
893             char pname[12];

895             if (i >= 1 && pid[i] == pid[i - 1])
896                 continue;

```

```

897         (void) sprintf(pname, "%d", (int)pid[i]);
898         if (print_proc(pname) == 0)
899             retcode = 0;
900     }
901 } else {
902     /*
903     * Determine which processes to print info about by searching
904     * the /proc directory and looking at each process.
905     */
906     if ((dirp = opendir(procdir)) == NULL) {
907         (void) fprintf(stderr,
908             gettext("ps: cannot open PROC directory %s\n"),
909             procdir);
910         exit(1);
911     }
912
913     /* for each active process --- */
914     while (dentry = readdir(dirp)) {
915         if (dentry->d_name[0] == '.') /* skip . and .. */
916             continue;
917         if (print_proc(dentry->d_name) == 0)
918             retcode = 0;
919     }
920
921     (void) closedir(dirp);
922 }
923 return (retcode);
924 }

```

unchanged portion omitted

```

1060 static void
1061 usage(void) /* print usage message and quit */
1062 {
1063     struct def_field *df, *sorted[NFIELDS];
1064     int pos = 80, i = 0;
1065
1066     static char usage1[] =
1067         "ps [ -aAdefHlcnjLPWyZ ] [ -o format ] [ -t termlist ]";
1068     static char usage2[] =
1069         "ps [ -aAdefHlcnjLPyZ ] [ -o format ] [ -t termlist ]";
1070     static char usage3[] =
1071         "\t[ -u userlist ] [ -U userlist ] [ -G grouplist ]";
1072     static char usage4[] =
1073         "\t[ -p proclist ] [ -g pgrplist ] [ -s sidlist ]";
1074     static char usage5[] =
1075         "\t[ -z zonelist ] [ -h lgrplist ]";
1076     static char usage6[] =
1077         " 'format' is one or more of:";
1078
1079     (void) fprintf(stderr,
1080         gettext("usage: %s\n%s\n%s\n%s\n%s\n"),
1081         gettext(usage1), gettext(usage2), gettext(usage3),
1082         gettext(usage4), gettext(usage5));
1083
1084     /*
1085     * Now print out the possible output formats such that they neatly fit
1086     * into eighty columns. Note that the fact that we are determining
1087     * this output programmatically means that a gettext() is impossible --
1088     * but it would be a mistake to localize the output formats anyway as
1089     * they are tokens for input, not output themselves.
1090     */
1091     for (df = &fname[0]; df < &fname[NFIELDS]; df++)
1092         sorted[i++] = df;
1093
1094     (void) qsort(sorted, NFIELDS, sizeof (void *), field_cmp);
1095
1096     for (i = 0; i < NFIELDS; i++) {

```

```

1095         if (pos + strlen((df = sorted[i])>->fname) + 1 >= 80) {
1096             (void) fprintf(stderr, "\n\t");
1097             pos = 8;
1098         }
1099
1100         (void) fprintf(stderr, "%s%s", pos > 8 ? " " : "", df->fname);
1101         pos += strlen(df->fname) + 1;
1102     }
1103
1104     (void) fprintf(stderr, "\n");
1105
1106     exit(1);
1107 }

```

unchanged portion omitted

```

1355 /*
1356 * Print info about the process.
1357 */
1358 static void
1359 prcom(psinfo_t *psinfo, char *tty)
1360 {
1361     char *cp;
1362     long tm;
1363     int bytesleft;
1364     int wcnt, length;
1365     wchar_t wchar;
1366     struct passwd *pwd;
1367     int zombie_lwp;
1368     char zonename[ZONENAME_MAX];
1369
1370     /*
1371     * If process is zombie, call zombie print routine and return.
1372     */
1373     if (psinfo->pr_nlwp == 0) {
1374         if (fields != NULL)
1375             pr_fields(psinfo, tty, print_zombie_field);
1376         else
1377             prcom(psinfo);
1378         return;
1379     }
1380
1381     zombie_lwp = (Lflg && psinfo->pr_lwp.pr_sname == 'Z');
1382
1383     /*
1384     * If user specified '-o format', print requested fields and return.
1385     */
1386     if (fields != NULL) {
1387         pr_fields(psinfo, tty, print_field);
1388         return;
1389     }
1390
1391     /*
1392     * All fields before 'PID' are printed with a trailing space as a
1393     * separator, rather than keeping track of which column is first. All
1394     * other fields are printed with a leading space.
1395     */
1396     if (lflg) {
1397         if (!yflg)
1398             (void) printf("%2x ", psinfo->pr_flag & 0377); /* F */
1399         (void) printf("%c ", psinfo->pr_lwp.pr_sname); /* S */
1400     }
1401
1402     if (Zflg) { /* ZONE */
1403         if (getzonenamebyid(psinfo->pr_zoneid, zonename,
1404             sizeof (zonename)) < 0) {
1405             if (snprintf(NULL, 0, "%d",

```

```

1406         ((int)psinfo->pr_zoneid) > 7)
1407         (void) printf(" %6.6d%c ",
1408         ((int)psinfo->pr_zoneid), '**');
1409     else
1410         (void) printf(" %7.7d ",
1411         ((int)psinfo->pr_zoneid));
1398     (void) printf(" %7.7d ", ((int)psinfo->pr_zoneid));
1412 } else {
1413     size_t nw;
1415     nw = mbstowcs(NULL, zonename, 0);
1416     if (nw == (size_t)-1)
1417         (void) printf("%8.8s ", "ERROR");
1418     else if (nw > 8)
1419         (void) wprintf(L"%7.7s%c ", zonename, '**');
1420     else
1421         (void) wprintf(L"%8.8s ", zonename);
1400     (void) printf(" %8.8s ", zonename);
1422 }
1423 }
1425 if (f_flg) {
1426     if ((pwd = getpwuid(psinfo->pr_euid)) != NULL) { /* UID */
1427         size_t nw;
1429         nw = mbstowcs(NULL, pwd->pw_name, 0);
1430         if (nw == (size_t)-1)
1431             (void) printf("%8.8s ", "ERROR");
1432         else if (nw > 8)
1433             (void) wprintf(L"%7.7s%c ", pwd->pw_name, '**');
1405         if ((pwd = getpwuid(psinfo->pr_euid)) != NULL)
1406             (void) printf(" %8.8s ", pwd->pw_name);
1434         else
1435             (void) wprintf(L"%8.8s ", pwd->pw_name);
1436     } else {
1437         if (snprintf(NULL, 0, "%u",
1438         (psinfo->pr_euid)) > 7)
1439             (void) printf(" %6.6u%c ", psinfo->pr_euid,
1440             '**');
1441         else
1442             (void) printf(" %7.7u ", psinfo->pr_euid);
1443     }
1444 } else if (l_flg) {
1445     if (snprintf(NULL, 0, "%u", (psinfo->pr_euid)) > 6)
1446         (void) printf(" %5.5u%c ", psinfo->pr_euid, '**');
1447     else
1448         (void) printf(" %6u ", psinfo->pr_euid);
1449 }
1450 (void) printf(" %*d", pidwidth, (int)psinfo->pr_pid); /* PID */
1451 if (l_flg || f_flg)
1452     (void) printf(" %*d", pidwidth,
1453     (int)psinfo->pr_ppid); /* PPID */
1454 if (j_flg) {
1455     (void) printf(" %*d", pidwidth,
1456     (int)psinfo->pr_pgid); /* PGID */
1457     (void) printf(" %*d", pidwidth,
1458     (int)psinfo->pr_sid); /* SID */
1459 }
1460 if (L_flg)
1461     (void) printf(" %5d", (int)psinfo->pr_lwp.pr_lwpid); /* LWP */
1462 if (P_flg) {
1463     if (psinfo->pr_lwp.pr_bindpro == PBIND_NONE) /* PSR */
1464         (void) printf(" -");
1465     else
1466         (void) printf(" %3d", psinfo->pr_lwp.pr_bindpro);
1467 }

```

```

1468     if (L_flg && f_flg) /* NLWP */
1469         (void) printf(" %5d", psinfo->pr_nlwp + psinfo->pr_nzomb);
1470     if (c_flg) {
1471         if (zombie_lwp) /* CLS */
1472             (void) printf(" ");
1473         else
1474             (void) printf(" %4s", psinfo->pr_lwp.pr_clname);
1475         (void) printf(" %3d", psinfo->pr_lwp.pr_pri); /* PRI */
1476     } else if (l_flg || f_flg) {
1477         (void) printf(" %3d", psinfo->pr_lwp.pr_cpu & 0377); /* C */
1478         if (l_flg) { /* PRI NI */
1479             /*
1480              * Print priorities the old way (lower numbers
1481              * mean higher priority) and print nice value
1482              * for time sharing procs.
1483              */
1484             (void) printf(" %3d", psinfo->pr_lwp.pr_oldpri);
1485             if (psinfo->pr_lwp.pr_oldpri != 0)
1486                 (void) printf(" %2d", psinfo->pr_lwp.pr_nice);
1487             else
1488                 (void) printf(" %2.2s",
1489                 psinfo->pr_lwp.pr_clname);
1490         }
1491     }
1492     if (l_flg) {
1493         if (y_flg) {
1494             if (psinfo->pr_flag & SSYS) /* RSS */
1495                 (void) printf(" 0");
1496             else if (psinfo->pr_rssize)
1497                 (void) printf(" %5lu",
1498                 (ulong_t)psinfo->pr_rssize);
1499             else
1500                 (void) printf(" ?");
1501             if (psinfo->pr_flag & SSYS) /* SZ */
1502                 (void) printf(" 0");
1503             else if (psinfo->pr_size)
1504                 (void) printf(" %6lu",
1505                 (ulong_t)psinfo->pr_size);
1506             else
1507                 (void) printf(" ?");
1508         } else {
1509             #ifndef _LP64
1510             if (psinfo->pr_addr) /* ADDR */
1511                 (void) printf(" %8lx",
1512                 (ulong_t)psinfo->pr_addr);
1513             else
1514                 (void) printf(" ?");
1515             if (psinfo->pr_flag & SSYS) /* SZ */
1516                 (void) printf(" 0");
1517             else if (psinfo->pr_size)
1518                 (void) printf(" %6lu",
1519                 (ulong_t)psinfo->pr_size / kbytes_per_page);
1520             else
1521                 (void) printf(" ?");
1522         }
1523     }
1524     if (psinfo->pr_lwp.pr_sname != 'S') /* WCHAN */
1525         (void) printf(" ");
1526     #ifndef _LP64
1527     else if (psinfo->pr_lwp.pr_wchan)
1528         (void) printf(" %8lx",
1529         (ulong_t)psinfo->pr_lwp.pr_wchan);
1530     #endif
1531     else
1532         (void) printf(" ?");
1533 }

```

```

1534     if (fflg) {                                /* STIME */
1535         int width = fname[F_STIME].width;
1536         if (Lflg)
1537             prtime(psinfo->pr_lwp.pr_start, width + 1, 1);
1538         else
1539             prtime(psinfo->pr_start, width + 1, 1);
1540     }

1542     if (Hflg) {
1543         /* Display home lgroup */
1544         (void) printf(" %4d", (int)psinfo->pr_lwp.pr_lgrp);
1545     }

1547     (void) printf(" %-8.14s", tty);              /* TTY */
1548     if (Lflg) {
1549         tm = psinfo->pr_lwp.pr_time.tv_sec;
1550         if (psinfo->pr_lwp.pr_time.tv_nsec > 500000000)
1551             tm++;
1552     } else {
1553         tm = psinfo->pr_time.tv_sec;
1554         if (psinfo->pr_time.tv_nsec > 500000000)
1555             tm++;
1556     }
1557     (void) printf(" %4ld:%.2ld", tm / 60, tm % 60); /* [L]TIME */

1559     if (zombie_lwp) {
1560         (void) printf(" <defunct>\n");
1561         return;
1562     }

1564     if (!fflg) {                                /* CMD */
1565         wcnt = namentcnt(psinfo->pr_fname, 16, 8);
1566         (void) printf(" %.*s\n", wcnt, psinfo->pr_fname);
1567         return;
1568     }

1571     /*
1572     * PRARGSZ == length of cmd arg string.
1573     */
1574     psinfo->pr_psargs[PRARGSZ-1] = '\0';
1575     bytesleft = PRARGSZ;
1576     for (cp = psinfo->pr_psargs; *cp != '\0'; cp += length) {
1577         length = mbtowlc(&wchar, cp, MB_LEN_MAX);
1578         if (length == 0)
1579             break;
1580         if (length < 0 || !iswprint(wchar)) {
1581             if (length < 0)
1582                 length = 1;
1583             if (bytesleft <= length) {
1584                 *cp = '\0';
1585                 break;
1586             }
1587             /* omit the unprintable character */
1588             (void) memmove(cp, cp+length, bytesleft-length);
1589             length = 0;
1590         }
1591         bytesleft -= length;
1592     }
1593     wcnt = namentcnt(psinfo->pr_psargs, PRARGSZ, lflg ? 35 : PRARGSZ);
1594     (void) printf(" %.*s\n", wcnt, psinfo->pr_psargs);
1595 }

```

\_\_\_\_\_unchanged portion omitted\_\_\_\_\_

```

1649 static void
1650 print_field(psinfo_t *psinfo, struct field *f, const char *tty)

```

```

1651 {
1652     int width = f->width;
1653     struct passwd *pwd;
1654     struct group *grp;
1655     time_t cputime;
1656     int bytesleft;
1657     int wcnt;
1658     wchar_t wchar;
1659     char *cp;
1660     int length;
1661     ulong_t mask;
1662     char c, *csave;
1663     int zombie_lwp;

1665     zombie_lwp = (Lflg && psinfo->pr_lwp.pr_sname == 'Z');

1667     switch (f->fname) {
1668     case F_RUSER:
1669         if ((pwd = getpwuid(psinfo->pr_uid)) != NULL) {
1670             size_t nw;

1672             nw = mbstowcs(NULL, pwd->pw_name, 0);
1673             if (nw == (size_t)-1)
1674                 (void) printf("%*s ", width, "ERROR");
1675             else if (Wflg && nw > width)
1676                 (void) wprintf(L"%.*s%c", width - 1,
1677                     pwd->pw_name, '*');
1678             if ((pwd = getpwuid(psinfo->pr_uid)) != NULL)
1679                 (void) printf("%*s", width, pwd->pw_name);
1680             else
1681                 (void) wprintf(L"%*s", width, pwd->pw_name);
1682         } else {
1683             if (Wflg && snprintf(NULL, 0, "%u",
1684                 (psinfo->pr_uid)) > width)
1685                 (void) printf("%*u%c", width - 1,
1686                     psinfo->pr_uid, '*');
1687             else
1688                 (void) printf("%*u", width, psinfo->pr_uid);
1689         }
1690         break;
1691     case F_USER:
1692         if ((pwd = getpwuid(psinfo->pr_euid)) != NULL) {
1693             size_t nw;

1695             nw = mbstowcs(NULL, pwd->pw_name, 0);
1696             if (nw == (size_t)-1)
1697                 (void) printf("%*s ", width, "ERROR");
1698             else if (Wflg && nw > width)
1699                 (void) wprintf(L"%.*s%c", width - 1,
1700                     pwd->pw_name, '*');
1701             if ((pwd = getpwuid(psinfo->pr_euid)) != NULL)
1702                 (void) printf("%*s", width, pwd->pw_name);
1703             else
1704                 (void) wprintf(L"%*s", width, pwd->pw_name);
1705         } else {
1706             if (Wflg && snprintf(NULL, 0, "%u",
1707                 (psinfo->pr_euid)) > width)
1708                 (void) printf("%*u%c", width - 1,
1709                     psinfo->pr_euid, '*');
1710             else
1711                 (void) printf("%*u", width, psinfo->pr_euid);
1712         }
1713         break;
1714     case F_RGROUP:

```

```

1713         if ((grp = getgrgid(psinfo->pr_gid)) != NULL)
1714             (void) printf("%*s", width, grp->gr_name);
1715         else
1716             (void) printf("%*u", width, psinfo->pr_gid);
1717         break;
1718     case F_GROUP:
1719         if ((grp = getgrgid(psinfo->pr_egid)) != NULL)
1720             (void) printf("%*s", width, grp->gr_name);
1721         else
1722             (void) printf("%*u", width, psinfo->pr_egid);
1723         break;
1724     case F_RUID:
1725         (void) printf("%*u", width, psinfo->pr_uid);
1726         break;
1727     case F_UID:
1728         (void) printf("%*u", width, psinfo->pr_euid);
1729         break;
1730     case F_RGID:
1731         (void) printf("%*u", width, psinfo->pr_gid);
1732         break;
1733     case F_GID:
1734         (void) printf("%*u", width, psinfo->pr_egid);
1735         break;
1736     case F_PID:
1737         (void) printf("%*d", width, (int)psinfo->pr_pid);
1738         break;
1739     case F_PPID:
1740         (void) printf("%*d", width, (int)psinfo->pr_ppid);
1741         break;
1742     case F_PGID:
1743         (void) printf("%*d", width, (int)psinfo->pr_pgid);
1744         break;
1745     case F_SID:
1746         (void) printf("%*d", width, (int)psinfo->pr_sid);
1747         break;
1748     case F_PSR:
1749         if (zombie_lwp || psinfo->pr_lwp.pr_bindpro == PBIND_NONE)
1750             (void) printf("%*s", width, "-");
1751         else
1752             (void) printf("%*d", width, psinfo->pr_lwp.pr_bindpro);
1753         break;
1754     case F_LWP:
1755         (void) printf("%*d", width, (int)psinfo->pr_lwp.pr_lwpid);
1756         break;
1757     case F_NLWP:
1758         (void) printf("%*d", width, psinfo->pr_nlwp + psinfo->pr_nzomb);
1759         break;
1760     case F_OPRI:
1761         if (zombie_lwp)
1762             (void) printf("%*s", width, "-");
1763         else
1764             (void) printf("%*d", width, psinfo->pr_lwp.pr_oldpri);
1765         break;
1766     case F_PRI:
1767         if (zombie_lwp)
1768             (void) printf("%*s", width, "-");
1769         else
1770             (void) printf("%*d", width, psinfo->pr_lwp.pr_pri);
1771         break;
1772     case F_F:
1773         mask = 0xffffffffUL;
1774         if (width < 8)
1775             mask >>= (8 - width) * 4;
1776         (void) printf("%*lx", width, psinfo->pr_flag & mask);
1777         break;
1778     case F_S:

```

```

1779         (void) printf("%*c", width, psinfo->pr_lwp.pr_sname);
1780         break;
1781     case F_C:
1782         if (zombie_lwp)
1783             (void) printf("%*s", width, "-");
1784         else
1785             (void) printf("%*d", width, psinfo->pr_lwp.pr_cpu);
1786         break;
1787     case F_PCPU:
1788         if (zombie_lwp)
1789             (void) printf("%*s", width, "-");
1790         else if (Lflg)
1791             prtpct(psinfo->pr_lwp.pr_pctcpu, width);
1792         else
1793             prtpct(psinfo->pr_pctcpu, width);
1794         break;
1795     case F_PMEM:
1796         prtpct(psinfo->pr_pctmem, width);
1797         break;
1798     case F_OSZ:
1799         (void) printf("%*lu", width,
1800             (ulong_t)psinfo->pr_size / kbytes_per_page);
1801         break;
1802     case F_VSZ:
1803         (void) printf("%*lu", width, (ulong_t)psinfo->pr_size);
1804         break;
1805     case F_RSS:
1806         (void) printf("%*lu", width, (ulong_t)psinfo->pr_rssize);
1807         break;
1808     case F_NICE:
1809         /* if pr_oldpri is zero, then this class has no nice */
1810         if (zombie_lwp)
1811             (void) printf("%*s", width, "-");
1812         else if (psinfo->pr_lwp.pr_oldpri != 0)
1813             (void) printf("%*d", width, psinfo->pr_lwp.pr_nice);
1814         else
1815             (void) printf("%*.*s", width, width,
1816                 psinfo->pr_lwp.pr_clname);
1817         break;
1818     case F_CLASS:
1819         if (zombie_lwp)
1820             (void) printf("%*s", width, "-");
1821         else
1822             (void) printf("%*.*s", width, width,
1823                 psinfo->pr_lwp.pr_clname);
1824         break;
1825     case F_STIME:
1826         if (Lflg)
1827             prtime(psinfo->pr_lwp.pr_start, width, 0);
1828         else
1829             prtime(psinfo->pr_start, width, 0);
1830         break;
1831     case F_ETIME:
1832         if (Lflg)
1833             print_time(delta_secs(&psinfo->pr_lwp.pr_start),
1834                 width);
1835         else
1836             print_time(delta_secs(&psinfo->pr_start), width);
1837         break;
1838     case F_TIME:
1839         if (Lflg) {
1840             cputime = psinfo->pr_lwp.pr_time.tv_sec;
1841             if (psinfo->pr_lwp.pr_time.tv_nsec > 500000000)
1842                 cputime++;
1843         } else {
1844             cputime = psinfo->pr_time.tv_sec;

```

```

1845         if (psinfo->pr_time.tv_nsec > 5000000000)
1846             cputime++;
1847     }
1848     print_time(cputime, width);
1849     break;
1850 case F_TTY:
1851     (void) printf("%-s", width, tty);
1852     break;
1853 case F_ADDR:
1854     if (zombie_lwp)
1855         (void) printf("%s", width, "-");
1856     else if (Lflg)
1857         (void) printf("%*lx", width,
1858             (long)psinfo->pr_lwp.pr_addr);
1859     else
1860         (void) printf("%*lx", width, (long)psinfo->pr_addr);
1861     break;
1862 case F_WCHAN:
1863     if (!zombie_lwp && psinfo->pr_lwp.pr_wchan)
1864         (void) printf("%*lx", width,
1865             (long)psinfo->pr_lwp.pr_wchan);
1866     else
1867         (void) printf("%*.s", width, width, "-");
1868     break;
1869 case F_FNAME:
1870     /*
1871      * Print full width unless this is the last output format.
1872      */
1873     if (zombie_lwp) {
1874         if (f->next != NULL)
1875             (void) printf("%-s", width, "<defunct>");
1876         else
1877             (void) printf("%s", "<defunct>");
1878         break;
1879     }
1880     wcnt = namencnt(psinfo->pr_fname, 16, width);
1881     if (f->next != NULL)
1882         (void) printf("%-*.s", width, wcnt, psinfo->pr_fname);
1883     else
1884         (void) printf("%-*.s", wcnt, psinfo->pr_fname);
1885     break;
1886 case F_COMM:
1887     if (zombie_lwp) {
1888         if (f->next != NULL)
1889             (void) printf("%-s", width, "<defunct>");
1890         else
1891             (void) printf("%s", "<defunct>");
1892         break;
1893     }
1894     csave = strpbrk(psinfo->pr_psargs, " \t\r\v\f\n");
1895     if (csave) {
1896         c = *csave;
1897         *csave = '\0';
1898     }
1899     /* FALLTHROUGH */
1900 case F_ARGS:
1901     /*
1902      * PRARGSZ == length of cmd arg string.
1903      */
1904     if (zombie_lwp) {
1905         (void) printf("%-s", width, "<defunct>");
1906         break;
1907     }
1908     psinfo->pr_psargs[PRARGSZ-1] = '\0';
1909     bytesleft = PRARGSZ;
1910     for (cp = psinfo->pr_psargs; *cp != '\0'; cp += length) {

```

```

1911         length = mbtowc(&wchar, cp, MB_LEN_MAX);
1912         if (length == 0)
1913             break;
1914         if (length < 0 || !iswprint(wchar)) {
1915             if (length < 0)
1916                 length = 1;
1917             if (bytesleft <= length) {
1918                 *cp = '\0';
1919                 break;
1920             }
1921             /* omit the unprintable character */
1922             (void) memmove(cp, cp+length, bytesleft-length);
1923             length = 0;
1924         }
1925         bytesleft -= length;
1926     }
1927     wcnt = namencnt(psinfo->pr_psargs, PRARGSZ, width);
1928     /*
1929      * Print full width unless this is the last format.
1930      */
1931     if (f->next != NULL)
1932         (void) printf("%-*.s", width, wcnt,
1933             psinfo->pr_psargs);
1934     else
1935         (void) printf("%-*.s", wcnt,
1936             psinfo->pr_psargs);
1937     if (f->fname == F_COMM && csave)
1938         *csave = c;
1939     break;
1940 case F_TASKID:
1941     (void) printf("%*d", width, (int)psinfo->pr_taskid);
1942     break;
1943 case F_PROJID:
1944     (void) printf("%*d", width, (int)psinfo->pr_projid);
1945     break;
1946 case F_PROJECT:
1947     {
1948         struct project cproj;
1949         char proj_buf[PROJECT_BUFSZ];
1950
1951         if ((getprojbyid(psinfo->pr_projid, &cproj,
1952             (void *)&proj_buf, PROJECT_BUFSZ)) == NULL) {
1953             if (Wflg && snprintf(NULL, 0, "%d",
1954                 ((int)psinfo->pr_projid)) > width)
1955                 (void) printf("%.*d%c", width - 1,
1956                     ((int)psinfo->pr_projid), '*');
1957             else
1958                 (void *)&proj_buf, PROJECT_BUFSZ)) == NULL)
1959                 (void) printf("%*d", width,
1960                     (int)psinfo->pr_projid);
1961         } else {
1962             size_t nw;
1963
1964             if (cproj.pj_name != NULL)
1965                 nw = mbstowcs(NULL, cproj.pj_name, 0);
1966             if (cproj.pj_name == NULL)
1967                 (void) printf("%*s", width, "---");
1968             else if (nw == (size_t)-1)
1969                 (void) printf("%*s", width, "ERROR");
1970             else if (Wflg && nw > width)
1971                 (void) wprintf(L"%.*s%c", width - 1,
1972                     cproj.pj_name, '*');
1973             else
1974                 (void) wprintf(L"%*s", width,
1975                     cproj.pj_name);
1976             (void) printf("%*s", width,

```



```

1887         (cproj.pj_name != NULL) ?
1888         cproj.pj_name : "---");
1889     }
1890 }
1891 break;
1892 case F_PSET:
1893     if (zombie_lwp || psinfo->pr_lwp.pr_bindpset == PS_NONE)
1894         (void) printf("%*s", width, "-");
1895     else
1896         (void) printf("%*d", width, psinfo->pr_lwp.pr_bindpset);
1897     break;
1898 case F_ZONEID:
1899     (void) printf("%*d", width, (int)psinfo->pr_zoneid);
1900     break;
1901 case F_ZONE:
1902     {
1903         char zonename[ZONENAME_MAX];
1904
1905         if (getzonenamebyid(psinfo->pr_zoneid, zonename,
1906             sizeof (zonename)) < 0) {
1907             if (Wflag && snprintf(NULL, 0, "%d",
1908                 ((int)psinfo->pr_zoneid) > width)
1909                 (void) printf("%.d%c", width - 1,
1910                     ((int)psinfo->pr_zoneid), '*');
1911             else
1912                 (void) printf("%*d", width,
1913                     (int)psinfo->pr_zoneid);
1914             ((int)psinfo->pr_zoneid);
1915         } else {
1916             size_t nw;
1917
1918             nw = mbstowcs(NULL, zonename, 0);
1919             if (nw == (size_t)-1)
1920                 (void) printf("%*s ", width, "ERROR");
1921             else if (Wflag && nw > width)
1922                 (void) wprintf(L"%.*s%c", width - 1,
1923                     zonename, '*');
1924             else
1925                 (void) wprintf(L"%*s", width, zonename);
1926             (void) printf("%*s", width, zonename);
1927         }
1928     }
1929     break;
1930 case F_CTID:
1931     if (psinfo->pr_contract == -1)
1932         (void) printf("%*s", width, "-");
1933     else
1934         (void) printf("%*ld", width, (long)psinfo->pr_contract);
1935     break;
1936 case F_LGRP:
1937     /* Display home lgroup */
1938     (void) printf("%*d", width, (int)psinfo->pr_lwp.pr_lgrp);
1939     break;
1940 case F_DMODEL:
1941     (void) printf("%*s", width,
1942         psinfo->pr_dmodel == PR_MODEL_LP64 ? "_LP64" : "_ILP32");
1943     break;
1944 }
1945 }
1946 _____unchanged_portion_omitted_____
1947
1948 static void
1949 przom(psinfo_t *psinfo)
1950 {
1951     long      tm;

```

```

2269 struct passwd *pwd;
2270 char zonename[ZONENAME_MAX];

2272 /*
2273  * All fields before 'PID' are printed with a trailing space as a
2274  * spearator, rather than keeping track of which column is first. All
2275  * other fields are printed with a leading space.
2276  */
2277 if (lflg) { /* F S */
2278     if (!yflg)
2279         (void) printf("%2x ", psinfo->pr_flag & 0377); /* F */
2280     (void) printf("%c ", psinfo->pr_lwp.pr_sname); /* S */
2281 }
2282 if (Zflg) {
2283     if (getzonenamebyid(psinfo->pr_zoneid, zonename,
2284         sizeof(zonename)) < 0) {
2285         if (snprintf(NULL, 0, "%d",
2286             ((int)psinfo->pr_zoneid)) > 7)
2287             (void) printf(" %6.6d%c ",
2288                 ((int)psinfo->pr_zoneid), '*');
2289         else
2290             (void) printf(" %7.7d ",
2291                 ((int)psinfo->pr_zoneid));
2292     } else {
2293         size_t nw;

2295         nw = mbstowcs(NULL, zonename, 0);
2296         if (nw == (size_t)-1)
2297             (void) printf("%8.8s ", "ERROR");
2298         else if (nw > 8)
2299             (void) wprintf(L"%7.7s%c ", zonename, '*');
2300         else
2301             (void) wprintf(L"%8.8s ", zonename);
2302     }
2303 }
2304 if (Hflg) {
2305     /* Display home lgroup */
2306     (void) printf(" %6d", (int)psinfo->pr_lwp.pr_lgrp); /* LGRP */
2307 }
2308 if (fflg) {
2309     if ((pwd = getpwuid(psinfo->pr_euid)) != NULL) {
2310         size_t nw;

2312         nw = mbstowcs(NULL, pwd->pw_name, 0);
2313         if (nw == (size_t)-1)
2314             (void) printf("%8.8s ", "ERROR");
2315         else if (nw > 8)
2316             (void) wprintf(L"%7.7s%c ", pwd->pw_name, '*');
2317         if ((pwd = getpwuid(psinfo->pr_euid)) != NULL)
2318             (void) printf("%8.8s ", pwd->pw_name);
2319         else
2320             (void) wprintf(L"%8.8s ", pwd->pw_name);
2321     } else {
2322         if (snprintf(NULL, 0, "%u",
2323             (psinfo->pr_euid)) > 7)
2324             (void) printf(" %6.6u%c ", psinfo->pr_euid,
2325                 '*');
2326         else
2327             (void) printf(" %7.7u ", psinfo->pr_euid);
2328     }
2329 } else if (lflg) {
2330     if (snprintf(NULL, 0, "%u", (psinfo->pr_euid)) > 6)
2331         (void) printf("%5.5u%c ", psinfo->pr_euid, '*');
2332     else

```

```

2198     } else if (lflg)
2331         (void) printf("%6u ", psinfo->pr_euid);
2332     }

2334     (void) printf("%*d", pidwidth, (int)psinfo->pr_pid);    /* PID */
2335     if (lflg || fflg)
2336         (void) printf(" %*d", pidwidth,
2337             (int)psinfo->pr_ppid);                            /* PPID */

2339     if (jflg) {
2340         (void) printf(" %*d", pidwidth,
2341             (int)psinfo->pr_pgid);                            /* PGID */
2342         (void) printf(" %*d", pidwidth,
2343             (int)psinfo->pr_sid);                            /* SID */
2344     }

2346     if (Lflg)
2347         (void) printf(" %5d", 0);                            /* LWP */
2348     if (Pflg)
2349         (void) printf("  -");                                /* PSR */
2350     if (Lflg && fflg)
2351         (void) printf(" %5d", 0);                            /* NLWP */

2353     if (cflg) {
2354         (void) printf(" %4s", "-");                          /* zombies have no class */
2355         (void) printf(" %3d", psinfo->pr_lwp.pr_pri);        /* PRI */
2356     } else if (lflg || fflg) {
2357         (void) printf(" %3d", psinfo->pr_lwp.pr_cpu & 0377); /* C */
2358         if (lflg)
2359             (void) printf(" %3d %2s",
2360                 psinfo->pr_lwp.pr_oldpri, "-");            /* PRI NI */
2361     }
2362     if (lflg) {
2363         if (yflg)
2364             (void) printf(" %5d %6d %8s", 0, 0, "-");
2365         else
2366             (void) printf(" %8s %6d %8s", "-", 0, "-");
2367     }
2368     if (fflg) {
2369         int width = fname[F_STIME].width;
2370         (void) printf(" %*.s", width, width, "-");          /* STIME */
2371     }
2372     (void) printf(" %-8.14s", "?");                          /* TTY */

2374     tm = psinfo->pr_time.tv_sec;
2375     if (psinfo->pr_time.tv_nsec > 500000000)
2376         tm++;
2377     (void) printf(" %4ld:%.2ld", tm / 60, tm % 60);          /* TIME */
2378     (void) printf(" <defunct>\n");
2379 }

```

unchanged\_portion\_omitted

new/usr/src/cmd/pwck/pwck.c

1

```
*****
5355 Wed Sep  4 20:45:59 2013
new/usr/src/cmd/pwck/pwck.c
2989 Eliminate use of LOGNAME_MAX in ON
1166 useradd have warning with name more 8 chars
*****
1 /*
2  * CDDL HEADER START
3  *
4  * The contents of this file are subject to the terms of the
5  * Common Development and Distribution License (the "License").
6  * You may not use this file except in compliance with the License.
7  *
8  * You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE
9  * or http://www.opensolaris.org/os/licensing.
10 * See the License for the specific language governing permissions
11 * and limitations under the License.
12 *
13 * When distributing Covered Code, include this CDDL HEADER in each
14 * file and include the License file at usr/src/OPENSOLARIS.LICENSE.
15 * If applicable, add the following below this CDDL HEADER, with the
16 * fields enclosed by brackets "[]" replaced with your own identifying
17 * information: Portions Copyright [yyyy] [name of copyright owner]
18 *
19 * CDDL HEADER END
20 */
21 /*
22  * Copyright (c) 2013 Gary Mills
23  *
24  * Copyright 2007 Sun Microsystems, Inc. All rights reserved.
25  * Use is subject to license terms.
26 */

28 /*      Copyright (c) 1984, 1986, 1987, 1988, 1989 AT&T */
29 /*      All Rights Reserved */

30 #pragma ident      "%Z%M% %I%      %E% SMI"

32 #include <sys/types.h>
33 #include <sys/param.h>
34 #include <sys/signal.h>
35 #include <sys/sysmacros.h>
36 #include <sys/stat.h>
37 #include <stdio.h>
38 #include <stdlib.h>
39 #include <string.h>
40 #include <ctype.h>
41 #include <locale.h>
42 #include <errno.h>
43 #include <unistd.h>
44 #include <limits.h>

46 #define ERROR1  "Too many/few fields"
47 #define ERROR2  "Bad character(s) in logname"
48 #define ERROR2a "First char in logname not alphabetic"
49 #define ERROR2b "Logname field NULL"
50 #define ERROR2c "Logname contains no lower-case letters"
51 #define ERROR3  "Logname too long/short"
52 #define ERROR4  "Invalid UID"
53 #define ERROR5  "Invalid GID"
54 #define ERROR6  "Login directory not found"
55 #define ERROR6a "Login directory null"
56 #define ERROR7  "Optional shell file not found"

58 static int eflag, code = 0;
```

new/usr/src/cmd/pwck/pwck.c

2

```
59 static int badc;
60 static int lc;
61 static char buf[512];
62 static void error(char *);

64 int
65 main(int argc, char **argv)
66 {
67     int delim[512];
68     char logbuf[512];
69     FILE *fptr;
70     struct stat obuf;
71     uid_t uid;
72     gid_t gid;
73     int i, j, colons;
74     char *pw_file;
75     struct stat stat_buf;
76     char *str, *lastc;

78     (void) setlocale(LC_ALL, "");

80 #if !defined(TEXT_DOMAIN)          /* Should be defined by cc -D */
81 #define TEXT_DOMAIN "SYS_TEST"
82 #endif
83     (void) textdomain(TEXT_DOMAIN);

85     if (argc == 1)
86         pw_file = "/etc/passwd";
87     else
88         pw_file = argv[1];

90     if ((fptr = fopen(pw_file, "r")) == NULL) {
91         (void) fprintf(stderr, gettext("cannot open %s\n"), pw_file);
92         exit(1);
93     }

95     if (fstat(fileno(fptr), &stat_buf) < 0) {
96         (void) fprintf(stderr, gettext("fstat failed for %s\n"),
97             pw_file);
98         (void) fclose(fptr);
99         exit(1);
100     }

102     if (stat_buf.st_size == 0) {
103         (void) fprintf(stderr, gettext("file %s is empty\n"), pw_file);
104         (void) fclose(fptr);
105         exit(1);
106     }

108     while (fgets(buf, sizeof (buf), fptr) != NULL) {

110         colons = 0;
111         badc = 0;
112         lc = 0;
113         eflag = 0;

115         /* Check that entry is not a nameservice redirection */

117         if (buf[0] == '+' || buf[0] == '-') {
118             /*
119              * Should set flag here to allow special case checking
120              * in the rest of the code,
121              * but for now, we'll just ignore this entry.
122              */
123             continue;
124         }
```

```

126          /* Check number of fields */
128          for (i = 0; buf[i] != NULL; i++)
129              if (buf[i] == ':') {
130                  delim[colons] = i;
131                  ++colons;
132              }
134          if (colons != 6) {
135              error(ERROR1);
136              continue;
137          }
138          delim[6] = i - 1;
139          delim[7] = NULL;
141          /*
142           * Check the first char is alpha; the rest alphanumeric;
143           * and that the name does not consist solely of uppercase
144           * alpha chars
145           */
146          if (buf[0] == ':')
147              error(ERROR2b);
148          else if (!isalpha(buf[0]))
149              error(ERROR2a);
151          for (i = 0; buf[i] != ':'; i++) {
152              if (!isalnum(buf[i]) &&
153                  buf[i] != '-' &&
154                  buf[i] != '_' &&
155                  buf[i] != '.')
156                  badc++;
157              else if (islower(buf[i]))
158                  lc++;
159          }
160          if (lc == 0)
161              error(ERROR2c);
162          if (badc > 0)
163              error(ERROR2);
165          /* Check for valid number of characters in logname */
167          if (i <= 0 || i > LOGNAME_MAX)
168              error(ERROR3);
170          /* Check that UID is numeric and <= MAXUID */
172          errno = 0;
173          str = &buf[delim[1] + 1];
174          uid = strtol(str, &lastc, 10);
175          if (lastc != str + (delim[2] - delim[1]) - 1 ||
176              uid > MAXUID || errno == ERANGE)
177              error(ERROR4);
179          /* Check that GID is numeric and <= MAXUID */
181          errno = 0;
182          str = &buf[delim[2] + 1];
183          gid = strtol(str, &lastc, 10);
184          if (lastc != str + (delim[3] - delim[2]) - 1 ||
185              gid > MAXUID || errno == ERANGE)
186              error(ERROR5);
188          /* Check initial working directory */

```

```

190          for (j = 0, i = (delim[4] + 1); i < delim[5]; j++, i++)
191              logbuf[j] = buf[i];
192          logbuf[j] = '\0';
194          if (logbuf[0] == NULL)
195              error(ERROR6a);
196          else if ((stat(logbuf, &obuf)) == -1)
197              error(ERROR6);
199          /* Check program to use as shell */
201          if ((buf[(delim[5] + 1)]) != '\n') {
203              for (j = 0, i = (delim[5] + 1); i < delim[6]; j++, i++)
204                  logbuf[j] = buf[i];
205              logbuf[j] = '\0';
207              if (strcmp(logbuf, "") == 0) /* subsystem login */
208                  continue;
210              if ((stat(logbuf, &obuf)) == -1)
211                  error(ERROR7);
213              for (j = 0; j < 512; j++)
214                  logbuf[j] = NULL;
215          }
216          }
217          (void) fclose(fp);
218          return (code);
219 }

```

unchanged\_portion\_omitted

new/usr/src/cmd/w/w.c

1

```
*****
18980 Wed Sep  4 20:45:59 2013
new/usr/src/cmd/w/w.c
2989 Eliminate use of LOGNAME_MAX in ON
1166 useradd have warning with name more 8 chars
*****
1 /*
2  * CDDL HEADER START
3  *
4  * The contents of this file are subject to the terms of the
5  * Common Development and Distribution License (the "License").
6  * You may not use this file except in compliance with the License.
7  *
8  * You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE
9  * or http://www.opensolaris.org/os/licensing.
10 * See the License for the specific language governing permissions
11 * and limitations under the License.
12 *
13 * When distributing Covered Code, include this CDDL HEADER in each
14 * file and include the License file at usr/src/OPENSOLARIS.LICENSE.
15 * If applicable, add the following below this CDDL HEADER, with the
16 * fields enclosed by brackets "[]" replaced with your own identifying
17 * information: Portions Copyright [yyyy] [name of copyright owner]
18 *
19 * CDDL HEADER END
20 */
21 /*
22  * Copyright (c) 2013 Gary Mills
23  *
24  * Copyright 2009 Sun Microsystems, Inc. All rights reserved.
25  * Use is subject to license terms.
26  */
27
28 /*      Copyright (c) 1984, 1986, 1987, 1988, 1989 AT&T */
29 /*      All Rights Reserved */
30
31 /*
32  * University Copyright- Copyright (c) 1982, 1986, 1988
33  * The Regents of the University of California
34  * All Rights Reserved
35  *
36  * University Acknowledgment- Portions of this document are derived from
37  * software developed by the University of California, Berkeley, and its
38  * contributors.
39  */
40
41 /*
42  * This is the new w command which takes advantage of
43  * the /proc interface to gain access to the information
44  * of all the processes currently on the system.
45  *
46  * This program also implements 'uptime'.
47  *
48  * Maintenance note:
49  *
50  * Much of this code is replicated in whodo.c. If you're
51  * fixing bugs here, then you should probably fix 'em there too.
52  */
53
54 #include <stdio.h>
55 #include <string.h>
56 #include <stdarg.h>
57 #include <stdlib.h>
58 #include <ctype.h>
59 #include <fcntl.h>
60 #include <time.h>
```

new/usr/src/cmd/w/w.c

2

```
61 #include <errno.h>
62 #include <sys/types.h>
63 #include <utmpx.h>
64 #include <sys/stat.h>
65 #include <dirent.h>
66 #include <procfs.h>          /* /proc header file */
67 #include <locale.h>
68 #include <unistd.h>
69 #include <sys/loadavg.h>
70 #include <limits.h>
71 #include <priv_utils.h>
72
73 /*
74  * Use the full lengths from utmpx for user and line.
75  * utmpx defines wider fields for user and line. For compatibility of output,
76  * we are limiting these to the old maximums in utmp. Define UTMPX_NAMELEN
77  * to use the full lengths.
78  */
79 #ifndef UTMPX_NAMELEN
80 #define UTMPX_NAMELEN 12
81 #endif
82
83 /* Print minimum field widths. */
84 #define LOGIN_WIDTH 8
85 #define LINE_WIDTH 12
86
87 #define DIV60(t) ((t+30)/60) /* x/60 rounded */
88
89 #ifdef ERR
90 #undef ERR
91 #endif
92 #define ERR (-1)
93
94 #define HSIZE 256 /* size of process hash table */
95 #define PROC_DIR "/"
96 #define INITPROC (pid_t)1 /* init process pid */
97 #define NONE 'n' /* no state */
98 #define RUNNING 'r' /* runnable process */
99 #define ZOMBIE 'z' /* zombie process */
100 #define VISITED 'v' /* marked node as visited */
101 #define PRINTF(a) if (printf a < 0) { \
102     perror((gettext("%s: printf failed"), prog)); \
103     exit(1); }
104
105 struct uproc {
106     pid_t p_upid; /* process id */
107     char p_state; /* numeric value of process state */
108     dev_t p_ttyd; /* controlling tty of process */
109     time_t p_time; /* seconds of user & system time */
110     time_t p_ctime; /* seconds of child user & sys time */
111     int p_igintr; /* 1 = ignores SIGQUIT and SIGINT */
112     char p_comm[PRARGSZ+1]; /* command */
113     char p_args[PRARGSZ+1]; /* command line arguments */
114     struct uproc *p_child; /* first child pointer */
115     struct uproc *p_sibling; /* sibling pointer */
116     struct uproc *p_pgrp; /* pgrp link */
117     struct uproc *p_link; /* hash table chain pointer */
118 };
119
120 /*
```

```

118 *      define hash table for struct uproc
119 *      Hash function uses process id
120 *      and the size of the hash table(HSIZE)
121 *      to determine process index into the table.
122 */
123 static struct uproc      pr_htbl[HSIZE];

125 static struct      uproc *findhash(pid_t);
126 static time_t      findidle(char *);
127 static void        clnarglist(char *);
128 static void        showtotals(struct uproc *);
129 static void        calctotals(struct uproc *);
130 static void        prttime(time_t, char *);
131 static void        prtstat(time_t *time);
132 static void        checkkmpm(char *str);

134 static char        *prog;          /* pointer to invocation name */
135 static int          header = 1;    /* true if -h flag: don't print heading */
136 static int          lflag = 1;    /* set if -l flag; 0 for -s flag: short form */
137 static char        *sel_user;     /* login of particular user selected */
138 static char        firstchar;     /* first char of name of prog invoked as */
139 static int          login;        /* true if invoked as login shell */
140 static time_t       now;          /* current time of day */
141 static time_t       uptime;       /* time of last reboot & elapsed time since */
142 static int          nusers;       /* number of users logged in now */
143 static time_t       idle;         /* number of minutes user is idle */
144 static time_t       jobtime;      /* total cpu time visible */
145 static char        doing[520];    /* process attached to terminal */
146 static time_t       proctime;     /* cpu time of process in doing */
147 static pid_t       curpid; empty;
148 static int          add_times;    /* boolean: add the cpu times or not */

150 #if SIGQUIT > SIGINT
151 #define ACTSIZE SIGQUIT
152 #else
153 #define ACTSIZE SIGINT
154 #endif

156 int
157 main(int argc, char *argv[])
158 {
159     struct utmpx      *ut;
160     struct utmpx      *utmpbegin;
161     struct utmpx      *utmpend;
162     struct utmpx      *utp;
163     struct uproc       *up, *parent, *pgrp;
164     struct psinfo      info;
165     struct sigaction   actinfo[ACTSIZE];
166     struct pstatus      statinfo;
167     size_t             size;
168     struct stat        sbuf;
169     DIR                *dirp;
170     struct dirent       *dp;
171     char               pname[64];
172     char               *fname;
173     int                procfd;
174     char               *cp;
175     int                i;
176     int                days, hrs, mins;
177     int                entries;
178     double             loadavg[3];

180     /*
181      * This program needs the proc_owner privilege
182      */
183     (void) __init_suid_priv(PU_CLEARLIMITSET, PRIV_PROC_OWNER,

```

```

184         (char *)NULL);

186         (void) setlocale(LC_ALL, "");
187 #if !defined(TEXT_DOMAIN)
188 #define TEXT_DOMAIN "SYS_TEST"
189 #endif
190         (void) textdomain(TEXT_DOMAIN);

192         login = (argv[0][0] == '-');
193         cp = strrchr(argv[0], '/');
194         firstchar = login ? argv[0][1] : (cp == 0) ? argv[0][0] : cp[1];
195         prog = argv[0];

197         while (argc > 1) {
198             if (argv[1][0] == '-') {
199                 for (i = 1; argv[1][i]; i++) {
200                     switch (argv[1][i]) {

202                         case 'h':
203                             header = 0;
204                             break;

206                         case 'l':
207                             lflag++;
208                             break;
209                         case 's':
210                             lflag = 0;
211                             break;

213                         case 'u':
214                         case 'w':
215                             firstchar = argv[1][i];
216                             break;

218                         default:
219                             (void) fprintf(stderr, gettext(
220                                 "%s: bad flag %s\n"),
221                                 prog, argv[1]);
222                             exit(1);
223                     }
224                 }
225             } else {
226                 if (!isalnum(argv[1][0]) || argc > 2) {
227                     (void) fprintf(stderr, gettext(
228                         "usage: %s [ -hlsuw ] [ user ]\n"), prog);
229                     exit(1);
230                 } else
231                     sel_user = argv[1];
232             }
233             argc--; argv++;
234         }

236         /*
237          * read the UTMP_FILE (contains information about each logged in user)
238          */
239         if (stat(UTMPX_FILE, &sbuf) == ERR) {
240             (void) fprintf(stderr, gettext("%s: stat error of %s: %s\n"),
241                 prog, UTMPX_FILE, strerror(errno));
242             exit(1);
243         }
244         entries = sbuf.st_size / sizeof (struct futmpx);
245         size = sizeof (struct utmpx) * entries;
246         if ((ut = malloc(size)) == NULL) {
247             (void) fprintf(stderr, gettext("%s: malloc error of %s: %s\n"),
248                 prog, UTMPX_FILE, strerror(errno));
249             exit(1);

```

```

250     }

252     (void) utmpxname(UTMPX_FILE);

254     utmpbegin = ut;
255     utmpend = (struct utmpx *)((char *)utmpbegin + size);

257     setutxent();
258     while ((ut < utmpend) && (utp = getutxent()) != NULL) {
259         (void) memcpy(ut++, utp, sizeof (*ut));
260     }

262     (void) time(&now);      /* get current time */

264     if (header) {          /* print a header */
265         prtat(&now);
266         for (ut = utmpbegin; ut < utmpend; ut++) {
267             if (ut->ut_type == USER_PROCESS) {
268                 if (!nonuser(*ut))
269                     nusers++;
270             } else if (ut->ut_type == BOOT_TIME) {
271                 uptime = now - ut->ut_xtime;
272                 uptime += 30;
273                 days = uptime / (60*60*24);
274                 uptime %= (60*60*24);
275                 hrs = uptime / (60*60);
276                 uptime %= (60*60);
277                 mins = uptime / 60;

279                 PRINTF((gettext(" up")));
280                 if (days > 0)
281                     PRINTF((gettext(
282                         " %d day(s)", days)));
283                 if (hrs > 0 && mins > 0) {
284                     PRINTF((" %2d:%02d", hrs, mins));
285                 } else {
286                     if (hrs > 0)
287                         PRINTF((gettext(
288                             " %d hr(s)", hrs)));
289                     if (mins > 0)
290                         PRINTF((gettext(
291                             " %d min(s)", mins)));
292                 }
293             }
294         }

296         ut = utmpbegin; /* rewind utmp data */
297         PRINTF(((nusers == 1) ?
298             gettext(" %d user") : gettext(" %d users")), nusers));
299         /*
300          * Print 1, 5, and 15 minute load averages.
301          */
302         (void) getloadavg(loadavg, 3);
303         PRINTF((gettext(",   load average: %.2f, %.2f, %.2f\n"),
304             loadavg[LOADAVG_1MIN], loadavg[LOADAVG_5MIN],
305             loadavg[LOADAVG_15MIN]));

307         if (firstchar == 'u') /* uptime command */
308             exit(0);

310         if (!lflag) {
311             PRINTF((dcgettext(NULL, "User      tty      "
312                 "login@ idle JCPU PCPU what\n", LC_TIME)));
313         } else {
314             PRINTF((dcgettext(NULL,
315                 "User      tty      idle      what\n", LC_TIME)));

```

```

316         }

318         if (fflush(stdout) == EOF) {
319             perror((gettext("%s: fflush failed\n"), prog));
320             exit(1);
321         }
322     }

324     /*
325     * loop through /proc, reading info about each process
326     * and build the parent/child tree
327     */
328     if (!(dirp = opendir(PROCDIR))) {
329         (void) fprintf(stderr, gettext("%s: could not open %s: %s\n"),
330             prog, PROCDIR, strerror(errno));
331         exit(1);
332     }

334     while ((dp = readdir(dirp)) != NULL) {
335         if (dp->d_name[0] == '.')
336             continue;
337     retry:
338         (void) sprintf(pname, "%s/%s/", PROCDIR, dp->d_name);
339         fname = pname + strlen(pname);
340         (void) strcpy(fname, "psinfo");
341         if ((procfd = open(pname, O_RDONLY)) < 0)
342             continue;
343         if (read(procfd, &info, sizeof (info)) != sizeof (info)) {
344             int err = errno;
345             (void) close(procfd);
346             if (err == EAGAIN)
347                 goto retry;
348             if (err != ENOENT)
349                 (void) fprintf(stderr, gettext(
350                     "%s: read() failed on %s: %s\n"),
351                     prog, pname, strerror(err));
352             continue;
353         }
354         (void) close(procfd);

356         up = findhash(info.pr_pid);
357         up->p_ttyd = info.pr_ttydev;
358         up->p_state = (info.pr_nlw == 0 ? ZOMBIE : RUNNING);
359         up->p_time = 0;
360         up->p_ctime = 0;
361         up->p_igintr = 0;
362         (void) strncpy(up->p_comm, info.pr_fname,
363             sizeof (info.pr_fname));
364         up->p_args[0] = 0;

366         if (up->p_state != NONE && up->p_state != ZOMBIE) {
367             (void) strcpy(fname, "status");

369             /* now we need the proc_owner privilege */
370             (void) __priv_bracket(PRIV_ON);

372             procfd = open(pname, O_RDONLY);

374             /* drop proc_owner privilege after open */
375             (void) __priv_bracket(PRIV_OFF);

377             if (procfd < 0)
378                 continue;

380             if (read(procfd, &statinfo, sizeof (statinfo))
381                 != sizeof (statinfo)) {

```

```

382         int err = errno;
383         (void) close(procfd);
384         if (err == EAGAIN)
385             goto retry;
386         if (err != ENOENT)
387             (void) fprintf(stderr, gettext(
388                 "%s: read() failed on %s: %s\n"),
389                 prog, pname, strerror(err));
390         continue;
391     }
392     (void) close(procfd);
393
394     up->p_time = statinfo.pr_utime.tv_sec +
395         statinfo.pr_stime.tv_sec; /* seconds */
396     up->p_ctime = statinfo.pr_cutime.tv_sec +
397         statinfo.pr_cstime.tv_sec;
398
399     (void) strcpy(fname, "sigact");
400
401     /* now we need the proc_owner privilege */
402     (void) __priv_bracket(PRIV_ON);
403
404     procfd = open(pname, O_RDONLY);
405
406     /* drop proc_owner privilege after open */
407     (void) __priv_bracket(PRIV_OFF);
408
409     if (procfd < 0)
410         continue;
411
412     if (read(procfd, actinfo, sizeof (actinfo))
413         != sizeof (actinfo)) {
414         int err = errno;
415         (void) close(procfd);
416         if (err == EAGAIN)
417             goto retry;
418         if (err != ENOENT)
419             (void) fprintf(stderr, gettext(
420                 "%s: read() failed on %s: %s\n"),
421                 prog, pname, strerror(err));
422         continue;
423     }
424     (void) close(procfd);
425
426     up->p_igintr =
427         actinfo[SIGINT-1].sa_handler == SIG_IGN &&
428         actinfo[SIGQUIT-1].sa_handler == SIG_IGN;
429
430     /*
431     * Process args.
432     */
433     up->p_args[0] = 0;
434     clnarglist(info.pr_psargs);
435     (void) strcat(up->p_args, info.pr_psargs);
436     if (up->p_args[0] == 0 ||
437         up->p_args[0] == '-' && up->p_args[1] <= ' ' ||
438         up->p_args[0] == '?') {
439         (void) strcat(up->p_args, " (");
440         (void) strcat(up->p_args, up->p_comm);
441         (void) strcat(up->p_args, ")");
442     }
443 }
444
445 /*
446 * link pgrp together in case parents go away
447 * Pgrp chain is a single linked list originating

```

```

448     * from the pgrp leader to its group member.
449     */
450     if (info.pr_pgid != info.pr_pid) { /* not pgrp leader */
451         pgrp = findhash(info.pr_pgid);
452         up->p_pgrpl = pgrp->p_pgrpl;
453         pgrp->p_pgrpl = up;
454     }
455     parent = findhash(info.pr_ppid);
456
457     /* if this is the new member, link it in */
458     if (parent->p_upid != INITPROCESS) {
459         if (parent->p_child) {
460             up->p_sibling = parent->p_child;
461             up->p_child = 0;
462         }
463         parent->p_child = up;
464     }
465 }
466
467 /* revert to non-privileged user after opening */
468 (void) __priv_relinquish();
469
470 (void) closedir(dirp);
471 (void) time(&now); /* get current time */
472
473 /*
474 * loop through utmpx file, printing process info
475 * about each logged in user
476 */
477 for (ut = utmpbegin; ut < utmpend; ut++) {
478     if (ut->ut_type != USER_PROCESS)
479         continue;
480     if (sel_user && strcmp(ut->ut_name, sel_user, NMAX) != 0)
481         continue; /* we're looking for somebody else */
482
483     /* print login name of the user */
484     PRINTF("%-*.s ", LOGIN_WIDTH, NMAX, ut->ut_name);
485     PRINTF("%-*.s ", NMAX, NMAX, ut->ut_name);
486
487     /* print tty user is on */
488     if (lflag) {
489         PRINTF("%-*.s", LINE_WIDTH, LMAX, ut->ut_line);
490         PRINTF("%-*.s", LMAX, LMAX, ut->ut_line);
491     } else {
492         if (ut->ut_line[0] == 'p' && ut->ut_line[1] == 't' &&
493             ut->ut_line[2] == 's' && ut->ut_line[3] == '/') {
494             PRINTF("%-*.3s", LMAX, &ut->ut_line[4]);
495         } else {
496             PRINTF("%-*.s", LINE_WIDTH, LMAX,
497                 ut->ut_line);
498             PRINTF("%-*.s", LMAX, LMAX, ut->ut_line);
499         }
500     }
501
502     /* print when the user logged in */
503     if (lflag) {
504         time_t tim = ut->ut_xtime;
505         prtatt(&tim);
506     }
507
508     /* print idle time */
509     idle = findidle(ut->ut_line);
510     if (idle >= 36 * 60) {
511         PRINTF((dcgettext(NULL, "%2ddays ", LC_TIME),
512             (idle + 12 * 60) / (24 * 60)));
513     } else

```



new/usr/src/cmd/w/w.c

9

```
511         prttime(idle, " ");
512         showtotals(findhash(ut->ut_pid));
513     }
514     if (fclose(stdout) == EOF) {
515         perror((gettext("%s: fclose failed"), prog));
516         exit(1);
517     }
518     return (0);
519 }
```

\_\_\_\_\_unchanged\_portion\_omitted\_\_\_\_\_

new/usr/src/cmd/wall/wall.c

\*\*\*\*\*

11096 Wed Sep 4 20:46:00 2013

new/usr/src/cmd/wall/wall.c

2989 Eliminate use of LOGNAME\_MAX in ON

1166 useradd have warning with name more 8 chars

\*\*\*\*\*

```
1 /*
2  * CDDL HEADER START
3  *
4  * The contents of this file are subject to the terms of the
5  * Common Development and Distribution License, Version 1.0 only
6  * (the "License"). You may not use this file except in compliance
7  * with the License.
8  *
9  * You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE
10  * or http://www.opensolaris.org/os/licensing.
11  * See the License for the specific language governing permissions
12  * and limitations under the License.
13  *
14  * When distributing Covered Code, include this CDDL HEADER in each
15  * file and include the License file at usr/src/OPENSOLARIS.LICENSE.
16  * If applicable, add the following below this CDDL HEADER, with the
17  * fields enclosed by brackets "[]" replaced with your own identifying
18  * information: Portions Copyright [yyyy] [name of copyright owner]
19  *
20  * CDDL HEADER END
21 */
22 /*      Copyright (c) 1984, 1986, 1987, 1988, 1989 AT&T */
23 /*      All Rights Reserved */
```

```
27 /*
28  * Copyright 1988-2003 Sun Microsystems, Inc. All rights reserved.
29  * Use is subject to license terms.
30 */
```

```
32 /*
33  * Copyright 2012 Joyent, Inc. All rights reserved.
```

```
34  *
35  * Copyright (c) 2013 Gary Mills
36 */
```

```
38 #include <signal.h>
39 #include <stdio.h>
40 #include <stdlib.h>
41 #include <grp.h>
42 #include <sys/types.h>
43 #include <unistd.h>
44 #include <string.h>
45 #include <ctype.h>
46 #include <sys/stat.h>
47 #include <utmpx.h>
48 #include <sys/utsname.h>
49 #include <dirent.h>
50 #include <pwd.h>
51 #include <fcntl.h>
52 #include <time.h>
53 #include <errno.h>
54 #include <locale.h>
55 #include <syslog.h>
56 #include <sys/wait.h>
57 #include <limits.h>
58 #include <libzonecfg.h>
59 #include <zone.h>
60 #include <sys/contract/process.h>
```

1

new/usr/src/cmd/wall/wall.c

```
61 #include <libcontract.h>
62 #include <sys/ctfs.h>
```

```
64 /*
65  * Use the full lengths from utmpx for user and line.
66  * utmpx defines wider fields for user and line. For compatibility of output,
67  * we are limiting these to the old maximums in utmp. Define UTMPX_NAMELEN
68  * to use the full lengths.
69 */
```

```
67 #define NMAX (sizeof (((struct utmpx *)0)->ut_user))
68 #define LMAX (sizeof (((struct utmpx *)0)->ut_line))
69 #ifndef UTMPX_NAMELEN
70 /* XXX - utmp -fix name length */
71 #define NMAX (_POSIX_LOGIN_NAME_MAX - 1)
72 #define LMAX 12
73 #else /* UTMPX_NAMELEN */
74 #define NMAX (sizeof (((struct utmpx *)0)->ut_user))
75 #define LMAX (sizeof (((struct utmpx *)0)->ut_line))
76 #endif /* UTMPX_NAMELEN */
```

```
70 static char mesg[3000];
71 static char *infile;
72 static int gflag;
73 static struct group *pgrp;
74 static char *grpname;
75 static char line[MAXNAMLEN+1] = "???";
76 static char systm[MAXNAMLEN+1];
77 static time_t tloc;
78 static struct utsname utsn;
79 static char who[NMAX+1] = "???";
80 static char who[9] = "???";
81 static char time_buf[50];
82 #define DATE_FMT "%a %b %e %H:%M:%S"
```

```
83 static void sendmes(struct utmpx *, zoneid_t);
84 static void sendmes_tozone(zoneid_t, int);
85 static int chkgrp(char *);
86 static char *copy_str_till(char *, char *, char, int);
```

```
88 static int init_template(void);
89 int contract_abandon_id(ctid_t);
```

```
91 int
92 main(int argc, char *argv[])
93 {
94     FILE *f;
95     char *ptr, *start;
96     struct passwd *pwd;
97     char *term_name;
98     int c;
99     int aflag = 0;
100    int errflg = 0;
101    int zflg = 0;
102    int Zflg = 0;

104    char *zonename = NULL;
105    zoneid_t *zoneidlist = NULL;
106    uint_t nzids_saved, nzids = 0;

108    (void) setlocale(LC_ALL, "");

110    while ((c = getopt(argc, argv, "g:az:Z")) != EOF)
111        switch (c) {
112            case 'a':
113                aflag++;
114                break;
```

2

```

115         case 'g':
116             if (gflag) {
117                 (void) fprintf(stderr,
118                     "Only one group allowed\n");
119                 return (1);
120             }
121             if ((pgrp = getgrnam(grpname = optarg)) == NULL) {
122                 (void) fprintf(stderr, "Unknown group %s\n",
123                     grpname);
124                 return (1);
125             }
126             gflag++;
127             break;
128         case 'z':
129             zflag++;
130             zonename = optarg;
131             if (getzoneidbyname(zonename) == -1) {
132                 (void) fprintf(stderr, "Specified zone %s "
133                     "is invalid", zonename);
134                 return (1);
135             }
136             break;
137         case 'Z':
138             Zflag++;
139             break;
140         case '?':
141             errflg++;
142             break;
143     }
144
145     if (errflg) {
146         (void) fprintf(stderr,
147             "Usage: wall [-a] [-g group] [-z zone] [-Z] [files...]\n");
148         return (1);
149     }
150
151     if (zflag && Zflag) {
152         (void) fprintf(stderr, "Cannot use -z with -Z\n");
153         return (1);
154     }
155
156     if (optind < argc)
157         infile = argv[optind];
158
159     if (uname(&utsn) == -1) {
160         (void) fprintf(stderr, "wall: uname() failed, %s\n",
161             strerror(errno));
162         return (2);
163     }
164     (void) strcpy(systm, utsn.nodename);
165
166     /*
167     * Get the name of the terminal wall is running from.
168     */
169
170     if ((term_name = ttyname(fileno(stderr))) != NULL) {
171         /*
172         * skip the leading "/dev/" in term_name
173         */
174         (void) strncpy(line, &term_name[5], sizeof (line) - 1);
175     }
176
177     if (who[0] == '?') {
178         if (pwd = getpwuid(getuid()))
179             (void) strncpy(&who[0], pwd->pw_name, sizeof (who));
180     }

```

```

182     f = stdin;
183     if (infile) {
184         f = fopen(infile, "r");
185         if (f == NULL) {
186             (void) fprintf(stderr, "Cannot open %s\n", infile);
187             return (1);
188         }
189     }
190
191     start = &mesg[0];
192     ptr = start;
193     while ((ptr - start) < 3000) {
194         size_t n;
195
196         if (fgets(ptr, &mesg[sizeof (mesg)] - ptr, f) == NULL)
197             break;
198         if ((n = strlen(ptr)) == 0)
199             break;
200         ptr += n;
201     }
202     (void) fclose(f);
203
204     /*
205     * If the request is from the rwall daemon then use the caller's
206     * name and host. We determine this if all of the following is true:
207     * 1) First 5 characters are "From "
208     * 2) Next non-white characters are of the form "name@host:"
209     */
210     if (strcmp(line, "???" ) == 0) {
211         char rwho[MAXNAMLEN+1];
212         char rsystm[MAXNAMLEN+1];
213         char *cp;
214
215         if (strncmp(mesg, "From ", 5) == 0) {
216             cp = &mesg[5];
217             cp = copy_str_till(rwho, cp, '@', MAXNAMLEN + 1);
218             if (rwho[0] != '\0') {
219                 cp = copy_str_till(rsystm, ++cp, ':',
220                     MAXNAMLEN + 1);
221                 if (rsystm[0] != '\0') {
222                     (void) strcpy(systm, rsystm);
223                     (void) strncpy(rwho, who,
224                         sizeof (who));
225                     (void) strncpy(rwho, who, 9);
226                     (void) strcpy(line, "rpc.rwalld");
227                 }
228             }
229         }
230         (void) time(&tloc);
231         (void) strftime(time_buf, sizeof (time_buf),
232             DATE_FMT, localtime(&tloc));
233
234         if (zflag != 0) {
235             if ((zoneidlist =
236                 malloc(sizeof (zoneid_t))) == NULL ||
237                 (*zoneidlist = getzoneidbyname(zonename)) == -1)
238                 return (errno);
239             nzids = 1;
240         } else if (Zflag != 0) {
241             if (zone_list(NULL, &nzids) != 0)
242                 return (errno);
243         } again:
244             nzids *= 2;
245             if ((zoneidlist = malloc(nzids * sizeof (zoneid_t))) == NULL)

```

```

246         exit(errno);
247         nzids_saved = nzids;
248         if (zone_list(zoneidlist, &nzids) != 0) {
249             (void) free(zoneidlist);
250             return (errno);
251         }
252         if (nzids > nzids_saved) {
253             free(zoneidlist);
254             goto again;
255         }
256     }
257     if (zflg || Zflg) {
258         for (; nzids > 0; --nzids)
259             sendmes_tozone(zoneidlist[nzids-1], aflag);
260         free(zoneidlist);
261     } else
262         sendmes_tozone(getzoneid(), aflag);
264     return (0);
265 }

```

unchanged\_portion\_omitted

```

329 /*
330  * Note to future maintainers: with the change of wall to use the
331  * getutxent() API, the forked children (created by this function)
332  * must call _exit as opposed to exit. This is necessary to avoid
333  * unwanted fflushing of getutxent's stdio stream (caused by atexit
334  * processing).
335  */
336 static void
337 sendmes(struct utmpx *p, zoneid_t zid)
338 {
339     int i;
340     char *s;
341     static char device[LMAX + 6];
342     char *bp;
343     int ibp;
344     FILE *f;
345     int fd, tmpl_fd;
346     boolean_t zoneenter = B_FALSE;
348     if (zid != getzoneid()) {
349         zoneenter = B_TRUE;
350         tmpl_fd = init_template();
351         if (tmpl_fd == -1) {
352             (void) fprintf(stderr, "Could not initialize "
353                 "process contract");
354             return;
355         }
356     }
358     while ((i = (int)fork()) == -1) {
359         (void) alarm(60);
360         (void) wait((int *)0);
361         (void) alarm(0);
362     }
364     if (i)
365         return;
367     if (zoneenter && zone_enter(zid) == -1) {
368         char zonename[ZONENAME_MAX];
369         (void) getzonenamebyid(zid, zonename, ZONENAME_MAX);
370         (void) fprintf(stderr, "Could not enter zone "
371             "%s\n", zonename);
372     }

```

```

373     if (zoneenter)
374         (void) ct_tmpl_clear(tmpl_fd);
376     if (gflag)
377         if (!chkgrp(p->ut_user))
378             _exit(0);
380     (void) signal(SIGHUP, SIG_IGN);
381     (void) alarm(60);
382     s = &device[0];
383     (void) snprintf(s, sizeof (device), "/dev/%.*s", LMAX, p->ut_line);
385     /* check if the device is really a tty */
386     if ((fd = open(s, O_WRONLY|O_NOCTTY|O_NONBLOCK)) == -1) {
387         (void) fprintf(stderr, "Cannot send to %.*s on %s\n",
388             NMAX, p->ut_user, s);
389         perror("open");
390         (void) fflush(stderr);
391         _exit(1);
392     } else {
393         if (!isatty(fd)) {
394             (void) fprintf(stderr,
395                 "Cannot send to device %.*s %s\n",
396                 LMAX, p->ut_line,
397                 "because it's not a tty");
398             openlog("wall", 0, LOG_AUTH);
399             syslog(LOG_CRIT, "%.*s in utmpx is not a tty\n",
400                 LMAX, p->ut_line);
401             closelog();
402             (void) fflush(stderr);
403             _exit(1);
404         }
405     }
406 #ifdef DEBUG
407     (void) close(fd);
408     f = fopen("wall.debug", "a");
409 #else
410     f = fdopen(fd, "w");
411 #endif
412     if (f == NULL) {
413         (void) fprintf(stderr, "Cannot send to %.*s on %s\n",
414             NMAX, &p->ut_user[0], s);
415         perror("open");
416         (void) fflush(stderr);
417         _exit(1);
418     }
419     (void) fprintf(f,
420         "\07\07\07Broadcast Message from %s (%s) on %s %19.19s",
421         who, line, systm, time_buf);
422     if (gflag)
423         (void) fprintf(f, " to group %s", grpname);
424     (void) fprintf(f, "... \n");
425 #ifdef DEBUG
426     (void) fprintf(f, "DEBUG: To %.*s on %s\n", NMAX, p->ut_user, s);
427 #endif
428     i = strlen(msg);
429     for (bp = msg; --i >= 0; bp++) {
430         ibp = (unsigned int)((unsigned char) *bp);
431         if (*bp == '\n')
432             (void) putc('\r', f);
433         if (isprint(ibp) || *bp == '\r' || *bp == '\013' ||
434             *bp == ' ' || *bp == '\t' || *bp == '\n' || *bp == '\007') {
435             (void) putc(*bp, f);
436         } else {
437             if (!isascii(*bp)) {

```

```

438             (void) fputs("M-", f);
439             *bp = toascii(*bp);
440         }
441         if (iscntrl(*bp)) {
442             (void) putc('^', f);
443             (void) putc(*bp + 0100, f);
444         }
445         else
446             (void) putc(*bp, f);
447     }
448
449     if (*bp == '\n')
450         (void) fflush(f);
451
452     if (ferror(f) || feof(f)) {
453         (void) printf("\n\007Write failed\n");
454         (void) fflush(stdout);
455         _exit(1);
456     }
457 }
458 (void) fclose(f);
459 (void) close(fd);
460 _exit(0);
461 }

```

```

464 static int
465 chkgrp(char *name)
466 {
467     int i;
468     char user[NMAX + 1];
469     char *p;
470
471     (void) strcpy(user, name, sizeof (user));
472     for (i = 0; pgrp->gr_mem[i] && pgrp->gr_mem[i][0]; i++) {
473         if (strcmp(user, pgrp->gr_mem[i]) == 0)
474             for (p = name; *p && *p != ' '; p++)
475                 *p = 0;
476         if (strncmp(name, pgrp->gr_mem[i], 8) == 0)
477             return (1);
478     }
479
480     return (0);
481 }

```

unchanged\_portion\_omitted

new/usr/src/cmd/who/who.c

\*\*\*\*\*

20484 Wed Sep 4 20:46:00 2013

new/usr/src/cmd/who/who.c

2989 Eliminate use of LOGNAME\_MAX in ON

1166 useradd have warning with name more 8 chars

\*\*\*\*\*

```
1 /*
2  * CDDL HEADER START
3  *
4  * The contents of this file are subject to the terms of the
5  * Common Development and Distribution License (the "License").
6  * You may not use this file except in compliance with the License.
7  *
8  * You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE
9  * or http://www.opensolaris.org/os/licensing.
10 * See the License for the specific language governing permissions
11 * and limitations under the License.
12 *
13 * When distributing Covered Code, include this CDDL HEADER in each
14 * file and include the License file at usr/src/OPENSOLARIS.LICENSE.
15 * If applicable, add the following below this CDDL HEADER, with the
16 * fields enclosed by brackets "[]" replaced with your own identifying
17 * information: Portions Copyright [yyyy] [name of copyright owner]
18 *
19 * CDDL HEADER END
20 */
21 /*      Copyright (c) 1984, 1986, 1987, 1988, 1989 AT&T */
22 /*      All Rights Reserved */

25 /*
26  * Copyright (c) 2013 Gary Mills
27  *
28  * Copyright 2006 Sun Microsystems, Inc. All rights reserved.
29  * Use is subject to license terms.
30  */

30 #pragma ident      "%Z%M% %I%      %E% SMI"

32 /*
33  *      This program analyzes information found in /var/adm/utmpx
34  *
35  *      Additionally information is gathered from /etc/inittab
36  *      if requested.
37  *
38  *
39  *      Syntax:
40  *
41  *      who am i          Displays info on yourself
42  *
43  *      who -a            Displays information about All
44  *                        entries in /var/adm/utmpx
45  *
46  *      who -b            Displays info on last boot
47  *
48  *      who -d            Displays info on DEAD PROCESSES
49  *
50  *      who -H            Displays HEADERS for output
51  *
52  *      who -l            Displays info on LOGIN entries
53  *
54  *      who -m            Same as who am i
55  *
56  *      who -p            Displays info on PROCESSES spawned by init
57  *
58  *      who -q            Displays short information on
```

1

new/usr/src/cmd/who/who.c

```
59 *
60 *
61 *      who -r            Displays info of current run-level
62 *
63 *      who -s            Displays requested info in SHORT form
64 *
65 *      who -t            Displays info on TIME changes
66 *
67 *      who -T            Displays writeability of each user
68 *                        (+ writeable, - non-writeable, ? hung)
69 *
70 *      who -u            Displays LONG info on users
71 *                        who have LOGGED ON
72 */

74 #define      DATE_FMT      "%b %e %H:%M"

76 /*
77 *      %b      Abbreviated month name
78 *      %e      Day of month
79 *      %H      hour (24-hour clock)
80 *      %M      minute
81 */
82 #include      <errno.h>
83 #include      <fcntl.h>
84 #include      <stdio.h>
85 #include      <string.h>
86 #include      <sys/types.h>
87 #include      <unistd.h>
88 #include      <stdlib.h>
89 #include      <sys/stat.h>
90 #include      <time.h>
91 #include      <utmpx.h>
92 #include      <locale.h>
93 #include      <pwd.h>
94 #include      <limits.h>

96 static void process(void);
97 static void ck_file(char *);
98 static void dump(void);

100 static struct      utmpx *utmpp;      /* pointer for getutxent() */

102 /*
103  * Use the full lengths from utmpx for user and line.
104  * utmpx defines wider fields for user and line. For compatibility of output,
105  * we are limiting these to the old maximums in utmp. Define UTMPX_NAMELEN
106  * to use the full lengths.
107 */
108 #ifndef UTMPX_NAMELEN
109 /* XXX - utmp - fix name length */
110 #define NMAX      (_POSIX_LOGIN_NAME_MAX - 1)
111 #define LMAX      12
112 #else /* UTMPX_NAMELEN */
113 #define NMAX      (sizeof (utmpp->ut_user))
114 #define LMAX      (sizeof (utmpp->ut_line))
115 #endif

116 /* Print minimum field widths. */
117 #define LOGIN_WIDTH      8
118 #define LINE_WIDTH      12

119 static char      comment[BUFSIZ]; /* holds inittab comment */
120 static char      errmsg[BUFSIZ]; /* used in snprintf for errors */
121 static int      fildes; /* file descriptor for inittab */
122 static int      Hopt = 0; /* 1 = who -H */
```

2

```

116 static char *inittab; /* ptr to inittab contents */
117 static char *iinit; /* index into inittab */
118 static int justme = 0; /* 1 = who am i */
119 static struct tm *lptr; /* holds user login time */
120 static char *myname; /* pointer to invoker's name */
121 static char *mytty; /* holds device user is on */
122 static char nameval[sizeof (utmp->ut_user) + 1]; /* invoker's name */
123 static int number = 8; /* number of users per -q line */
124 static int optcnt = 0; /* keeps count of options */
125 static char outbuf[BUFSIZ]; /* buffer for output */
126 static char *program; /* holds name of this program */
127 #ifdef XPG4
128 static int aopt = 0; /* 1 = who -a */
129 static int dopt = 0; /* 1 = who -d */
130 #endif /* XPG4 */
131 static int qopt = 0; /* 1 = who -q */
132 static int sopt = 0; /* 1 = who -s */
133 static struct stat stbuf; /* area for stat buffer */
134 static struct stat *stbufp; /* ptr to structure */
135 static int terse = 1; /* 1 = print terse msgs */
136 static int Topt = 0; /* 1 = who -T */
137 static time_t timnow; /* holds current time */
138 static int totlusr = 0; /* cntr for users on system */
139 static int uopt = 0; /* 1 = who -u */
140 static char user[sizeof (utmp->ut_user) + 1]; /* holds user name */
141 static int validtype[UTMAXTYPE+1]; /* holds valid types */
142 static int wrap; /* flag to indicate wrap */
143 static char time_buf[128]; /* holds date and time string */
144 static char *end; /* used in strtol for end pointer */

146 int
147 main(int argc, char **argv)
148 {
149     int goerr = 0; /* non-zero indicates cmd error */
150     int i;
151     int optsw; /* switch for while of getopt() */

153     (void) setlocale(LC_ALL, "");

155     #if !defined(TEXT_DOMAIN) /* Should be defined by cc -D */
156     #define TEXT_DOMAIN "SYS_TEST" /* Use this only if it weren't */
157     #endif
158     (void) textdomain(TEXT_DOMAIN);

160     validtype[USER_PROCESS] = 1;
161     validtype[EMPTY] = 0;
162     stbufp = &stbuf;

164     /*
165      * Strip off path name of this command
166      */
167     for (i = strlen(argv[0]); i >= 0 && argv[0][i] != '/'; --i)
168         ;
169     for (i = strlen(argv[0]); i >= 0 && argv[0][i] != '/'; --i);
170     if (i >= 0)
171         argv[0] += i+1;
172     program = argv[0];

173     /*
174      * Buffer stdout for speed
175      */
176     setbuf(stdout, outbuf);

178     /*
179      * Retrieve options specified on command line
180      * XCU4 - add -m option

```

```

181     /*
182     while ((optsw = getopt(argc, argv, "abdHlmm:pqrstTu")) != EOF) {
183         optcnt++;
184         switch (optsw) {

186             case 'a':
187                 optcnt += 7;
188                 validtype[BOOT_TIME] = 1;
189                 validtype[DEAD_PROCESS] = 1;
190                 validtype[LOGIN_PROCESS] = 1;
191                 validtype[INIT_PROCESS] = 1;
192                 validtype[RUN_LVL] = 1;
193                 validtype[OLD_TIME] = 1;
194                 validtype[NEW_TIME] = 1;
195                 validtype[USER_PROCESS] = 1;

196             #ifdef XPG4
197                 aopt = 1;
198             #endif /* XPG4 */

199                 uopt = 1;
200                 Topt = 1;
201                 if (!sopt) terse = 0;
202                 break;

204             case 'b':
205                 validtype[BOOT_TIME] = 1;
206                 if (!uopt) validtype[USER_PROCESS] = 0;
207                 break;

209             case 'd':
210                 validtype[DEAD_PROCESS] = 1;
211                 if (!uopt) validtype[USER_PROCESS] = 0;

212             #ifdef XPG4
213                 dopt = 1;
214             #endif /* XPG4 */

215                 break;

217             case 'H':
218                 optcnt--; /* Don't count Header */
219                 Hopt = 1;
220                 break;

222             case 'l':
223                 validtype[LOGIN_PROCESS] = 1;
224                 if (!uopt) validtype[USER_PROCESS] = 0;
225                 terse = 0;
226                 break;

227             case 'm': /* New XCU4 option */
228                 justme = 1;
229                 break;

231             case 'n':
232                 errno = 0;
233                 number = strtol(optarg, &end, 10);
234                 if (errno != 0 || *end != '\0') {
235                     (void) fprintf(stderr, gettext(
236                         "%s: Invalid numeric argument\n"),
237                         program);
238                     exit(1);
239                 }
240                 if (number < 1) {
241                     (void) fprintf(stderr, gettext(
242                         "%s: Number of users per line must "
243                         "be at least 1\n"), program);
244                     exit(1);
245                 }
246                 break;

```

```

248         case 'p':
249             validtype[INIT_PROCESS] = 1;
250             if (!uopt) validtype[USER_PROCESS] = 0;
251             break;

253         case 'q':
254             qopt = 1;
255             break;

257         case 'r':
258             validtype[RUN_LVL] = 1;
259             terse = 0;
260             if (!uopt) validtype[USER_PROCESS] = 0;
261             break;

263         case 's':
264             sopt = 1;
265             terse = 1;
266             break;

268         case 't':
269             validtype[OLD_TIME] = 1;
270             validtype[NEW_TIME] = 1;
271             if (!uopt) validtype[USER_PROCESS] = 0;
272             break;

274         case 'T':
275             Topt = 1;
276 #ifdef XPG4
277             terse = 1;      /* XPG4 requires -T */
278 #else /* XPG4 */
279             terse = 0;
280 #endif /* XPG4 */
281             break;

283         case 'u':
284             uopt = 1;
285             validtype[USER_PROCESS] = 1;
286             if (!sopt) terse = 0;
287             break;

289         case '?':
290             goerr++;
291             break;
292         default:
293             break;
294     }
295 }
296 #ifdef XPG4
297 /*
298  * XCU4 changes - check for illegal sopt, Topt & aopt combination
299  */
300 if (sopt == 1) {
301     terse = 1;
302     if (Topt == 1 || aopt == 1)
303         goerr++;
304 }
305 #endif /* XPG4 */

307 if (goerr > 0) {
308 #ifdef XPG4
309     /*
310      * XCU4 - slightly different usage with -s -a & -T
311      */
312     (void) fprintf(stderr, gettext("\nUsage: %s"), program);

```

```

313         (void) fprintf(stderr,
314             gettext("-s [-bdHlmpqrtu] [utmpx_like_file]\n"));

316         (void) fprintf(stderr, gettext(
317             "\t%s [-abdHlmpqrtu] [utmpx_like_file]\n"), program);
318 #else /* XPG4 */
319         (void) fprintf(stderr, gettext(
320             "\nUsage: %s [-abdHlmpqrstTu] [utmpx_like_file]\n"),
321             program);
322 #endif /* XPG4 */
323         (void) fprintf(stderr,
324             gettext("\t%s -q [-n x] [utmpx_like_file]\n"), program);
325         (void) fprintf(stderr, gettext("\t%s [am i]\n"), program);
326         /*
327          * XCU4 changes - be explicit with "am i" options
328          */
329         (void) fprintf(stderr, gettext("\t%s [am I]\n"), program);
330         (void) fprintf(stderr, gettext(
331             "a\tall (bdlpriu options)\n"));
332         (void) fprintf(stderr, gettext("b\tboot time\n"));
333         (void) fprintf(stderr, gettext("d\tdead processes\n"));
334         (void) fprintf(stderr, gettext("H\ttprint header\n"));
335         (void) fprintf(stderr, gettext("\ltlogin processes\n"));
336         (void) fprintf(stderr, gettext(
337             "n #\tspecify number of users per line for -q\n"));
338         (void) fprintf(stderr,
339             gettext("p\tprocesses other than getty or users\n"));
340         (void) fprintf(stderr, gettext("q\tquick %s\n"), program);
341         (void) fprintf(stderr, gettext("r\trun level\n"));
342         (void) fprintf(stderr, gettext(
343             "s\tshort form of %s (no time since last output or pid)\n"),
344             program);
345         (void) fprintf(stderr, gettext("t\ttime changes\n"));
346         (void) fprintf(stderr, gettext(
347             "T\tstatus of tty (+ writable, - not writable, "
348             "? hung)\n"));
349         (void) fprintf(stderr, gettext("u\tuseful information\n"));
350         (void) fprintf(stderr,
351             gettext("m\tinformation only about current terminal\n"));
352         (void) fprintf(stderr, gettext(
353             "am i\tinformation about current terminal "
354             "(same as -m)\n"));
355         (void) fprintf(stderr, gettext(
356             "am I\tinformation about current terminal "
357             "(same as -m)\n"));
358         exit(1);
359     }

361     /*
362      * XCU4: If -q option ignore all other options
363      */
364     if (qopt == 1) {
365         Hopt = 0;
366         sopt = 0;
367         Topt = 0;
368         uopt = 0;
369         justme = 0;
370         validtype[ACCOUNTING] = 0;
371         validtype[BOOT_TIME] = 0;
372         validtype[DEAD_PROCESS] = 0;
373         validtype[LOGIN_PROCESS] = 0;
374         validtype[INIT_PROCESS] = 0;
375         validtype[RUN_LVL] = 0;
376         validtype[OLD_TIME] = 0;
377         validtype[NEW_TIME] = 0;
378         validtype[USER_PROCESS] = 1;

```



```

379     }

381     if (argc == optind + 1) {
382         optcnt++;
383         ck_file(argv[optind]);
384         (void) utmpxname(argv[optind]);
385     }

387     /*
388      *   Test for 'who am i' or 'who am I'
389      *   XCU4 - check if justme was already set by -m option
390      */
391     if ((justme == 1 || (argc == 3 && strcmp(argv[1], "am") == 0 &&
392         ((argv[2][0] == 'i' || argv[2][0] == 'I') &&
393         argv[2][1] == '\0')))) {
394         justme = 1;
395         myname = nameval;
396         (void) cuserid(myname);
397         if ((mytty = ttyname(fileno(stdin))) == NULL &&
398             (mytty = ttyname(fileno(stdout))) == NULL &&
399             (mytty = ttyname(fileno(stderr))) == NULL) {
400             (void) fprintf(stderr, gettext(
401                 "Must be attached to terminal for 'am I' option\n"));
402             (void) fflush(stderr);
403             exit(1);
404         } else
405             mytty += 5; /* bump past "/dev/" */
406     }

408     if (!terse) {
409         if (Hopt)
410             (void) printf(gettext(
411                 "NAME      LINE      TIME      IDLE      PID  COMMENTS\n"));
412
413         timnow = time(0);

415         if ((fildes = open("/etc/inittab",
416             O_NONBLOCK|O_RDONLY)) == -1) {
417             (void) snprintf(errmsg, sizeof (errmsg),
418                 gettext("%s: Cannot open /etc/inittab"), program);
419             perror(errmsg);
420             exit(errno);
421         }

423         if (fstat(fildes, stbufp) == -1) {
424             (void) snprintf(errmsg, sizeof (errmsg),
425                 gettext("%s: Cannot stat /etc/inittab"), program);
426             perror(errmsg);
427             exit(errno);
428         }

430         if ((inittab = malloc(stbufp->st_size + 1)) == NULL) {
431             (void) snprintf(errmsg, sizeof (errmsg),
432                 gettext("%s: Cannot allocate %ld bytes"),
433                 program, stbufp->st_size);
434             perror(errmsg);
435             exit(errno);
436         }

438         if (read(fildes, inittab, stbufp->st_size)
439             != stbufp->st_size) {
440             (void) snprintf(errmsg, sizeof (errmsg),
441                 gettext("%s: Error reading /etc/inittab"),
442                 program);
443             perror(errmsg);
444             exit(errno);

```

```

445     }

447         inittab[stbufp->st_size] = '\0';
448         iinit = inittab;
449     } else {
450         if (Hopt) {
451             #ifdef XPG4
452                 if (dopt) {
453                     (void) printf(gettext(
454                         "NAME      LINE      TIME      COMMENTS\n"));
455                 } else {
456                     (void) printf(
457                         gettext("NAME      LINE      TIME\n"));
458                 }
459             #else /* XPG4 */
460                 (void) printf(
461                     gettext("NAME      LINE      TIME\n"));
462             #endif /* XPG4 */
463         }
464     }
465     process();

467     /*
468      *   'who -q' requires EOL upon exit,
469      *   followed by total line
470      */
471     if (qopt)
472         (void) printf(gettext("\n# users=%d\n"), totlusrs);
473     return (0);
474 }

476 static void
477 dump()
478 {
479     char    device[sizeof (utmp->ut_line) + 1];
480     time_t  hr;
481     time_t  idle;
482     time_t  min;
483     char    path[sizeof (utmp->ut_line) + 6];
484     int     pexit;
485     int     pterm;
486     int     rc;
487     char    w; /* writeability indicator */

489     /*
490      * Get and check user name
491      */
492     if (utmp->ut_user[0] == '\0')
493         (void) strcpy(user, "  .");
494     else {
495         (void) strncpy(user, utmp->ut_user, sizeof (user));
496         user[sizeof (user) - 1] = '\0';
497     }
498     totlusrs++;

500     /*
501      * Do print in 'who -q' format
502      */
503     if (qopt) {
504         /*
505          * XCU4 - Use non user macro for correct user count
506          */
507         if (((totlusrs - 1) % number) == 0 && totlusrs > 1)
508             (void) printf("\n");
509         (void) printf("%-*.s ", LOGIN_WIDTH, NMAX, user);
510         (void) printf("%-*.s ", NMAX, user);

```

```

510         return;
511     }

514     pexit = (int)' ';
515     pterm = (int)' ';

517     /*
518     *      Get exit info if applicable
519     */
520     if (utmpp->ut_type == RUN_LVL || utmpp->ut_type == DEAD_PROCESS) {
521         pterm = utmpp->ut_exit.e_termination;
522         pexit = utmpp->ut_exit.e_exit;
523     }

525     /*
526     *      Message ut_xtime field
527     */
528     lptr = localtime(&utmpp->ut_xtime);
529     (void) strftime(time_buf, sizeof (time_buf),
530         dcgettext(NULL, DATE_FMT, LC_TIME), lptr);

532     /*
533     *      Get and message device
534     */
535     if (utmpp->ut_line[0] == '\0')
536         (void) strcpy(device, "      .");
537     else {
538         (void) strncpy(device, utmpp->ut_line,
539             sizeof (utmpp->ut_line));
540         device[sizeof (utmpp->ut_line)] = '\0';
541     }

543     /*
544     *      Get writeability if requested
545     *      XCU4 - only print + or - for user processes
546     */
547     if (Topt && (utmpp->ut_type == USER_PROCESS)) {
548         w = '-';
549         (void) strcpy(path, "/dev/");
550         (void) strncpy(path + 5, utmpp->ut_line,
551             sizeof (utmpp->ut_line));
552         path[5 + sizeof (utmpp->ut_line)] = '\0';

554         if ((rc = stat(path, stbufp)) == -1) w = '?';
555         else if ((stbufp->st_mode & S_IWOTH) ||
556             (stbufp->st_mode & S_IWGRP)) /* Check group & other */
557             w = '+';

559     } else
560         w = ' ';

562     /*
563     *      Print the TERSE portion of the output
564     */
565     (void) printf("%-*s %c %-12s %s", LOGIN_WIDTH, NMAX, user,
566         w, device, time_buf);
568     (void) printf("%-*s %c %-12s %s", NMAX, user, w, device, time_buf);

568     if (!terse) {
569         /*
570         *      Stat device for idle time
571         *      (Don't complain if you can't)
572         */
573         rc = -1;
574         if (utmpp->ut_type == USER_PROCESS) {

```

```

575         (void) strcpy(path, "/dev/");
576         (void) strncpy(path + 5, utmpp->ut_line,
577             sizeof (utmpp->ut_line));
578         path[5 + sizeof (utmpp->ut_line)] = '\0';
579         rc = stat(path, stbufp);
580     }
581     if (rc != -1) {
582         idle = timnow - stbufp->st_mtime;
583         hr = idle/3600;
584         min = (unsigned)(idle/60)%60;
585         if (hr == 0 && min == 0)
586             (void) printf(gettext("      . "));
587         else {
588             if (hr < 24)
589                 (void) printf("%2d:%2.2d", (int)hr,
590                     (int)min);
591             else
592                 (void) printf(gettext(" old "));
593         }
594     }

596     /*
597     *      Add PID for verbose output
598     */
599     if (utmpp->ut_type != BOOT_TIME &&
600         utmpp->ut_type != RUN_LVL &&
601         utmpp->ut_type != ACCOUNTING)
602         (void) printf(" %5ld", utmpp->ut_pid);

604     /*
605     *      Handle /etc/inittab comment
606     */
607     if (utmpp->ut_type == DEAD_PROCESS) {
608         (void) printf(gettext(" id=%4.4s "),
609             utmpp->ut_id);
610         (void) printf(gettext("term=%3d "), pterm);
611         (void) printf(gettext("exit=%d "), pexit);
612     } else if (utmpp->ut_type != INIT_PROCESS) {
613         /*
614         *      Search for each entry in inittab
615         *      string. Keep our place from
616         *      search to search to try and
617         *      minimize the work. Wrap once if needed
618         *      for each entry.
619         */
620         wrap = 0;
621         /*
622         *      Look for a line beginning with
623         *      utmpp->ut_id
624         */
625         while ((rc = strncmp(utmpp->ut_id, iinit,
626             strcspn(iinit, ":")) != 0) {
627             for (; *iinit != '\n'; iinit++)
628                 ;
629             for (; *iinit != '\n'; iinit++)
630                 iinit++;

631             /*
632             *      Wrap once if necessary to
633             *      find entry in inittab
634             */
635             if (*iinit == '\0') {
636                 if (!wrap) {
637                     iinit = inittab;
638                     wrap = 1;
639                 }

```

```

640     }
641 }
642
643     if (*iinit != '\0') {
644         /*
645          * We found our entry
646          */
647         for (iinit++; *iinit != '#' &&
648             *iinit != '\n'; iinit++)
649             ;
650         if (*iinit == '#') {
651             for (iinit++; *iinit == ' ' ||
652                 *iinit == '\t'; iinit++)
653                 ;
654             for (rc = 0; *iinit != '\n'; iinit++)
655                 comment[rc++] = *iinit;
656             comment[rc] = '\0';
657         } else
658             (void) strcpy(comment, " ");
659
660         (void) printf(" %s", comment);
661     } else
662         iinit = inittab; /* Reset pointer */
663 }
664 if (utmp->ut_type == INIT_PROCESS)
665     (void) printf(gettext(" id=%4.4s"), utmp->ut_id);
666 }
667 #ifdef XPG4
668 else
669     if (dopt && utmp->ut_type == DEAD_PROCESS) {
670         (void) printf(gettext("\tterm=%-3d "), pterm);
671         (void) printf(gettext("exit=%d "), pexit);
672     }
673 #endif /* XPG4 */
674
675 /*
676  * Handle RUN_LVL process - If no alt. file - Only one!
677  */
678 if (utmp->ut_type == RUN_LVL) {
679     (void) printf(" %c %5ld %c", pterm, utmp->ut_pid,
680         pexit);
681     if (optcnt == 1 && !validtype[USER_PROCESS]) {
682         (void) printf("\n");
683         exit(0);
684     }
685 }
686
687 /*
688  * Handle BOOT_TIME process - If no alt. file - Only one!
689  */
690 if (utmp->ut_type == BOOT_TIME) {
691     if (optcnt == 1 && !validtype[USER_PROCESS]) {
692         (void) printf("\n");
693         exit(0);
694     }
695 }
696
697 /*
698  * Get remote host from utmpx structure
699  */
700 if (utmp && utmp->ut_host[0])
701     (void) printf("\t(%.s)", sizeof (utmp->ut_host),
702         utmp->ut_host);

```

```

705     /*
706      * Now, put on the trailing EOL
707      */
708     (void) printf("\n");
709 }
710
711 static void
712 process()
713 {
714     struct passwd *pwp;
715     int i = 0;
716     char *ttname;
717
718     /*
719      * Loop over each entry in /var/adm/utmpx
720      */
721
722     setutxent();
723     while ((utmp = getutxent()) != NULL) {
724 #ifdef DEBUG
725         (void) printf(
726             "ut_user '%s'\nut_id '%s'\nut_line '%s'\nut_type '%d'\n\n",
727             utmp->ut_user, utmp->ut_id, utmp->ut_line, utmp->ut_type);
728 #endif
729         if (utmp->ut_type <= UTMAXTYPE) {
730             /*
731              * Handle "am i"
732              */
733             if (justme) {
734                 if (strcmp(myname, utmp->ut_user,
735                     sizeof (utmp->ut_user)) == 0 &&
736                     strcmp(mytty, utmp->ut_line,
737                         sizeof (utmp->ut_line)) == 0 &&
738                     utmp->ut_type == USER_PROCESS) {
739                     /*
740                      * we have have found ourselves
741                      * in the utmp file and the entry
742                      * is a user process, this is not
743                      * meaningful otherwise
744                      */
745
746                     dump();
747                     if ((utmp->ut_line[0] == '\0') ||
748                         (strcmp(utmp->ut_user,
749                             "LOGIN") != 0))
750                         (strcmp(utmp->ut_user, "LOGIN") != 0))
751                         continue;
752                 }
753             }
754             /*
755              * Print the line if we want it
756              */
757             if (validtype[utmp->ut_type]) {
758                 #ifdef XPG4
759                 if (utmp->ut_type == LOGIN_PROCESS) {
760                     if ((utmp->ut_line[0] == '\0') ||
761                         (strcmp(utmp->ut_user,
762                             "LOGIN") != 0))
763                         (strcmp(utmp->ut_user, "LOGIN") != 0))
764                             continue;
765                 }
766             }
767             #endif /* XPG4 */
768             dump();
769         } else {
770             (void) fprintf(stderr,

```

```

769         gettext("%s: Error --- entry has ut_type "
770               "of %d\n"), program, utmp->ut_type);
771         (void) fprintf(stderr,
772               gettext(" when maximum is %d\n"), UTMXTYPE);
773     }
774 }
775
776 /*
777  * If justme is set at this point than the utmp entry
778  * was not found.
779  */
780 if (justme) {
781     static struct utmpx utmpt;
782
783     pwp = getpwuid(geteuid());
784     if (pwp != NULL)
785         while (i < (int)sizeof (utmpt.ut_user) &&
786               *pwp->pw_name != 0)
787             utmpt.ut_user[i++] = *pwp->pw_name++;
788
789     ttname = ttyname(1);
790
791     i = 0;
792     if (ttname != NULL)
793         while (i < (int)sizeof (utmpt.ut_line) &&
794               *ttname != 0)
795             utmpt.ut_line[i++] = *ttname++;
796
797     utmpt.ut_id[0] = 0;
798     utmpt.ut_pid = getpid();
799     utmpt.ut_type = USER_PROCESS;
800     (void) time(&utmpt.ut_xtime);
801     utmpp = &utmpt;
802     dump();
803     exit(0);
804 }
805 }

```

unchanged\_portion\_omitted

new/usr/src/cmd/whodo/whodo.c

```
*****
21012 Wed Sep  4 20:46:00 2013
new/usr/src/cmd/whodo/whodo.c
2989 Eliminate use of LOGNAME_MAX in ON
1166 useradd have warning with name more 8 chars
*****
1 /*
2  * CDDL HEADER START
3  *
4  * The contents of this file are subject to the terms of the
5  * Common Development and Distribution License (the "License").
6  * You may not use this file except in compliance with the License.
7  *
8  * You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE
9  * or http://www.opensolaris.org/os/licensing.
10 * See the License for the specific language governing permissions
11 * and limitations under the License.
12 *
13 * When distributing Covered Code, include this CDDL HEADER in each
14 * file and include the License file at usr/src/OPENSOLARIS.LICENSE.
15 * If applicable, add the following below this CDDL HEADER, with the
16 * fields enclosed by brackets "[]" replaced with your own identifying
17 * information: Portions Copyright [yyyy] [name of copyright owner]
18 *
19 * CDDL HEADER END
20 */
21 /*
22  * Copyright (c) 2013 Gary Mills
23  *
24  * Copyright 2009 Sun Microsystems, Inc. All rights reserved.
25  * Use is subject to license terms.
26  */

28 /*      Copyright (c) 1984, 1986, 1987, 1988, 1989 AT&T */
29 /*      All Rights Reserved */

31 /*
32  * University Copyright- Copyright (c) 1982, 1986, 1988
33  * The Regents of the University of California
34  * All Rights Reserved
35  *
36  * University Acknowledgment- Portions of this document are derived from
37  * software developed by the University of California, Berkeley, and its
38  * contributors.
39  */

41 /*
42  * This is the new whodo command which takes advantage of
43  * the /proc interface to gain access to the information
44  * of all the processes currently on the system.
45  *
46  * Maintenance note:
47  *
48  * Much of this code is replicated in w.c. If you're
49  * fixing bugs here, then you should probably fix 'em there too.
50  */

52 #include <stdio.h>
53 #include <string.h>
54 #include <stdlib.h>
55 #include <ctype.h>
56 #include <fcntl.h>
57 #include <time.h>
58 #include <errno.h>
59 #include <sys/types.h>
60 #include <utmpx.h>
```

1

new/usr/src/cmd/whodo/whodo.c

```
61 #include <sys/utsname.h>
62 #include <sys/stat.h>
63 #include <sys/mkdev.h>
64 #include <dirent.h>
65 #include <procfs.h>          /* /proc header file */
66 #include <sys/wait.h>
67 #include <locale.h>
68 #include <unistd.h>
69 #include <limits.h>
70 #include <priv_utils.h>

72 /*
73  * Use the full lengths from utmpx for user and line.
74  * utmpx defines wider fields for user and line. For compatibility of output,
75  * we are limiting these to the old maximums in utmp. Define UTMPX_NAMELEN
76  * to use the full lengths.
77  */
78 #define NMAX      (sizeof (((struct utmpx *)0)->ut_user))
79 #define LMAX      (sizeof (((struct utmpx *)0)->ut_line))
80 #ifndef UTMPX_NAMELEN
81 /* XXX - utmp - fix name length */
82 #define NMAX      (_POSIX_LOGIN_NAME_MAX - 1)
83 #define LMAX      12
84 #else /* UTMPX_NAMELEN */
85 static struct utmpx dummy;
86 #define NMAX      (sizeof (dummy.ut_user))
87 #define LMAX      (sizeof (dummy.ut_line))
88 #endif /* UTMPX_NAMELEN */

89 /* Print minimum field widths. */
90 #define LOGIN_WIDTH      8
91 #define LINE_WIDTH      12

92 #define DIV60(t)        ((t+30)/60)    /* x/60 rounded */

93 #ifdef ERR
94 #undef ERR
95 #endif
96 #define ERR              (-1)

97 #define DEVNAMELEN      14
98 #define HSIZE           256            /* size of process hash table */
99 #define PROCDIR          "/proc"
100 #define INITPROCESS      (pid_t)1     /* init process pid */
101 #define NONE              'n'         /* no state */
102 #define RUNNING          'r'         /* runnable process */
103 #define ZOMBIE            'z'         /* zombie process */
104 #define VISITED           'v'         /* marked node as visited */

105 static int               ndevs;       /* number of configured devices */
106 static int               maxdev;      /* slots for configured devices */
107 #define DNINCR           100
108 static struct devl {
109     char                 dname[DEVNAMELEN]; /* device name */
110     dev_t                 ddev;             /* device number */
111 } *devl;

112 /*
113  * define hash table for struct uproc
114  * Hash function uses process id
115  * and the size of the hash table(HSIZE)
116  * to determine process index into the table.
117  */
118 static struct uproc      pr_htbl[HSIZE];
```

2

```

129 static struct uproc *findhash(pid_t);
130 static time_t findidle(char *);
131 static void clnarglist(char *);
132 static void showproc(struct uproc *);
133 static void showtotals(struct uproc *);
134 static void calctotals(struct uproc *);
135 static char *getty(dev_t);
136 static void prttime(time_t, char *);
137 static void prtatt(time_t *);
138 static void checkampm(char *);

140 static char *prog;
141 static int header = 1; /* true if -h flag: don't print heading */
142 static int lflag = 0; /* true if -l flag: w command format */
143 static char *sel_user; /* login of particular user selected */
144 static time_t now; /* current time of day */
145 static time_t uptime; /* time of last reboot & elapsed time since */
146 static int nusers; /* number of users logged in now */
147 static time_t idle; /* number of minutes user is idle */
148 static time_t jobtime; /* total cpu time visible */
149 static char doing[520]; /* process attached to terminal */
150 static time_t proctime; /* cpu time of process in doing */
151 static int empty;
152 static pid_t curpid;

154 #if SIGQUIT > SIGINT
155 #define ACTSIZE SIGQUIT
156 #else
157 #define ACTSIZE SIGINT
158 #endif

160 int
161 main(int argc, char *argv[])
162 {
163     struct utmpx *ut;
164     struct utmpx *utmpbegin;
165     struct utmpx *utmpend;
166     struct utmpx *utp;
167     struct tm *tm;
168     struct uproc *up, *parent, *pgrp;
169     struct psinfo info;
170     struct sigaction actinfo[ACTSIZE];
171     struct pstatus statinfo;
172     size_t size;
173     struct stat sbuf;
174     struct utsname uts;
175     DIR *dirp;
176     struct dirent *dp;
177     char pname[64];
178     char *fname;
179     int procfid;
180     int i;
181     int days, hrs, mins;
182     int entries;

184     /*
185      * This program needs the proc_owner privilege
186      */
187     (void) __init_suid_priv(PU_CLEARLIMITSET, PRIV_PROC_OWNER,
188         (char *)NULL);

190     (void) setlocale(LC_ALL, "");
191     #if !defined(TEXT_DOMAIN)
192     #define TEXT_DOMAIN "SYS_TEST"
193     #endif
194     (void) textdomain(TEXT_DOMAIN);

```

```

196     prog = argv[0];

198     while (argc > 1) {
199         if (argv[1][0] == '-') {
200             for (i = 1; argv[1][i]; i++) {
201                 switch (argv[1][i]) {

203                     case 'h':
204                         header = 0;
205                         break;

207                     case 'l':
208                         lflag++;
209                         break;

211                     default:
212                         (void) printf(gettext(
213                             "usage: %s [ -hl ] [ user ]\n"),
214                             prog);
215                         exit(1);
216                 }
217             }
218         } else {
219             if (!isalnum(argv[1][0]) || argc > 2) {
220                 (void) printf(gettext(
221                     "usage: %s [ -hl ] [ user ]\n"), prog);
222                 exit(1);
223             } else
224                 sel_user = argv[1];
225             argc--; argv++;
226         }
227     }

229     /*
230      * read the UTMPX_FILE (contains information about
231      * each logged in user)
232      */
233     if (stat(UTMPX_FILE, &sbuf) == ERR) {
234         (void) fprintf(stderr, gettext("%s: stat error of %s: %s\n"),
235             prog, UTMPX_FILE, strerror(errno));
236         exit(1);
237     }
238     entries = sbuf.st_size / sizeof (struct futmpx);
239     size = sizeof (struct utmpx) * entries;

241     if ((ut = malloc(size)) == NULL) {
242         (void) fprintf(stderr, gettext("%s: malloc error of %s: %s\n"),
243             prog, UTMPX_FILE, strerror(errno));
244         exit(1);
245     }

247     (void) utmpxname(UTMPX_FILE);

249     utmpbegin = ut;
250     /* LINTED pointer cast may result in improper alignment */
251     utmpend = (struct utmpx *)((char *)utmpbegin + size);

253     setutxent();
254     while ((ut < utmpend) && ((utp = getutxent()) != NULL))
255         (void) memcpy(ut++, utp, sizeof (*ut));
256     endutxent();

258     (void) time(&now); /* get current time */

260     if (header) { /* print a header */

```

```

261         if (lflag) { /* w command format header */
262             prtat(&now);
263             for (ut = utmpbegin; ut < utmpend; ut++) {
264                 if (ut->ut_type == USER_PROCESS) {
265                     nusers++;
266                 } else if (ut->ut_type == BOOT_TIME) {
267                     uptime = now - ut->ut_xtime;
268                     uptime += 30;
269                     days = uptime / (60*60*24);
270                     uptime %= (60*60*24);
271                     hrs = uptime / (60*60);
272                     uptime %= (60*60);
273                     mins = uptime / 60;
274
275                     (void) printf(dcgettext(NULL,
276                     " up %d day(s), %d hr(s), "
277                     "%d min(s)", LC_TIME),
278                     days, hrs, mins);
279                 }
280             }
281
282             ut = utmpbegin; /* rewind utmp data */
283             (void) printf(dcgettext(NULL,
284             " %d user(s)\n", LC_TIME), nusers);
285             (void) printf(dcgettext(NULL, "User      tty
286             "login@ idle JCPU PCPU what\n", LC_TIME));
287         } else { /* standard whodo header */
288             char date_buf[100];
289
290             /*
291              * print current time and date
292              */
293             (void) strftime(date_buf, sizeof (date_buf),
294             dcgettext(NULL, "%C", LC_TIME), localtime(&now));
295             (void) printf("%s\n", date_buf);
296
297             /*
298              * print system name
299              */
300             (void) uname(&uts);
301             (void) printf("%s\n", uts.nodename);
302         }
303     }
304
305     /*
306     * loop through /proc, reading info about each process
307     * and build the parent/child tree
308     */
309     if (!(dirp = opendir(PROCDIR))) {
310         (void) fprintf(stderr, gettext("%s: could not open %s: %s\n"),
311         prog, PROCDIR, strerror(errno));
312         exit(1);
313     }
314
315     while ((dp = readdir(dirp)) != NULL) {
316         if (dp->d_name[0] == '.')
317             continue;
318     retry:
319         (void) snprintf(pname, sizeof (pname),
320         "%s/%s/", PROCDIR, dp->d_name);
321         fname = pname + strlen(pname);
322         (void) strcpy(fname, "psinfo");
323         if ((procfd = open(pname, O_RDONLY)) < 0)
324             continue;
325         if (read(procfd, &info, sizeof (info)) != sizeof (info)) {
326             int err = errno;

```

```

327             (void) close(procfd);
328             if (err == EAGAIN)
329                 goto retry;
330             if (err != ENOENT)
331                 (void) fprintf(stderr, gettext(
332                 "%s: read() failed on %s: %s\n"),
333                 prog, pname, strerror(err));
334             continue;
335         }
336         (void) close(procfd);
337
338         up = findhash(info.pr_pid);
339         up->p_ttyd = info.pr_ttydev;
340         up->p_state = (info.pr_nlwp == 0? ZOMBIE : RUNNING);
341         up->p_time = 0;
342         up->p_ctime = 0;
343         up->p_igintr = 0;
344         (void) strncpy(up->p_comm, info.pr_fname,
345         sizeof (info.pr_fname));
346         up->p_args[0] = 0;
347
348         if (up->p_state != NONE && up->p_state != ZOMBIE) {
349             (void) strcpy(fname, "status");
350
351             /* now we need the proc_owner privilege */
352             (void) __priv_bracket(PRIV_ON);
353
354             procfd = open(pname, O_RDONLY);
355
356             /* drop proc_owner privilege after open */
357             (void) __priv_bracket(PRIV_OFF);
358
359             if (procfd < 0)
360                 continue;
361
362             if (read(procfd, &stainfo, sizeof (stainfo))
363             != sizeof (stainfo)) {
364                 int err = errno;
365                 (void) close(procfd);
366                 if (err == EAGAIN)
367                     goto retry;
368                 if (err != ENOENT)
369                     (void) fprintf(stderr, gettext(
370                     "%s: read() failed on %s: %s\n"),
371                     prog, pname, strerror(err));
372                 continue;
373             }
374             (void) close(procfd);
375
376             up->p_time = stainfo.pr_utime.tv_sec +
377             stainfo.pr_stime.tv_sec;
378             up->p_ctime = stainfo.pr_cutime.tv_sec +
379             stainfo.pr_cstime.tv_sec;
380
381             (void) strcpy(fname, "sigact");
382
383             /* now we need the proc_owner privilege */
384             (void) __priv_bracket(PRIV_ON);
385
386             procfd = open(pname, O_RDONLY);
387
388             /* drop proc_owner privilege after open */
389             (void) __priv_bracket(PRIV_OFF);
390
391             if (procfd < 0)
392                 continue;

```

```

393     if (read(procf, actinfo, sizeof (actinfo))
394         != sizeof (actinfo)) {
395         int err = errno;
396         (void) close(procf);
397         if (err == EAGAIN)
398             goto retry;
399         if (err != ENOENT)
400             (void) fprintf(stderr, gettext(
401                 "%s: read() failed on %s: %s\n"),
402                 prog, pname, strerror(err));
403         continue;
404     }
405     (void) close(procf);
407     up->p_igintr =
408         actinfo[SIGINT-1].sa_handler == SIG_IGN &&
409         actinfo[SIGQUIT-1].sa_handler == SIG_IGN;
411     up->p_args[0] = 0;
413     /*
414      * Process args if there's a chance we'll print it.
415      */
416     if (lflag) { /* w command needs args */
417         clnarglist(info.pr_psargs);
418         (void) strcpy(up->p_args, info.pr_psargs);
419         if (up->p_args[0] == 0 ||
420             up->p_args[0] == '-' &&
421             up->p_args[1] <= ' ' ||
422             up->p_args[0] == '?') {
423             (void) strcat(up->p_args, " (");
424             (void) strcat(up->p_args, up->p_comm);
425             (void) strcat(up->p_args, ")");
426         }
427     }
429 }
431 /*
432  * link pgrp together in case parents go away
433  * Pgrp chain is a single linked list originating
434  * from the pgrp leader to its group member.
435  */
436 if (info.pr_pgid != info.pr_pid) { /* not pgrp leader */
437     pgrp = findhash(info.pr_pgid);
438     up->p_pgrplink = pgrp->p_pgrplink;
439     pgrp->p_pgrplink = up;
440 }
441 parent = findhash(info.pr_ppid);
443 /* if this is the new member, link it in */
444 if (parent->p_upid != INITPROCESS) {
445     if (parent->p_child) {
446         up->p_sibling = parent->p_child;
447         up->p_child = 0;
448     }
449     parent->p_child = up;
450 }
452 }
454 /* revert to non-privileged user */
455 (void) __priv_relinquish();
457 (void) closedir(dirp);
458 (void) time(&now); /* get current time */

```

```

460     /*
461      * loop through utmpx file, printing process info
462      * about each logged in user
463      */
464     for (ut = utmpbegin; ut < utmpend; ut++) {
465         time_t tim;
467         if (ut->ut_type != USER_PROCESS)
468             continue;
469         if (sel_user && strcmp(ut->ut_name, sel_user, NMAX) != 0)
470             continue; /* we're looking for somebody else */
471         if (lflag) { /* -l flag format (w command) */
472             /* print login name of the user */
473             (void) printf("%-*.s ", LOGIN_WIDTH, (int)NMAX,
474                 ut->ut_name);
475             (void) printf("%-*.s ", NMAX, NMAX, ut->ut_name);
476
477             /* print tty user is on */
478             (void) printf("%-*.s", LINE_WIDTH, (int)LMAX,
479                 ut->ut_line);
480             (void) printf("%-*.s", LMAX, LMAX, ut->ut_line);
481
482             /* print when the user logged in */
483             tim = ut->ut_xtime;
484             (void) prtcat(&tim);
485
486             /* print idle time */
487             idle = findidle(ut->ut_line);
488             if (idle >= 36 * 60)
489                 (void) printf(dcgettext(NULL, "%2ddays ",
490                     LC_TIME), (idle + 12 * 60) / (24 * 60));
491             else
492                 prtime(idle, " ");
493             showtotals(findhash((pid_t)ut->ut_pid));
494             /* standard whodo format */
495             tim = ut->ut_xtime;
496             tm = localtime(&tim);
497             (void) printf("\n%-*.s %-*.s %2.1d:%2.2d\n",
498                 LINE_WIDTH, (int)LMAX, ut->ut_line,
499                 LOGIN_WIDTH, (int)NMAX, ut->ut_name, tm->tm_hour,
500                 tm->tm_min);
501             LMAX, LMAX, ut->ut_line,
502             NMAX, NMAX, ut->ut_name, tm->tm_hour, tm->tm_min);
503             showproc(findhash((pid_t)ut->ut_pid));
504         }
505     }
506     return (0);
507 }
508 /*
509  * Used for standard whodo format.
510  * This is the recursive routine descending the process
511  * tree starting from the given process pointer(up).
512  * It used depth-first search strategy and also marked
513  * each node as printed as it traversed down the tree.
514  */
515 static void
516 showproc(struct uproc *up)
517 {
518     struct uproc *zp;
519
520     if (up->p_state == VISITED) /* we already been here */
521         return;
522     /* print the data for this process */

```



```
521     if (up->p_state == ZOMBIE)
522         (void) printf("    %-*s %5d %4.1ld:%2.2ld %s\n",
523             LINE_WIDTH, (int)LMAX, "  ?", (int)up->p_upid, 0L, 0L,
524             "<defunct>");
525     else if (up->p_state != NONE) {
526         (void) printf("    %-*s %5d %4.1ld:%2.2ld %s\n",
527             LINE_WIDTH, (int)LMAX, getty(up->p_ttyd), (int)up->p_upid,
528             LMAX, LMAX, getty(up->p_ttyd), (int)up->p_upid,
529             up->p_time / 60L, up->p_time % 60L,
530             up->p_comm);
531     }
532     up->p_state = VISITED;
533
534     /* descend for its children */
535     if (up->p_child) {
536         showproc(up->p_child);
537         for (zp = up->p_child->p_sibling; zp; zp = zp->p_sibling) {
538             showproc(zp);
539         }
540     }
541
542     /* print the pgrp relation */
543     if (up->p_pgrplink)
544         showproc(up->p_pgrplink);
545 }
546
547 _____unchanged_portion_omitted_____
```

new/usr/src/head/limits.h

1

```
*****
10785 Wed Sep  4 20:46:00 2013
new/usr/src/head/limits.h
2989 Eliminate use of LOGNAME_MAX in ON
1166 useradd have warning with name more 8 chars
*****
1 /*
2  * CDDL HEADER START
3  *
4  * The contents of this file are subject to the terms of the
5  * Common Development and Distribution License (the "License").
6  * You may not use this file except in compliance with the License.
7  *
8  * You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE
9  * or http://www.opensolaris.org/os/licensing.
10  * See the License for the specific language governing permissions
11  * and limitations under the License.
12  *
13  * When distributing Covered Code, include this CDDL HEADER in each
14  * file and include the License file at usr/src/OPENSOLARIS.LICENSE.
15  * If applicable, add the following below this CDDL HEADER, with the
16  * fields enclosed by brackets "[]" replaced with your own identifying
17  * information: Portions Copyright [yyyy] [name of copyright owner]
18  *
19  * CDDL HEADER END
20  */

22 /*
23  * Copyright (c) 2013 Gary Mills
24  *
25  * Copyright 2008 Sun Microsystems, Inc. All rights reserved.
26  * Use is subject to license terms.
27  */

29 /*      Copyright (c) 1988 AT&T */
30 /*      All Rights Reserved      */

33 #ifndef _LIMITS_H
34 #define _LIMITS_H

34 #pragma ident      "%Z%M% %I%      %E% SMI"      /* SVr4.0 1.34 */

36 #include <sys/feature_tests.h>
37 #include <sys/isa_defs.h>
38 #include <iso/limits_iso.h>

40 /*
41  * Include fixed width type limits as proposed by the ISO/JTC1/SC22/WG14 C
42  * committee's working draft for the revision of the current ISO C standard,
43  * ISO/IEC 9899:1990 Programming language - C. These are not currently
44  * required by any standard but constitute a useful, general purpose set
45  * of type definitions and limits which is namespace clean with respect to
46  * all standards.
47  */
48 #if defined(__EXTENSIONS__) || !defined(_STRICT_STDC) || \
49     defined(__XOPEN_OR_POSIX)
50 #include <sys/int_limits.h>
51 #endif

53 #ifdef __cplusplus
54 extern "C" {
55 #endif

57 #if defined(__EXTENSIONS__) || !defined(_STRICT_STDC) || \
58     defined(__XOPEN_OR_POSIX)
```

new/usr/src/head/limits.h

2

```
60 #define SSIZE_MAX      LONG_MAX      /* max value of an "ssize_t" */

62 /*
63  * ARG_MAX is calculated as follows:
64  * NCARGS - space for other stuff on initial stack
65  * like aux vectors, saved registers, etc..
66  */
67 #define _ARG_MAX32      1048320 /* max length of args to exec 32-bit program */
68 #define _ARG_MAX64      2096640 /* max length of args to exec 64-bit program */
69 #ifdef _LP64
70 #define ARG_MAX          _ARG_MAX64 /* max length of arguments to exec */
71 #else /* _LP64 */
72 #define ARG_MAX          _ARG_MAX32 /* max length of arguments to exec */
73 #endif /* _LP64 */

75 #ifndef MAX_CANON
76 #define MAX_CANON      256 /* max bytes in line for canonical processing */
77 #endif

79 #ifndef MAX_INPUT
80 #define MAX_INPUT      512 /* max size of a char input buffer */
81 #endif

83 #define NGROUPS_MAX      16 /* max number of groups for a user */

85 #ifndef PATH_MAX
86 #define PATH_MAX      1024 /* max # of characters in a path name */
87 #endif

89 #define SYMLINK_MAX      1024 /* max # of characters a symlink can contain */

91 #define PIPE_BUF      5120 /* max # bytes atomic in write to a pipe */

93 #ifndef TMP_MAX
94 #define TMP_MAX      17576 /* 26 * 26 * 26 */
95 #endif

97 /*
98  * POSIX conformant definitions - An implementation may define
99  * other symbols which reflect the actual implementation. Alternate
100  * definitions may not be as restrictive as the POSIX definitions.
101  */
102 #define _POSIX_AIO_LISTIO_MAX      2
103 #define _POSIX_AIO_MAX      1
104 #define _POSIX_ARG_MAX      4096
105 #ifdef _XPG6
106 #define _POSIX_CHILD_MAX      25
107 #else
108 #define _POSIX_CHILD_MAX      6 /* POSIX.1-1990 default */
109 #endif
110 #define _POSIX_CLOCKRES_MIN      20000000
111 #define _POSIX_DELAYTIMER_MAX      32
112 #define _POSIX_LINK_MAX      8
113 #define _POSIX_MAX_CANON      255
114 #define _POSIX_MAX_INPUT      255
115 #define _POSIX_MQ_OPEN_MAX      8
116 #define _POSIX_MQ_PRIO_MAX      32
117 #define _POSIX_NAME_MAX      14
118 #ifdef _XPG6
119 #define _POSIX_NGROUPS_MAX      8
120 #define _POSIX_OPEN_MAX      20
121 #define _POSIX_PATH_MAX      256
122 #else
123 #define _POSIX_NGROUPS_MAX      0 /* POSIX.1-1990 defaults */
124 #define _POSIX_OPEN_MAX      16
```

## new/usr/src/head/limits.h

3

```

125 #define _POSIX_PATH_MAX          255
126 #endif
127 #define _POSIX_PIPE_BUF          512
128 #define _POSIX_RTSIG_MAX          8
129 #define _POSIX_SEM_NSEMS_MAX      256
130 #define _POSIX_SEM_VALUE_MAX      32767
131 #define _POSIX_SIGQUEUE_MAX       32
132 #define _POSIX_SSIZE_MAX          32767
133 #define _POSIX_STREAM_MAX         8
134 #define _POSIX_TIMER_MAX          32
135 #ifdef _XPG6
136 #define _POSIX_TZNAME_MAX          6
137 #else
138 #define _POSIX_TZNAME_MAX          3 /* POSIX.1-1990 default */
139 #endif
140 /* POSIX.1c conformant */
141 #define _POSIX_LOGIN_NAME_MAX      9
142 #define _POSIX_THREAD_DESTRUCTOR_ITERATIONS 4
143 #define _POSIX_THREAD_KEYS_MAX     128
144 #define _POSIX_THREAD_THREADS_MAX  64
145 #define _POSIX_TTY_NAME_MAX        9
146 /* UNIX 03 conformant */
147 #define _POSIX_HOST_NAME_MAX       255
148 #define _POSIX_RE_DUP_MAX          255
149 #define _POSIX_SYMLINK_MAX         255
150 #define _POSIX_SYMLINK_MAX         8

152 /*
153  * POSIX.2 and XPG4-XSH4 conformant definitions
154  */

156 #define _POSIX2_BC_BASE_MAX        99
157 #define _POSIX2_BC_DIM_MAX         2048
158 #define _POSIX2_BC_SCALE_MAX       99
159 #define _POSIX2_BC_STRING_MAX      1000
160 #define _POSIX2_COLL_WEIGHTS_MAX   2
161 #define _POSIX2_EXPR_NEST_MAX      32
162 #define _POSIX2_LINE_MAX           2048
163 #define _POSIX2_RE_DUP_MAX         255
164 /* UNIX 03 conformant */
165 #define _POSIX2_CHARCLASS_NAME_MAX 14

167 #define BC_BASE_MAX                _POSIX2_BC_BASE_MAX
168 #define BC_DIM_MAX                  _POSIX2_BC_DIM_MAX
169 #define BC_SCALE_MAX                _POSIX2_BC_SCALE_MAX
170 #define BC_STRING_MAX               _POSIX2_BC_STRING_MAX
171 #define COLL_WEIGHTS_MAX            _POSIX2_COLL_WEIGHTS_MAX
172 #define EXPR_NEST_MAX               _POSIX2_EXPR_NEST_MAX
173 #define LINE_MAX                    _POSIX2_LINE_MAX
174 #if !defined(_XPG6)
175 #define RE_DUP_MAX                  _POSIX2_RE_DUP_MAX
176 #else
177 #define RE_DUP_MAX                  _POSIX_RE_DUP_MAX
178 #endif /* !defined(_XPG6) */

180 #endif /* defined(__EXTENSIONS__) || !defined(_STRICT_STDC) ... */

182 #if defined(__EXTENSIONS__) || \
183     (!defined(_STRICT_STDC) && !defined(_POSIX_C_SOURCE)) || \
184     defined(_XOPEN_SOURCE)

186 /*
187  * For dual definitions for PASS_MAX and sysconf.c
188  */
189 #define _PASS_MAX_XPG              8 /* old standards PASS_MAX */
190 #define _PASS_MAX                  256 /* modern Solaris PASS_MAX */

```

## new/usr/src/head/limits.h

4

```

192 #if defined(_XPG3) && !defined(_XPG6)
193 #define PASS_MAX                    _PASS_MAX_XPG /* max # of characters in a password */
194 #else /* XPG6 or just Solaris */
195 #define PASS_MAX                    _PASS_MAX /* max # of characters in a password */
196 #endif /* defined(_XPG3) && !defined(_XPG6) */

198 #define CHARCLASS_NAME_MAX         _POSIX2_CHARCLASS_NAME_MAX

200 #define NL_ARGMAX                   9 /* max value of "digit" in calls to the */
201 /* NLS printf() and scanf() */
202 #define NL_LANGMAX                  14 /* max # of bytes in a LANG name */
203 #define NL_MSGMAX                   32767 /* max message number */
204 #define NL_NMAX                     1 /* max # bytes in N-to-1 mapping characters */
205 #define NL_SETMAX                   255 /* max set number */
206 #define NL_TEXTMAX                  2048 /* max set number */
207 #define NZERO                       20 /* default process priority */

209 #define WORD_BIT                    32 /* # of bits in a "word" or "int" */
210 #if defined(_LP64)
211 #define LONG_BIT                    64 /* # of bits in a "long" */
212 #else /* _ILP32 */
213 #define LONG_BIT                    32 /* # of bits in a "long" */
214 #endif

216 /* Marked as LEGACY in SUSv2 and removed in UNIX 03 */
217 #ifndef _XPG6
218 #define DBL_DIG                      15 /* digits of precision of a "double" */
219 #define DBL_MAX                      1.7976931348623157081452E+308 /* max decimal value */
220 /* of a double */
221 #define FLT_DIG                      6 /* digits of precision of a "float" */
222 #define FLT_MAX                      3.4028234663852885981170E+38F /* max decimal value */
223 /* of a "float" */
224 #endif

226 /* Marked as LEGACY in SUSv1 and removed in SUSv2 */
227 #ifndef _XPG5
228 #define DBL_MIN                      2.2250738585072013830903E-308 /* min decimal value */
229 /* of a double */
230 #define FLT_MIN                      1.1754943508222875079688E-38F /* min decimal value */
231 /* of a float */
232 #endif

234 #endif /* defined(__EXTENSIONS__) || (!defined(_STRICT_STDC) ... */

236 #define _XOPEN_IOV_MAX              16 /* max # iovec/process with readv()/writev() */
237 #define _XOPEN_NAME_MAX             255 /* max # bytes in filename excluding null */
238 #define _XOPEN_PATH_MAX             1024 /* max # bytes in a pathname */

240 #define IOV_MAX                      _XOPEN_IOV_MAX

242 #if defined(__EXTENSIONS__) || \
243     (!defined(_STRICT_STDC) && !defined(_XOPEN_OR_POSIX))

245 #define FCHR_MAX                    1048576 /* max size of a file in bytes */
246 #define PID_MAX                     999999 /* max value for a process ID */

248 /*
249  * POSIX 1003.1a, section 2.9.5, table 2-5 contains [NAME_MAX] and the
250  * related text states:
251  *
252  * A definition of one of the values from Table 2-5 shall be omitted from the
253  * <limits.h> on specific implementations where the corresponding value is
254  * equal to or greater than the stated minimum, but where the value can vary
255  * depending on the file to which it is applied. The actual value supported for
256  * a specific pathname shall be provided by the pathconf() (5.7.1) function.

```

```

257 *
258 * This is clear that any machine supporting multiple file system types
259 * and/or a network can not include this define, regardless of protection
260 * by the _POSIX_SOURCE and _POSIX_C_SOURCE flags.
261 *
262 * #define      NAME_MAX      14
263 */

265 #define CHILD_MAX      25      /* max # of processes per user id */
266 #ifndef OPEN_MAX
267 #define OPEN_MAX      256      /* max # of files a process can have open */
268 #endif

270 #define PIPE_MAX      5120      /* max # bytes written to a pipe in a write */

272 #define STD_BLK      1024      /* # bytes in a physical I/O block */
273 #define UID_MAX      2147483647      /* max value for a user or group ID */
274 #define USI_MAX      4294967295      /* max decimal value of an "unsigned" */
275 #define SYSPID_MAX      1      /* max pid of system processes */

277 #ifndef SYS_NMLN
278 #define SYS_NMLN      257      /* also defined in sys/utsname.h */
279 #endif

281 #ifndef CLK_TCK

283 #if !defined(_CLOCK_T) || __cplusplus >= 199711L
284 #define _CLOCK_T
285 typedef long      clock_t;
286 #endif /* !_CLOCK_T */

288 extern long _sysconf(int);      /* System Private interface to sysconf() */
289 #define CLK_TCK ((clock_t)_sysconf(3)) /* 3 is _SC_CLK_TCK */

291 #endif /* CLK_TCK */

293 #ifdef __USE_LEGACY_LOGNAME
294 #define LOGNAME_MAX      8      /* max # of characters in a login name */
295 #else /* __USE_LEGACY_LOGNAME */
296 #define LOGNAME_MAX      32      /* max # of characters in a login name */
297 /* Increased for illumos */
298 #endif /* __USE_LEGACY_LOGNAME */
299 #define LOGIN_NAME_MAX (LOGNAME_MAX + 1)      /* max buffer size */
300 #define LOGNAME_MAX_TRAD      8      /* traditional length */
301 #define LOGIN_NAME_MAX_TRAD (LOGNAME_MAX_TRAD + 1) /* and size */

303 #define TTYNAME_MAX      128      /* max # of characters in a tty name */

305 #endif /* if defined(__EXTENSIONS__) || (!defined(_STRICT_STDC) ... */

307 #if defined(__EXTENSIONS__) || (_POSIX_C_SOURCE >= 199506L)
308 #include <sys/unistd.h>

310 #if !defined(_SIZE_T) || __cplusplus >= 199711L
311 #define _SIZE_T
312 #if defined(_LP64) || defined(_I32LPx)
313 typedef unsigned long size_t; /* size of something in bytes */
314 #else
315 typedef unsigned int size_t; /* (historical version) */
316 #endif
317 #endif /* _SIZE_T */

319 extern long _sysconf(int);      /* System Private interface to sysconf() */

321 #define PTHREAD_STACK_MIN ((size_t)_sysconf(_SC_THREAD_STACK_MIN))
322 /* Added for UNIX98 conformance */

```

```

323 #define PTHREAD_DESTRUCTOR_ITERATIONS _POSIX_THREAD_DESTRUCTOR_ITERATIONS
324 #define PTHREAD_KEYS_MAX _POSIX_THREAD_KEYS_MAX
325 #define PTHREAD_THREADS_MAX _POSIX_THREAD_THREADS_MAX
326 #endif /* defined(__EXTENSIONS__) || (_POSIX_C_SOURCE >= 199506L) */

328 #ifdef __cplusplus
329 }

```

unchanged\_portion\_omitted

new/usr/src/head/stdlib.h

1

```
*****
11675 Wed Sep  4 20:46:00 2013
new/usr/src/head/stdlib.h
2989 Eliminate use of LOGNAME_MAX in ON
1166 useradd have warning with name more 8 chars
*****
1 /*
2  * CDDL HEADER START
3  *
4  * The contents of this file are subject to the terms of the
5  * Common Development and Distribution License (the "License").
6  * You may not use this file except in compliance with the License.
7  *
8  * You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE
9  * or http://www.opensolaris.org/os/licensing.
10 * See the License for the specific language governing permissions
11 * and limitations under the License.
12 *
13 * When distributing Covered Code, include this CDDL HEADER in each
14 * file and include the License file at usr/src/OPENSOLARIS.LICENSE.
15 * If applicable, add the following below this CDDL HEADER, with the
16 * fields enclosed by brackets "[]" replaced with your own identifying
17 * information: Portions Copyright [yyyy] [name of copyright owner]
18 *
19 * CDDL HEADER END
20 */

22 /*
23  * Copyright (c) 2013 Gary Mills
24  *
25  * Copyright (c) 1989, 2010, Oracle and/or its affiliates. All rights reserved.
26  */

28 /* Copyright (c) 2013, OmniTI Computer Consulting, Inc. All rights reserved. */

30 /*      Copyright (c) 1988 AT&T */
31 /*      All Rights Reserved      */

33 #ifndef _STDLIB_H
34 #define _STDLIB_H

36 #include <iso/stdlib_iso.h>
37 #include <iso/stdlib_c99.h>

39 #if defined(__EXTENSIONS__) || defined(_XPG4)
40 #include <sys/wait.h>
41 #endif

43 /*
44  * Allow global visibility for symbols defined in
45  * C++ "std" namespace in <iso/stdlib_iso.h>.
46  */
47 #if __cplusplus >= 199711L
48 using std::div_t;
49 using std::ldiv_t;
50 using std::size_t;
51 using std::abort;
52 using std::abs;
53 using std::atexit;
54 using std::atof;
55 using std::atoi;
56 using std::atol;
57 using std::bsearch;
58 using std::calloc;
59 using std::div;
60 using std::exit;
```

new/usr/src/head/stdlib.h

2

```
61 using std::free;
62 using std::getenv;
63 using std::labs;
64 using std::ldiv;
65 using std::malloc;
66 using std::mblen;
67 using std::mbstowcs;
68 using std::mbtowc;
69 using std::qsort;
70 using std::rand;
71 using std::realloc;
72 using std::srand;
73 using std::strtod;
74 using std::strtol;
75 using std::strtoul;
76 using std::system;
77 using std::wcstombs;
78 using std::wctomb;
79 #endif

81 #ifdef __cplusplus
82 extern "C" {
83 #endif

85 #ifndef _UID_T
86 #define _UID_T
87 typedef unsigned int    uid_t;          /* UID type */
88 #endif

90 #if defined(__STDC__)

92 /* large file compilation environment setup */
93 #if !defined(_LP64) && _FILE_OFFSET_BITS == 64

95 #ifdef __PRAGMA_REDEFINE_EXTNAME
96 #pragma redefine_extname    mkstemp        mkstemp64
97 #pragma redefine_extname    mkstemps       mkstemps64
98 #else /* __PRAGMA_REDEFINE_EXTNAME */
99 #define mkstemp              mkstemp64
100 #define mkstemps             mkstemps64
101 #endif /* __PRAGMA_REDEFINE_EXTNAME */

103 #endif /* _FILE_OFFSET_BITS == 64 */

105 /* In the LP64 compilation environment, all APIs are already large file */
106 #if defined(_LP64) && defined(_LARGEFILE64_SOURCE)

108 #ifdef __PRAGMA_REDEFINE_EXTNAME
109 #pragma redefine_extname    mkstemp64      mkstemp
110 #pragma redefine_extname    mkstemps64     mkstemps
111 #else /* __PRAGMA_REDEFINE_EXTNAME */
112 #define mkstemp64           mkstemp
113 #define mkstemps64         mkstemps
114 #endif /* __PRAGMA_REDEFINE_EXTNAME */

116 #endif /* _LP64 && _LARGEFILE64_SOURCE */

118 #if defined(__EXTENSIONS__) || \
119     (!defined(_STRICT_STDC) && !defined(__XOPEN_OR_POSIX)) || \
120     (_POSIX_C_SOURCE - 0 >= 199506L) || defined(_REENTRANT)
121 extern int rand_r(unsigned int *);
122 #endif

124 extern void _exithandle(void);

126 #if defined(__EXTENSIONS__) || \
```

```

127     (!defined(_STRICT_STDC) && !defined(_POSIX_C_SOURCE)) || \
128     defined(_XPG4)
129 extern double drand48(void);
130 extern double erand48(unsigned short *);
131 extern long jrand48(unsigned short *);
132 extern void lcong48(unsigned short *);
133 extern long lrand48(void);
134 extern long mrand48(void);
135 extern long nrand48(unsigned short *);
136 extern unsigned short *seed48(unsigned short *);
137 extern void srand48(long);
138 extern int putenv(char *);
139 extern void setkey(const char *);
140 #endif /* defined(__EXTENSIONS__) || !defined(_STRICT_STDC) ... */

142 /*
143  * swab() has historically been in <stdlib.h> as delivered from AT&T
144  * and continues to be visible in the default compilation environment.
145  * As of Issue 4 of the X/Open Portability Guides, swab() was declared
146  * in <unistd.h>. As a result, with respect to X/Open namespace the
147  * swab() declaration in this header is only visible for the XPG3
148  * environment.
149  */
150 #if defined(__EXTENSIONS__) || \
151     (!defined(_STRICT_STDC) && !defined(_POSIX_C_SOURCE)) && \
152     (!defined(_XOPEN_SOURCE) || (defined(_XPG3) && !defined(_XPG4)))
153 #ifndef __SSIZE_T
154 #define __SSIZE_T
155 #if defined(_LP64) || defined(_I32LPx)
156 typedef long    ssize_t;      /* size of something in bytes or -1 */
157 #else
158 typedef int     ssize_t;      /* (historical version) */
159 #endif
160 #endif /* !__SSIZE_T */

162 extern void swab(const char *, char *, ssize_t);
163 #endif /* defined(__EXTENSIONS__) || !defined(_STRICT_STDC) ... */

165 #if defined(__EXTENSIONS__) || \
166     (!defined(_XOPEN_OR_POSIX) || defined(_XPG4_2) || \
167     (defined(_LARGEFILE_SOURCE) && _FILE_OFFSET_BITS == 64))
168 extern int mkstemp(char *);
169 #if !defined(_XPG4_2) || defined(__EXTENSIONS__)
170 extern int mkstemps(char *, int);
171 #endif
172 #endif /* defined(__EXTENSIONS__) ... */

174 #if defined(_LARGEFILE64_SOURCE) && !((_FILE_OFFSET_BITS == 64) && \
175     !defined(__PRAGMA_REDEFINE_EXTNAME))
176 extern int mkstemp64(char *);
177 #if !defined(_XPG4_2) || defined(__EXTENSIONS__)
178 extern int mkstemps64(char *, int);
179 #endif
180 #endif /* _LARGEFILE64_SOURCE... */

182 #if defined(__EXTENSIONS__) || \
183     (!defined(_STRICT_STDC) && !defined(_XOPEN_OR_POSIX)) || \
184     defined(_XPG4_2)
185 extern long a64l(const char *);
186 extern char *ecvt(double, int, int *_RESTRICT_KYWD, int *_RESTRICT_KYWD);
187 extern char *fcvt(double, int, int *_RESTRICT_KYWD, int *_RESTRICT_KYWD);
188 extern char *gcvt(double, int, char *);
189 extern int getsuopt(char **, char *const *, char **);
190 extern int grantpt(int);
191 extern char *initstate(unsigned, char *, size_t);
192 extern char *l64a(long);

```

```

193 extern char *mktemp(char *);
194 extern char *ptsname(int);
195 extern long random(void);
196 extern char *realpath(const char *_RESTRICT_KYWD, char *_RESTRICT_KYWD);
197 extern char *setstate(const char *);
198 extern void srand(unsigned);
199 extern int unlockpt(int);
200 /* Marked LEGACY in SUSv2 and removed in SUSv3 */
201 #if !defined(_XPG6) || defined(__EXTENSIONS__)
202 extern int ttyslot(void);
203 extern void *valloc(size_t);
204 #endif /* !defined(_XPG6) || defined(__EXTENSIONS__) */
205 #endif /* defined(__EXTENSIONS__) || ... || defined(_XPG4_2) */

207 #if defined(__EXTENSIONS__) || \
208     (!defined(_STRICT_STDC) && !defined(_XOPEN_OR_POSIX)) || \
209     defined(_XPG6)
210 extern int posix_memalign(void **, size_t, size_t);
211 extern int posix_openpt(int);
212 extern int setenv(const char *, const char *, int);
213 extern int unsetenv(const char *);
214 #endif

216 #if defined(__EXTENSIONS__) || \
217     (!defined(_STRICT_STDC) && !defined(_XOPEN_OR_POSIX))
218 extern char *canonicalize_file_name(const char *);
219 extern int clearenv(void);
220 extern void closefrom(int);
221 extern int daemon(int, int);
222 extern int dup2(int, int);
223 extern int dup3(int, int, int);
224 extern int fdwalk(int (*)(void *, int), void *);
225 extern char *qecvt(long double, int, int *, int *);
226 extern char *qfcvt(long double, int, int *, int *);
227 extern char *qgcvt(long double, int, char *);
228 extern char *getcwd(char *, size_t);
229 extern const char *getexecname(void);

231 #ifndef __GETLOGIN_DEFINED /* Avoid duplicate in unistd.h */
232 #define __GETLOGIN_DEFINED
233 #ifndef __USE_LEGACY_LOGNAME
234 #ifdef __PRAGMA_REDEFINE_EXTNAME
235 #pragma redefine_extname getlogin getloginx
236 #else /* __PRAGMA_REDEFINE_EXTNAME */
237 extern char *getloginx(void);
238 #define getlogin getloginx
239 #endif /* __PRAGMA_REDEFINE_EXTNAME */
240 #endif /* __USE_LEGACY_LOGNAME */
241 extern char *getlogin(void);
242 #endif /* __GETLOGIN_DEFINED */

244 extern int getopt(int, char *const *, const char *);
245 extern char *optarg;
246 extern int optind, opterr, optopt;
247 extern char *getpass(const char *);
248 extern char *getpassphrase(const char *);
249 extern int getpw(uid_t, char *);
250 extern int isatty(int);
251 extern void *memalign(size_t, size_t);
252 extern char *ttyname(int);
253 extern char *mkdtemp(char *);
254 extern const char *getprogname(void);
255 extern void setprogname(const char *);

257 #if !defined(_STRICT_STDC) && defined(_LONGLONG_TYPE)
258 extern char *lltostr(long long, char *);

```

```

259 extern char *ulltostr(unsigned long long, char *);
260 #endif /* !defined(_STRICT_STDC) && defined(_LONGLONG_TYPE) */

262 #endif /* defined(__EXTENSIONS__) || !defined(_STRICT_STDC) ... */

264 #else /* not __STDC__ */

266 #if defined(__EXTENSIONS__) || !defined(_XOPEN_OR_POSIX) || \
267     (_POSIX_C_SOURCE - 0 >= 199506L) || defined(_REENTRANT)
268 extern int rand_r();
269 #endif /* defined(__EXTENSIONS__) || defined(_REENTRANT) ... */

271 extern void _exithandle();

273 #if defined(__EXTENSIONS__) || !defined(_POSIX_C_SOURCE) || defined(_XPG4)
274 extern double drand48();
275 extern double erand48();
276 extern long jrand48();
277 extern void lcong48();
278 extern long lrand48();
279 extern long mrand48();
280 extern long nrand48();
281 extern unsigned short *seed48();
282 extern void srand48();
283 extern int putenv();
284 extern void setkey();
285 #endif /* defined(__EXTENSIONS__) || !defined(_POSIX_C_SOURCE) ... */

287 #if (defined(__EXTENSIONS__) || !defined(_POSIX_C_SOURCE)) && \
288     (!defined(_XOPEN_SOURCE) || (defined(_XPG3) && !defined(_XPG4)))
289 extern void swab();
290 #endif

292 #if defined(__EXTENSIONS__) || \
293     !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2) || \
294     (defined(_LARGEFILE_SOURCE) && _FILE_OFFSET_BITS == 64)
295 extern int mkstemp();
296 #if !defined(_XPG4_2) || defined(__EXTENSIONS__)
297 extern int mkstemps();
298 #endif
299 #endif /* defined(__EXTENSIONS__) ... */

301 #if defined(_LARGEFILE64_SOURCE) && !((_FILE_OFFSET_BITS == 64) && \
302     !defined(__PRAGMA_REDEFINE_EXTNAME))
303 extern int mkstemp64();
304 #if !defined(_XPG4_2) || defined(__EXTENSIONS__)
305 extern int mkstemps64();
306 #endif
307 #endif /* _LARGEFILE64_SOURCE... */

309 #if defined(__EXTENSIONS__) || !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2)
310 extern long a64l();
311 extern char *ecvt();
312 extern char *fcvt();
313 extern char *gcvt();
314 extern int getsubopt();
315 extern int grantpt();
316 extern char *initstate();
317 extern char *l64a();
318 extern char *mktemp();
319 extern char *ptsname();
320 extern long random();
321 extern char *realpath();
322 extern char *setstate();
323 extern void srandom();
324 /* Marked LEGACY in SUSv2 and removed in SUSv3 */

```

```

325 #if !defined(_XPG6) || defined(__EXTENSIONS__)
326 extern int ttyslot();
327 extern void *valloc();
328 #endif /* !defined(_XPG6) || defined(__EXTENSIONS__) */
329 #endif /* defined(__EXTENSIONS__) || ... || defined(_XPG4_2) */

331 #if defined(__EXTENSIONS__) || !defined(__XOPEN_OR_POSIX) || defined(_XPG6)
332 extern int posix_memalign();
333 extern int posix_openpt();
334 extern int setenv();
335 extern int unsetenv();
336 #endif

338 #if defined(__EXTENSIONS__) || !defined(__XOPEN_OR_POSIX)
339 extern char *canonicalize_file_name();
340 extern int clearenv();
341 extern void closefrom();
342 extern int daemon();
343 extern int dup2();
344 extern int dup3();
345 extern int fdwalk();
346 extern char *qecvt();
347 extern char *qfcvt();
348 extern char *ggcvt();
349 extern char *getcwd();
350 extern char *getexecname();

352 #ifndef __GETLOGIN_DEFINED /* Avoid duplicate in unistd.h */
353 #define __GETLOGIN_DEFINED
354 #ifndef __USE_LEGACY_LOGNAME
355 #ifdef __PRAGMA_REDEFINE_EXTNAME
356 #pragma redefine_extname getlogin getloginx
357 #else /* __PRAGMA_REDEFINE_EXTNAME */
358 extern char *getloginx();
359 #define getlogin getloginx
360 #endif /* __PRAGMA_REDEFINE_EXTNAME */
361 #endif /* __USE_LEGACY_LOGNAME */
362 extern char *getlogin();
363 #endif /* __GETLOGIN_DEFINED */

365 extern int getopt();
366 extern char *optarg;
367 extern int optind, opterr, optopt;
368 extern char *getpass();
369 extern char *getpassphrase();
370 extern int getpw();
371 extern int isatty();
372 extern void *memalign();
373 extern char *ttyname();
374 extern char *mkdtemp();
375 extern char *getprogname();
376 extern void setprogname();

378 #if defined(_LONGLONG_TYPE)
379 extern char *lltostr();
380 extern char *ulltostr();
381 #endif /* defined(_LONGLONG_TYPE) */
382 #endif /* defined(__EXTENSIONS__) || !defined(__XOPEN_OR_POSIX) ... */

384 #endif /* __STDC__ */

386 #ifdef __cplusplus
387 }
388 #endif

390 #endif /* _STDLIB_H */

```

new/usr/src/head/unistd.h

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```
*****
40793 Wed Sep  4 20:46:00 2013
new/usr/src/head/unistd.h
2989 Eliminate use of LOGNAME_MAX in ON
1166 useradd have warning with name more 8 chars
*****
1 /*
2  * CDDL HEADER START
3  *
4  * The contents of this file are subject to the terms of the
5  * Common Development and Distribution License (the "License").
6  * You may not use this file except in compliance with the License.
7  *
8  * You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE
9  * or http://www.opensolaris.org/os/licensing.
10 * See the License for the specific language governing permissions
11 * and limitations under the License.
12 *
13 * When distributing Covered Code, include this CDDL HEADER in each
14 * file and include the License file at usr/src/OPENSOLARIS.LICENSE.
15 * If applicable, add the following below this CDDL HEADER, with the
16 * fields enclosed by brackets "[]" replaced with your own identifying
17 * information: Portions Copyright [yyyy] [name of copyright owner]
18 *
19 * CDDL HEADER END
20 */

22 /*
23  * Copyright (c) 2013 Gary Mills
24  *
25  * Copyright (c) 1989, 2010, Oracle and/or its affiliates. All rights reserved.
26  */

28 /*      Copyright (c) 1988 AT&T */
29 /*      All Rights Reserved */

31 /* Copyright (c) 2013, OmniTI Computer Consulting, Inc. All rights reserved. */

33 #ifndef _UNISTD_H
34 #define _UNISTD_H

36 #include <sys/feature_tests.h>

38 #include <sys/types.h>
39 #include <sys/unistd.h>

41 #ifdef __cplusplus
42 extern "C" {
43 #endif

45 /* Symbolic constants for the "access" routine: */
46 #define R_OK  4 /* Test for Read permission */
47 #define W_OK  2 /* Test for Write permission */
48 #define X_OK  1 /* Test for eXecute permission */
49 #define F_OK  0 /* Test for existence of File */

51 #if !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2) || defined(__EXTENSIONS__)
52 #define F_ULOCK 0 /* Unlock a previously locked region */
53 #define F_LOCK  1 /* Lock a region for exclusive use */
54 #define F_TLOCK 2 /* Test and lock a region for exclusive use */
55 #define F_TEST  3 /* Test a region for other processes locks */
56 #endif /* !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2)... */

58 /* Symbolic constants for the "lseek" routine: */

60 #ifndef SEEK_SET
```

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```
61 #define SEEK_SET 0 /* Set file pointer to "offset" */
62 #endif

64 #ifndef SEEK_CUR
65 #define SEEK_CUR 1 /* Set file pointer to current plus "offset" */
66 #endif

68 #ifndef SEEK_END
69 #define SEEK_END 2 /* Set file pointer to EOF plus "offset" */
70 #endif

72 #if !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__)
73 #ifndef SEEK_DATA
74 #define SEEK_DATA 3 /* Set file pointer to next data past offset */
75 #endif

77 #ifndef SEEK_HOLE
78 #define SEEK_HOLE 4 /* Set file pointer to next hole past offset */
79 #endif
80 #endif /* !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__) */

82 #if !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__)
83 /* Path names: */
84 #define GF_PATH "/etc/group" /* Path name of the "group" file */
85 #define PF_PATH "/etc/passwd" /* Path name of the "passwd" file */
86 #endif /* !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__) */

88 /*
89  * compile-time symbolic constants,
90  * Support does not mean the feature is enabled.
91  * Use pathconf/sysconf to obtain actual configuration value.
92  */

94 /* Values unchanged in UNIX 03 */
95 #define _POSIX_ASYNC_IO 1
96 #define _POSIX_JOB_CONTROL 1
97 #define _POSIX_SAVED_IDS 1
98 #define _POSIX_SYNC_IO 1

100 /*
101  * POSIX.1b compile-time symbolic constants.
102  */
103 #if defined(_XPG6)
104 #define _POSIX_ASYNCHRONOUS_IO 200112L
105 #define _POSIX_FSYNC 200112L
106 #define _POSIX_MAPPED_FILES 200112L
107 #define _POSIX_MEMLOCK 200112L
108 #define _POSIX_MEMLOCK_RANGE 200112L
109 #define _POSIX_MEMORY_PROTECTION 200112L
110 #define _POSIX_MESSAGE_PASSING 200112L
111 #define _POSIX_PRIORITY_SCHEDULING 200112L
112 #define _POSIX_REALTIME_SIGNALS 200112L
113 #define _POSIX_SEMAPHORES 200112L
114 #define _POSIX_SHARED_MEMORY_OBJECTS 200112L
115 #define _POSIX_SYNCHRONIZED_IO 200112L
116 #else
117 #define _POSIX_ASYNCHRONOUS_IO 1
118 #define _POSIX_FSYNC 1
119 #define _POSIX_MAPPED_FILES 1
120 #define _POSIX_MEMLOCK 1
121 #define _POSIX_MEMLOCK_RANGE 1
122 #define _POSIX_MEMORY_PROTECTION 1
123 #define _POSIX_MESSAGE_PASSING 1
124 #define _POSIX_PRIORITY_SCHEDULING 1
125 #define _POSIX_REALTIME_SIGNALS 1
126 #define _POSIX_SEMAPHORES 1
```



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```

127 #define _POSIX_SHARED_MEMORY_OBJECTS 1
128 #define _POSIX_SYNCHRONIZED_IO 1
129 #endif

131 /*
132  * POSIX.1c compile-time symbolic constants.
133  */
134 #if defined(_XPG6)
135 #define _POSIX_THREAD_SAFE_FUNCTIONS 200112L
136 #define _POSIX_THREADS 200112L
137 #define _POSIX_THREAD_ATTR_STACKADDR 200112L
138 #define _POSIX_THREAD_ATTR_STACKSIZE 200112L
139 #define _POSIX_THREAD_PROCESS_SHARED 200112L
140 #define _POSIX_THREAD_PRIORITY_SCHEDULING 200112L
141 #define _POSIX_TIMERS 200112L
142 #else
143 #define _POSIX_THREAD_SAFE_FUNCTIONS 1
144 #define _POSIX_THREADS 1
145 #define _POSIX_THREAD_ATTR_STACKADDR 1
146 #define _POSIX_THREAD_ATTR_STACKSIZE 1
147 #define _POSIX_THREAD_PROCESS_SHARED 1
148 #define _POSIX_THREAD_PRIORITY_SCHEDULING 1
149 #define _POSIX_TIMERS 1
150 #endif

152 /* New in UNIX 03 */
153 #define _POSIX_ADVISORY_INFO 200112L
154 #define _POSIX_BARRIERS 200112L
155 #define _POSIX_CLOCK_SELECTION 200112L
156 #define _POSIX_IPV6 200112L
157 #define _POSIX_MONOTONIC_CLOCK 200112L
158 #define _POSIX_RAW_SOCKETS 200112L
159 #define _POSIX_READER_WRITER_LOCKS 200112L
160 #define _POSIX_SPAWN 200112L
161 #define _POSIX_SPIN_LOCKS 200112L
162 #define _POSIX_TIMEOUTS 200112L

164 /*
165  * Support for the POSIX.1 mutex protocol attribute. For realtime applications
166  * which need mutexes to support priority inheritance/ceiling.
167  */
168 #if defined(_XPG6)
169 #define _POSIX_THREAD_PRIO_INHERIT 200112L
170 #define _POSIX_THREAD_PRIO_PROTECT 200112L
171 #else
172 #define _POSIX_THREAD_PRIO_INHERIT 1
173 #define _POSIX_THREAD_PRIO_PROTECT 1
174 #endif

176 #ifndef _POSIX_VDISABLE
177 #define _POSIX_VDISABLE 0
178 #endif

180 #ifndef NULL
181 #if defined(_LP64)
182 #define NULL 0L
183 #else
184 #define NULL 0
185 #endif
186 #endif

188 #define STDIN_FILENO 0
189 #define STDOUT_FILENO 1
190 #define STDERR_FILENO 2

192 /*

```

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```

193  * Large File Summit-related announcement macros. The system supports both
194  * the additional and transitional Large File Summit interfaces. (The final
195  * two macros provide a finer granularity breakdown of _LFS64_LARGEFILE.)
196  */
197 #define _LFS_LARGEFILE 1
198 #define _LFS64_LARGEFILE 1
199 #define _LFS64_STDIO 1
200 #define _LFS64_ASYNCHRONOUS_IO 1

202 /* large file compilation environment setup */
203 #if !defined(_LP64) && _FILE_OFFSET_BITS == 64
204 #ifdef __PRAGMA_REDEFINE_EXTNAME
205 #pragma redefine_extname ftruncate ftruncate64
206 #pragma redefine_extname lseek lseek64
207 #pragma redefine_extname pread pread64
208 #pragma redefine_extname pwrite pwrite64
209 #pragma redefine_extname truncate truncate64
210 #pragma redefine_extname lockf lockf64
211 #pragma redefine_extname tell tell64
212 #else /* __PRAGMA_REDEFINE_EXTNAME */
213 #define ftruncate ftruncate64
214 #define lseek lseek64
215 #define pread pread64
216 #define pwrite pwrite64
217 #define truncate truncate64
218 #define lockf lockf64
219 #define tell tell64
220 #endif /* __PRAGMA_REDEFINE_EXTNAME */
221 #endif /* !_LP64 && _FILE_OFFSET_BITS == 64 */

223 /* In the LP64 compilation environment, the APIs are already large file */
224 #if defined(_LP64) && defined(_LARGEFILE64_SOURCE)
225 #ifdef __PRAGMA_REDEFINE_EXTNAME
226 #pragma redefine_extname ftruncate64 ftruncate
227 #pragma redefine_extname lseek64 lseek
228 #pragma redefine_extname pread64 pread
229 #pragma redefine_extname pwrite64 pwrite
230 #pragma redefine_extname truncate64 truncate
231 #pragma redefine_extname lockf64 lockf
232 #pragma redefine_extname tell64 tell
233 #else /* __PRAGMA_REDEFINE_EXTNAME */
234 #define ftruncate64 ftruncate
235 #define lseek64 lseek
236 #define pread64 pread
237 #define pwrite64 pwrite
238 #define truncate64 truncate
239 #define lockf64 lockf
240 #define tell64 tell
241 #endif /* __PRAGMA_REDEFINE_EXTNAME */
242 #endif /* !_LP64 && _LARGEFILE64_SOURCE */

244 #if defined(__STDC__)

246 extern int access(const char *, int);
247 #if !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__)
248 extern int acct(const char *);
249 #endif /* !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__) */
250 extern unsigned alarm(unsigned);
251 /* Marked as LEGACY in SUSv2 and removed in SUSv3 */
252 #if !defined(__XOPEN_OR_POSIX) || (defined(_XPG4_2) && !defined(_XPG6)) || \
253     defined(__EXTENSIONS__)
254 extern int brk(void *);
255 #endif /* !defined(__XOPEN_OR_POSIX) || (defined(_XPG4_2)... */
256 extern int chdir(const char *);
257 extern int chown(const char *, uid_t, gid_t);
258 /* Marked as LEGACY in SUSv2 and removed in SUSv3 */

```

```

259 #if !defined(_POSIX_C_SOURCE) || (defined(_XOPEN_SOURCE) && \
260     !defined(_XPG6)) || defined(__EXTENSIONS__)
261 extern int chroot(const char *);
262 #endif /* !defined(_POSIX_C_SOURCE) || defined(_XOPEN_SOURCE)... */
263 extern int close(int);
264 #if defined(_XPG4) || defined(__EXTENSIONS__)
265 extern size_t confstr(int, char *, size_t);
266 extern char *crypt(const char *, const char *);
267 #endif /* !defined(_XPG4) || defined(__EXTENSIONS__) */
268 #if !defined(_POSIX_C_SOURCE) || defined(_XOPEN_SOURCE) || \
269     defined(__EXTENSIONS__)
270 extern char *ctermid(char *);
271 #endif /* !defined(_POSIX_C_SOURCE) ... */
272 #if !defined(_XOPEN_OR_POSIX) || defined(_REENTRANT) || defined(__EXTENSIONS__)
273 extern char *ctermid_r(char *);
274 #endif /* !defined(_XOPEN_OR_POSIX) || defined(_REENTRANT) ... */
275 /* Marked as LEGACY in SUSv2 and removed in SUSv3 */
276 #if !defined(_XPG6) || defined(__EXTENSIONS__)
277 extern char *cuserid(char *);
278 #endif
279 extern int dup(int);
280 extern int dup2(int, int);
281 extern int dup3(int, int, int);
282 #if defined(_XPG4) || defined(__EXTENSIONS__)
283 extern void encrypt(char *, int);
284 #endif /* defined(_XPG4) || defined(__EXTENSIONS__) */
285 #if !defined(_XOPEN_OR_POSIX) || defined(__EXTENSIONS__)
286 extern void endusershell(void);
287 #endif /* !defined(_XOPEN_OR_POSIX) || defined(__EXTENSIONS__) */
288 extern int execl(const char *, const char *, ...);
289 extern int execle(const char *, const char *, ...);
290 extern int execlp(const char *, const char *, ...);
291 extern int execvp(const char *, char *const *);
292 extern int execve(const char *, char *const *, char *const *);
293 extern int execvp(const char *, char *const *);
294 extern void _exit(int);
295     _NORETURN;
296 /*
297  * The following fattach prototype is duplicated in <stropts.h>. The
298  * duplication is necessitated by XPG4.2 which requires the prototype
299  * be defined in <stropts.h>.
300  */
301 #if !defined(_XOPEN_OR_POSIX) || defined(__EXTENSIONS__)
302 extern int fattach(int, const char *);
303 #endif /* !defined(_XOPEN_OR_POSIX) || defined(__EXTENSIONS__) */
304 #if !defined(_XOPEN_OR_POSIX) || defined(_XPG4_2) || defined(__EXTENSIONS__)
305 extern int fchdir(int);
306 extern int fchown(int, uid_t, gid_t);
307 #endif /* !defined(_XOPEN_OR_POSIX) || defined(_XPG4_2)... */
308 #if !defined(_XOPEN_OR_POSIX) || defined(__EXTENSIONS__)
309 extern int fchroot(int);
310 #endif /* !defined(_XOPEN_OR_POSIX) || defined(__EXTENSIONS__) */
311 #if !defined(_XOPEN_OR_POSIX) || (_POSIX_C_SOURCE > 2) || \
312     defined(__EXTENSIONS__)
313 extern int fdatsync(int);
314 #endif /* !defined(_XOPEN_OR_POSIX) || (_POSIX_C_SOURCE > 2)... */
315 /*
316  * The following fdetach prototype is duplicated in <stropts.h>. The
317  * duplication is necessitated by XPG4.2 which requires the prototype
318  * be defined in <stropts.h>.
319  */
320 #if !defined(_XOPEN_OR_POSIX) || defined(__EXTENSIONS__)
321 extern int fdetach(const char *);
322 #endif /* !defined(_XOPEN_OR_POSIX)... */
323 extern pid_t fork(void);
324 #if !defined(_XOPEN_OR_POSIX) || defined(__EXTENSIONS__)

```

```

325 extern pid_t fork1(void);
326 extern pid_t forkall(void);
327 #endif /* !defined(_XOPEN_OR_POSIX)... */
328 extern long fpathconf(int, int);
329 #if !defined(_POSIX_C_SOURCE) || (_POSIX_C_SOURCE > 2) || \
330     defined(__EXTENSIONS__)
331 extern int fsync(int);
332 #endif /* !defined(_POSIX_C_SOURCE) || (_POSIX_C_SOURCE > 2)... */
333 #if !defined(_XOPEN_OR_POSIX) || (_POSIX_C_SOURCE > 2) || defined(_XPG4_2) || \
334     (defined(_LARGEFILE_SOURCE) && _FILE_OFFSET_BITS == 64) || \
335     defined(__EXTENSIONS__)
336 extern int ftruncate(int, off_t);
337 #endif /* !defined(_XOPEN_OR_POSIX) || (_POSIX_C_SOURCE > 2)... */
338 extern char *getcwd(char *, size_t);
339 #if !defined(_XOPEN_OR_POSIX) || (defined(_XPG4_2) && !defined(_XPG6)) || \
340     defined(__EXTENSIONS__)
341 extern int getdtablesize(void);
342 #endif
343 extern gid_t getegid(void);
344 extern uid_t geteuid(void);
345 extern gid_t getgid(void);
346 extern int getgroups(int, gid_t *);
347 #if !defined(_XOPEN_OR_POSIX) || defined(_XPG4_2) || defined(__EXTENSIONS__)
348 extern long gethostid(void);
349 #endif
350 #if defined(_XPG4_2)
351 extern int gethostname(char *, size_t);
352 #elif !defined(_XOPEN_OR_POSIX) || defined(__EXTENSIONS__)
353 extern int gethostname(char *, int);
354 #endif
355
356 #ifndef __GETLOGIN_DEFINED /* Avoid duplicate in stdlib.h */
357 #define __GETLOGIN_DEFINED
358 #ifndef __USE_LEGACY_LOGNAME
359 #ifdef __PRAGMA_REDEFINE_EXTNAME
360 #pragma redefine_extname getlogin getloginx
361 #else /* __PRAGMA_REDEFINE_EXTNAME */
362 extern char *getloginx(void);
363 #define getlogin getloginx
364 #endif /* __PRAGMA_REDEFINE_EXTNAME */
365 #endif /* __USE_LEGACY_LOGNAME */
366 extern char *getlogin(void);
367 #endif /* __GETLOGIN_DEFINED */
368
369 #if defined(_XPG4) || defined(__EXTENSIONS__)
370 extern int getopt(int, char *const *, const char *);
371 extern char *optarg;
372 extern int opterr, optind, optopt;
373 /* Marked as LEGACY in SUSv2 and removed in SUSv3 */
374 #if !defined(_XPG6) || defined(__EXTENSIONS__)
375 extern char *getpass(const char *);
376 #endif
377 #endif /* defined(_XPG4) || defined(__EXTENSIONS__) */
378 #if !defined(_XOPEN_OR_POSIX) || defined(_XPG4_2) || defined(__EXTENSIONS__)
379 /* Marked as LEGACY in SUSv2 and removed in SUSv3 */
380 #if !defined(_XPG6) || defined(__EXTENSIONS__)
381 extern int getpagesize(void);
382 #endif
383 extern pid_t getpgid(pid_t);
384 #endif /* !defined(_XOPEN_OR_POSIX) || defined(_XPG4_2)... */
385 extern pid_t getpid(void);
386 extern pid_t getppid(void);
387 extern pid_t getpgrp(void);
388
389 #if !defined(_XOPEN_OR_POSIX) || defined(__EXTENSIONS__)
390 char *getttx(const char *, const char *);

```

```

391 #endif /* !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__) */
392 #if !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2) || defined(__EXTENSIONS__)
393 extern pid_t getsid(pid_t);
394 #endif /* !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2)... */
395 extern uid_t getuid(void);
396 #if !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__)
397 extern char *getusershell(void);
398 #endif /* !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__) */
399 #if !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2) || defined(__EXTENSIONS__)
400 extern char *getwd(char *);
401 #endif /* !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2)... */
402 /*
403  * The following ioctl prototype is duplicated in <stropts.h>. The
404  * duplication is necessitated by XPG4.2 which requires the prototype
405  * be defined in <stropts.h>.
406  */
407 #if !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__)
408 extern int ioctl(int, int, ...);
409 extern int isaexec(const char *, char *const *, char *const *);
410 extern int issetugid(void);
411 #endif
412 extern int isatty(int);
413 #if !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2) || defined(__EXTENSIONS__)
414 extern int lchown(const char *, uid_t, gid_t);
415 #endif
416 extern int link(const char *, const char *);
417 #if !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__)
418 extern off_t lseek(int, off_t, int);
419 #endif
420 #if !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2) || \
421     (defined(_LARGEFILE_SOURCE) && _FILE_OFFSET_BITS == 64) || \
422     defined(__EXTENSIONS__)
423 extern int lockf(int, int, off_t);
424 #endif
425 extern off_t lseek(int, off_t, int);
426 #if !defined(_POSIX_C_SOURCE) || defined(_XOPEN_SOURCE) || \
427     defined(__EXTENSIONS__)
428 extern int nice(int);
429 #endif /* !defined(_POSIX_C_SOURCE) || defined(_XOPEN_SOURCE)... */
430 #if !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__)
431 extern int mincore(caddr_t, size_t, char *);
432 #endif
433 extern long pathconf(const char *, int);
434 extern int pause(void);
435 extern int pipe(int *);
436 extern int pipe2(int *, int);
437 #if !defined(_POSIX_C_SOURCE) || defined(_XPG5) || \
438     (defined(_LARGEFILE_SOURCE) && _FILE_OFFSET_BITS == 64) || \
439     defined(__EXTENSIONS__)
440 extern ssize_t pread(int, void *, size_t, off_t);
441 #endif
442 #if !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__)
443 extern void profil(unsigned short *, size_t, unsigned long, unsigned int);
444 #endif
445 /*
446  * pthread_atfork() is also declared in <pthread.h> as per SUSv3. The
447  * declarations are identical. A change to either one may also require
448  * appropriate namespace updates in order to avoid redeclaration
449  * warnings in the case where both prototypes are exposed via inclusion
450  * of both <pthread.h> and <unistd.h>.
451  */
452 #if !defined(__XOPEN_OR_POSIX) || \
453     ((_POSIX_C_SOURCE > 2) && !defined(_XPG6)) || \
454     defined(__EXTENSIONS__)
455 extern int pthread_atfork(void (*) (void), void (*) (void), void (*) (void));
456 #endif /* !defined(__XOPEN_OR_POSIX) || ((_POSIX_C_SOURCE > 2) ... */

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457 #if !defined(_LP64) && \
458     (!defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__))
459 extern int ptrace(int, pid_t, int, int);
460 #endif
461 #if !defined(_POSIX_C_SOURCE) || defined(_XPG5) || \
462     (defined(_LARGEFILE_SOURCE) && _FILE_OFFSET_BITS == 64) || \
463     defined(__EXTENSIONS__)
464 extern ssize_t pwrite(int, const void *, size_t, off_t);
465 #endif
466 #if !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__)
467 /* per RFC 3542; This is also defined in netdb.h */
468 extern int rcmd_af(char **, unsigned short, const char *, const char *,
469     const char *, int *, int);
470 #endif
471 extern ssize_t read(int, void *, size_t);
472 #if !defined(__XOPEN_OR_POSIX) || \
473     defined(_XPG4_2) || defined(__EXTENSIONS__)
474 extern ssize_t readlink(const char *_RESTRICT_KYWD, char *_RESTRICT_KYWD,
475     size_t);
476 #endif
477 #if (!defined(__XOPEN_OR_POSIX) || (defined(_XPG3) && !defined(_XPG4))) || \
478     defined(__EXTENSIONS__)
479 #if __cplusplus >= 199711L
480 namespace std {
481 #endif
482 extern int rename(const char *, const char *);
483 #if __cplusplus >= 199711L
484 } /* end of namespace std */
485
486 using std::rename;
487 #endif /* __cplusplus >= 199711L */
488 #endif /* (!defined(__XOPEN_OR_POSIX) || (defined(_XPG3)... */
489 #if !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__)
490 extern int resolvepath(const char *, char *, size_t);
491 /* per RFC 3542; This is also defined in netdb.h */
492 extern int rexec_af(char **, unsigned short, const char *, const char *,
493     const char *, int *, int);
494 #endif /* !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__) */
495 extern int rmdir(const char *);
496 #if !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__)
497 /* per RFC 3542; This is also defined in netdb.h */
498 extern int rresvport_af(int *, int);
499 #endif
500
501 #if !defined(__XOPEN_OR_POSIX) || (defined(_XPG4_2) && !defined(_XPG6)) || \
502     defined(__EXTENSIONS__)
503 extern void *sbrk(intptr_t);
504 #endif /* !defined(__XOPEN_OR_POSIX) || (defined(_XPG4_2)... */
505 #if !defined(__XOPEN_OR_POSIX) || defined(_XPG6) || defined(__EXTENSIONS__)
506 extern int setegid(gid_t);
507 extern int seteuid(uid_t);
508 #endif /* !defined(__XOPEN_OR_POSIX) || defined(_XPG6) ... */
509 extern int setgid(gid_t);
510 #if !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__)
511 extern int setgroups(int, const gid_t *);
512 extern int sethostname(char *, int);
513 #endif /* !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__) */
514 extern int setpgid(pid_t, pid_t);
515 #if !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2) || defined(__EXTENSIONS__)
516 extern pid_t setpgrp(void);
517 extern int setregid(gid_t, gid_t);
518 extern int setreuid(uid_t, uid_t);
519 #endif /* !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2)... */
520 extern pid_t setsid(void);
521 extern int setuid(uid_t);
522 #if !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__)

```

```

523 extern void setusershell(void);
524 #endif /* !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__) */
525 extern unsigned sleep(unsigned);
526 #if !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__)
527 extern int stime(const time_t *);
528 #endif /* !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__) */
529 #if defined(_XPG4)
530 /* __EXTENSIONS__ makes the SVID Third Edition prototype in stdlib.h visible */
531 extern void swab(const void *_RESTRICT_KYWD, void *_RESTRICT_KYWD, ssize_t);
532 #endif /* defined(_XPG4) */
533 #if !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2) || defined(__EXTENSIONS__)
534 extern int symlink(const char *, const char *);
535 extern void sync(void);
536 #endif /* !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2) */
537 #if defined(_XPG5) && !defined(_XPG6)
538 #ifdef __PRAGMA_REDEFINE_EXTNAME
539 #pragma redefine_extname sysconf __sysconf_xpg5
540 #else /* __PRAGMA_REDEFINE_EXTNAME */
541 #define sysconf __sysconf_xpg5
542 #endif /* __PRAGMA_REDEFINE_EXTNAME */
543 #endif /* defined(_XPG5) && !defined(_XPG6) */
544 extern long sysconf(int);
545 extern pid_t tcgetpgrp(int);
546 extern int tcsetpgrp(int, pid_t);
547 #if !defined(__XOPEN_OR_POSIX) || \
548     (defined(_LARGEFILE_SOURCE) && _FILE_OFFSET_BITS == 64) || \
549     defined(__EXTENSIONS__)
550 extern off_t tell(int);
551 #endif /* !defined(__XOPEN_OR_POSIX)... */
552 #if !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2) || \
553     (defined(_LARGEFILE_SOURCE) && _FILE_OFFSET_BITS == 64) || \
554     defined(__EXTENSIONS__)
555 extern int truncate(const char *, off_t);
556 #endif /* !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2)... */
557 extern char *ttyname(int);
558 #if !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2) || defined(__EXTENSIONS__)
559 extern useconds_t ualarm(useconds_t, useconds_t);
560 #endif /* !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2)... */
561 extern int unlink(const char *);
562 #if !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2) || defined(__EXTENSIONS__)
563 extern int usleep(useconds_t);
564 #endif /* !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2)... */
565 #if !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2) || defined(__EXTENSIONS__)
566 extern pid_t vfork(void) _RETURNS_TWICE;
567 #endif /* !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2)... */
568 #if !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__)
569 extern void vhangup(void);
570 #endif /* !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__) */
571 extern ssize_t write(int, const void *, size_t);
572 #if !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__)
573 extern void yield(void);
574 #endif /* !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__) */

576 #if !defined(__XOPEN_OR_POSIX) || defined(_ATFILE_SOURCE) || \
577     defined(__EXTENSIONS__)
578 /* || defined(_XPG7) */
579 extern int faccessat(int, const char *, int, int);
580 extern int fchownat(int, const char *, uid_t, gid_t, int);
581 extern int linkat(int, const char *, int, const char *, int);
582 extern ssize_t readlinkat(int, const char *_RESTRICT_KYWD,
583     char *_RESTRICT_KYWD, size_t);
584 extern int renameat(int, const char *, int, const char *);
585 extern int symlinkat(const char *, int, const char *);
586 extern int unlinkat(int, const char *, int);
587 #endif /* !defined(__XOPEN_OR_POSIX) || defined(_ATFILE_SOURCE)... */
588 #if !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__)

```

```

589 extern int get_nprocs(void);
590 extern int get_nprocs_conf(void);
591 #endif /* !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__) */

593 /* transitional large file interface versions */
594 #if defined(_LARGEFILE64_SOURCE) && !((_FILE_OFFSET_BITS == 64) && \
595     !defined(__PRAGMA_REDEFINE_EXTNAME))
596 extern int ftruncate64(int, off64_t);
597 extern off64_t lseek64(int, off64_t, int);
598 extern ssize_t pread64(int, void *, size_t, off64_t);
599 extern ssize_t pwrite64(int, const void *, size_t, off64_t);
600 extern off64_t tell64(int);
601 extern int truncate64(const char *, off64_t);
602 extern int lockf64(int, int, off64_t);
603 #endif /* _LARGEFILE64_SOURCE */

605 #else /* _STDC__ */

607 extern int access();
608 #if !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__)
609 extern int acct();
610 #endif /* !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__) */
611 extern unsigned alarm();
612 #if !defined(__XOPEN_OR_POSIX) || (defined(_XPG4_2) && !defined(_XPG6)) || \
613     defined(__EXTENSIONS__)
614 extern int brk();
615 #endif /* !defined(__XOPEN_OR_POSIX) || (defined(_XPG4_2)... */
616 extern int chdir();
617 extern int chown();
618 #if !defined(_POSIX_C_SOURCE) || defined(_XOPEN_SOURCE) || \
619     defined(__EXTENSIONS__)
620 extern int chroot();
621 #endif /* (!defined(_POSIX_C_SOURCE) || defined(_XOPEN_SOURCE)... */
622 extern int close();
623 #if defined(_XPG4) || defined(__EXTENSIONS__)
624 extern size_t confstr();
625 extern char *crypt();
626 #endif /* defined(_XPG4) || defined(__EXTENSIONS__) */
627 #if !defined(_POSIX_C_SOURCE) || defined(_XPG3) || defined(__EXTENSIONS__)
628 extern char *ctermid();
629 #endif /* (!defined(_POSIX_C_SOURCE) || defined(_XPG3)... */
630 #if !defined(__XOPEN_OR_POSIX) || defined(_REENTRANT) || defined(__EXTENSIONS__)
631 extern char *ctermid_r();
632 #endif /* !defined(__XOPEN_OR_POSIX) || defined(_REENTRANT) ... */
633 #if !defined(_XPG6) || defined(__EXTENSIONS__)
634 extern char *cuserid();
635 #endif
636 extern int dup();
637 extern int dup2();
638 extern int dup3();
639 #if defined(_XPG4) || defined(__EXTENSIONS__)
640 extern void encrypt();
641 #endif /* defined(_XPG4) || defined(__EXTENSIONS__) */
642 #if !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__)
643 extern void endusershell();
644 #endif /* !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__) */
645 extern int execl();
646 extern int execle();
647 extern int execlp();
648 extern int execv();
649 extern int execve();
650 extern int execvp();
651 extern void _exit();
652 #if !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__)
653 extern int fattach();
654 #endif /* !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__) */

```

```

655 #if !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2) || defined(__EXTENSIONS__)
656 extern int fchdir();
657 extern int fchown();
658 #endif /* !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2)... */
659 #if !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__)
660 extern int fchroot();
661 #endif /* !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__) */
662 #if !defined(__XOPEN_OR_POSIX) || (_POSIX_C_SOURCE > 2) || \
663     defined(__EXTENSIONS__)
664 extern int fdatsync();
665 #endif /* !defined(__XOPEN_OR_POSIX) || (_POSIX_C_SOURCE > 2)... */
666 #if !defined(__XOPEN_OR_POSIX)
667 extern int fdetach();
668 #endif /* !defined(__XOPEN_OR_POSIX) */
669 extern pid_t fork();
670 #if !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__)
671 extern pid_t fork1();
672 extern pid_t forkall();
673 #endif /* !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__) */
674 extern long fpathconf();
675 #if !defined(_POSIX_C_SOURCE) || (_POSIX_C_SOURCE > 2) || \
676     defined(__EXTENSIONS__)
677 extern int fsync();
678 #endif /* !defined(_POSIX_C_SOURCE) || (_POSIX_C_SOURCE > 2)... */
679 #if !defined(__XOPEN_OR_POSIX) || (_POSIX_C_SOURCE > 2) || defined(_XPG4_2) || \
680     (defined(_LARGEFILE_SOURCE) && _FILE_OFFSET_BITS == 64) || \
681     defined(__EXTENSIONS__)
682 extern int ftruncate();
683 #endif /* !defined(__XOPEN_OR_POSIX) (_POSIX_C_SOURCE > 2)... */
684 extern char *getcwd();
685 #if !defined(__XOPEN_OR_POSIX) || (defined(_XPG4_2) && !defined(_XPG6)) || \
686     defined(__EXTENSIONS__)
687 extern int getdtablesize();
688 #endif
689 extern gid_t getegid();
690 extern uid_t geteuid();
691 extern gid_t getgid();
692 extern int getgroups();
693 #if !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2) || defined(__EXTENSIONS__)
694 extern long gethostid();
695 #endif
696 #if !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2) || defined(__EXTENSIONS__)
697 extern int gethostname();
698 #endif

700 #ifndef __GETLOGIN_DEFINED /* Avoid duplicate in stdlib.h */
701 #define __GETLOGIN_DEFINED
702 #ifndef __USE_LEGACY_LOGNAME
703 #ifdef __PRAGMA_REDEFINE_EXTNAME
704 #pragma redefine_extname getlogin getloginx
705 #else /* __PRAGMA_REDEFINE_EXTNAME */
706 extern char *getloginx();
707 #define getlogin getloginx
708 #endif /* __PRAGMA_REDEFINE_EXTNAME */
709 #endif /* __USE_LEGACY_LOGNAME */
710 extern char *getlogin();
711 #endif /* __GETLOGIN_DEFINED */

713 #if defined(_XPG4) || defined(__EXTENSIONS__)
714 extern int getopt();
715 extern char *optarg;
716 extern int opterr, optind, optopt;
717 #if !defined(_XPG6) || defined(__EXTENSIONS__)
718 extern char *getpass();
719 #endif
720 #endif /* defined(_XPG4) || defined(__EXTENSIONS__) */

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721 #if !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2) || defined(__EXTENSIONS__)
722 #if !defined(_XPG6) || defined(__EXTENSIONS__)
723 extern int getpagesize();
724 #endif
725 extern pid_t getpgid();
726 #endif /* !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2)... */
727 extern pid_t getpid();
728 extern pid_t getppid();
729 extern pid_t getpgrp();
730 #if !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__)
731 char *gettxt();
732 #endif /* !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__) */
733 #if !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2) || defined(__EXTENSIONS__)
734 extern pid_t getsid();
735 #endif /* !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2) */
736 extern uid_t getuid();
737 #if !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__)
738 extern char *getusershell();
739 #endif /* !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__) */
740 #if !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2) || defined(__EXTENSIONS__)
741 extern char *getwd();
742 #endif /* !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2)... */
743 #if !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__)
744 extern int ioctl();
745 #endif /* !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__) */
746 #if !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__)
747 extern int isaexec();
748 extern int issetugid();
749 #endif /* !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__) */
750 extern int isatty();
751 #if !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2) || defined(__EXTENSIONS__)
752 extern int lchown();
753 #endif /* !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2) */
754 extern int link();
755 #if !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__)
756 extern off_t llseek();
757 #endif /* !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__) */
758 #if !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2) || \
759     (defined(_LARGEFILE_SOURCE) && _FILE_OFFSET_BITS == 64) || \
760     defined(__EXTENSIONS__)
761 extern int lockf();
762 #endif /* !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2)... */
763 extern off_t lseek();
764 #if !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__)
765 extern int mincore();
766 #endif /* !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__) */
767 #if !defined(_POSIX_C_SOURCE) || defined(_XOPEN_SOURCE) || \
768     defined(__EXTENSIONS__)
769 extern int nice();
770 #endif /* !defined(_POSIX_C_SOURCE) || defined(_XOPEN_SOURCE)... */
771 extern long pathconf();
772 extern int pause();
773 extern int pipe();
774 #if !defined(__XOPEN_OR_POSIX) || defined(_XPG5) || \
775     (defined(_LARGEFILE_SOURCE) && _FILE_OFFSET_BITS == 64) || \
776     defined(__EXTENSIONS__)
777 extern ssize_t pread();
778 #endif
779 #if !defined(_LP64) && \
780     (!defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__))
781 extern void profil();
782 extern int ptrace();
783 #endif
784 #if !defined(__XOPEN_OR_POSIX) || \
785     ((_POSIX_C_SOURCE > 2) && !defined(_XPG6)) || \
786     defined(__EXTENSIONS__)

```

```

787 extern int pthread_atfork();
788 #endif /* !defined(__XOPEN_OR_POSIX) || ((_POSIX_C_SOURCE > 2) ... */
789 #if !defined(__XOPEN_OR_POSIX) || defined(_XPG5) || \
790     (defined(_LARGEFILE_SOURCE) && _FILE_OFFSET_BITS == 64) || \
791     defined(__EXTENSIONS__)
792 extern ssize_t pwrite();
793 #endif /* !defined(__XOPEN_OR_POSIX) || defined(_XPG5) */
794 extern ssize_t read();
795 #if !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__)
796 /* per RFC 3542; This is also defined in netdb.h */
797 extern int rcmd_af();
798 #endif
799 #if !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2) || defined(__EXTENSIONS__)
800 extern ssize_t readlink();
801 #endif /* !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2)... */
802 #if (!defined(__XOPEN_OR_POSIX) || (defined(_XPG3) && !defined(_XPG4))) || \
803     defined(__EXTENSIONS__)
804 extern int rename();
805 #endif /* !defined(__XOPEN_OR_POSIX) || (defined(_XPG3)... */
806 #if !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__)
807 extern int resolvepath();
808 /* per RFC 3542; This is also defined in netdb.h */
809 extern int rexec_af();
810 #endif /* !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__) */
811 extern int rmdir();
812 #if !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__)
813 /* per RFC 3542; This is also defined in netdb.h */
814 extern int rresvport_af();
815 #endif
816 #if !defined(__XOPEN_OR_POSIX) || (defined(_XPG4_2) && !defined(_XPG6)) || \
817     defined(__EXTENSIONS__)
818 extern void *sbrk();
819 #endif /* !defined(__XOPEN_OR_POSIX) || (defined(_XPG4_2)... */
820 #if !defined(__XOPEN_OR_POSIX) || defined(_XPG6) || defined(__EXTENSIONS__)
821 extern int setegid();
822 extern int seteuid();
823 #endif /* !defined(__XOPEN_OR_POSIX) || defined(_XPG6) ... */
824 extern int setgid();
825 #if !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__)
826 extern int setgroups();
827 extern int sethostname();
828 #endif /* !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__) */
829 extern int setpgid();
830 #if !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2) || defined(__EXTENSIONS__)
831 extern pid_t setpggrp();
832 extern int setregid();
833 extern int setreuid();
834 #endif /* !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2)... */
835 extern pid_t setsid();
836 extern int setuid();
837 #if !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__)
838 extern void setusershell();
839 #endif /* !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__) */
840 extern unsigned sleep();
841 #if !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__)
842 extern int stime();
843 #endif /* !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__) */
844 #if defined(_XPG4)
845 /* __EXTENSIONS__ makes the SVID Third Edition prototype in stdlib.h visible */
846 extern void swab();
847 #endif /* defined(_XPG4) */
848 #if !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2) || defined(__EXTENSIONS__)
849 extern int symlink();
850 extern void sync();
851 #endif /* !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2)... */
852 #if defined(_XPG5)

```

```

853 #ifdef __PRAGMA_REDEFINE_EXTNAME
854 #pragma redefine_extname sysconf __sysconf_xpg5
855 extern long sysconf();
856 #else /* __PRAGMA_REDEFINE_EXTNAME */
857 extern long __sysconf_xpg5();
858 #define sysconf __sysconf_xpg5
859 #endif /* __PRAGMA_REDEFINE_EXTNAME */
860 #endif /* defined(_XPG5) */
861 extern pid_t togetpgrp();
862 extern int tcsetpgrp();
863 #if !defined(__XOPEN_OR_POSIX) || \
864     (defined(_LARGEFILE_SOURCE) && _FILE_OFFSET_BITS == 64) || \
865     defined(__EXTENSIONS__)
866 extern off_t tell();
867 #endif /* !defined(__XOPEN_OR_POSIX)... */
868 #if !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2) || \
869     (defined(_LARGEFILE_SOURCE) && _FILE_OFFSET_BITS == 64) || \
870     defined(__EXTENSIONS__)
871 extern int truncate();
872 #endif /* !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2)... */
873 extern char *ttyname();
874 #if !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2) || defined(__EXTENSIONS__)
875 extern useconds_t ualarm();
876 #endif /* !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2)... */
877 extern int unlink();
878 #if !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2) || defined(__EXTENSIONS__)
879 extern int usleep();
880 #endif /* !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2)... */
881 #if !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2) || defined(__EXTENSIONS__)
882 extern pid_t vfork();
883 #endif /* !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2)... */
884 #if !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__)
885 extern void vhangup();
886 #endif /* !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__) */
887 extern ssize_t write();
888 #if !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__)
889 extern void yield();
890 #endif /* !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__) */

892 #if !defined(__XOPEN_OR_POSIX) || defined(_ATFILE_SOURCE) || \
893     defined(__EXTENSIONS__)
894 /* || defined(_XPG7) */
895 extern int faccessat();
896 extern int fchownat();
897 extern int linkat();
898 extern ssize_t readlinkat();
899 extern int renameat();
900 extern int symlinkat();
901 extern int unlinkat();
902 #endif /* !defined(__XOPEN_OR_POSIX) || defined(_ATFILE_SOURCE)... */
903 #if !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__)
904 extern int get_nprocs();
905 extern int get_nprocs_conf();
906 #endif /* !defined(__XOPEN_OR_POSIX) || defined(__EXTENSIONS__) */

908 /* transitional large file interface versions */
909 #if defined(_LARGEFILE64_SOURCE) && !((_FILE_OFFSET_BITS == 64) && \
910     !defined(__PRAGMA_REDEFINE_EXTNAME))
911 extern int ftruncate64();
912 extern off64_t lseek64();
913 extern ssize_t pread64();
914 extern ssize_t pwrite64();
915 extern off64_t tell64();
916 extern int truncate64();
917 extern int lockf64();
918 #endif /* _LARGEFILE64_SOURCE */

```

```

920 #endif /* __STDC__ */

922 #if !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2) || defined(__EXTENSIONS__)
923 #pragma unknown_control_flow(vfork)
924 #endif /* !defined(__XOPEN_OR_POSIX) || defined(_XPG4_2)... */

926 /*
927  * getlogin_r() & ttyname_r() prototypes are defined here.
928  */

930 /*
931  * Previous releases of Solaris, starting at 2.3, provided definitions of
932  * various functions as specified in POSIX.1c, Draft 6. For some of these
933  * functions, the final POSIX 1003.1c standard had a different number of
934  * arguments and return values.
935  *
936  * The following segment of this header provides support for the standard
937  * interfaces while supporting applications written under earlier
938  * releases. The application defines appropriate values of the feature
939  * test macros _POSIX_C_SOURCE and _POSIX_PTHREAD_SEMANTICS to indicate
940  * whether it was written to expect the Draft 6 or standard versions of
941  * these interfaces, before including this header. This header then
942  * provides a mapping from the source version of the interface to an
943  * appropriate binary interface. Such mappings permit an application
944  * to be built from libraries and objects which have mixed expectations
945  * of the definitions of these functions.
946  *
947  * For applications using the Draft 6 definitions, the binary symbol is the
948  * same as the source symbol, and no explicit mapping is needed. For the
949  * standard interface, the function func() is mapped to the binary symbol
950  * _posix_func(). The preferred mechanism for the remapping is a compiler
951  * #pragma. If the compiler does not provide such a #pragma, the header file
952  * defines a static function func() which calls the _posix_func() version;
953  * this has to be done instead of #define since POSIX specifies that an
954  * application can #undef the symbol and still be bound to the correct
955  * implementation. Unfortunately, the statics confuse lint so we fallback to
956  * #define in that case.
957  *
958  * NOTE: Support for the Draft 6 definitions is provided for compatibility
959  * only. New applications/libraries should use the standard definitions.
960  */

962 #if defined(__EXTENSIONS__) || defined(_REENTRANT) || \
963     !defined(__XOPEN_OR_POSIX) || (_POSIX_C_SOURCE - 0 >= 199506L) || \
964     defined(_POSIX_PTHREAD_SEMANTICS)

966 #if defined(__STDC__)

968 #if (_POSIX_C_SOURCE - 0 >= 199506L) || defined(_POSIX_PTHREAD_SEMANTICS)

970 #ifndef __USE_LEGACY_LOGNAME__
971 #ifdef __PRAGMA_REDEFINE_EXTNAME
972 #pragma redefine_extname getlogin_r _posix_getloginx_r
973 extern int getlogin_r(char *, int);
974 #else /* __PRAGMA_REDEFINE_EXTNAME */
975 extern int _posix_getloginx_r(char *, int);
976 #define getlogin_r _posix_getloginx_r
977 #endif /* __PRAGMA_REDEFINE_EXTNAME */
978 #else /* __USE_LEGACY_LOGNAME */
979 #ifdef __PRAGMA_REDEFINE_EXTNAME
980 #pragma redefine_extname getlogin_r _posix_getlogin_r
981 extern int getlogin_r(char *, int);
982 #else /* __PRAGMA_REDEFINE_EXTNAME */

```

```

983 extern int _posix_getlogin_r(char *, int);
950 extern int _posix_ttyname_r(int, char *, size_t);

985 #ifdef __lint

987 #define getlogin_r _posix_getlogin_r
955 #define ttyname_r _posix_ttyname_r

989 #else /* !__lint */

991 static int
992 getlogin_r(char *__name, int __len)
993 {
994     return (_posix_getlogin_r(__name, __len));
995 }

997 #endif /* !__lint */
998 #endif /* __PRAGMA_REDEFINE_EXTNAME */
999 #endif /* __USE_LEGACY_LOGNAME */

1001 #ifdef __PRAGMA_REDEFINE_EXTNAME
1002 #pragma redefine_extname ttyname_r _posix_ttyname_r
1003 extern int ttyname_r(int, char *, size_t);
1004 #else /* __PRAGMA_REDEFINE_EXTNAME */
1005 extern int _posix_ttyname_r(int, char *, size_t);

1007 #ifdef __lint

1009 #define ttyname_r _posix_ttyname_r

1011 #else /* !__lint */

1013 static int
1014 ttyname_r(int __fildev, char *__buf, size_t __size)
1015 {
1016     return (_posix_ttyname_r(__fildev, __buf, __size));
1017 }

1019 #endif /* !__lint */
1020 #endif /* __PRAGMA_REDEFINE_EXTNAME */

1022 #else /* (_POSIX_C_SOURCE - 0 >= 199506L) || ... */

1024 #ifndef __USE_LEGACY_LOGNAME__
1025 #ifdef __PRAGMA_REDEFINE_EXTNAME
1026 #pragma redefine_extname getlogin_r getloginx_r
1027 #else /* __PRAGMA_REDEFINE_EXTNAME */
1028 extern char *getloginx_r(char *, int);
1029 #define getlogin_r getloginx_r
1030 #endif /* __PRAGMA_REDEFINE_EXTNAME */
1031 #endif /* __USE_LEGACY_LOGNAME */
1032 extern char *getlogin_r(char *, int);

1034 extern char *ttyname_r(int, char *, int);

1036 #endif /* (_POSIX_C_SOURCE - 0 >= 199506L) || ... */

1038 #else /* __STDC__ */

1040 #if (_POSIX_C_SOURCE - 0 >= 199506L) || defined(_POSIX_PTHREAD_SEMANTICS)

1042 #ifndef __USE_LEGACY_LOGNAME__
1043 #ifdef __PRAGMA_REDEFINE_EXTNAME
1044 #pragma redefine_extname getlogin_r _posix_getloginx_r
1045 extern int getlogin_r();

```

```

1046 #else /* __PRAGMA_REDEFINE_EXTNAME */
1047 extern int __posix_getloginx_r();
1048 #define getlogin_r __posix_getloginx_r
1049 #endif /* __PRAGMA_REDEFINE_EXTNAME */
1050 #else /* __USE_LEGACY_LOGNAME */
1051 #ifdef __PRAGMA_REDEFINE_EXTNAME
1052 #pragma redefine_extname getlogin_r __posix_getlogin_r
1053 #pragma redefine_extname ttyname_r __posix_ttyname_r
1054 #else
1055 extern int __posix_getlogin_r();
1056 extern int __posix_ttyname_r();
1057 #endif

1057 #ifdef __lint

1059 #define getlogin_r __posix_getlogin_r
1060 #define ttyname_r __posix_ttyname_r

1061 #else /* !__lint */

1063 static int
1064 getlogin_r(__name, __len)
1065     char *__name;
1066     int __len;
1067 {
1068     return (__posix_getlogin_r(__name, __len));
1069 }
1070 #endif /* !__lint */
1071 #endif /* __PRAGMA_REDEFINE_EXTNAME */
1072 #endif /* __USE_LEGACY_LOGNAME */

1074 #ifdef __PRAGMA_REDEFINE_EXTNAME
1075 #pragma redefine_extname ttyname_r __posix_ttyname_r
1076 extern int ttyname_r();
1077 #else /* __PRAGMA_REDEFINE_EXTNAME */

1079 extern int __posix_ttyname_r();

1081 #ifdef __lint

1083 #define ttyname_r __posix_ttyname_r

1085 #else /* !__lint */

1087 static int
1088 ttyname_r(__fildes, __buf, __size)
1089     int __fildes;
1090     char *__buf;
1091     size_t __size;
1092 {
1093     return (__posix_ttyname_r(__fildes, __buf, __size));
1094 }
1095 #endif /* !__lint */
1096 #endif /* __PRAGMA_REDEFINE_EXTNAME */

1097 #else /* (_POSIX_C_SOURCE - 0 >= 199506L) || ... */

1099 #ifndef __USE_LEGACY_LOGNAME
1100 #ifdef __PRAGMA_REDEFINE_EXTNAME
1101 #pragma redefine_extname getlogin_r __posix_getloginx_r
1102 #else /* __PRAGMA_REDEFINE_EXTNAME */
1103 extern char *getloginx_r();
1104 #define getlogin_r __posix_getloginx_r
1105 #endif /* __PRAGMA_REDEFINE_EXTNAME */

```

```

1106 #endif /* __USE_LEGACY_LOGNAME */
1107 extern char *getlogin_r();

1109 extern char *ttyname_r();

1111 #endif /* (_POSIX_C_SOURCE - 0 >= 199506L) || ... */

1113 #endif /* __STDC */

1115 #endif /* defined(__EXTENSIONS__) || defined(_REENTRANT)... */

1117 #ifdef __cplusplus
1118 }

```

unchanged\_portion\_omitted



## new/usr/src/lib/Makefile

1

```

*****
13912 Wed Sep  4 20:46:00 2013
new/usr/src/lib/Makefile
2989 Eliminate use of LOGNAME_MAX in ON
1166 useradd have warning with name more 8 chars
*****
1 #
2 # CDDL HEADER START
3 #
4 # The contents of this file are subject to the terms of the
5 # Common Development and Distribution License (the "License").
6 # You may not use this file except in compliance with the License.
7 #
8 # You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE
9 # or http://www.opensolaris.org/os/licensing.
10 # See the License for the specific language governing permissions
11 # and limitations under the License.
12 #
13 # When distributing Covered Code, include this CDDL HEADER in each
14 # file and include the License file at usr/src/OPENSOLARIS.LICENSE.
15 # If applicable, add the following below this CDDL HEADER, with the
16 # fields enclosed by brackets "[]" replaced with your own identifying
17 # information: Portions Copyright [yyyy] [name of copyright owner]
18 #
19 # CDDL HEADER END
20 #

22 # Copyright 2011 Nexenta Systems, Inc. All rights reserved.
23 # Copyright (c) 1989, 2010, Oracle and/or its affiliates. All rights reserved.
24 # Copyright (c) 2012 by Delphix. All rights reserved.
25 # Copyright (c) 2012, Joyent, Inc. All rights reserved.
26 # Copyright (c) 2013 Gary Mills

28 include ../Makefile.master

30 #      Note that libcurses installs commands along with its library.
31 #      This is a minor bug which probably should be fixed.
32 #      Note also that a few extra libraries are kept in cmd source.
33 #
34 # Certain libraries are linked with, hence depend on, other libraries.
35 #
36 # Although we have historically used .WAIT to express dependencies, it
37 # reduces the amount of parallelism and thus lengthens the time it
38 # takes to build the libraries. Thus, we now require that any new
39 # libraries explicitly call out their dependencies. Eventually, all
40 # the library dependencies will be called out explicitly. See
41 # "Library interdependencies" near the end of this file.
42 #
43 # Aside from explicit dependencies (and legacy .WAITs), all libraries
44 # are built in parallel.
45 #
46 .PARALLEL:

48 #
49 # The $(CLOSED_BUILD) additions to SUBDIRS & MSGSUBDIRS are unfortunate,
50 # but required due to the "dependencies" of using .WAIT to barrier the
51 # parallel dmake builds. once 4631488 has been fixed, they can be
52 # consolidated into one $(CLOSED_BUILD)SUBDIRS += (all closed libs) as
53 # shown in HDRSUBDIRS
54 #
55 SUBDIRS= \
56     common                .WAIT \
57     ../cmd/sgs/libconv    \
58     ../cmd/sgs/libdl      .WAIT

60 SUBDIRS += \

```

## new/usr/src/lib/Makefile

2

```

61     libc                  .WAIT \
62     ../cmd/sgs/libelf     .WAIT \
63     c_synonyms            \
64     libmd                 \
65     libmd5                \
66     librm                 \
67     libmp                 .WAIT \
68     libnsl                \
69     libsecdb              .WAIT \
70     librpcsvc             \
71     libsocket             .WAIT \
72     libsctp               \
73     libsip                \
74     libcommputil          \
75     libresolv             \
76     libresolv2            .WAIT \
77     libw                  .WAIT \
78     libintl              .WAIT \
79     ../cmd/sgs/librtld_db \
80     libaio                \
81     libast                \
82     libdll               \
83     libcmd               \
84     libshell              \
85     libsum                \
86     librt                 \
87     libadm               \
88     libctf                \
89     libdtrace             \
90     libdtrace_jni         \
91     libcurses             \
92     libtermcap            \
93     libgen                \
94     libgss                \
95     libpam                \
96     libuuid              \
97     libthread             \
98     libpthread            .WAIT \
99     libslp                \
100    libbsdmmalloc          \
101    libdoor                \
102    libdevinfo             \
103    libdladm               \
104    libdlpi                \
105    libeti                 \
106    libcrypt               \
107    libdns_sd              \
108    libefi                 \
109    libfstyp               \
110    libwanboot             \
111    libwanbootutil        \
112    libcryptoutil          \
113    libinetutil            \
114    libipadm               \
115    libipmp                \
116    libiscsit              \
117    libkmf                 \
118    libkstat               \
119    libkvm                 \
120    liblm                  \
121    libmalloc              \
122    libmapmmalloc          \
123    libmtmmalloc           \
124    libnls                 \
125    libnwam                \
126    libsmbios              \

```

## new/usr/src/lib/Makefile

```

127      libtecla      \
128      libumem       \
129      libnvpair     .WAIT  \
130      libxacct      \
131      libsas1       \
132      libldap5      \
133      libslldap     .WAIT  \
134      libbsm        \
135      libsys        \
136      libsysevent   \
137      libnisdb      \
138      libpool       \
139      libpp         \
140      libproc       \
141      libproject    \
142      libsendfile   \
143      nametoaddr    \
144      ncad_addr     \
145      hbaapi        \
146      smhba         \
147      sun_fc        \
148      sun_sas       \
149      gss_mechs/mech_krb5 .WAIT  \
150      libkrb5       .WAIT  \
151      krb5          .WAIT  \
152      libsmbfs      \
153      libfcoe       \
154      libsrpt       \
155      libstmf       \
156      libstmfproxy  \
157      libnsctl      \
158      libunistat    \
159      libdscfg      \
160      librdc        \
161      libinstzones  \
162      libpkg        \
163      libpcidb      \
164
165 SUBDIRS += \
166      passwdutil    \
167      pam_modules   \
168      crypt_modules \
169      libadt_jni     \
170      abi           \
171      auditd_plugins \
172      libvolmgt     \
173      libdevice     \
174      libdevvid     \
175      libdhcpsvc    \
176      libc_db       \
177      libndmp       \
178      libsec        \
179      libtnfprobe   \
180      libtnf        \
181      libtnfctl     \
182      libdhcpageant \
183      libdhcpcdu    \
184      libdhcputil   \
185      libxnet       \
186      libipsecutil  \
187 $(CLOSED_BUILD)SUBDIRS += \
188      $(CLOSED)/lib/libike
189 SUBDIRS += \
190      nsswitch       \
191      print          \
192      libuutil       \

```

3

## new/usr/src/lib/Makefile

```

193      libscf        \
194      libinetsvc     \
195      librestart     \
196      libsched       \
197      libelfsign     \
198      pkcs11         .WAIT  \
199      libpctx        .WAIT  \
200      libcpc         \
201      getloginx      \
202      watchmalloc    \
203      extendedFILE   \
204      madv           \
205      mpss           \
206      libdisasm      \
207      libwrap        \
208      libxcurses     \
209      libxcurses2    \
210      libbrand       .WAIT  \
211      libzonecfg     \
212      libzoneinfo    \
213      libzonestat    \
214      libtsnet       \
215      libtsol        \
216      gss_mechs/mech_spnego \
217      gss_mechs/mech_dummy  \
218      gss_mechs/mech_dh     \
219      rpcsec_gss           \
220      libraidcfg          .WAIT  \
221      librcm              .WAIT  \
222      libcfgadm           .WAIT  \
223      libpicl             .WAIT  \
224      libpicltree         .WAIT  \
225      raidcfg_plugins     \
226      cfgadm_plugins      \
227      libmail             \
228      lvm                 \
229      libsmmedia          \
230      libipp              \
231      libdiskmgt          \
232      liblgrp             \
233      libfsmgt            \
234      fm                  \
235      libavl              \
236      libcmdutils         \
237      libcontract          \
238      ../cmd/sendmail/libmilter \
239      sasl_plugins        \
240      udapl               \
241      libzpool            \
242      libzfs_core         \
243      libzfs              \
244      libbe               \
245      pylibbe             \
246      libzfs_jni          \
247      pyzfs               \
248      pysolaris           \
249      libmapid            \
250      brand               \
251      policykit           \
252      hal                 \
253      libshare            \
254      libsqlite           \
255      libidmap            \
256      libadutils          \
257      libipmi             \
258      libxacct/demo      \

```

4

## new/usr/src/lib/Makefile

```

259     libvrrpadm    \
260     libvscan      \
261     libgrubmgmt    \
262     smbssrv        \
263     libilb         \
264     scsi           \
265     libima         \
266     libsun_ima     \
267     mpapi          \
268     librstp        \
269     librepase       \
270     libhotplug     \
271     libfruutils    .WAIT  \
272     libfru         \
273     ${$(MACH)_SUBDIRS}

275 i386_SUBDIRS=      \
276     libntfs        \
277     libparted      \
278     libfdisk       \
279     libsaveargs

281 sparc_SUBDIRS= .WAIT \
282     efcode         \
283     libds          \
284     libdscp        \
285     libprtdiag     .WAIT  \
286     libprtdiag_psr \
287     libpri         \
288     librsc         \
289     storage        \
290     libpcp         \
291     libtsalarm     \
292     libvl2n

294 FM_sparc_DEPLIBS= libpri

296 fm:      \
297     libexacct    \
298     libipmi      \
299     libzfs       \
300     scsi         \
301     ${FM_${$(MACH)_DEPLIBS}}

303 #
304 # Create a special version of ${SUBDIRS} with no .WAIT's, for use with the
305 # clean and clobber targets (for more information, see those targets, below).
306 #
307 NOWAIT_SUBDIRS= ${SUBDIRS:.WAIT=}

309 DCSUBDIRS =      \
310     lvm

312 MSGSUBDIRS=      \
313     abi          \
314     auditd_plugins \
315     brand        \
316     cfgadm_plugins \
317     gss_mechs/mech_dh \
318     gss_mechs/mech_krb5 \
319     krb5         \
320     libast       \
321     libbsm      \
322     libbc       \
323     libcfgadm   \
324     libcmd      \

```

5

## new/usr/src/lib/Makefile

```

325     libcontract    \
326     libcurses      \
327     libdhcpsvc     \
328     libdhcputil    \
329     libipsecutil   \
330     libdiskmgmt    \
331     libdladm       \
332     libdll         \
333     libgrubmgmt    \
334     libgss         \
335     libidmap       \
336     libipmp        \
337     libilb         \
338     libinetutil    \
339     libinstzones   \
340     libipadm       \
341     libnsl         \
342     libnwam        \
343     libpam         \
344     libpicl        \
345     libpool        \
346     libpkg         \
347     libpp          \
348     libscf         \
349     libsas1        \
350     libldap5       \
351     libsecdb       \
352     libshare       \
353     libshell       \
354     libslldap     \
355     libslp         \
356     libsmbsfs     \
357     libsmmedia     \
358     libsum         \
359     libtsol        \
360     libuutil       \
361     libvrrpadm     \
362     libvscan       \
363     libwanboot     \
364     libwanbootutil \
365     libzfs         \
366     libzonecfg     \
367     lvm            \
368     madv           \
369     mpss           \
370     pam_modules    \
371     pyzfs          \
372     pysolaris      \
373     rpcsec_gss     \
374     librepase      \
375 MSGSUBDIRS +=      \
376     ${$(MACH)_MSGSUBDIRS}

378 sparc_MSGSUBDIRS=  \
379     libprtdiag     \
380     libprtdiag_psr

382 i386_MSGSUBDIRS=  libfdisk

384 HDRSUBDIRS=      \
385     auditd_plugins \
386     libast         \
387     libbrand       \
388     libbsm         \
389     libbc          \
390     libcmd         \

```

6

## new/usr/src/lib/Makefile

```

391 libcmdutils \
392 libcommputil \
393 libcontract \
394 libcpc \
395 libctf \
396 libcurses \
397 libtermcap \
398 libcryptoutil \
399 libdevice \
400 libdevvid \
401 libdevinfo \
402 libdiskmgmt \
403 libdladm \
404 libdll \
405 libdlpi \
406 libdhcpcagent \
407 libdhcpsvc \
408 libdhcputil \
409 libdisasm \
410 libdns_sd \
411 libdscfg \
412 libdtrace \
413 libdtrace_jni \
414 libelfsign \
415 libeti \
416 libfru \
417 libfstyp \
418 libgen \
419 libipadm \
420 libipsecutil \
421 libinetsvc \
422 libinetutil \
423 libinstzones \
424 libipmi \
425 libipmp \
426 libipp \
427 libiscsit \
428 libkstat \
429 libkvm \
430 libmail \
431 libmd \
432 libmtmalloc \
433 libndmp \
434 libnvpair \
435 libnsctl \
436 libnsl \
437 libnwam \
438 libpam \
439 libpcidb \
440 libpctx \
441 libpicl \
442 libpicltree \
443 libpool \
444 libpp \
445 libproc \
446 libraidcfg \
447 librcm \
448 librdc \
449 libscf \
450 libsip \
451 libsmbios \
452 librestart \
453 librpcsvc \
454 librsn \
455 librstp \
456 libsas1 \

```

7

## new/usr/src/lib/Makefile

```

457 libsec \
458 libshell \
459 libslp \
460 libsmmedia \
461 libsocket \
462 libsqlite \
463 libfcoe \
464 libsrpt \
465 libstmf \
466 libstmfproxy \
467 libsum \
468 libsysevent \
469 libtecla \
470 libtnf \
471 libtnfctl \
472 libtnfprobe \
473 libtsnet \
474 libtsol \
475 libvrrpadm \
476 libvolmgmt \
477 libumem \
478 libunistat \
479 libuutil \
480 libwanboot \
481 libwanbootutil \
482 libwrap \
483 libxcurses2 \
484 libzfs \
485 libzfs_core \
486 libzfs_jni \
487 libzoneinfo \
488 libzonestat \
489 hal \
490 policykit \
491 lvm \
492 pkcs11 \
493 passwdutil \
494 ../cmd/sendmail/libmilter \
495 fm \
496 udapl \
497 libmapid \
498 libkrb5 \
499 libsmvfs \
500 libshare \
501 libidmap \
502 libvscan \
503 libgrubmgmt \
504 smbsrv \
505 libilb \
506 scsi \
507 hbaapi \
508 smhba \
509 libima \
510 libsun_ima \
511 mpapi \
512 librepase \
513 $(MACH)_HDRSUBDIRS)

515 $(CLOSED_BUILD)HDRSUBDIRS += \
516 $(CLOSED)/lib/libbike

518 i386_HDRSUBDIRS= \
519 libparted \
520 libfdisk \
521 libsaveargs \

```

8

## new/usr/src/lib/Makefile

```

523 sparc_HDRSUBDIRS= \
524     libds \
525     libdscp \
526     libpri \
527     libvl2n \
528     storage

530 all := TARGET= all
531 check := TARGET= check
532 clean := TARGET= clean
533 clobber := TARGET= clobber
534 install := TARGET= install
535 install_h := TARGET= install_h
536 lint := TARGET= lint
537 _dc := TARGET= _dc
538 _msg := TARGET= _msg

540 .KEEP_STATE:

542 #
543 # For the all and install targets, we clearly must respect library
544 # dependencies so that the libraries link correctly. However, for
545 # the remaining targets (check, clean, clobber, install_h, lint, _dc
546 # and _msg), libraries do not have any dependencies on one another
547 # and thus respecting dependencies just slows down the build.
548 # As such, for these rules, we use pattern replacement to explicitly
549 # avoid triggering the dependency information. Note that for clean,
550 # clobber and lint, we must use $(NOWAIT_SUBDIRS) rather than
551 # $(SUBDIRS), to prevent '.WAIT' from expanding to '.WAIT-noddepend'.
552 #

554 all: $(SUBDIRS)

556 install: $(SUBDIRS) .WAIT install_extra

558 # extra libraries kept in other source areas
559 install_extra:
560     @cd ../cmd/sgs; pwd; $(MAKE) install_lib
561     @pwd

563 clean clobber lint: $(NOWAIT_SUBDIRS:%=%-nodepend)

565 install_h check: $(HDRSUBDIRS:%=%-nodepend)

567 _msg: $(MSGSUBDIRS:%=%-nodepend) .WAIT _dc

569 _dc: $(DCSUBDIRS:%=%-nodepend)

571 #
572 # Library interdependencies are called out explicitly here
573 #
574 auditd_plugins: libbsm libnsl libsecdb
575 gss_mechs/mech_krb5: libgss libnsl libsocket libresolv pkcs11
576 libadt_jni: libbsm
577 libast: libsocket
578 libadutils: libldap5 libresolv libsocket libnsl
579 nsswithc: libadutils libidmap
580 libbe: libzfs
581 libbsm: libtsol
582 libcmd: libsum libast libsocket libnsl
583 libcmdutils: libavl
584 libcontract: libnvpair
585 libdevinfo: libdevinfo
586 libdevinfo: libnvpair libsec
587 libdhcpgent: libsocket libdhcputil libuuid libdlpi libcontract
588 libdhcpsvc: libinetutil

```

9

## new/usr/src/lib/Makefile

```

589 libdhcputil: libnsl libgen libinetutil libdlpi
590 libdladm: libdevinfo libinetutil libsocket libscf librcm libnvpair \
591     libxacct libnsl libkstat libcurses
592 libdll: libast
593 libdlpi: libinetutil libdladm
594 libds: libsysevent
595 libdscfg: libnsctl libunistat libsocket libnsl
596 libdtrace: libproc libgen libctf
597 libdtrace_jni: libuutil libdtrace
598 libefi: libuuid
599 libfstyp: libnvpair
600 libelfsign: libcryptoutil libkmf
601 libidmap: libadutils libldap5 libavl libslldap libuutil
602 libipadm: libnsl libinetutil libsocket libdlpi libnvpair libdhcpgent \
603     libdladm libsecdb
604 libiscsit: libc libnvpair libstmf libuuid libnsl
605 libkmf: libcryptoutil pkcs11
606 libnsl: libmd5
607 libmapid: libresolv
608 librdc: libsocket libnsl libnsctl libunistat libdscfg
609 libuuid: libdlpi
610 $(CLOSED_BUILD)libike: libipsecutil libxnet libcryptoutil
611 libinetutil: libsocket
612 libipsecutil: libtecla libsocket
613 libinstzones: libzonecfg libcontract
614 libpkg: libwanboot libscf libadm
615 libnwm: libscf
616 libsecdb: libnsl
617 libsas1: libgss libsocket pkcs11 libmd
618 sasl_plugins: pkcs11 libgss libsocket libsas1
619 libscdp: libsocket
620 libshell: libast libcmd libdl1 libsocket libsecdb
621 libsip: libmd5
622 libsmbs: libcmdutils libsocket libnsl libkrb5
623 libsocket: libnsl
624 libstmfproxy: libstmf libsocket libnsl libpthread
625 libsum: libast
626 libsysevent: libsecdb
627 libldap5: libsas1 libsocket libnsl libmd
628 libslldap: libldap5 libtsol libnsl libc libscf libresolv
629 libpool: libnvpair libxacct
630 libpp: libast
631 libzonecfg: libc libsocket libnsl libuuid libnvpair libsysevent libsec \
632     libbrand libpool libscf
633 libproc: ../cmd/sgs/librtld_db ../cmd/sgs/libelf libctf libsaveargs
634 libproject: libpool libproc libsecdb
635 libtermcap: libcurses
636 libtsnet: libnsl libtsol libsecdb
637 libwrap: libnsl libsocket
638 libwanboot: libnvpair libresolv libnsl libsocket libdevinfo libinetutil \
639     libdhcputil
640 libwanbootutil: libnsl
641 pam_modules: libproject passwdutil smbsrv
642 libscf: libuutil libmd libgen libsmbios libnsl
643 libnetsvc: libscf
644 librestart: libuutil libscf
645 libsaveargs: libdisasm
646 ../cmd/sgs/libdl: ../cmd/sgs/libconv
647 ../cmd/sgs/libelf: ../cmd/sgs/libconv
648 pkcs11: libcryptoutil
649 print: libldap5
650 udapl/udapl_tavor: udapl/libdat
651 libzfs: libdevinfo libgen libnvpair libuutil \
652     libadm libavl libefi libidmap libmd libzfs_core
653 libzfs_core: libnvpair
654 libzfs_jni: libdiskmgt libnvpair libzfs

```

10

```
655 libzpool:      libavl libumem libnvpair libcmdutils
656 libsec:         libavl libidmap
657 brand:          libc libsocket
658 libshare:        libscf libzfs libuuid libfsmgmt libsecdb libumem libsmbsfs
659 libexacct/demo: libexacct libproject libsocket libnsl
660 libtsalarm:      libpcp
661 smbsrv:          libsocket libnsl libmd libxnet libpthread librt \
662 libshare libidmap pkcs11 libsqlite libcryptoutil \
663 libreparse libcmdutils
664 libv12n:         libds libuuid
665 libvrrpadm:      libsocket libdladm libscf
666 libvscan:        libscf
667 libfru:          libfruutils
668 scsi:            libnvpair libfru
669 mpapi:           libpthread libdevinfo libsysevent libnvpair
670 sun_fc:          libdevinfo libsysevent libnvpair
671 libsun_ima:       libdevinfo libsysevent libnsl
672 sun_sas:         libdevinfo libsysevent libnvpair libkstat libdevid
673 libgrubmgmt:      libdevinfo libzfs libfstyp
674 pylibbe:         libbe libzfs
675 pyzfs:           libnvpair libzfs
676 pysolaris:       libsec libidmap
677 libreparse:      libnvpair
678 libhotplug:       libnvpair
679 cfgadm_plugins:  libhotplug
680 libilb:           libsocket
681 $(INTEL_BUILD)libdiskmgmt:libfdisk

683 #
684 # The reason this rule checks for the existence of the
685 # Makefile is that some of the directories do not exist
686 # in certain situations (e.g., exportable source builds,
687 # OpenSolaris).
688 #
689 $(SUBDIRS): FRC
690     @if [ -f $@/Makefile ]; then \
691         cd $@; pwd; $(MAKE) $(TARGET); \
692     else \
693         true; \
694     fi

696 $(SUBDIRS:%=%-nodepend):
697     @if [ -f $(@:%-nodepend=)/Makefile ]; then \
698         cd $(@:%-nodepend=); pwd; $(MAKE) $(TARGET); \
699     else \
700         true; \
701     fi

703 FRC:
```

new/usr/src/lib/getloginx/Makefile

1

\*\*\*\*\*

1241 Wed Sep 4 20:46:00 2013

new/usr/src/lib/getloginx/Makefile

2989 Eliminate use of LOGNAME\_MAX in ON

1166 useradd have warning with name more 8 chars

\*\*\*\*\*

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26 #

28 include ../Makefile.lib

30 SUBDIRS= $(MACH)
31 $(BUILD64)SUBDIRS += $(MACH64)

33 all := TARGET= all
34 install := TARGET= install
35 clean := TARGET= clean
36 clobber := TARGET= clobber
37 lint := TARGET= lint

39 .KEEP_STATE:

41 all install clean clobber lint: $(SUBDIRS)

43 $(SUBDIRS): FRC
44 @cd $@; pwd; $(MAKE) $(TARGET)

46 FRC:
```

new/usr/src/lib/getloginx/Makefile.com

1

\*\*\*\*\*

1416 Wed Sep 4 20:46:00 2013  
new/usr/src/lib/getloginx/Makefile.com  
2989 Eliminate use of LOGNAME\_MAX in ON

1166 useradd have warning with name more 8 chars

\*\*\*\*\*

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26 #

28 LIBRARY = getloginx.a
29 VERS = .1

31 OBJECTS = getloginx.o

33 # include library definitions
34 include ../../Makefile.lib

36 SRCDIR = ../common

38 LIBS = $(DYNLIB)
39 LDLIBS += -lc
40 CFLAGS += $(CCVERBOSE)
41 CFLAGS64 += $(CCVERBOSE)
42 CPPFLAGS += -I../common -I../common/inc -D_REENTRANT
43 DYNFLAGS += $(ZINTERPOSE)

45 .KEEP_STATE:

47 all: $(LIBS)

49 lint:
50     $(LINT.c) $(SRCS) $(LDLIBS)

52 # include library targets
53 include ../../Makefile.targ

55 pics/%.o: ../common/%.c
56     $(COMPILE.c) -o $@ $<
57     $(POST_PROCESS_O)
```



new/usr/src/lib/getloginx/amd64/Makefile

1

\*\*\*\*\*

1031 Wed Sep 4 20:46:00 2013

new/usr/src/lib/getloginx/amd64/Makefile

2989 Eliminate use of LOGNAME\_MAX in ON

1166 useradd have warning with name more 8 chars

\*\*\*\*\*

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26 #

28 include ../Makefile.com
29 include ../../Makefile.lib.64

31 .KEEP_STATE:

33 install: all $(ROOTLIBS64)
```

new/usr/src/lib/getloginx/common/getloginx.c

1

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1143 Wed Sep 4 20:46:00 2013

new/usr/src/lib/getloginx/common/getloginx.c

2989 Eliminate use of LOGNAME\_MAX in ON

1166 useradd have warning with name more 8 chars

\*\*\*\*\*

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19 *
20 * CDDL HEADER END
21 */
22 /*
23  * Copyright (c) 2013 Gary Mills
24  *
25  * For old programs that handle long names correctly,
26  * getlogin() returns a long login name without change.
27  *
28  * Use:
29  * LD_PRELOAD=getloginx.so.1 program args ...
30  *
31 */

33 extern char *getloginx(void);

35 char *
36 getlogin(void)
37 {
38     return (getloginx());
39 }

41 /* */
```

new/usr/src/lib/getloginx/common/mapfile-vers

1

\*\*\*\*\*

1310 Wed Sep 4 20:46:00 2013

new/usr/src/lib/getloginx/common/mapfile-vers

2989 Eliminate use of LOGNAME\_MAX in ON

1166 useradd have warning with name more 8 chars

\*\*\*\*\*

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21 #
22 # Copyright (c) 2013 Gary Mills
23 #

25 #
26 # MAPFILE HEADER START
27 #
28 # WARNING: STOP NOW. DO NOT MODIFY THIS FILE.
29 # Object versioning must comply with the rules detailed in
30 #
31 #     usr/src/lib/README.mapfiles
32 #
33 # You should not be making modifications here until you've read the most current
34 # copy of that file. If you need help, contact a gatekeeper for guidance.
35 #
36 # MAPFILE HEADER END
37 #

39 $mapfile_version 2

41 SYMBOL_VERSION ILLUMOS_0.1 {    # first release of getloginx.so.1
42     global:
43         getlogin;
44     local:
45         *;
46 };
```

new/usr/src/lib/getloginx/i386/Makefile

1

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999 Wed Sep 4 20:46:00 2013

new/usr/src/lib/getloginx/i386/Makefile

2989 Eliminate use of LOGNAME\_MAX in ON

1166 useradd have warning with name more 8 chars

\*\*\*\*\*

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28 include ../Makefile.com

30 .KEEP_STATE:

32 install: all $(ROOTLIBS)
```

new/usr/src/lib/getloginx/sparc/Makefile

1

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999 Wed Sep 4 20:46:00 2013

new/usr/src/lib/getloginx/sparc/Makefile

2989 Eliminate use of LOGNAME\_MAX in ON

1166 useradd have warning with name more 8 chars

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26 #

28 include ../Makefile.com

30 .KEEP_STATE:

32 install: all $(ROOTLIBS)
```

new/usr/src/lib/getloginx/sparcv9/Makefile

1

\*\*\*\*\*

1031 Wed Sep 4 20:46:01 2013

new/usr/src/lib/getloginx/sparcv9/Makefile

2989 Eliminate use of LOGNAME\_MAX in ON

1166 useradd have warning with name more 8 chars

\*\*\*\*\*

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26 #

28 include ../Makefile.com
29 include ../../Makefile.lib.64

31 .KEEP_STATE:

33 install: all $(ROOTLIBS64)
```

new/usr/src/lib/libc/port/gen/getlogin.c

1

```
*****
4669 Wed Sep  4 20:46:01 2013
new/usr/src/lib/libc/port/gen/getlogin.c
2989 Eliminate use of LOGNAME_MAX in ON
1166 useradd have warning with name more 8 chars
*****
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27  */

29 /*      Copyright (c) 1988 AT&T */
30 /*      All Rights Reserved  */

32 #pragma weak _getlogin = getloginx
33 #pragma weak _getlogin_r = getloginx_r
30 #pragma ident  "%Z%M% %I%      %E% SMI"

32 #pragma weak _getlogin = getlogin
33 #pragma weak _getlogin_r = getlogin_r

35 #include "lint.h"
36 #include <sys/types.h>
37 #include <sys/stat.h>
38 #include <fcntl.h>
39 #include <string.h>
40 #include <stdlib.h>
41 #include <limits.h>
42 #include "utmpx.h"
43 #include <unistd.h>
44 #include <errno.h>
45 #include <thread.h>
46 #include <synch.h>
47 #include <mtlib.h>
48 #include "tsd.h"

50 /* Revert the renames done in unistd.h */
51 #ifdef __PRAGMA_REDEFINE_EXTNAME
52 #pragma redefine_extname      getlogint      getlogin
53 #pragma redefine_extname      getlogint_r     getlogin_r
54 #pragma redefine_extname      __posix_getlogint_r      __posix_getlogin_r
55 #else /* __PRAGMA_REDEFINE_EXTNAME */
56 #ifdef getlogin
```

new/usr/src/lib/libc/port/gen/getlogin.c

2

```
57 #undef  getlogin
58 #endif  /* getlogin */
59 #ifdef  getlogin_r
60 #undef  getlogin_r
61 #endif  /* getlogin_r */
62 #ifdef  __posix_getlogin_r
63 #undef  __posix_getlogin_r
64 #endif  /* __posix_getlogin_r */
65 #define getlogint      getlogin
66 #define getlogint_r     getlogin_r
67 #define __posix_getlogint_r      __posix_getlogin_r
68 #endif  /* __PRAGMA_REDEFINE_EXTNAME */

70 /*
71  * Use the full length of a login name.
72  * The utmpx interface provides for a 32 character login name.
73  * XXX - _POSIX_LOGIN_NAME_MAX limits the length of a login name.  The utmpx
74  * interface provides for a 32 character login name, but for the sake of
75  * compatibility, we are still using the old utmp-imposed limit.
76  */
77 #define NMAX      (sizeof (((struct utmpx *)0)->ut_user))

76 /*
77  * Common function
78  * POSIX.1c Draft-6 version of the function getlogin_r.
79  * It was implemented by Solaris 2.3.
80  */
79 static char *
80 getl_r_common(char *answer, size_t namelen, size_t maxlen)
81 char *
61 getlogin_r(char *answer, int namelen)
81 {
82     int                uf;
83     off64_t            me;
84     struct futmpx      ubuf;

67     if (namelen < _POSIX_LOGIN_NAME_MAX) {
68         errno = ERANGE;
69         return (NULL);
70     }

86     if ((me = (off64_t)ttyslot()) < 0)
87         return (NULL);
88     if ((uf = open64(UTMPX_FILE, 0)) < 0)
89         return (NULL);
90     (void) lseek64(uf, me * sizeof (ubuf), SEEK_SET);
91     if (read(uf, &ubuf, sizeof (ubuf)) != sizeof (ubuf)) {
92         (void) close(uf);
93         return (NULL);
94     }
95     (void) close(uf);
96     if (ubuf.ut_user[0] == '\0')
97         return (NULL);

99     /* Insufficient buffer size */
100     if (namelen < strlen(&ubuf.ut_user[0], maxlen)) {
101         errno = ERANGE;
102         return (NULL);
103     }
104     (void) strncpy(&answer[0], &ubuf.ut_user[0], maxlen);
105     answer[maxlen] = '\0';
84     (void) strncpy(&answer[0], &ubuf.ut_user[0],
85         _POSIX_LOGIN_NAME_MAX - 1);
86     answer[_POSIX_LOGIN_NAME_MAX - 1] = '\0';
106     return (&answer[0]);
107 }
```

```

109 /*
110  * POSIX.1c Draft-6 version of the function getlogin_r.
111  * It was implemented by Solaris 2.3.
112  */
113 char *
114 getlogint_r(char *answer, int namelen)
115 {
116     return (getl_r_common(answer, (size_t)namelen, LOGNAME_MAX_TRAD));
117 }

119 /*
120  * POSIX.1c standard version of the function getlogin_r.
121  * User gets it via static getlogin_r from the header file.
122  */
123 int
124 __posix_getlogint_r(char *name, int namelen)
125 {
126     __posix_getlogin_r(char *name, int namelen)
127 {
128     int nerrno = 0;
129     int oerrno = errno;

131     errno = 0;
132     if (getl_r_common(name, (size_t)namelen, LOGNAME_MAX_TRAD) == NULL) {
133         if (getlogin_r(name, namelen) == NULL) {
134             if (errno == 0)
135                 nerrno = EINVAL;
136             else
137                 nerrno = errno;
138         }
139     }
140     errno = oerrno;
141     return (nerrno);
142 }

144 char *
145 getlogint(void)
146 {
147     getlogin(void)
148 {
149     char *answer = tsdalloc(_T_LOGIN, LOGIN_NAME_MAX_TRAD, NULL);
150     char *answer = tsdalloc(_T_LOGIN, _POSIX_LOGIN_NAME_MAX, NULL);

152     if (answer == NULL)
153         return (NULL);
154     return (getl_r_common(answer, LOGIN_NAME_MAX_TRAD, LOGNAME_MAX_TRAD));
155 }

157 /*
158  * POSIX.1c Draft-6 version of the function getlogin_r.
159  * It was implemented by Solaris 2.3.
160  * For extended login names, selected by redefine_extname in unistd.h.
161  */
162 char *
163 getloginx_r(char *answer, int namelen)
164 {
165     return (getl_r_common(answer, (size_t)namelen, NMAX));
166 }

168 /*
169  * POSIX.1c standard version of the function getlogin_r.
170  * User gets it via static getlogin_r from the header file.
171  * For extended login names, selected by redefine_extname in unistd.h.
172  */
173 int
174 __posix_getloginx_r(char *name, int namelen)
175 {
176     int nerrno = 0;

```

```

170     int oerrno = errno;

172     errno = 0;
173     if (getl_r_common(name, (size_t)namelen, NMAX) == NULL) {
174         if (errno == 0)
175             nerrno = EINVAL;
176         else
177             nerrno = errno;
178     }
179     errno = oerrno;
180     return (nerrno);
181 }

183 /*
184  * For extended login names, selected by redefine_extname in unistd.h.
185  */
186 char *
187 getloginx(void)
188 {
189     char *answer = tsdalloc(_T_LOGIN, LOGIN_NAME_MAX, NULL);

191     if (answer == NULL)
192         return (NULL);
193     return (getl_r_common(answer, LOGIN_NAME_MAX, NMAX));
194     return (getlogin_r(answer, _POSIX_LOGIN_NAME_MAX));
195 }

197 _____unchanged_portion_omitted_____

```



new/usr/src/lib/libc/port/gen/sysconf.c

1

```
*****
12091 Wed Sep  4 20:46:01 2013
new/usr/src/lib/libc/port/gen/sysconf.c
2989 Eliminate use of LOGNAME_MAX in ON
1166 useradd have warning with name more 8 chars
*****
1 /*
2  * CDDL HEADER START
3  *
4  * The contents of this file are subject to the terms of the
5  * Common Development and Distribution License (the "License").
6  * You may not use this file except in compliance with the License.
7  *
8  * You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE
9  * or http://www.opensolaris.org/os/licensing.
10 * See the License for the specific language governing permissions
11 * and limitations under the License.
12 *
13 * When distributing Covered Code, include this CDDL HEADER in each
14 * file and include the License file at usr/src/OPENSOLARIS.LICENSE.
15 * If applicable, add the following below this CDDL HEADER, with the
16 * fields enclosed by brackets "[]" replaced with your own identifying
17 * information: Portions Copyright [yyyy] [name of copyright owner]
18 *
19 * CDDL HEADER END
20 */
21
22 /*
23  * Copyright (c) 2013 Gary Mills
24  *
25  * Copyright 2009 Sun Microsystems, Inc. All rights reserved.
26  * Use is subject to license terms.
27 */
28
29 /*      Copyright (c) 1988 AT&T */
30 /*      All Rights Reserved */
31
32 /* sysconf(3C) - returns system configuration information */
33
34 #pragma weak _sysconf = sysconf
35
36 #include "lint.h"
37 #include <mtlib.h>
38 #include <sys/types.h>
39 #include <unistd.h>
40 #include <sys/sysconfig.h>
41 #include <limits.h>
42 #include <time.h>
43 #include <errno.h>
44 #include <nss_dbdefs.h>
45 #include <thread.h>
46 #include <xti.h>
47 #include "libc.h"
48 #include "xpg6.h"
49
50 /* from nss_common.c */
51 extern size_t _nss_get_bufsizes(int);
52
53 long
54 sysconf(int name)
55 {
56     static int _pagesize = 0;
57     static int _hz = 0;
58     static pid_t _maxpid = 0;
59     static int _stackprot = 0;
60     static int _ngroups_max;
```

new/usr/src/lib/libc/port/gen/sysconf.c

2

```
61     extern int __xpg4;
62
63     switch (name) {
64     default:
65         errno = EINVAL;
66         return (-1L);
67
68     case _SC_ARG_MAX:
69         return ((long)ARG_MAX);
70
71     case _SC_CLK_TCK:
72         if (_hz <= 0)
73             _hz = _sysconfig(_CONFIG_CLK_TCK);
74         return (_hz);
75
76     case _SC_JOB_CONTROL:
77         return ((long)_POSIX_JOB_CONTROL);
78
79     case _SC_SAVED_IDS:
80         return ((long)_POSIX_SAVED_IDS);
81
82     case _SC_CHILD_MAX:
83         return (_sysconfig(_CONFIG_CHILD_MAX));
84
85     case _SC_NGROUPS_MAX:
86         if (_ngroups_max <= 0)
87             _ngroups_max = _sysconfig(_CONFIG_NGROUPS);
88         return (_ngroups_max);
89
90     case _SC_OPEN_MAX:
91         return (_sysconfig(_CONFIG_OPEN_FILES));
92
93     case _SC_VERSION:
94         if (__xpg6 & _C99SUSv3_XPG6_sysconf_version)
95             return (200112L);
96         else
97             return (199506L);
98
99     case _SC_PAGESIZE:
100         if (_pagesize <= 0)
101             _pagesize = _sysconfig(_CONFIG_PAGESIZE);
102         return (_pagesize);
103
104     case _SC_XOPEN_VERSION:
105         if (__xpg6 & _C99SUSv3_XPG6_sysconf_version)
106             return (600L);
107         else if (__xpg4 == 0)
108             return (_sysconfig(_CONFIG_XOPEN_VER));
109         else
110             return (4L);
111
112     case _SC_XOPEN_XCU_VERSION:
113         if (__xpg6 & _C99SUSv3_XPG6_sysconf_version)
114             return (600L);
115         else
116             return (4L);
117
118     /*
119     * old value for pre XPG5 conformant systems to match
120     * getpass() length.
121     * XPG5 special cased with __sysconf_xpg5()
122     * new value for default and modern XPG systems.
123     */
124     case _SC_PASS_MAX:
125         if ((__xpg4 == 1) &&
126             (!(__xpg6 & _C99SUSv3_XPG6_sysconf_version)))
```

```

127         return ((long)_PASS_MAX_XPG);
128     else
129         return ((long)_PASS_MAX);
131
132     case _SC_LOGNAME_MAX:
133         return ((long)LOGNAME_MAX);
134
135     case _SC_STREAM_MAX:
136         return (_sysconfig(_CONFIG_OPEN_FILES));
137
138     case _SC_TZNAME_MAX:
139         return (-1L);
140
141     case _SC_NPROCESSORS_CONF:
142         return (_sysconfig(_CONFIG_NPROC_CONF));
143
144     case _SC_NPROCESSORS_ONLN:
145         return (_sysconfig(_CONFIG_NPROC_ONLN));
146
147     case _SC_NPROCESSORS_MAX:
148         return (_sysconfig(_CONFIG_NPROC_MAX));
149
150     case _SC_STACK_PROT:
151         if (_stackprot == 0)
152             _stackprot = _sysconfig(_CONFIG_STACK_PROT);
153         return (_stackprot);
154
155     /* POSIX.4 names */
156
157     /*
158     * Each of the following also have _POSIX_* symbols
159     * defined in <unistd.h>. Values here should align
160     * with values in the header. Up until the SUSv3 standard
161     * we defined these simply as 1. With the introduction
162     * of the new revision, these were changed to 200112L.
163     * The standard allows us to change the value, however,
164     * we have kept both values in case application programs
165     * are relying on the previous value even though an
166     * application doing so is technically wrong.
167     */
168     case _SC_ASYNCHRONOUS_IO:
169     case _SC_FSYNC:
170     case _SC_MAPPED_FILES:
171     case _SC_MEMLOCK:
172     case _SC_MEMLOCK_RANGE:
173     case _SC_MEMORY_PROTECTION:
174     case _SC_MESSAGE_PASSING:
175     case _SC_PRIORITY_SCHEDULING:
176     case _SC_REALTIME_SIGNALS:
177     case _SC_SEMAPHORES:
178     case _SC_SHARED_MEMORY_OBJECTS:
179     case _SC_SYNCHRONIZED_IO:
180     case _SC_TIMERS:
181         if (__xpg6 & _C99SUSv3_mode_ON)
182             return (200112L);
183         else
184             return (1L);
185
186     case _SC_PRIORITIZED_IO:
187     #ifdef _POSIX_PRIORITIZED_IO
188         return (1L);
189     #else
190         return (-1L);
191     #endif
192
193     case _SC_AIO_LISTIO_MAX:

```

```

193         return (_sysconfig(_CONFIG_AIO_LISTIO_MAX));
194
195     case _SC_AIO_MAX:
196         return (_sysconfig(_CONFIG_AIO_MAX));
197
198     case _SC_AIO_PRIO_DELTA_MAX:
199         return (_sysconfig(_CONFIG_AIO_PRIO_DELTA_MAX));
200
201     case _SC_DELAYTIMER_MAX:
202         return (_sysconfig(_CONFIG_DELAYTIMER_MAX));
203
204     case _SC_MQ_OPEN_MAX:
205         return (_sysconfig(_CONFIG_MQ_OPEN_MAX));
206
207     case _SC_MQ_PRIO_MAX:
208         return (_sysconfig(_CONFIG_MQ_PRIO_MAX));
209
210     case _SC_RTSIG_MAX:
211         return (_sysconfig(_CONFIG_RTSIG_MAX));
212
213     case _SC_SEM_NSEMS_MAX:
214         return (_sysconfig(_CONFIG_SEM_NSEMS_MAX));
215
216     case _SC_SEM_VALUE_MAX:
217         return (_sysconfig(_CONFIG_SEM_VALUE_MAX));
218
219     case _SC_SIGQUEUE_MAX:
220         return (_sysconfig(_CONFIG_SIGQUEUE_MAX));
221
222     case _SC_SIGRT_MAX:
223         return (_sysconfig(_CONFIG_SIGRT_MAX));
224
225     case _SC_SIGRT_MIN:
226         return (_sysconfig(_CONFIG_SIGRT_MIN));
227
228     case _SC_TIMER_MAX:
229         return (_sysconfig(_CONFIG_TIMER_MAX));
230
231     case _SC_PHYS_PAGES:
232         return (_sysconfig(_CONFIG_PHYS_PAGES));
233
234     case _SC_AVPHYS_PAGES:
235         return (_sysconfig(_CONFIG_AVPHYS_PAGES));
236
237     /* XPG4/POSIX.1-1990/POSIX.2-1992 names */
238     case _SC_2_C_BIND:
239         if (__xpg6 & _C99SUSv3_XPG6_sysconf_version)
240             return (200112L);
241         else
242             return (1L);
243
244     case _SC_2_CHAR_TERM:
245         return ((long)_POSIX2_CHAR_TERM);
246
247     case _SC_2_C_DEV:
248         if (__xpg6 & _C99SUSv3_XPG6_sysconf_version)
249             return (200112L);
250         else
251             return (1L);
252
253     case _SC_2_C_VERSION:
254         if (__xpg6 & _C99SUSv3_XPG6_sysconf_version)
255             return (200112L);
256         else
257             return (199209L);

```

```

259     case _SC_2_FORT_DEV:
260         return (-1L);

262     case _SC_2_FORT_RUN:
263         if (__xpg6 & _C99SUSv3_XPG6_sysconf_version)
264             return (200112L);
265         else
266             return (1L);

268     case _SC_2_LOCALEDEF:
269         if (__xpg6 & _C99SUSv3_XPG6_sysconf_version)
270             return (200112L);
271         else
272             return (1L);

274     case _SC_2_SW_DEV:
275         if (__xpg6 & _C99SUSv3_XPG6_sysconf_version)
276             return (200112L);
277         else
278             return (1L);

280     case _SC_2_UPE:
281         if (__xpg6 & _C99SUSv3_XPG6_sysconf_version)
282             return (200112L);
283         else
284             return (1L);

286     case _SC_2_VERSION:
287         if (__xpg6 & _C99SUSv3_XPG6_sysconf_version)
288             return (200112L);
289         else
290             return (199209L);

292     case _SC_BC_BASE_MAX:
293         return ((long)BC_BASE_MAX);

295     case _SC_BC_DIM_MAX:
296         return ((long)BC_DIM_MAX);

298     case _SC_BC_SCALE_MAX:
299         return ((long)BC_SCALE_MAX);

301     case _SC_BC_STRING_MAX:
302         return ((long)BC_STRING_MAX);

304     case _SC_COLL_WEIGHTS_MAX:
305         return ((long)COLL_WEIGHTS_MAX);

307     case _SC_EXPR_NEST_MAX:
308         return ((long)EXPR_NEST_MAX);

310     case _SC_LINE_MAX:
311         return ((long)LINE_MAX);

313     case _SC_RE_DUP_MAX:
314         return ((long)RE_DUP_MAX);

316     case _SC_XOPEN_CRYPT:
317         return (1L);

319     case _SC_XOPEN_ENH_I18N:
320         return ((long)_XOPEN_ENH_I18N);

322     case _SC_XOPEN_SHM:
323         return ((long)_XOPEN_SHM);

```

```

325         /* XPG4v2 (SUS) names */
326     case _SC_XOPEN_UNIX:
327         return (1L);

329     case _SC_XOPEN_LEGACY:
330         return (1L);

332     case _SC_ATEXIT_MAX:
333         return (-1L);

335     case _SC_IOV_MAX:
336         return ((long)IOV_MAX);

338     case _SC_T_IOV_MAX:
339         return ((long)T_IOV_MAX);

341         /* XPG5 (SUSv2) names */
342     case _SC_XOPEN_REALTIME:
343         return (1L);

345     case _SC_XOPEN_REALTIME_THREADS:
346     #if defined(_POSIX_THREAD_PRIORITY_SCHEDULING) && \
347         defined(_POSIX_THREAD_PRIO_INHERIT) && \
348         defined(_POSIX_THREAD_PRIO_PROTECT)
349         return (1L);
350     #else
351         return (-1L);
352     #endif

354     case _SC_XBS5_ILP32_OFF32:
355         return (1L);

357     case _SC_XBS5_ILP32_OFFBIG:
358         return (1L);

360     case _SC_XBS5_LP64_OFF64:
361         return (1L);

363     case _SC_XBS5_LPBIG_OFFBIG:
364         return (1L);

366         /* POSIX.1c names */
367     case _SC_THREAD_DESTRUCTOR_ITERATIONS:
368         return (-1L);

370     case _SC_GETGR_R_SIZE_MAX:
371         return ((long)_nss_get_bufsizes(_SC_GETGR_R_SIZE_MAX));

373     case _SC_GETPW_R_SIZE_MAX:
374         return ((long)_NSS_BUFLEN_PASSWD);

376     case _SC_LOGIN_NAME_MAX:
377         return ((long)(LOGIN_NAME_MAX));
375         return ((long)(LOGNAME_MAX + 1));

379     case _SC_THREAD_KEYS_MAX:
380         return (-1L);

382     case _SC_THREAD_STACK_MIN:
383         return ((long)thr_min_stack());

385     case _SC_THREAD_THREADS_MAX:
386         return (-1L);

388     case _SC_TTY_NAME_MAX:
389         return ((long)TTYNAME_MAX);

```

```

391     case _SC_BARRIERS:
392         return ((long)_POSIX_BARRIERS);

394     case _SC_CLOCK_SELECTION:
395         return ((long)_POSIX_CLOCK_SELECTION);

397     case _SC_MONOTONIC_CLOCK:
398         return ((long)_POSIX_MONOTONIC_CLOCK);

400     case _SC_SPAWN:
401         return ((long)_POSIX_SPAWN);

403     case _SC_SPIN_LOCKS:
404         return ((long)_POSIX_SPIN_LOCKS);

406     case _SC_THREADS:
407     case _SC_THREAD_ATTR_STACKADDR:
408     case _SC_THREAD_ATTR_STACKSIZE:
409     case _SC_THREAD_PRIORITY_SCHEDULING:
410     case _SC_THREAD_PRIO_INHERIT:
411     case _SC_THREAD_PRIO_PROTECT:
412     case _SC_THREAD_PROCESS_SHARED:
413     case _SC_THREAD_SAFE_FUNCTIONS:
414         if (__xpg6 & _C99SUSv3_mode_ON)
415             return (200112L);
416         else
417             return (1L);

419     case _SC_TIMEOUTS:
420         return ((long)_POSIX_TIMEOUTS);

422     /* 1216676 - cache info */
423     case _SC_COHER_BLKSZ:
424         return (_sysconf(_CONFIG_COHERENCY));

426     case _SC_SPLIT_CACHE:
427         return (_sysconf(_CONFIG_SPLIT_CACHE));

429     case _SC_ICACHE_SZ:
430         return (_sysconf(_CONFIG_ICACHESZ));

432     case _SC_DCACHE_SZ:
433         return (_sysconf(_CONFIG_DCACHESZ));

435     case _SC_ICACHE_LINESZ:
436         return (_sysconf(_CONFIG_ICACHELINESZ));

438     case _SC_DCACHE_LINESZ:
439         return (_sysconf(_CONFIG_DCACHELINESZ));

441     case _SC_ICACHE_BLKSZ:
442         return (_sysconf(_CONFIG_ICACHEBLKSZ));

444     case _SC_DCACHE_BLKSZ:
445         return (_sysconf(_CONFIG_DCACHEBLKSZ));

447     case _SC_DCACHE_TBLKSZ:
448         return (_sysconf(_CONFIG_DCACHETBLKSZ));

450     case _SC_ICACHE_ASSOC:
451         return (_sysconf(_CONFIG_ICACHE_ASSOC));

453     case _SC_DCACHE_ASSOC:
454         return (_sysconf(_CONFIG_DCACHE_ASSOC));

```

```

456     case _SC_MAXPID:
457         if (_maxpid <= 0)
458             _maxpid = _sysconf(_CONFIG_MAXPID);
459         return (_maxpid);

461     case _SC_CPUID_MAX:
462         return (_sysconf(_CONFIG_CPUID_MAX));

464     case _SC_EPHID_MAX:
465         return (_sysconf(_CONFIG_EPHID_MAX));

467     /* UNIX 03 names - XPG6/SUSv3/POSIX.1-2001 */

469     case _SC_REGEX:
470         return ((long)_POSIX_REGEX);

472     case _SC_SHELL:
473         return ((long)_POSIX_SHELL);

475     case _SC_ADVISORY_INFO:
476         return ((long)_POSIX_ADVISORY_INFO);

478     case _SC_HOST_NAME_MAX:
479         return ((long)_POSIX_HOST_NAME_MAX);

481     case _SC_READER_WRITER_LOCKS:
482         return ((long)_POSIX_READER_WRITER_LOCKS);

484     case _SC_IPV6:
485         return ((long)_POSIX_IPV6);

487     case _SC_RAW_SOCKETS:
488         return ((long)_POSIX_RAW_SOCKETS);

490     case _SC_XOPEN_STREAMS:
491         return ((long)_XOPEN_STREAMS);

493     case _SC_SYMLINK_MAX:
494         return (_sysconf(_CONFIG_SYMLINK_MAX));

496     case _SC_V6_ILP32_OFF32:
497         return (1L);

499     case _SC_V6_ILP32_OFFBIG:
500         return (1L);

502     case _SC_V6_LP64_OFF64:
503         return (1L);

505     case _SC_V6_LP64_OFFBIG:
506         return (1L);

508     /* Unsupported UNIX 03 options */
509     case _SC_2_PBS:
510     case _SC_2_PBS_ACCOUNTING:
511     case _SC_2_PBS_CHECKPOINT:
512     case _SC_2_PBS_LOCATE:
513     case _SC_2_PBS_MESSAGE:
514     case _SC_2_PBS_TRACK:
515     case _SC_CPUTIME:
516     case _SC_SPORADIC_SERVER:
517     case _SC_SS_REPL_MAX:
518     case _SC_THREAD_CPUTIME:
519     case _SC_THREAD_SPORADIC_SERVER:
520     case _SC_TRACE:
521     case _SC_TRACE_EVENT_FILTER:

```

new/usr/src/lib/libc/port/gen/sysconf.c

9

```
522             case _SC_TRACE_EVENT_NAME_MAX:
523             case _SC_TRACE_INHERIT:
524             case _SC_TRACE_LOG:
525             case _SC_TRACE_NAME_MAX:
526             case _SC_TRACE_SYS_MAX:
527             case _SC_TRACE_USER_EVENT_MAX:
528             case _SC_TYPED_MEMORY_OBJECTS:
529                 return (-1L);
530         }
531     }
    _____unchanged_portion_omitted
```

new/usr/src/lib/libc/port/llib-1c

1

```
*****
45866 Wed Sep  4 20:46:01 2013
new/usr/src/lib/libc/port/llib-1c
2989 Eliminate use of LOGNAME_MAX in ON
1166 useradd have warning with name more 8 chars
*****
1 /*
2  * CDDL HEADER START
3  *
4  * The contents of this file are subject to the terms of the
5  * Common Development and Distribution License (the "License").
6  * You may not use this file except in compliance with the License.
7  *
8  * You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE
9  * or http://www.opensolaris.org/os/licensing.
10 * See the License for the specific language governing permissions
11 * and limitations under the License.
12 *
13 * When distributing Covered Code, include this CDDL HEADER in each
14 * file and include the License file at usr/src/OPENSOLARIS.LICENSE.
15 * If applicable, add the following below this CDDL HEADER, with the
16 * fields enclosed by brackets "[]" replaced with your own identifying
17 * information: Portions Copyright [yyyy] [name of copyright owner]
18 *
19 * CDDL HEADER END
20 */

22 /*
23 * Copyright (c) 1991, 2010, Oracle and/or its affiliates. All rights reserved.
24 * Copyright 2011 Nexenta Systems, Inc. All rights reserved.
25 * Copyright 2013 OmniTI Computer Consulting, Inc. All rights reserved.
26 * Copyright (c) 2013 Gary Mills
27 */

29 /* LINTLIBRARY */
30 /* PROTOLIB1 */

32 #define __EXTENSIONS__

34 #include <aio.h>
35 #include <alloca.h>
36 #include <attr.h>
37 #include <atomic.h>
38 #include <ctype.h>
39 #include <default.h>
40 #include <dirent.h>
41 #include <dlfcn.h>
42 #include <door.h>
43 #include <err.h>
44 #include <sys/errno.h>
45 #include <euc.h>
46 #include <fcntl.h>
47 #include <float.h>
48 #include <fmtmsg.h>
49 #include <fnmatch.h>
50 #include <ftw.h>
51 #include <glob.h>
52 #include <getwidth.h>
53 #include <grp.h>
54 #include <iconv.h>
55 #include <langinfo.h>
56 #include <libgen.h>
57 #include <libw.h>
58 #include <locale.h>
59 #include <memory.h>
60 #include <mon.h>
```

new/usr/src/lib/libc/port/llib-1c

2

```
61 #include <mqueue.h>
62 #include <nan.h>
63 #include <ndbm.h>
64 #include <limits.h>
65 #include <nl_types.h>
66 #include <poll.h>
67 #include <project.h>
68 #include <priv.h>
69 #include <pwd.h>
70 #include <rctl.h>
71 #include <regex.h>
72 #include <rpcsvc/ypclnt.h>
73 #include <sched.h>
74 #include <search.h>
75 #include <semaphore.h>
76 #include <setjmp.h>
77 #include <shadow.h>
78 #include <siginfo.h>
79 #include <signal.h>
80 #include <stdarg.h>
81 #include <ucred.h>
82 #include <sys/ucred.h>
83 #include <unistd.h>
84 #include <ulimit.h>
85 #include <utime.h>
86 #include <stddef.h>
87 #include <stdio.h>
88 #include <stdlib.h>
89 #include <string.h>
90 #include <stropts.h>
91 #include <synch.h>
92 #include <sys/acctctl.h>
93 #include <sys/acl.h>
94 #include <sys/asynch.h>
95 #include <sys/byteorder.h>
96 #include <sys/cladm.h>
97 #include <sys/corectl.h>
98 #include <sys/dl.h>
99 #include <sys/exacct.h>
100 #include <sys/fcntl.h>
101 #include <sys/file.h>
102 #include <sys/fs/namenode.h>
103 #include <sys/instance.h>
104 #include <sys/ipc.h>
105 #include <sys/lwp.h>
106 #include <sys/mkdev.h>
107 #include <sys/mman.h>
108 #include <sys/mnttab.h>
109 #include <sys/mount.h>
110 #include <sys/msg.h>
111 #include <sys/param.h>
112 #include <sys/priocntl.h>
113 #include <sys/procset.h>
114 #include <sys/processor.h>
115 #include <sys/pset.h>
116 #include <sys/rctl_impl.h>
117 #include <sys/sem.h>
118 #include <sys/shm.h>
119 #include <sys/sid.h>
120 #include <sys/signal.h>
121 #include <sys/stat.h>
122 #include <sys/statvfs.h>
123 #include <sys/strlog.h>
124 #include <sys/stropts.h>
125 #include <sys/syscall.h>
126 #include <sys/sysconfig.h>
```

```

127 #include <sys/syslog.h>
128 #include <sys/systeminfo.h>
129 #include <sys/task.h>
130 #include <sys/termio.h>
131 #include <sys/termios.h>
132 #include <sys/u8_textprep.h>
133 #include <sys/time.h>
134 #include <sys/timeb.h>
135 #include <sys/times.h>
136 #include <sys/types.h>
137 #include <sys/uadmin.h>
138 #include <sys/utsname.h>
139 #include <sys/vfstab.h>
140 #include <sys/sendfile.h>
141 #include <sys/zone.h>
142 #include <termio.h>
143 #include <time.h>
144 #include <tzfile.h>
145 #include <ucontext.h>
146 #include <utmpx.h>
147 #include <values.h>
148 #include <wait.h>
149 #include <wchar.h>
150 #include <wctype.h>
151 #include <wider.h>
152 #include <wordexp.h>
153 #include <thread.h>
154 #include <pthread.h>
155 #include <schedctl.h>
156 #include <zone.h>
157 #include <port.h>
158 #include <spawn.h>
159 #include <inttypes.h>
160 #include <getopt.h>
161 #include <stdio_ext.h>
162 #if defined(__i386)
163 #include <sys/sysi86.h>
164 #endif
165 #if defined(__amd64)
166 #include <stack_unwind.h>
167 #endif

169 /*
170  * This really comes from the crt*.s startup modules.
171  */
172 char **environ;

174 /*
175  * This is a GNU/Linux/BSD compatibility interface,
176  * not declared in any header file.
177  */
178 const char *__progname;

180 /*
181  * POSIX versions of standard libc routines; these aren't extracted
182  * from the headers above since we cannot #define _POSIX_C_SOURCE.
183  */
184 int __posix_readdir_r(DIR * _RESTRICT_KYWD, struct dirent * _RESTRICT_KYWD,
185 struct dirent ** _RESTRICT_KYWD);
186 int __posix_getgrgid_r(gid_t, struct group *, char *, size_t, struct group **);
187 int __posix_getgrnam_r(const char *, struct group *, char *, size_t,
188 struct group **);
189 int __posix_getpwuid_r(uid_t, struct passwd *, char *, size_t,
190 struct passwd **);
191 int __posix_getpwnam_r(const char *, struct passwd *, char *, size_t,
192 struct passwd **);

```

```

193 int __posix_sigwait(const sigset_t * _RESTRICT_KYWD, int * _RESTRICT_KYWD);
194 char * __posix_asctime_r(const struct tm * _RESTRICT_KYWD, char * _RESTRICT_KYWD);
195 char * __posix_ctime_r(const time_t *, char *);
196 int __posix_ttyname_r(int, char *, size_t);
197 int __posix_getlogin_r(char *, int);
198 int __posix_getloginx_r(char *, int);

200 /*
201  * XPG4 versions of standard libc routines; these aren't extracted
202  * from the headers above since we cannot #define _XPG4_2.
203  */
204 int __xpg4_putmsg(int, const struct strbuf *, const struct strbuf *, int);
205 int __xpg4_putpmsg(int, const struct strbuf *, const struct strbuf *, int, int);

207 /*
208  * These aren't extracted from the headers above because:
209  * - We cannot #define _STRPTIME_DONTZERO
210  * - We cannot #define _XPG5
211  */
212 char * __strptime_dontzero(const char *, const char *, struct tm *);
213 long __sysconf_xpg5(int);
214 wchar_t * __wcstok_xpg5(wchar_t * _RESTRICT_KYWD,
215 const wchar_t * _RESTRICT_KYWD, wchar_t ** _RESTRICT_KYWD);
216 size_t __wcsftime_xpg5(wchar_t * _RESTRICT_KYWD, size_t,
217 const wchar_t * _RESTRICT_KYWD, const struct tm * _RESTRICT_KYWD);
218 wint_t __fgetwc_xpg5(__FILE *);
219 wint_t __getwc_xpg5(__FILE *);
220 wint_t __getwchar_xpg5(void);
221 wint_t __fputwc_xpg5(wint_t, __FILE *);
222 wint_t __putwc_xpg5(wint_t, __FILE *);
223 wint_t __putwchar_xpg5(wint_t);
224 wchar_t * __fgetws_xpg5(wchar_t * _RESTRICT_KYWD, int, __FILE * _RESTRICT_KYWD);
225 int __fputws_xpg5(const wchar_t * _RESTRICT_KYWD, __FILE * _RESTRICT_KYWD);
226 wint_t __ungetwc_xpg5(wint_t, __FILE *);

228 /*
229  * /usr/src/lib/libc/port/gen routines
230  */

232 /* _ctype.c */

234 /* _loc_data.c */

236 /* _locale.c */

238 /* _set_tab.c */
239 int _set_tab(const char *loc, int cat);

241 /* _xftw.c */
242 int _xftw(int ver, const char *path, int (*fn)(), int depth);

244 /* a64l.c */
245 long a64l(const char *);

247 /* abort.c */
248 void abort(void);

250 /* abs.c */
251 int abs(int arg);
252 long labs(long int arg);

254 /* assert.c */
255 void __assert(const char *assertion, const char *filename, int line_num);
256 void __assert_c99(const char *assertion, const char *filename, int line_num,
257 const char *funcname);

```

new/usr/src/lib/libc/port/llib-1c

```
259 /* atexit.c */
260 int atexit(void(*func)());
261 void _exithandle(void);

263 /* atof.c */
264 double atof(const char *p);

266 /* atoi.c */
267 int atoi(const char *p);

269 /* atol.c */
270 long atol(const char *p);

272 /* basename.c */
273 char *basename(char *s);

275 /* bcmp.c */
276 int bcmp(const void *s1, const void *s2, size_t len);

278 /* bcopy.c */
279 void bcopy(const void *s1, void *s2, size_t len);

281 /* bsearch.c */
282 void *bsearch(const void *ky, const void *bs, size_t nel,
283              size_t width, int (*compar)());

285 /* bzero.c */
286 void bzero(void *sp, size_t len);

288 /* calloc.c */
289 void *calloc(size_t num, size_t size);

291 /* catclose.c */
292 int catclose(nl_catd catd);

294 /* catgets.c */
295 char *catgets(nl_catd catd, int set_num, int msg_num, const char *s);

297 /* catopen.c */
298 nl_catd catopen(const char *name, int mode);

300 /* cfgetispeed.c */
301 speed_t cfgetispeed(const struct termios *termios_p);

303 /* cfgetospeed.c */
304 speed_t cfgetospeed(const struct termios *termios_p);

306 /* cfree.c */
307 void cfree(void *p, size_t num, size_t size);

309 /* cfsetispeed.c */
310 int cfsetispeed(struct termios *termios_p, speed_t speed);

312 /* cfsetospeed.c */
313 int cfsetospeed(struct termios *termios_p, speed_t speed);

315 /* cftime.c */
316 int cftime(char *buf, char *format, const time_t *t);
317 int asctime(char *buf, const char *format, const struct tm *tm);

319 /* clock.c */
320 clock_t clock(void);

322 /* closedir.c */
323 int closedir(DIR *dirp);
```

5

new/usr/src/lib/libc/port/llib-1c

```
325 /* confstr.c */
326 size_t confstr(int name, char *buf, size_t length);

328 /* crypt.c */
329 void setkey(const char *key);
330 void encrypt(char *block, int fake);
331 char *crypt(const char *key, const char *salt);

333 /* csetlen.c */
334 int csetlen(int cset);
335 int csetcol(int cset);

337 /* ctime.c */
338 char *ctime(const time_t *t);
339 char *ctime_r(const time_t *, char *buf, int);
340 char *asctime(const struct tm *t);
341 char *asctime_r(const struct tm *, char *, int);

343 /* ctypefcns.c */
344 int isalpha(int c);
345 int isupper(int c);
346 int islower(int c);
347 int isdigit(int c);
348 int isxdigit(int c);
349 int isalnum(int c);
350 int isspace(int c);
351 int ispunct(int c);
352 int isprint(int c);
353 int isgraph(int c);
354 int iscntrl(int c);
355 int isascii(int c);
356 int _toupper(int c);
357 int _tolower(int c);
358 int toascii(int c);

360 /* daemon.c */
361 int daemon(int nochdir, int noclose);

363 /* directio.c */
364 int directio(int fildes, int advice);

366 /* dirname.c */
367 char *dirname(char *s);

369 /* div.c */
370 div_t div(int numer, int denom);
371 ldiv_t ldiv(long int numer, long int denom);

373 /* drand48.c */
374 double drand48(void);
375 double erand48(unsigned short *xsubi);
376 long lrand48(unsigned short *xsubi, unsigned int m);
377 long lrand48(void);
378 long mrand48(void);
379 void srand48(long seedval);
380 unsigned short *seed48(unsigned short seed16v[3]);
381 void lcong48(unsigned short param[7]);
382 long nrand48(unsigned short *xsubi);
383 long jrand48(unsigned short *xsubi);

385 /* dup.c */
386 int dup(int fildes);
387 int dup2(int fildes, int fildes2);
388 int dup3(int fildes, int fildes2, int flags);

390 /* ecvt.c */
```

6



```

391 char *ecvt(double value, int ndigit, int *_RESTRICT_KYWD decpt,
392             int *_RESTRICT_KYWDsign);
393 char *fcvt(double value, int ndigit, int *_RESTRICT_KYWD decpt,
394             int *_RESTRICT_KYWD sign);

396 /* err.c */
397 void _errfp(FILE *, int, const char *, ...);
398 void _verrfp(FILE *, int, const char *, va_list);
399 void _errxfp(FILE *, int, const char *, ...);
400 void _verrxfp(FILE *, int, const char *, va_list);
401 void _warnfp(FILE *, const char *, ...);
402 void _vwarnfp(FILE *, const char *, va_list);
403 void _warnxfp(FILE *, const char *, ...);
404 void _vwarnxfp(FILE *, const char *, va_list);

406 /* errlst.c */

408 /* euclen.c */
409 int euccol(const unsigned char *s);
410 int euclen(const unsigned char *s);
411 int eucscol(const unsigned char *s);

413 /* execvp.c */
414 /* VARARGS1 */
415 int execlp(const char *, const char *, ...);
416 int execvp(const char *name, char *const *argv);

418 /* fattach.c */
419 int fattach(int fildes, const char *path);

421 /* fdetach.c */
422 int fdetach(const char *path);

424 /* ffs.c */
425 int ffs(int field);

427 /* fmtmsg.c */
428 int addseverity(int value, const char *string);
429 int fmtmsg(long class, const char *label, int severity, const char *text,
430             const char *action, const char *tag);

432 /* ftime.c */
433 int ftime(struct timeb *tp);

435 /* ftok.c */
436 key_t ftok(const char *path, int id);

438 /* gcvvt.c */
439 char *gcvvt(double number, int ndigit, char *buf);

441 /* getcwd.c */
442 char *getcwd(char *str, size_t size);

444 /* getdate.c */
445 struct tm *getdate(const char *expression);
446 #ifdef getdate_err
447 #undef getdate_err
448 #endif
449 int getdate_err;

451 /* getdate_data.c */

453 /* getdate_gd.c */

455 /* getdtblsize.c */
456 int getdtblsize(void);

```

```

458 /* getenv.c */
459 char *getenv(const char *name);

461 /* getexecname.c */
462 const char *getexecname(void);

464 /* getgrnam.c */
465 struct group *getgrnam(const char *name);
466 struct group *getgrgid(gid_t gid);
467 struct group *fgetgrent_r(FILE *, struct group *, char *, int);
468 struct group *getgrent_r(struct group *, char *, int);
469 struct group *getgrgid_r(gid_t, struct group *, char *, int);
470 struct group *getgrnam_r(const char *, struct group *, char *, int);

472 /* gethostid.c */
473 long gethostid(void);

475 /* gethz.c */
476 int gethz(void);

478 /* getisax.c */
479 uint_t getisax(uint32_t *, uint_t);

481 /* getlogin.c */
482 char *getloginx(void);
483 char *getloginx_r(char *, int);
484 #ifdef getlogin
485 #undef getlogin
486 #endif /* getlogin */
487 char *getlogin(void);
488 #ifdef getlogin_r
489 #undef getlogin_r
490 #endif /* getlogin_r */
491 char *getlogin_r(char *, int);

493 /* getmntent.c */
494 int getmntany(FILE *fd, struct mnttab *mgetp, struct mnttab *mrefp);
495 int getmntent(FILE *fd, struct mnttab *mp);

497 /* getnetgrent.c */
498 int setnetgrent(const char *grp);
499 int endnetgrent(void);
500 int getnetgrent(char **machinep, char **namep, char **domainp);

502 /* getopt.c */
503 int getopt(int argc, char *const *argv, const char *opts);

505 /* getopt_long.c */
506 int getopt_clip(int argc, char *const *argv, const char *optstring,
507                 const struct option *long_options, int *long_index);
508 int getopt_long(int argc, char *const *argv, const char *optstring,
509                 const struct option *long_options, int *long_index);
510 int getopt_long_only(int argc, char *const *argv, const char *optstring,
511                      const struct option *long_options, int *long_index);

513 /* getpagesize.c */
514 int getpagesize(void);

516 /* getpw.c */
517 int getpw(uid_t uid, char *buf);

519 /* getpwnam.c */
520 struct passwd *getpwnam(const char *name);
521 struct passwd *getpwuid(uid_t uid);
522 struct passwd *fgetpwent_r(FILE *, struct passwd *, char *, int);

```

```

523 struct passwd *getpwent_r(struct passwd *, char *, int);
524 struct passwd *getpwnam_r(const char *, struct passwd *, char *, int);
525 struct passwd *getpwuid_r(uid_t, struct passwd *, char *, int);

527 /* getrusage.c */
528 int getrusage(int who, struct rusage *rusage);

530 /* gettimeofday.c */
531 int gettimeofday(struct timeval *_RESTRICT_KYWD tp, void *_RESTRICT_KYWD);

533 /* getspent.c */
534 void setspent(void);
535 void endspent(void);
536 struct spwd *getspent(void);
537 struct spwd *getspent_r(struct spwd *, char *, int);
538 struct spwd *fgetspent(FILE *f);
539 struct spwd *fgetspent_r(FILE *, struct spwd *, char *, int);
540 struct spwd *getspnam(const char *name);
541 struct spwd *getspnam_r(const char *, struct spwd *, char *, int);
542 int putspent(const struct spwd *p, FILE *f);

544 /* getspent_r.c */
545 int str2spwd(const char *, int, void *, char *, int);

547 /* getsubopt.c */
548 int getsubopt(char **optionsp, char *const *tokens, char **valuep);

550 /* gettxt.c */
551 char *gettext(const char *msg_id, const char *dflt_str);

553 /* getusershell.c */
554 char *getusershell(void);
555 void endusershell(void);
556 void setusershell(void);

558 /* getut.c */
559 struct utmp *getutent(void);
560 struct utmp *getutid(const struct utmp *entry);
561 struct utmp *getutline(const struct utmp *entry);
562 struct utmp *pututline(const struct utmp *entry);
563 void setutent(void);
564 void endutent(void);
565 int utmpname(const char *newfile);
566 void updwtmp(const char *file, struct utmp *ut);
567 void getutmp(const struct utmpx *utx, struct utmp *ut);
568 void getutmpx(const struct utmp *ut, struct utmpx *utx);
569 struct utmp *makeut(struct utmp *utmp);

571 /* getutx.c */
572 struct utmpx *getutxent(void);
573 struct utmpx *getutxid(const struct utmpx *entry);
574 struct utmpx *getutxline(const struct utmpx *entry);
575 struct utmpx *pututxline(const struct utmpx *entry);
576 void setutxent(void);
577 void endutxent(void);
578 int utmpxname(const char *newfile);
579 void updwtmpx(const char *file, struct utmpx *utx);
580 struct utmpx *makeutx(const struct utmpx *utmp);
581 struct utmpx *modutx(const struct utmpx *utp);

583 /* getvfsent.c */
584 int getvfsspec(FILE *fd, struct vfstab *vp, char *special);
585 int getvfsfile(FILE *fd, struct vfstab *vp, char *mountp);
586 int getvfssany(FILE *fd, struct vfstab *vgetp, struct vfstab *vrefp);
587 int getvfsent(FILE *fd, struct vfstab *vp);

```

```

589 /* getwd.c */
590 char *getwd(char *pathname);

592 /* getwidth.c */
593 void getwidth(eucwidth_t *eucstruct);

595 /* hsearch.c */
596 int hcreate(size_t size);
597 void hdestroy(void);
598 ENTRY *hsearch(ENTRY item, ACTION action);

600 /* iconv.c */
601 size_t iconv(iconv_t cd, const char **_RESTRICT_KYWD inbuf,
602             size_t *_RESTRICT_KYWD inbytesleft, char **_RESTRICT_KYWD outbuf,
603             size_t *_RESTRICT_KYWD outbytesleft);
604 int iconv_close(iconv_t cd);
605 iconv_t iconv_open(const char *tocode, const char *fromcode);

607 /* imaxabs.c */
608 intmax_t imaxabs(intmax_t j);

610 /* imaxdiv.c */
611 imaxdiv_t imaxdiv(intmax_t numer, intmax_t denom);

613 /* index.c */
614 char *index(const char *sp, int c);

616 /* initgroups.c */
617 int initgroups(const char *uname, gid_t agroup);

619 /* innnetgr.c */
620 int innnetgr(const char *group, const char *machine, const char *name,
621             const char *domain);

623 /* insque.c */
624 void insque(void *elem, void *pred);
625 void remque(void *elem);

627 /* isaexec.c */
628 int isaexec(const char *, char *const *, char *const *);

630 /* isastream.c */
631 int isastream(int fd);

633 /* isatty.c */
634 int isatty(int f);

636 /* killpg.c */
637 int killpg(pid_t pgrp, int sig);

639 /* l64a.c */
640 char *l64a(long lg);

642 /* lckpwwdf.c */
643 int lckpwwdf(void);
644 int ulckpwwdf(void);

646 /* lfind.c */
647 void * lfind(const void *ky, const void *bs, size_t *nelp,
648             size_t width, int (*compar)());

650 /* localeconv.c */
651 struct lconv *localeconv(void);

653 /* lsearch.c */
654 void * lsearch(const void *ky, void *bs, size_t *nelp,

```

```

655             size_t width, int (*compar)());

657 /* madvise.c */
658 int madvise(caddr_t addr, size_t len, int advice);

660 /* malloc.c */
661 void *malloc(size_t size);
662 void *realloc(void *old, size_t size);
663 void free(void *old);

665 /* mbstowcs.c */
666 size_t mbstowcs(wchar_t *_RESTRICT_KYWD pwcs, const char *_RESTRICT_KYWD s,
667                size_t n);

669 /* mbtowc.c */
670 int mbtowc(wchar_t *_RESTRICT_KYWD wchar, const char *_RESTRICT_KYWD s,
671            size_t n);
672 int mblen(const char *s, size_t n);

674 /* memalign.c */
675 void *memalign(size_t align, size_t nbytes);

677 /* memccpy.c */
678 void *memccpy(void *_RESTRICT_KYWDs, const void *_RESTRICT_KYWD s0, int c,
679              size_t n);

681 /* memchr.c */
682 void *memchr(const void *sptr, int c1, size_t n);

684 /* memcmp.c */
685 int memcmp(const void *s1, const void *s2, size_t n);

687 /* memcpy.c */
688 void *memcpy(void *_RESTRICT_KYWD s, const void *_RESTRICT_KYWD s0, size_t n);

690 /* memmove.c */
691 void *memmove(void *s, const void *s0, size_t n);

693 /* memset.c */
694 void *memset(void *s1, int c, size_t n);

696 /* mkdev.c */
697 dev_t __makedev(const int version, const major_t majdev,
698                const minor_t mindev);
699 major_t __major(const int version, const dev_t devnum);
700 minor_t __minor(const int version, const dev_t devnum);

702 /* mkfifo.c */
703 int mkfifo(const char *path, mode_t mode);

705 /* mktemp.c */
706 char *mktemp(char *as);

708 /* mlock.c */
709 int mlock(caddr_t addr, size_t len);

711 /* mlockall.c */
712 int mlockall(int flags);

714 /* mon.c */
715 void monitor(int (*alowpc)(), int (*ahighpc)(), WORD *buffer,
716             size_t bufsize, size_t nfunc);

718 /* msync.c */
719 int msync(caddr_t addr, size_t len, int flags);

```

```

721 /* munlock.c */
722 int munlock(caddr_t addr, size_t len);

724 /* munlockall.c */
725 int munlockall(void);

727 /* ndbm.c */
728 void dbm_setdefwrite(DBM *db);
729 int dbm_flush(DBM *db);
730 int dbm_flushpag(DBM *db);
731 DBM *dbm_open(const char *file, int flags, mode_t mode);
732 void dbm_close(DBM *db);
733 int dbm_close_status(DBM *db);
734 datum dbm_fetch(DBM *db, datum key);
735 int dbm_delete(DBM *db, datum key);
736 int dbm_store(DBM *db, datum key, datum dat, int replace);
737 datum dbm_firstkey(DBM *db);
738 datum dbm_nextkey(DBM *db);
739 datum dbm_do_nextkey(DBM *db, datum inkey);

741 /* new_list.c */

743 /* nftw.c */
744 int nftw(const char *path, int (*fn)(), int depth, int flags);

746 /* nl_langinfo.c */
747 char *nl_langinfo(nl_item item);

749 /* opendir.c */
750 DIR *opendir(const char *filename);

752 /* opt_data.c */

754 /* perror.c */
755 void perror(const char *s);

757 /* pipe.c */
758 int pipe(int *fds);

760 /* psiginfo.c */
761 void psiginfo(siginfo_t *sip, char *s);

763 /* psignal.c */
764 void psignal(int sig, const char *s);

766 /* pt.c */
767 char *ptsname(int fd);
768 int unlockpt(int fd);
769 int grantpt(int fd);

771 /* putenv.c */
772 int putenv(char *change);
773 int setenv(const char *envname, const char *envval, int overwrite);
774 int unsetenv(const char *name);

776 /* putpwent.c */
777 int putpwent(const struct passwd *p, FILE *f);

779 /* qsort.c */
780 void qsort(void *base, size_t n, size_t size, int (*compar)());

782 /* raise.c */
783 int raise(int sig);

785 /* rand.c */
786 void srand(unsigned x);

```

```

787 int rand(void);
788 int rand_r(unsigned int *);

790 /* random.c */
791 void srand(unsigned x);
792 char *initstate(unsigned seed, char *arg_state, size_t n);
793 char *setstate(const char *arg_state);
794 long random(void);

796 /* rctlops.c */
797 int rctl_walk(int (*callback)(const char *, void *), void *walk_data);
798 hrttime_t rctlblk_get_firing_time(rctlblk_t *rblk);
799 uint_t rctlblk_get_global_action(rctlblk_t *rblk);
800 uint_t rctlblk_get_global_flags(rctlblk_t *rblk);
801 uint_t rctlblk_get_local_action(rctlblk_t *rblk, int *signalp);
802 uint_t rctlblk_get_local_flags(rctlblk_t *rblk);
803 id_t rctlblk_get_recipient_pid(rctlblk_t *rblk);
804 rctl_priv_t rctlblk_get_privilege(rctlblk_t *rblk);
805 rctl_qty_t rctlblk_get_value(rctlblk_t *rblk);
806 void rctlblk_set_local_action(rctlblk_t *rblk, uint_t action, int signal);
807 void rctlblk_set_local_flags(rctlblk_t *rblk, uint_t flags);
808 void rctlblk_set_privilege(rctlblk_t *rblk, rctl_priv_t priv);
809 void rctlblk_set_value(rctlblk_t *rblk, rctl_qty_t val);
810 size_t rctlblk_size(void);

812 /* readdir.c */
813 struct dirent *readdir(DIR *dirp);

815 /* realpath.c */
816 char *realpath(const char *_RESTRICT_KYWD raw, char *_RESTRICT_KYWD canon);

818 /* regex.c */
819 char *re_comp(const char *sp);
820 int re_exec(const char *p1);

822 /* rindex.c */
823 char *rindex(const char *sp, int c);

825 /* rename.c */
826 int remove(const char *filename);
827 int rename(const char *old, const char *new);

829 /* rewinddir.c */
830 #undef rewinddir
831 void rewinddir(DIR *dirp);

833 /* scandir.c */
834 int alphasort(const struct dirent **, const struct dirent **);
835 int scandir(const char *dirname, struct dirent *(*namelist[]),
836             int (*select)(const struct dirent *),
837             int (*dcomp)(const struct dirent **, const struct dirent **));

839 /* scrwidth.c */
840 int scrwidth(wchar_t c);

842 /* seekdir.c */
843 void seekdir(DIR *dirp, long loc);

845 /* select.c */
846 int pselect(int nfds,
847             fd_set *_RESTRICT_KYWD readfds,
848             fd_set *_RESTRICT_KYWD writefds,
849             fd_set *_RESTRICT_KYWD errorfds,
850             const struct timespec *_RESTRICT_KYWD timeout,
851             const sigset_t *_RESTRICT_KYWD sigmask);
852 int select(int nfds,

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853             fd_set *_RESTRICT_KYWD readfds,
854             fd_set *_RESTRICT_KYWD writefds,
855             fd_set *_RESTRICT_KYWD errorfds,
856             struct timeval *_RESTRICT_KYWD timeout);

858 /* setlocale.c */
859 char *setlocale(int cat, const char *loc);

861 /* setpriority.c */
862 int getpriority(int which, id_t who);
863 int setpriority(int which, id_t who, int prio);

865 /* settimeofday.c */
866 int settimeofday(struct timeval *tp, void *);

868 /* sigflag.c */
869 int sigflag(int sig, int flag, int on);

871 /* siglist.c */

873 /* sigsend.c */
874 int sigsend(idtype_t idtype, id_t id, int sig);

876 /* sigsetops.c */
877 int sigfillset(sigset_t *set);
878 int sigemptyset(sigset_t *set);
879 int sigaddset(sigset_t *set, int sig);
880 int sigdelset(sigset_t *set, int sig);
881 int sigismember(const sigset_t *set, int sig);

883 /* scalls.c */
884 unsigned sleep(unsigned sleep_tm);

886 /* ssignal.c */
887 int (*ssignal(int sig, int (*fn)())())();
888 int gsignal(int sig);

890 /* str2id.c */

892 /* str2sig.c */
893 int str2sig(const char *s, int *sigp);
894 int sig2str(int i, char *s);

896 /* strcat.c */
897 char *strcat(char *_RESTRICT_KYWD s1, const char *_RESTRICT_KYWD s2);

899 /* strchr.c */
900 char *strchr(const char *sp, int c);

902 /* strcmp.c */
903 int strcmp(const char *s1, const char *s2);

905 /* strcpy.c */
906 char *strcpy(char *_RESTRICT_KYWD s1, const char *_RESTRICT_KYWD s2);

908 /* strcspn.c */
909 size_t strcspn(const char *string, const char *charset);

911 /* strdup.c */
912 char *strdup(const char *s1);

914 /* strerror.c */
915 char *strerror(int errnum);
916 int strerror_r(int errnum, char *strerrbuf, size_t buflen);

918 /* strftime.c */

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919 size_t strftime(char *_RESTRICT_KYWD s, size_t maxsize,
920                 const char *_RESTRICT_KYWD format,
921                 const struct tm *_RESTRICT_KYWD tm);

923 /* strlen.c */
924 size_t strlen(const char *s);

926 /* strncat.c */
927 char *strncat(char *_RESTRICT_KYWD s1, const char *_RESTRICT_KYWD s2, size_t n);

929 /* strncmp.c */
930 int strncmp(const char *s1, const char *s2, size_t n);

932 /* strncpy.c */
933 char *strncpy(char *_RESTRICT_KYWD s1, const char *_RESTRICT_KYWD s2, size_t n);

935 /* strpbrk.c */
936 char *strpbrk(const char *string, const char *brkset);

938 /* strrchr.c */
939 char *strrchr(const char *sp, int c);

941 /* strsep.c */
942 char *strsep(char **stringp, const char *delim);

944 /* strspn.c */
945 size_t strspn(const char *string, const char *charset);

947 /* strstr.c */
948 char *strstr(const char *as1, const char *as2);

950 /* strtod.c */
951 double strtod(const char *_RESTRICT_KYWD cp, char **_RESTRICT_KYWD ptr);
952 float strtof(const char *_RESTRICT_KYWD cp, char **_RESTRICT_KYWD ptr);
953 long double strtold(const char *_RESTRICT_KYWD cp, char **_RESTRICT_KYWD ptr);

955 /* strtimax.c */
956 intmax_t strtimax(const char *_RESTRICT_KYWD nptr,
957                  char **_RESTRICT_KYWD endptr, int base);

959 /* strtok.c */
960 char *strtok(char *_RESTRICT_KYWD string, const char *_RESTRICT_KYWD sepset);
961 char *strtok_r(char *_RESTRICT_KYWD, const char *_RESTRICT_KYWD,
962               char **_RESTRICT_KYWD);

964 /* strtol.c */
965 long strtol(const char *_RESTRICT_KYWD str, char **_RESTRICT_KYWD nptr,
966             int base);

968 /* strtoul.c */
969 unsigned long strtoul(const char *_RESTRICT_KYWD str,
970                      char **_RESTRICT_KYWD nptr, int base);

972 /* strtoumax.c */
973 uintmax_t strtoumax(const char *_RESTRICT_KYWD nptr,
974                    char **_RESTRICT_KYWD endptr, int base);

976 /* strxfrm.c */
977 size_t strxfrm(char *_RESTRICT_KYWD s1, const char *_RESTRICT_KYWD s2,
978               size_t n);
979 int strcoll(const char *s1, const char *s2);

981 /* swab.c */
982 void swab(const char *_RESTRICT_KYWD from, char *_RESTRICT_KYWD to, ssize_t n);

984 /* swapctl.c */

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```

985 int swapctl(int cmd, void *arg);

987 /* sysconf.c */
988 long sysconf(int name);

990 /* syslog.c */
991 /* VARARGS2 */
992 void syslog(int pri, const char *fmt, ...);
993 void vsyslog(int pri, const char *fmt, va_list ap);
994 void openlog(const char *ident, int logstat, int logfac);
995 void closelog(void);
996 int setlogmask(int pmask);

998 /* tcdrain.c */
999 int tcdrain(int fildes);

1001 /* tcflow.c */
1002 int tcflow(int fildes, int action);

1004 /* tcflush.c */
1005 int tcflush(int fildes, int queue_selector);

1007 /* tcgetattr.c */
1008 int tcgetattr(int fildes, struct termios *termios_p);

1010 /* tcgetpgrp.c */
1011 pid_t tcgetpgrp(int fd);

1013 /* tcgetsid.c */
1014 pid_t tcgetsid(int fd);

1016 /* tcseendbreak.c */
1017 int tcseendbreak(int fildes, int duration);

1019 /* tcsetattr.c */
1020 int tcsetattr(int fildes, int optional_actions,
1021              const struct termios *termios_p);

1023 /* tcsetpgrp.c */
1024 int tcsetpgrp(int fd, pid_t pgrp);

1026 /* tell.c */
1027 long tell(int f);

1029 /* telldir.c */
1030 long telldir(DIR *dirp);

1032 /* tfind.c */
1033 void *tfind(const void *ky, void *const *rtp, int (*compar)());

1035 /* time_comm.c */
1036 struct tm *localtime(const time_t *timep);
1037 struct tm *localtime_r(const time_t *_RESTRICT_KYWD, struct tm *_RESTRICT_KYWD);
1038 struct tm *gmtime(const time_t *clock);
1039 struct tm *gmtime_r(const time_t *_RESTRICT_KYWD, struct tm *_RESTRICT_KYWD);
1040 double difftime(time_t time1, time_t time0);
1041 time_t mktime(struct tm *timeptr);
1042 void _ltzset(time_t tim);
1043 void tzset(void);

1045 /* time_data.c */

1047 /* time_gdata.c */

1049 /* tolower.c */
1050 int tolower(int c);

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1052 /* toupper.c */
1053 int toupper(int c);

1055 /* truncate.c */
1056 int ftruncate(int fd, off_t len);
1057 int truncate(const char *path, off_t len);

1059 /* tsearch.c */
1060 void *tsearch(const void *ky, void **rtp, int (*compar)());
1061 void *tdelete(const void *ky, void **rtp, int (*compar)());
1062 void twalk(const void *rt, void (*action)());

1064 /* ttyname.c */
1065 char *ttyname(int f);
1066 char *ttyname_dev(dev_t rdev, char *buffer, size_t buflen);
1067 char *ttyname_r(int, char *, int);

1069 /* ttyslot.c */
1070 int ttyslot(void);

1072 /* ualarm.c */
1073 unsigned ualarm(unsigned usecs, unsigned reload);

1075 /* ulimit.c */
1076 /* VARARGS1 */
1077 long ulimit(int cmd, ...);

1079 /* scalls.c */
1080 int usleep(unsigned n);

1082 /* valloc.c */
1083 void *valloc(size_t size);

1085 /* waitpid.c */
1086 pid_t wait(int *stat_loc);
1087 pid_t waitpid(pid_t pid, int *stat_loc, int options);
1088 pid_t wait3(int *status, int options, struct rusage *rp);
1089 pid_t wait4(pid_t pid, int *status, int options, struct rusage *rusage);

1091 /* wctombs.c */
1092 size_t wctombs(char *_RESTRICT_KYWD s, const wchar_t *_RESTRICT_KYWD pwcs,
1093               size_t n);

1095 /* wctomb.c */
1096 int wctomb(char *s, wchar_t wchar);

1098 /* wdata.c */

1100 /* wisprint.c */
1101 int wisprint(wchar_t c);

1103 /* xgetwidth.c */
1104 void _xgetwidth(void);

1106 /*
1107  * /usr/src/lib/libc/port/intl routines
1108  */

1110 /* gettext.c */
1111 char *bindtextdomain(const char *domain, const char *binding);
1112 char *dcgettext(const char *domain, const char *msg_id, const int category);
1113 char *dgettext(const char *domain, const char *msg_id);
1114 char *gettext(const char *msg_id);
1115 char *textdomain(const char *domain);

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1117 /*
1118  * /usr/src/lib/libc/port/print routines
1119  */

1121 /* fprintf.c */
1122 /* VARARGS2 */
1123 int fprintf(FILE *_RESTRICT_KYWD iop, const char *_RESTRICT_KYWD format, ...);

1125 /* printf.c */
1126 /* VARARGS1 */
1127 int printf(const char *_RESTRICT_KYWD format, ...);

1129 /* snprintf.c */
1130 /* VARARGS2 */
1131 int snprintf(char *_RESTRICT_KYWD string, size_t n,
1132              const char *_RESTRICT_KYWD format, ...);

1134 /* sprintf.c */
1135 /* VARARGS2 */
1136 int sprintf(char *_RESTRICT_KYWD string,
1137             const char *_RESTRICT_KYWD format, ...);

1139 /* vfprintf.c */
1140 /* VARARGS2 */
1141 int vfprintf(FILE *_RESTRICT_KYWD iop, const char *_RESTRICT_KYWD format,
1142             va_list);

1144 /* vprintf.c */
1145 /* VARARGS1 */
1146 int vprintf(const char *_RESTRICT_KYWD format, va_list);

1148 /* vsnprintf.c */
1149 /* VARARGS2 */
1150 int vsnprintf(char *_RESTRICT_KYWD string, size_t n,
1151              const char *_RESTRICT_KYWD format, va_list);

1153 /* vsprintf.c */
1154 /* VARARGS2 */
1155 int vsprintf(char *_RESTRICT_KYWD string, const char *_RESTRICT_KYWD format,
1156             va_list);

1158 /*
1159  * /usr/src/lib/libc/port/regex routines
1160  */

1162 /* glob.c */
1163 extern int glob(const char *restrict pattern, int flags,
1164               int (*errfunc)(const char *epath, int eerrno), glob_t *restrict pglob);
1165 extern void globfree(glob_t *pglob);

1167 /* regex.c */
1168 char *regex(const char *regexp, const char *stringp, ...);
1169 #ifdef __loc1
1170 #undef __loc1
1171 #endif
1172 char *__loc1;

1174 /* regcmp.c */
1175 char *regcmp(const char *regexp, ...);
1176 #ifdef __i_size
1177 #undef __i_size
1178 #endif
1179 int __i_size;

1181 /*
1182  * /usr/src/lib/libc/port/stdio routines

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```

1183 */
1185 /* _filbuf.c */
1186 int _filbuf(FILE *iop);
1188 /* _flsbuf.c */
1189 int _flsbuf(int ch, FILE *iop);
1191 /* _wrtchk.c */
1192 int _wrtchk(FILE *iop);
1194 /* clearerr.c */
1195 void clearerr(FILE *iop);
1197 /* ctermid.c */
1198 char *ctermid(char *s);
1199 char *ctermid_r(char *s);
1201 /* cuserid.c */
1202 char *cuserid(char *s);
1204 /* data.c */
1206 /* doscan.c */
1207 int _doscan(FILE *iop, const char *fmt, va_list va_alist);
1209 /* fdopen.c */
1210 FILE *fdopen(int fd, const char *type);
1212 /* feof.c */
1213 int feof(FILE *iop);
1215 /* ferror.c */
1216 int ferror(FILE *iop);
1218 /* fgetc.c */
1219 int fgetc(FILE *iop);
1221 /* fgets.c */
1222 char *fgets(char *_RESTRICT_KYWD buf, int size, FILE *_RESTRICT_KYWD iop);
1224 /* fileno.c */
1225 int _fileno(FILE *iop);
1227 /* flush.c */
1228 void _cleanup(void);
1229 FILE *_findiop(void);
1230 typedef unsigned char Uchar;
1231 void _setbufend(FILE *iop, Uchar *end);
1232 Uchar *_realbufend(FILE *iop);
1233 void _bufsync(FILE *iop, Uchar *bufend);
1234 int _xflsbuf(FILE *iop);
1235 int fflush(FILE *iop);
1236 int fclose(FILE *iop);
1238 /* fopen.c */
1239 FILE *fopen(const char *_RESTRICT_KYWD name, const char *_RESTRICT_KYWD type);
1240 FILE *freopen(const char *_RESTRICT_KYWD name, const char *_RESTRICT_KYWD type,
1241               FILE *_RESTRICT_KYWD iop);
1243 /* fpos.c */
1244 int fgetpos(FILE *_RESTRICT_KYWD stream, fpos_t *_RESTRICT_KYWD pos);
1245 int fsetpos(FILE *stream, const fpos_t *pos);
1247 /* fputc.c */
1248 int fputc(int ch, FILE *iop);

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1250 /* fputs.c */
1251 int fputs(const char *_RESTRICT_KYWD ptr, FILE *_RESTRICT_KYWD iop);
1253 /* fread.c */
1254 size_t fread(const void *_RESTRICT_KYWD ptr, size_t size, size_t count,
1255              FILE *_RESTRICT_KYWD iop);
1257 /* fseek.c */
1258 int fseek(FILE *iop, long offset, int ptrname);
1260 /* ftell.c */
1261 long ftell(FILE *iop);
1263 /* fwrite.c */
1264 size_t fwrite(const void *_RESTRICT_KYWD ptr1, size_t size, size_t count,
1265              FILE *_RESTRICT_KYWD iop);
1267 /*getc.c */
1268 int getc(FILE *iop);
1270 /* getchar.c */
1271 int getchar(void);
1273 /* getpass.c */
1274 char *getpass(const char *prompt);
1276 /* getpass.c */
1277 char *getpassphrase(const char *prompt);
1279 /* gets.c */
1280 char *gets(char *buf);
1282 /* getw.c */
1283 int getw(FILE *stream);
1285 /* popen.c */
1286 FILE *popen(const char *cmd, const char *mode);
1287 int pclose(FILE *ptr);
1289 /* putc.c */
1290 int putc(int ch, FILE *iop);
1292 /* putchar.c */
1293 int putchar(int ch);
1295 /* puts.c */
1296 int puts(const char *ptr);
1298 /* putw.c */
1299 int putw(int w, FILE *stream);
1301 /* rewind.c */
1302 void rewind(FILE *iop);
1304 /* scanf.c */
1305 /* VARARGS1 */
1306 int scanf(const char *_RESTRICT_KYWD fmt, ...);
1308 /* VARARGS2 */
1309 int fscanf(FILE *_RESTRICT_KYWD iop, const char *_RESTRICT_KYWD fmt, ...);
1311 /* VARARGS2 */
1312 int sscanf(const char *_RESTRICT_KYWD str, const char *_RESTRICT_KYWD fmt, ...);
1314 /* setbuf.c */

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```

1315 void setbuf(FILE *_RESTRICT_KYWD iop, char *_RESTRICT_KYWD abuf);

1317 /* setvbuf.c */
1318 int setvbuf(FILE *_RESTRICT_KYWD iop, char *_RESTRICT_KYWD abuf, int type,
1319             size_t size);

1321 /* system.c */
1322 int system(const char *s);

1324 /* tempnam.c */
1325 char *tempnam(const char *dir, const char *pfx);

1327 /* tmpfile.c */
1328 FILE *tmpfile(void);

1330 /* tmpnam.c */
1331 char *tmpnam(char *s);
1332 char *tmpnam_r(char *);

1334 /* ungetc.c */
1335 int ungetc(int c, FILE *iop);

1337 /*
1338  * /usr/src/lib/libc/port/sys routines
1339  */

1341 /* exacctsys.c */
1342 size_t getacct(idtype_t idtype, id_t id, void *buf, size_t bufsize);
1343 int putacct(idtype_t idtype, id_t id, void *buf, size_t bufsize, int flags);
1344 int wracct(idtype_t idtype, id_t id, int flags);

1346 /* execl.c */
1347 /* VARARGS1 */
1348 int execl(const char *name, const char *, ...);

1350 /* execle.c */
1351 int execle(const char *, const char *file, ...);

1353 /* execv.c */
1354 int execv(const char *file, char *const *argv);

1356 /* lockf.c */
1357 int lockf(int fildes, int function, off_t size);

1359 /* meminfosys.c */
1360 int meminfo(const uint64_t *inaddr, int addr_count, const uint_t *info_req,
1361            int info_count, uint64_t *outdata, uint_t *validity);

1363 /* msgsys.c */
1364 int msgget(key_t key, int msgflg);
1365 int msgctl(int msqid, int cmd, struct msqid_ds *buf);
1366 ssize_t msgrcv(int msqid, void *msgp, size_t msgsz, long msgtyp, int msgflg);
1367 int msgsnd(int msqid, const void *msgp, size_t msgsz, int msgflg);

1369 /* nfssys.c */
1370 /*
1371 int exportfs(char *dir, struct export *ep);
1372 int nfs_getfh(char *path, fh_t *fhp);
1373 int nfssvc(int fd);
1374 */

1376 /* psetsys.c */
1377 int pset_create(psetid_t *npset);
1378 int pset_destroy(psetid_t pset);
1379 int pset_assign(psetid_t pset, processorid_t cpu, psetid_t *opset);
1380 int pset_assign_forced(psetid_t pset, processorid_t cpu, psetid_t *opset);

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1381 int pset_info(psetid_t pset, int *type, u_int *numcpus, processorid_t *cpulist);
1382 int pset_bind(psetid_t pset, idtype_t idtype, id_t id, psetid_t *opset);
1383 int pset_bind_lwp(psetid_t pset, id_t id, pid_t, psetid_t *opset);
1384

1386 /* rctlsys.c */
1387 int getrctl(const char *name, rctlblk_t *old_rblk, rctlblk_t *new_rblk,
1388             int flags);
1389 int setrctl(const char *name, rctlblk_t *old_rblk, rctlblk_t *new_rblk,
1390             int flags);
1391 /* (private functions) */
1392 int setprojrctl(const char *name, rctlblk_t *new_rblk, size_t size, int flags);
1393 int rctlctl(const char *, rctlblk_t *, int);
1394 size_t rctlolist(char *, size_t);

1397 /* semsys.c */
1398 int semctl(int semid, int semnum, int cmd, ...);
1399 int semget(key_t key, int nsems, int semflg);
1400 int semop(int semid, struct sembuf *sops, size_t nsops);

1402 /* shmsys.c */
1403 void *shmat(int shmid, const void *shmaddr, int shmflg);
1404 int shmctl(int shmid, int cmd, struct shmid_ds *buf);
1405 #if defined(_XOPEN_SOURCE) && (_XOPEN_VERSION - 0 == 4)
1406 int shmdt(const void *);
1407 #else
1408 int shmdt(char *);
1409 #endif /* defined(_XOPEN_SOURCE) && (_XOPEN_VERSION - 0 == 4) */
1410 int shmget(key_t key, size_t size, int shmflg);

1412 /* tasksys.c */
1413 taskid_t settaskid(projid_t project, uint_t flags);
1414 taskid_t gettaskid(void);
1415 projid_t getprojid(void);

1417 /*
1418  * /usr/src/lib/libc/port/widec routines
1419  */

1421 /* fgetws.c */
1422 wchar_t *fgetws(wchar_t *_RESTRICT_KYWD ptr, int size,
1423                FILE *_RESTRICT_KYWD iop);

1425 /* fputwc.c */
1426 wint_t fputwc(wint_t wc, FILE *iop);
1427 wint_t putwc(wint_t wc, FILE *iop);

1429 /* fputws.c */
1430 int fputws(const wchar_t *_RESTRICT_KYWD ptr, FILE *_RESTRICT_KYWD iop);

1432 /* getwchar.c */
1433 wint_t getwchar(void);

1435 /* getwidth.c */
1436 void getwidth(eucwidth_t *eucstruct);

1438 /* getws.c */
1439 wchar_t *getws(wchar_t *ptr);

1441 /* iswctype.c */
1442 int iswctype(wint_t wc, wctype_t charclass);
1443 int iswalph(wint_t c);
1444 int iswupper(wint_t c);
1445 int iswlower(wint_t c);
1446 int iswdigit(wint_t c);

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1447 int iswxdigit(wint_t c);
1448 int iswalnum(wint_t c);
1449 int iswspace(wint_t c);
1450 int iswpunct(wint_t c);
1451 int iswprint(wint_t c);
1452 int iswgraph(wint_t c);
1453 int iswcntrl(wint_t c);
1454 int isphongram(wint_t c);
1455 int isideogram(wint_t c);
1456 int isenglish(wint_t c);
1457 int isnumber(wint_t c);
1458 int isspecial(wint_t c);

1460 /* libwcollate.c */

1462 /* putwchar.c */
1463 wint_t putwchar(wint_t c);

1465 /* putws.c */
1466 int putws(const wchar_t *ptr);

1468 /* scrwidth.c */

1470 /* strtows.c */
1471 wchar_t *strtows(wchar_t *s1, char *s2);
1472 char *wstostr(char *s1, wchar_t *s2);

1474 /* trwctype.c */
1475 wint_t towupper(wint_t c);
1476 wint_t towlower(wint_t c);

1478 /* ungetwc.c */
1479 wint_t ungetwc(wint_t wc, FILE *iop);

1481 /* wcollate.c */
1482 size_t wcsxfrm(wchar_t *_RESTRICT_KYWD s1, const wchar_t *_RESTRICT_KYWD s2,
1483               size_t n);
1484 int wscoll(const wchar_t *s1, const wchar_t *s2);

1486 /* wcsftime.c */
1487 #if !defined(__amd64) /* XX64 - fix me */
1488 size_t wcsftime(wchar_t *wcs, size_t maxsize,
1489               const char *format, const struct tm *timeptr);
1490 #endif /* __amd64 */

1492 /* wcstring.c */
1493 wint_t fgetwc(FILE *iop);
1494 wint_t getwc(FILE *iop);
1495 int wcwidth(wchar_t wc);
1496 int wcswidth(const wchar_t *pwcs, size_t n);

1498 /* wcsvcs.c */
1499 wchar_t *wcswcs(const wchar_t *ws1, const wchar_t *ws2);

1501 /* wcsxfrm.c - empty file! */

1503 /* wcsxfrm.xpg4.c */

1505 /* wisprint.c */
1506 int wisprint(wchar_t c);

1508 /* wscasecmp.c */
1509 int wscasecmp(const wchar_t *s1, const wchar_t *s2);

1511 /* wscat.c */
1512 wchar_t *wscat(wchar_t *_RESTRICT_KYWD s1, const wchar_t *_RESTRICT_KYWD s2);

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1513 wchar_t *wscat(wchar_t *s1, const wchar_t *s2);

1515 /* wschr.c */
1516 wchar_t *wschr(const wchar_t *sp, wchar_t c);
1517 wchar_t *wschr(const wchar_t *sp, wchar_t c);

1519 /* wscmp.c */
1520 int wscmp(const wchar_t *s1, const wchar_t *s2);
1521 int wscmp(const wchar_t *s1, const wchar_t *s2);

1523 /* wscol.c */
1524 int wscol(const wchar_t *s1);

1526 /* wscpy.c */
1527 wchar_t *wscpy(wchar_t *_RESTRICT_KYWD s1, const wchar_t *_RESTRICT_KYWD s2);
1528 wchar_t *wscpy(wchar_t *s1, const wchar_t *s2);

1530 /* wscspn.c */
1531 size_t wscspn(const wchar_t *string, const wchar_t *charset);
1532 size_t wscspn(const wchar_t *string, const wchar_t *charset);

1534 /* wsdup.c */
1535 wchar_t *wsdup(const wchar_t *s1);

1537 /* wslen.c */
1538 size_t wslen(const wchar_t *s);
1539 size_t wslen(const wchar_t *s);

1541 /* wsnasecmp.c */
1542 int wsnasecmp(const wchar_t *s1, const wchar_t *s2, size_t n);

1544 /* wsnat.c */
1545 wchar_t *wsnecat(wchar_t *_RESTRICT_KYWD s1, const wchar_t *_RESTRICT_KYWD s2,
1546                size_t n);
1547 wchar_t *wsnecat(wchar_t *s1, const wchar_t *s2, size_t n);

1549 /* wsncmp.c */
1550 int wsncmp(const wchar_t *s1, const wchar_t *s2, size_t n);
1551 int wsncmp(const wchar_t *s1, const wchar_t *s2, size_t n);

1553 /* wsncpy.c */
1554 wchar_t *wsnncpy(wchar_t *_RESTRICT_KYWD s1, const wchar_t *_RESTRICT_KYWD s2,
1555                size_t n);
1556 wchar_t *wsnncpy(wchar_t *s1, const wchar_t *s2, size_t n);

1558 /* wspbkr.c */
1559 wchar_t *wspbkr(const wchar_t *string, const wchar_t *brkset);
1560 wchar_t *wspbkr(const wchar_t *string, const wchar_t *brkset);

1562 /* wsprintf.c */
1563 int wsprintf(wchar_t *wstring, const char *format, ...);

1565 /* wsrchr.c */
1566 wchar_t *wsrchr(const wchar_t *sp, wchar_t c);
1567 wchar_t *wsrchr(const wchar_t *sp, wchar_t c);

1569 /* wsscanf.c */
1570 int wsscanf(wchar_t *s, const char *format, ...);

1572 /* wssize.c */

1574 /* wssp.c */
1575 size_t wssp(const wchar_t *string, const wchar_t *charset);
1576 size_t wssp(const wchar_t *string, const wchar_t *charset);

1578 /* wstod.c */

```

```

1579 double wcstod(const wchar_t *_RESTRICT_KYWD cp, wchar_t **_RESTRICT_KYWD ptr);
1580 float wstof(const wchar_t *_RESTRICT_KYWD cp, wchar_t **_RESTRICT_KYWD ptr);
1581 long double wcstold(const wchar_t *_RESTRICT_KYWD cp,
1582     wchar_t **_RESTRICT_KYWD ptr);
1583 double wstod(const wchar_t *cp, wchar_t **ptr);

1585 /* wstok.c */
1586 #if !defined(__amd64)           /* XX64 - fix me */
1587 wchar_t *wcstok(wchar_t *string, const wchar_t *sepset);
1588 wchar_t *wstok(wchar_t *string, const wchar_t *sepset);
1589 #endif /* __amd64 */

1591 /* wcstol.c */
1592 long wcstol(const wchar_t *_RESTRICT_KYWD str, wchar_t **_RESTRICT_KYWD ptr,
1593     int base);
1594 long long wcstoll(const wchar_t *_RESTRICT_KYWD str,
1595     wchar_t **_RESTRICT_KYWD ptr, int base);

1597 /* wcstoul.c */
1598 unsigned long wcstoul(const wchar_t *_RESTRICT_KYWD str,
1599     wchar_t **_RESTRICT_KYWD ptr, int base);
1600 unsigned long long wcstoull(const wchar_t *_RESTRICT_KYWD str,
1601     wchar_t **_RESTRICT_KYWD ptr, int base);

1603 /* wcstoimax.c */
1604 intmax_t wcstoimax(const wchar_t *_RESTRICT_KYWD nptr,
1605     wchar_t **_RESTRICT_KYWD endptr, int base);
1606 uintmax_t wcstoumax(const wchar_t *_RESTRICT_KYWD nptr,
1607     wchar_t **_RESTRICT_KYWD endptr, int base);

1609 /* wstol.c */
1610 long wstol(const wchar_t *str, wchar_t **ptr, int base);

1612 /* wstoll.c */
1613 long long wstoll(const wchar_t *str, wchar_t **ptr, int base);
1614 long long watoll(const wchar_t *p);

1616 /* wsxfrm.c */
1617 size_t wsxfrm(wchar_t *s1, const wchar_t *s2, size_t n);
1618 int wscoll(const wchar_t *s1, const wchar_t *s2);

1620 /*
1621  * /usr/src/lib/libc/port/gen/event_port.c
1622  */
1623 int port_dispatch(int port, int flags, int source, int events, uintptr_t object,
1624     void *user);

1626 /*
1627  * /usr/src/lib/libc/$MACH/gen routines
1628  */

1630 /* alloca.s */

1632 void *__builtin_alloca(size_t);

1634 /*
1635  * modctl(int arg, ...) and utssys(...) are not available from a header
1636  * file, but our utilities which make use of it should be able to be
1637  * lint clean.
1638  */
1639 int modctl(int arg, ...);
1640 int utssys(void *buf, int arg, int type, void *outbp);

1643 typedef float single;
1644 typedef unsigned extended[3];

```

```

1645 typedef long double quadruple;
1646 typedef unsigned fp_exception_field_type;

1648 typedef char decimal_string[512];

1650 enum fp_class_type {
1651     fp_zero = 0,
1652     fp_subnormal = 1,
1653     fp_normal = 2,
1654     fp_infinity = 3,
1655     fp_quiet = 4,
1656     fp_signaling = 5
1657 };
    unchanged_portion_omitted

```

new/usr/src/lib/libc/port/mapfile-vers

1

```
*****
54824 Wed Sep  4 20:46:01 2013
new/usr/src/lib/libc/port/mapfile-vers
2989 Eliminate use of LOGNAME_MAX in ON
1166 useradd have warning with name more 8 chars
*****
1 #
2 # CDDL HEADER START
3 #
4 # The contents of this file are subject to the terms of the
5 # Common Development and Distribution License (the "License").
6 # You may not use this file except in compliance with the License.
7 #
8 # You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE
9 # or http://www.opensolaris.org/os/licensing.
10 # See the License for the specific language governing permissions
11 # and limitations under the License.
12 #
13 # When distributing Covered Code, include this CDDL HEADER in each
14 # file and include the License file at usr/src/OPENSOLARIS.LICENSE.
15 # If applicable, add the following below this CDDL HEADER, with the
16 # fields enclosed by brackets "[]" replaced with your own identifying
17 # information: Portions Copyright [yyyy] [name of copyright owner]
18 #
19 # CDDL HEADER END
20 #
21 #
22 # Copyright (c) 2006, 2010, Oracle and/or its affiliates. All rights reserved.
23 #
24 # Copyright 2010 Nexenta Systems, Inc. All rights reserved.
25 # Use is subject to license terms.
26 #
27 # Copyright (c) 2012 by Delphix. All rights reserved.
28 # Copyright (c) 2013, OmniTI Computer Consulting, Inc. All rights reserved.
29 # Copyright (c) 2013 Gary Mills
30 #
31 #
32 #
33 # MAPFILE HEADER START
34 #
35 # WARNING: STOP NOW. DO NOT MODIFY THIS FILE.
36 # Object versioning must comply with the rules detailed in
37 #
38 #     usr/src/lib/README.mapfiles
39 #
40 # You should not be making modifications here until you've read the most current
41 # copy of that file. If you need help, contact a gatekeeper for guidance.
42 #
43 # MAPFILE HEADER END
44 #
45 #
46 $mapfile_version 2
47 #
48 #
49 # All function names added to this or any other libc mapfile
50 # must be placed under the 'protected:' designation.
51 # The 'global:' designation is used *only* for data
52 # items and for the members of the malloc() family.
53 #
54 #
55 #
56 # README README README README README README: how to update this file
57 # 1) each version of Solaris/OpenSolaris gets a version number.
58 # (Actually since Solaris is actually a series of OpenSolaris releases
59 # we'll just use OpenSolaris for this exercise.)
60 # OpenSolaris 2008.11 gets 1.23
```

new/usr/src/lib/libc/port/mapfile-vers

2

```
61 # OpenSolaris 2009.04 gets 1.24
62 # etc.
63 # 2) each project integration uses a unique version number.
64 # PSARC/2008/123 gets 1.24.1
65 # PSARC/2008/456 gets 1.24.2
66 # etc.
67 #
68 #
69 # Mnemonic conditional input identifiers:
70 #
71 #
72 # - amd64, i386, sparc32, sparcv9: Correspond to ISA subdirectories used to
73 # hold per-platform code. Note however that we use 'sparc32' instead of
74 # 'sparc'. Since '_sparc' is predefined to apply to, all sparc platforms,
75 # naming the 32-bit version 'sparc' would be too likely to cause errors.
76 #
77 # - lf64: Defined on platforms that offer the 32-bit largefile APIs
78 #
79 $if _ELF32
80 $add lf64
81 $endif
82 $if _sparc && _ELF32
83 $add sparc32
84 $endif
85 $if _sparc && _ELF64
86 $add sparcv9
87 $endif
88 $if _x86 && _ELF32
89 $add i386
90 $endif
91 $if _x86 && _ELF64
92 $add amd64
93 $endif
94 #
95 SYMBOL_VERSION ILLUMOS_0.5 { # common C++ ABI exit handlers
96     protected:
97         __cxa_atexit;
98         __cxa_finalize;
99 } ILLUMOS_0.4;
100 unchanged portion omitted
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2582     __memcpy           { FLAGS = NODYNSORT };
2583     __memmove;
2584     __memset;
2585     __modff             { TYPE = FUNCTION; FILTER = libm.so.2 };
2586     __nan_read;
2587     __nan_written;
2588     __nextwctype;
2589     __nis_debug_bind;
2590     __nis_debug_calls;
2591     __nis_debug_file;
2592     __nis_debug_rpc;
2593     __nis_prefsrv;
2594     __nis_preftype;
2595     __nis_server;
2596     __nss_default_finders;
2597     __progname          { FLAGS = NODIRECT };
2598     __smbuf;
2599     __sp;
2600     __strdupa_str       { FLAGS = NODIRECT };
2601     __strdupa_len       { FLAGS = NODIRECT };
2602     __tdb_bootstrap;
2603     __threaded;
2604     thr_probe_getfunc_addr;
2605     __trans_lower;
2606     __trans_upper;
2607     __uberdata;
2608     __xpg6              { FLAGS = NODIRECT };

2610 $if _ELF32
2611     __dladdr            { TYPE = FUNCTION; FILTER = /usr/lib/ld.so.1 };
2612     __dladdr1           { TYPE = FUNCTION; FILTER = /usr/lib/ld.so.1 };
2613     __dlclose           { TYPE = FUNCTION; FILTER = /usr/lib/ld.so.1 };
2614     __dldump            { TYPE = FUNCTION; FILTER = /usr/lib/ld.so.1 };
2615     __dlderror          { TYPE = FUNCTION; FILTER = /usr/lib/ld.so.1 };
2616     __dlinfo            { TYPE = FUNCTION; FILTER = /usr/lib/ld.so.1 };
2617     __dlmopen           { TYPE = FUNCTION; FILTER = /usr/lib/ld.so.1 };
2618     __dlopen            { TYPE = FUNCTION; FILTER = /usr/lib/ld.so.1 };
2619     __dlsym             { TYPE = FUNCTION; FILTER = /usr/lib/ld.so.1 };
2620     __ld_libc           { TYPE = FUNCTION; FILTER = /usr/lib/ld.so.1 };
2621     __sys_errlist;
2622     __sys_errs;
2623     __sys_index;
2624     __sys_nerr          { FLAGS = NODYNSORT };
2625     __sys_num_err;
2626 $elif sparcv9
2627     __dladdr            { TYPE = FUNCTION; FILTER = /usr/lib/sparcv9/ld.so.1 };
2628     __dladdr1           { TYPE = FUNCTION; FILTER = /usr/lib/sparcv9/ld.so.1 };
2629     __dlclose           { TYPE = FUNCTION; FILTER = /usr/lib/sparcv9/ld.so.1 };
2630     __dldump            { TYPE = FUNCTION; FILTER = /usr/lib/sparcv9/ld.so.1 };
2631     __dlderror          { TYPE = FUNCTION; FILTER = /usr/lib/sparcv9/ld.so.1 };
2632     __dlinfo            { TYPE = FUNCTION; FILTER = /usr/lib/sparcv9/ld.so.1 };
2633     __dlmopen           { TYPE = FUNCTION; FILTER = /usr/lib/sparcv9/ld.so.1 };
2634     __dlopen            { TYPE = FUNCTION; FILTER = /usr/lib/sparcv9/ld.so.1 };
2635     __dlsym             { TYPE = FUNCTION; FILTER = /usr/lib/sparcv9/ld.so.1 };
2636     __ld_libc           { TYPE = FUNCTION; FILTER = /usr/lib/sparcv9/ld.so.1 };
2637 $elif amd64
2638     __dladdr            { TYPE = FUNCTION; FILTER = /usr/lib/amd64/ld.so.1 };
2639     __dladdr1           { TYPE = FUNCTION; FILTER = /usr/lib/amd64/ld.so.1 };
2640     __dlamd64getunwind { TYPE = FUNCTION; FILTER = /usr/lib/amd64/ld.so.1 };
2641     __dlclose           { TYPE = FUNCTION; FILTER = /usr/lib/amd64/ld.so.1 };
2642     __dldump            { TYPE = FUNCTION; FILTER = /usr/lib/amd64/ld.so.1 };
2643     __dlderror          { TYPE = FUNCTION; FILTER = /usr/lib/amd64/ld.so.1 };
2644     __dlinfo            { TYPE = FUNCTION; FILTER = /usr/lib/amd64/ld.so.1 };
2645     __dlmopen           { TYPE = FUNCTION; FILTER = /usr/lib/amd64/ld.so.1 };
2646     __dlopen            { TYPE = FUNCTION; FILTER = /usr/lib/amd64/ld.so.1 };
2647     __dlsym             { TYPE = FUNCTION; FILTER = /usr/lib/amd64/ld.so.1 };

```

```

2648     __ld_libc          { TYPE = FUNCTION; FILTER = /usr/lib/amd64/ld.so.1 };
2649 $else
2650 $error unknown platform
2651 $endif

2653 $if _sparc
2654     __lyday_to_month;
2655     __mon_lengths;
2656     __yday_to_month;
2657 $endif
2658 $if i386
2659     __sse_hw;
2660 $endif

2662     protected:
2663     acctctl;
2664     allocids;
2665     __assert_c99;
2666     __assert_c99;
2667     __assfail;
2668     attr_count;
2669     attr_to_data_type;
2670     attr_to_name;
2671     attr_to_option;
2672     attr_to_xattr_view;
2673     __autofs;
2674     __bufsync;
2675     __cladm;
2676     __class_quaduple;
2677     core_get_default_content;
2678     core_get_default_path;
2679     core_get_global_content;
2680     core_get_global_path;
2681     core_get_options;
2682     core_get_process_content;
2683     core_get_process_path;
2684     core_set_default_content;
2685     core_set_default_path;
2686     core_set_global_content;
2687     core_set_global_path;
2688     core_set_options;
2689     core_set_process_content;
2690     core_set_process_path;
2691     dbm_close_status;
2692     dbm_do_nextkey;
2693     dbm_setdefwrite;
2694     __D_cplx_div;
2695     __D_cplx_div_ix;
2696     __D_cplx_div_rx;
2697     __D_cplx_mul;
2698     defclose_r;
2699     defcntl;
2700     defcntl_r;
2701     defopen;
2702     defopen_r;
2703     defread;
2704     defread_r;
2705     __delete;
2706     __dgettext;
2707     __doprnt;
2708     __doscan;
2709     __errfp;
2710     __errxfp;
2711     exportfs;
2712     __F_cplx_div;
2713     __F_cplx_div_ix;

```

```

2714     _F_cplx_div_rx;
2715     _F_cplx_mul;
2716     __fgetwc_xpg5;
2717     __fgetws_xpg5;
2718     _findbuf;
2719     _findiop;
2720     __fini_daemon_priv;
2721     _finite;
2722     _forkl                { FLAGS = NODYNSORT };
2723     _forkall              { FLAGS = NODYNSORT };
2724     _fpclass;
2725     _fpgetmask;
2726     _fpgetround;
2727     _fpgetsticky;
2728     _fprintf;
2729     _fpsetmask;
2730     _fpsetround;
2731     _fpsetsticky;
2732     __fputwc_xpg5;
2733     __fputws_xpg5;
2734     _ftw;
2735     _gcvt;
2736     _getarg;
2737     __getcontext;
2738     _getdents;
2739     _get_exit_frame_monitor;
2740     _getfp;
2741     _getgroupsbymember;
2742     _getlogin_r;
2743     getloginx;
2744     getloginx_r;
2745     _getsp;
2746     __gettsp;
2747     getvmusage;
2748     __getwchar_xpg5;
2749     __getwc_xpg5;
2750     gtty;
2751     __idmap_flush_kcache;
2752     __idmap_reg;
2753     __idmap_unreg;
2754     __init_daemon_priv;
2755     __init_suid_priv;
2756     _insert;
2757     inst_sync;
2758     _iswctype;
2759     klpd_create;
2760     klpd_getpath;
2761     klpd_getport;
2762     klpd_getucred;
2763     klpd_register;
2764     klpd_register_id;
2765     klpd_unregister;
2766     klpd_unregister_id;
2767     _lgrp_home_fast      { FLAGS = NODYNSORT };
2768     _lgrpsys;
2769     _lltostr;
2770     _lock_clear;
2771     _lock_try;
2772     _ltzset;
2773     lwp_self;
2774     makeut;
2775     makeutx;
2776     _mbftowc;
2777     mcfiller;
2778     mntopt;
2779     modctl;

```

```

2780     modutx;
2781     msgctl64;
2782     __multi_innetgr;
2783     __mutex_destroy      { FLAGS = NODYNSORT };
2784     mutex_held;
2785     __mutex_init        { FLAGS = NODYNSORT };
2786     __mutex_unlock      { FLAGS = NODYNSORT };
2787     name_to_attr;
2788     nfs_getfh;
2789     nfssvc;
2790     _nfssys;
2791     __nis_get_environment;
2792     __nss_db_state_destr;
2793     nss_default_key2str;
2794     nss_delete;
2795     nss_endent;
2796     nss_getent;
2797     __nss_initf_group;
2798     __nss_initf_netgroup;
2799     __nss_initf_passwd;
2800     __nss_initf_shadow;
2801     nss_packed_arg_init;
2802     nss_packed_context_init;
2803     nss_packed_getkey;
2804     nss_packed_set_status;
2805     nss_search;
2806     nss_setent;
2807     __nss_XbyY_fgets;
2808     __nsw_extended_action_v1;
2809     __nsw_freeconfig_v1;
2810     __nsw_getconfig_v1;
2811     _nthreads;
2812     __openattdirat;
2813     option_to_attr;
2814     posix_getloginx_r;
2815     __priv_bracket;
2816     __priv_relinquish;
2817     pset_assign_forced;
2818     pset_bind_lwp;
2819     _psignal;
2820     _pthread_setcleanupinit;
2821     __putwchar_xpg5;
2822     __putwc_xpg5;
2823     rctlctl;
2824     rctlld;
2825     _realbufend;
2826     _resume;
2827     _resume_ret;
2828     _rpcsys;
2829     _sbrk_grow_aligned;
2830     scrwidth;
2831     semctl64;
2832     __semctl64;
2833     set_setcontext_enforcement;
2834     __setbufend;
2835     __set_errno;
2836     setprojctl;
2837     _setregid;
2838     _setreuid;
2839     setsigacthandler;
2840     shmctl64;
2841     __shmctl64;
2842     sigflag;
2843     _signal;
2844     _sigoff;
2845     _sigon;

```

```

2846     _so_accept;
2847     _so_bind;
2848     _sockconfig;
2849     _so_connect;
2850     _so_getpeername;
2851     _so_getsockname;
2852     _so_getsockopt;
2853     _so_listen;
2854     _so_recv;
2855     _so_recvfrom;
2856     _so_recvmsg;
2857     _so_send;
2858     _so_sendmsg;
2859     _so_sendto;
2860     _so_setsockopt;
2861     _so_shutdown;
2862     _so_socket;
2863     _so_socketpair;
2864     str2group;
2865     str2passwd;
2866     str2spwd;
2867     __strptime_dontzero;
2868     tty;
2869     syscall;
2870     _sysconfig;
2871     __systemcall;
2872     thr_continue_allmutators;
2873     _thr_continue_allmutators;
2874     thr_continue_mutator;
2875     _thr_continue_mutator;
2876     thr_getstate;
2877     _thr_getstate;
2878     thr_mutators_barrier;
2879     _thr_mutators_barrier;
2880     thr_probe_setup;
2881     _thr_schedctl;
2882     thr_setmutator;
2883     _thr_setmutator;
2884     thr_setstate;
2885     _thr_setstate;
2886     thr_sighndlrinfo;
2887     _thr_sighndlrinfo;
2888     _thr_slot_offset;
2889     thr_suspend_allmutators;
2890     _thr_suspend_allmutators;
2891     thr_suspend_mutator;
2892     _thr_suspend_mutator;
2893     thr_wait_mutator;
2894     _thr_wait_mutator;
2895     __tls_get_addr;
2896     tpool_create;
2897     tpool_dispatch;
2898     tpool_destroy;
2899     tpool_wait;
2900     tpool_suspend;
2901     tpool_suspended;
2902     tpool_resume;
2903     tpool_member;
2904     _ttyname_dev;
2905     _ucred_alloc;
2906     ucred_getamask;
2907     _ucred_getamask;
2908     ucred_getasid;
2909     _ucred_getasid;
2910     ucred_getatid;
2911     _ucred_getatid;

```

```

2912     ucred_getatid;
2913     _ucred_getatid;
2914     _ulltostr;
2915     _uncached_getgrgid_r;
2916     _uncached_getgrnam_r;
2917     _uncached_getpwnam_r;
2918     _uncached_getpwuid_r;
2919     __ungetwc_xpg5;
2920     _unordered;
2921     utssys;
2922     _verrfp;
2923     _verrxfp;
2924     _vwarnfp;
2925     _vwarnxfp;
2926     _warnfp;
2927     _warnxfp;
2928     __wcsftime_xpg5;
2929     __wcstok_xpg5;
2930     wdbindf;
2931     wdchkind;
2932     wddelim;
2933     _wrtchk;
2934     _xflsbuf;
2935     _xgetwidth;
2936     zone_add_datalink;
2937     zone_boot;
2938     zone_check_datalink;
2939     zone_create;
2940     zone_destroy;
2941     zone_enter;
2942     zone_getattr;
2943     zone_get_id;
2944     zone_list;
2945     zone_list_datalink;
2946     zonept;
2947     zone_remove_datalink;
2948     zone_setattr;
2949     zone_shutdown;
2950     zone_version;

2952 $if _ELF32
2953     __divdi3;
2954     _file_set;
2955     _fprintf_c89;
2956     _fscanf_c89;
2957     _fwprintf_c89;
2958     _fwscanf_c89;
2959     _imaxabs_c89;
2960     _imaxdiv_c89;
2961     __moddi3;
2962     _printf_c89;
2963     _scanf_c89;
2964     _snprintf_c89;
2965     _sprintf_c89;
2966     _sscanf_c89;
2967     _strtoimax_c89;
2968     _strtoumax_c89;
2969     _swprintf_c89;
2970     _swscanf_c89;
2971     __udivdi3;
2972     __umoddi3;
2973     _vfprintf_c89;
2974     _vfscanf_c89;
2975     _vfwprintf_c89;
2976     _vfwscanf_c89;
2977     _vprintf_c89;

```

```

2978     _vscanf_c89;
2979     _vsnprintf_c89;
2980     _vsprintf_c89;
2981     _vsscanf_c89;
2982     _vswprintf_c89;
2983     _vswscanf_c89;
2984     _vwprintf_c89;
2985     _vwscanf_c89;
2986     _wcstolmax_c89;
2987     _wcstoulmax_c89;
2988     _wprintf_c89;
2989     _wscanf_c89;
2990 $endif

```

```

2992 $if _sparc
2993     _cerror;
2994     install_utrap;
2995     _install_utrap;
2996     nop;
2997     _Q_cplx_div;
2998     _Q_cplx_div_ix;
2999     _Q_cplx_div_rx;
3000     _Q_cplx_lr_div;
3001     _Q_cplx_lr_div_ix;
3002     _Q_cplx_lr_div_rx;
3003     _Q_cplx_lr_mul;
3004     _Q_cplx_mul;
3005     _QgetRD;
3006     _xregs_clrptr;
3007 $endif

```

```

3009 $if sparc32
3010     __ashldi3;
3011     __ashrdi3;
3012     _cerror64;
3013     __cmpdi2;
3014     __floatdidf;
3015     __floatdisf;
3016     __floatundidf;
3017     __floatundisf;
3018     __lshrdi3;
3019     __muldi3;
3020     __ucmpdi2;
3021 $endif

```

```

3023 $if _x86
3024     _D_cplx_lr_div;
3025     _D_cplx_lr_div_ix;
3026     _D_cplx_lr_div_rx;
3027     _F_cplx_lr_div;
3028     _F_cplx_lr_div_ix;
3029     _F_cplx_lr_div_rx;
3030     __fltrounds;
3031     sysi86;
3032     _sysi86;
3033     _X_cplx_div;
3034     _X_cplx_div_ix;
3035     _X_cplx_div_rx;
3036     _X_cplx_lr_div;
3037     _X_cplx_lr_div_ix;
3038     _X_cplx_lr_div_rx;
3039     _X_cplx_mul;
3040     __xgetRD;
3041     __xtol;
3042     __xtoll;
3043     __xtoul;

```

```

3044     __xtoull;
3045 $endif

3047 $if i386
3048     __divrem64;
3049     __tls_get_addr;
3050     __udivrem64;
3051 $endif

```

```

3053 # The following functions should not be exported from libc,
3054 # but /lib/libm.so.2, some older versions of the Studio
3055 # compiler/debugger components, and some ancient programs
3056 # found in /usr/dist reference them. When we no longer
3057 # care about these old and broken binary objects, these
3058 # symbols should be deleted.

```

```

3059     _brk                                { FLAGS = NODYNSORT };
3060     _cond_broadcast                     { FLAGS = NODYNSORT };
3061     _cond_init                          { FLAGS = NODYNSORT };
3062     _cond_signal                        { FLAGS = NODYNSORT };
3063     _cond_wait                          { FLAGS = NODYNSORT };
3064     _ecvt                               { FLAGS = NODYNSORT };
3065     _fcvt                               { FLAGS = NODYNSORT };
3066     _getc_unlocked                     { FLAGS = NODYNSORT };
3067     _llseek                            { FLAGS = NODYNSORT };
3068     _pthread_attr_getdetachstate        { FLAGS = NODYNSORT };
3069     _pthread_attr_getinheritsched      { FLAGS = NODYNSORT };
3070     _pthread_attr_getschedparam        { FLAGS = NODYNSORT };
3071     _pthread_attr_getschedpolicy       { FLAGS = NODYNSORT };
3072     _pthread_attr_getscope              { FLAGS = NODYNSORT };
3073     _pthread_attr_getstackaddr         { FLAGS = NODYNSORT };
3074     _pthread_attr_getstacksize         { FLAGS = NODYNSORT };
3075     _pthread_attr_init                  { FLAGS = NODYNSORT };
3076     _pthread_condattr_getpshared       { FLAGS = NODYNSORT };
3077     _pthread_condattr_init             { FLAGS = NODYNSORT };
3078     _pthread_cond_init                 { FLAGS = NODYNSORT };
3079     _pthread_create                     { FLAGS = NODYNSORT };
3080     _pthread_getschedparam              { FLAGS = NODYNSORT };
3081     _pthread_join                       { FLAGS = NODYNSORT };
3082     _pthread_key_create                 { FLAGS = NODYNSORT };
3083     _pthread_mutexattr_getprioceiling  { FLAGS = NODYNSORT };
3084     _pthread_mutexattr_getprotocol     { FLAGS = NODYNSORT };
3085     _pthread_mutexattr_getpshared      { FLAGS = NODYNSORT };
3086     _pthread_mutexattr_init            { FLAGS = NODYNSORT };
3087     _pthread_mutex_getprioceiling      { FLAGS = NODYNSORT };
3088     _pthread_mutex_init                { FLAGS = NODYNSORT };
3089     _pthread_sigmask                   { FLAGS = NODYNSORT };
3090     _rwlock_init                       { FLAGS = NODYNSORT };
3091     _rw_rdlock                         { FLAGS = NODYNSORT };
3092     _rw_unlock                         { FLAGS = NODYNSORT };
3093     _rw_wrlock                         { FLAGS = NODYNSORT };
3094     _sbrk_unlocked                     { FLAGS = NODYNSORT };
3095     _select                            { FLAGS = NODYNSORT };
3096     _sema_init                         { FLAGS = NODYNSORT };
3097     _sema_post                         { FLAGS = NODYNSORT };
3098     _sema_trywait                      { FLAGS = NODYNSORT };
3099     _sema_wait                         { FLAGS = NODYNSORT };
3100     _sysfs                             { FLAGS = NODYNSORT };
3101     _thr_create                        { FLAGS = NODYNSORT };
3102     _thr_exit                          { FLAGS = NODYNSORT };
3103     _thr_getprio                       { FLAGS = NODYNSORT };
3104     _thr_getspecific                   { FLAGS = NODYNSORT };
3105     _thr_join                          { FLAGS = NODYNSORT };
3106     _thr_keycreate                     { FLAGS = NODYNSORT };
3107     _thr_kill                          { FLAGS = NODYNSORT };
3108     _thr_main                          { FLAGS = NODYNSORT };
3109     _thr_self                          { FLAGS = NODYNSORT };

```

```
3110      _thr_setspecific      { FLAGS = NODYNSORT };
3111      _thr_sigsetmask        { FLAGS = NODYNSORT };
3112      _thr_stksegment        { FLAGS = NODYNSORT };
3113      _ungetc_unlocked       { FLAGS = NODYNSORT };

3115      local:
3116      __imax_lldiv           { FLAGS = NODYNSORT };
3117      __ti_thr_self         { FLAGS = NODYNSORT };
3118      *;

3120 $if lf64
3121      _seekdir64            { FLAGS = NODYNSORT };
3122      _telldir64           { FLAGS = NODYNSORT };
3123 $endif

3125 $if _sparc
3126      __cerror              { FLAGS = NODYNSORT };
3127 $endif

3129 $if sparc32
3130      __cerror64            { FLAGS = NODYNSORT };
3131 $endif

3133 $if sparcv9
3134      __cleanup             { FLAGS = NODYNSORT };
3135 $endif

3137 $if i386
3138      _syscall6             { FLAGS = NODYNSORT };
3139      __systemcall6         { FLAGS = NODYNSORT };
3140 $endif

3142 $if amd64
3143      __tls_get_addr        { FLAGS = NODYNSORT };
3144 $endif
3145 };
_____unchanged_portion_omitted_____
```



new/usr/src/man/man1/ps.1

1

\*\*\*\*\*

25709 Wed Sep 4 20:46:01 2013

new/usr/src/man/man1/ps.1

2989 Eliminate use of LOGNAME\_MAX in ON

1166 useradd have warning with name more 8 chars

\*\*\*\*\*

```
1 \" te
2.\" Copyright 1989 AT&T
3.\" Copyright (c) 2009, Sun Microsystems, Inc. All Rights Reserved
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5.\" Copyright (c) 2013 Gary Mills
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12.\" The contents of this file are subject to the terms of the Common Development
13.\" See the License for the specific language governing permissions and limitat
14.\" the fields enclosed by brackets \"[]\" replaced with your own identifying info
15.TH PS 1 \"Apr 16, 2013\"
16.TH PS 1 \"Aug 16, 2009\"
17.SH NAME
18.ps \- report process status
19.SH SYNOPSIS
20.LP
21.nf
21 \fBps\fR [\fB-aAcdefjHlLPWyZ\fR] [\fB-g\fR \fIgrplist\fR] [\fB-h\fR \fIhgrplist\fR]
20 \fBps\fR [\fB-aAcdefjHlLPyZ\fR] [\fB-g\fR \fIgrplist\fR] [\fB-h\fR \fIhgrplist\fR]
22 [\fB-n\fR \fIinamelist\fR] [\fB-o\fR \fIformat\fR]... [\fB-p\fR \fIproclist\fR]
23 [\fB-s\fR \fIisidlist\fR] [\fB-t\fR \fIterm\fR] [\fB-u\fR \fIuidlist\fR] [\fB-
24 [\fB-G\fR \fIgidlist\fR] [\fB-z\fR \fIzonelist\fR]
25 .fi
27.SH DESCRIPTION
28.sp
29.LP
30 The \fBps\fR command prints information about active processes. Without
31 options, \fBps\fR prints information about processes that have the same
32 effective user \fBUID\fR and the same controlling terminal as the invoker. The
33 output contains only the process \fBUID\fR, terminal identifier, cumulative
34 execution time, and the command name. Otherwise, the information that is
35 displayed is controlled by the options.
36.sp
37.LP
38 Some options accept lists as arguments. Items in a list can be either separated
39 by commas or else enclosed in quotes and separated by commas or spaces. Values
40 for \fIproclist\fR and \fIgrplist\fR must be numeric.
41.SH OPTIONS
42.sp
43.LP
44 The following options are supported:
45.sp
46.ne 2
47.na
48 \fBfbB-a\fR \fR \fR
49 .ad
50 .RS 15n
51 Lists information about \fBa\fR processes most frequently requested: all
52 those except session leaders and processes not associated with a terminal.
53 .RE
55 .sp
56 .ne 2
57 .na
58 \fBfbB-A\fR \fR \fR
```

new/usr/src/man/man1/ps.1

2

```
59 .ad
60 .RS 15n
61 Lists information for all processes. Identical to \fB-e\fR, below.
62 .RE
64 .sp
65 .ne 2
66 .na
67 \fBfbB-c\fR \fR \fR
68 .ad
69 .RS 15n
70 Prints information in a format that reflects scheduler properties as described
71 in \fBpriosctl\fR(1). The \fB-c\fR option affects the output of the \fB-f\fR
72 and \fB-l\fR options, as described below.
73 .RE
75 .sp
76 .ne 2
77 .na
78 \fBfbB-d\fR \fR \fR
79 .ad
80 .RS 15n
81 Lists information about all processes except session leaders.
82 .RE
84 .sp
85 .ne 2
86 .na
87 \fBfbB-e\fR \fR \fR
88 .ad
89 .RS 15n
90 Lists information about \fBe\fR every process now running.
91 .sp
92 When the \fB-e\fR option is specified, options \fB-z\fR, \fB-t\fR, \fB-u\fR,
93 \fB-U\fR, \fB-g\fR, \fB-G\fR, \fB-p\fR, \fB-g\fR, \fB-s\fR and \fB-a\fR options
94 have no effect.
95 .RE
97 .sp
98 .ne 2
99 .na
100 \fBfbB-f\fR \fR \fR
101 .ad
102 .RS 15n
103 Generates a \fBfbB-fRull listing. (See below for significance of columns in a
104 full listing.)
105 .RE
107 .sp
108 .ne 2
109 .na
110 \fBfbB-g\fR \fIgrplist\fR \fR \fR
111 .ad
112 .RS 15n
113 Lists only process data whose group leader's \fBUID\fR number(s) appears in
114 \fIgrplist\fR. (A group leader is a process whose process \fBUID\fR number is
115 identical to its process group \fBUID\fR number.)
116 .RE
118 .sp
119 .ne 2
120 .na
121 \fBfbB-G\fR \fIgidlist\fR \fR \fR
122 .ad
123 .RS 15n
124 Lists information for processes whose real group ID numbers are given in
```

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125 \fIgidlist\fR. The \fIgidlist\fR must be a single argument in the form of a
126 blank- or comma-separated list.
127 .RE

129 .sp
130 .ne 2
131 .na
132 \fB\fB-h\fR \fIlgprlist\fR\fR
133 .ad
134 .RS 15n
135 Lists only the processes homed to the specified \fIlgprlist\fR. Nothing is
136 listed for any invalid group specified in \fIlgprlist\fR.
137 .RE

139 .sp
140 .ne 2
141 .na
142 \fB\fB-H\fR\fR
143 .ad
144 .RS 15n
145 Prints the home lgroup of the process under an additional column header, LGRP.
146 .RE

148 .sp
149 .ne 2
150 .na
151 \fB\fB-j\fR\fR
152 .ad
153 .RS 15n
154 Prints session \fBID\fR and process group \fBID\fR.
155 .RE

157 .sp
158 .ne 2
159 .na
160 \fB\fB-l\fR\fR
161 .ad
162 .RS 15n
163 Generates a \fBl\fRong listing. (See below.)
164 .RE

166 .sp
167 .ne 2
168 .na
169 \fB\fB-L\fR\fR
170 .ad
171 .RS 15n
172 Prints information about each light weight process (\fIlwp\fR) in each selected
173 process. (See below.)
174 .RE

176 .sp
177 .ne 2
178 .na
179 \fB\fB-n\fR \fInamelist\fR\fR
180 .ad
181 .RS 15n
182 Specifies the name of an alternative system \fInamelist\fR file in place of the
183 default. This option is accepted for compatibility, but is ignored.
184 .RE

186 .sp
187 .ne 2
188 .na
189 \fB\fB-o\fR \fIformat\fR\fR
190 .ad

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191 .RS 15n
192 Prints information according to the format specification given in \fIformat\fR.
193 This is fully described in \fBDISPLAY FORMATS\fR. Multiple \fB-o\fR options can
194 be specified; the format specification is interpreted as the
195 space-character-separated concatenation of all the \fIformat\fR
196 option-arguments.
197 .RE

199 .sp
200 .ne 2
201 .na
202 \fB\fB-p\fR \fIproclist\fR\fR
203 .ad
204 .RS 15n
205 Lists only process data whose process \fBID\fR numbers are given in
206 \fIproclist\fR.
207 .RE

209 .sp
210 .ne 2
211 .na
212 \fB\fB-P\fR\fR
213 .ad
214 .RS 15n
215 Prints the number of the processor to which the process or lwp is bound, if
216 any, under an additional column header, \fBPSR\fR.
217 .RE

219 .sp
220 .ne 2
221 .na
222 \fB\fB-s\fR \fIsidlist\fR\fR
223 .ad
224 .RS 15n
225 Lists information on all session leaders whose \fBID\fRs appear in
226 \fIsidlist\fR.
227 .RE

229 .sp
230 .ne 2
231 .na
232 \fB\fB-t\fR \fIterm\fR\fR
233 .ad
234 .RS 15n
235 Lists only process data associated with \fIterm\fR. Terminal identifiers are
236 specified as a device file name, and an identifier. For example, \fBterm/a\fR,
237 or \fBpts/0\fR.
238 .RE

240 .sp
241 .ne 2
242 .na
243 \fB\fB-u\fR \fIuidlist\fR\fR
244 .ad
245 .RS 15n
246 Lists only process data whose effective user \fBID\fR number or login name is
247 given in \fIuidlist\fR. In the listing, the numerical user \fBID\fR is printed
248 unless you give the \fB-f\fR option, which prints the login name.
249 .RE

251 .sp
252 .ne 2
253 .na
254 \fB\fB-U\fR \fIuidlist\fR\fR
255 .ad
256 .RS 15n

```

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257 Lists information for processes whose real user \fBID\fR numbers or login names
258 are given in \fIuidlist\fR. The \fIuidlist\fR must be a single argument in the
259 form of a blank- or comma-separated list.
260 .RE

262 .sp
263 .ne 2
264 .na
265 \fB\fB-W\fR\fR
266 .ad
267 .RS 15n
268 Truncate long names even when \fBps\fR would normally print them
269 in full.
270 A trailing asterisk marks a long name that has been truncated
271 to fit the column.
272 .RE

274 .sp
275 .ne 2
276 .na
277 \fB\fB-y\fR\fR
278 .ad
279 .RS 15n
280 Under a long listing (\fB-l\fR), omits the obsolete \fBFBF\fR and \fBADDR\fR
281 columns and includes an \fBRSS\fR column to report the resident set size of the
282 process. Under the \fB-y\fR option, both \fBRSS\fR and \fBSZ\fR (see below) is
283 reported in units of kilobytes instead of pages.
284 .RE

286 .sp
287 .ne 2
288 .na
289 \fB\fB-z\fR \fIzonelist\fR
290 .ad
291 .RS 15n
292 Lists only processes in the specified zones. Zones can be specified either by
293 name or ID. This option is only useful when executed in the global zone.
294 .RE

296 .sp
297 .ne 2
298 .na
299 \fB\fB-Z\fR\fR
300 .ad
301 .RS 15n
302 Prints the name of the zone with which the process is associated under an
303 additional column header, \fBZONE\fR. The \fBZONE\fR column width is limited to
304 8 characters. Use \fBps\fR \fB-eZ\fR for a quick way to see information about
305 every process now running along with the associated zone name. Use
306 .sp
307 .in +2
308 .nf
309 ps -eo zone,uid,pid,ppid,time,comm,...
310 .fi
311 .in -2
312 .sp

314 to see zone names wider than 8 characters.
315 .RE

317 .sp
318 .LP
319 Many of the options shown are used to select processes to list. If any are
320 specified, the default list is ignored and \fBps\fR selects the processes
321 represented by the inclusive OR of all the selection-criteria options.
322 .SH DISPLAY FORMATS

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323 .sp
324 .LP
325 Under the \fB-f\fR option, \fBps\fR tries to determine the command name and
326 arguments given when the process was created by examining the user block.
327 Failing this, the command name is printed, as it would have appeared without
328 the \fB-f\fR option, in square brackets.
329 .sp
330 .LP
331 The column headings and the meaning of the columns in a \fBps\fR listing are
332 given below; the letters \fBf\fR and \fBl\fR indicate the option (\fBfBull\fR or
333 \fBl\fRong, respectively) that causes the corresponding heading to appear;
334 \fBfBall\fR means that the heading always appears. \fBNote:\fR These two options
335 determine only what information is provided for a process; they do not
336 determine which processes are listed.
337 .sp
338 .ne 2
339 .na
340 \fB\fBFBF\fR(1)\fR
341 .ad
342 .RS 14n
343 Flags (hexadecimal and additive) associated with the process. These flags are
344 available for historical purposes; no meaning should be currently ascribed to
345 them.
346 .RE

348 .sp
349 .ne 2
350 .na
351 \fB\fBFS\fR (1)\fR
352 .ad
353 .RS 14n
354 The state of the process:
355 .sp
356 .ne 2
357 .na
358 \fBfBO\fR
359 .ad
360 .RS 5n
361 Process is running on a processor.
362 .RE

364 .sp
365 .ne 2
366 .na
367 \fBfBS\fR
368 .ad
369 .RS 5n
370 Sleeping: process is waiting for an event to complete.
371 .RE

373 .sp
374 .ne 2
375 .na
376 \fBfBR\fR
377 .ad
378 .RS 5n
379 Runnable: process is on run queue.
380 .RE

382 .sp
383 .ne 2
384 .na
385 \fBfBT\fR
386 .ad
387 .RS 5n
388 Process is stopped, either by a job control signal or because it is being

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389 traced.
390 .RE

392 .sp
393 .ne 2
394 .na
395 \fB\fR
396 .ad
397 .RS 5n
398 Waiting: process is waiting for CPU usage to drop to the CPU-caps enforced
399 limits.
400 .RE

402 .sp
403 .ne 2
404 .na
405 \fBZ\fR
406 .ad
407 .RS 5n
408 Zombie state: process terminated and parent not waiting.
409 .RE

411 .RE

413 .sp
414 .ne 2
415 .na
416 \fB\fBUID\fR (f,l)\fR
417 .ad
418 .RS 14n
419 The effective user \fBID\fR number of the process (the login name is printed
420 under the \fB-f\fR option).
421 A trailing asterisk marks a long name that has been truncated
422 to fit the column.
423 .RE

425 .sp
426 .ne 2
427 .na
428 \fB\fBPID\fR(all)\fR
429 .ad
430 .RS 14n
431 The process \fBID\fR of the process (this datum is necessary in order to kill a
432 process).
433 .RE

435 .sp
436 .ne 2
437 .na
438 \fB\fBPPID\fR(f,l)\fR
439 .ad
440 .RS 14n
441 The process \fBID\fR of the parent process.
442 .RE

444 .sp
445 .ne 2
446 .na
447 \fB\fBC\fR(f,l)\fR
448 .ad
449 .RS 14n
450 Processor utilization for scheduling (obsolete). Not printed when the \fB-c\fR
451 option is used.
452 .RE

454 .sp

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```

455 .ne 2
456 .na
457 \fB\fBCLS\fR(f,l)\fR
458 .ad
459 .RS 14n
460 Scheduling class. Printed only when the \fB-c\fR option is used.
461 .RE

463 .sp
464 .ne 2
465 .na
466 \fB\fBPRI\fR(l)\fR
467 .ad
468 .RS 14n
469 The priority of the process. Without the \fB-c\fR option, higher numbers mean
470 lower priority. With the \fB-c\fR option, higher numbers mean higher priority.
471 .RE

473 .sp
474 .ne 2
475 .na
476 \fB\fBNI\fR(l)\fR
477 .ad
478 .RS 14n
479 Nice value, used in priority computation. Not printed when the \fB-c\fR option
480 is used. Only processes in the certain scheduling classes have a nice value.
481 .RE

483 .sp
484 .ne 2
485 .na
486 \fB\fBADDR\fR(l)\fR
487 .ad
488 .RS 14n
489 The memory address of the process.
490 .RE

492 .sp
493 .ne 2
494 .na
495 \fB\fBSZ\fR(l)\fR
496 .ad
497 .RS 14n
498 The total size of the process in virtual memory, including all mapped files and
499 devices, in pages. See \fBpagesize\fR(l).
500 .RE

502 .sp
503 .ne 2
504 .na
505 \fB\fBWCHAN\fR(l)\fR
506 .ad
507 .RS 14n
508 The address of an event for which the process is sleeping (if blank, the
509 process is running).
510 .RE

512 .sp
513 .ne 2
514 .na
515 \fB\fBSTIME\fR(f)\fR
516 .ad
517 .RS 14n
518 The starting time of the process, given in hours, minutes, and seconds. (A
519 process begun more than twenty-four hours before the \fBps\fR inquiry is
520 executed is given in months and days.)

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```

521 .RE

523 .sp
524 .ne 2
525 .na
526 \fB\fBTty\fR(all)\fR
527 .ad
528 .RS 14n
529 The controlling terminal for the process (the message, \fB?\fR, is printed when
530 there is no controlling terminal).
531 .RE

533 .sp
534 .ne 2
535 .na
536 \fB\fBTime\fR(all)\fR
537 .ad
538 .RS 14n
539 The cumulative execution time for the process.
540 .RE

542 .sp
543 .ne 2
544 .na
545 \fB\fBLTime\fR(all)\fR
546 .ad
547 .RS 14n
548 The execution time for the lwp being reported.
549 .RE

551 .sp
552 .ne 2
553 .na
554 \fB\fBCmd\fR(all)\fR
555 .ad
556 .RS 14n
557 The command name (the full command name and its arguments, up to a limit of 80
558 characters, are printed under the \fB-f\fR option).
559 .RE

561 .sp
562 .LP
563 The following two additional columns are printed when the \fB-j\fR option is
564 specified:
565 .sp
566 .ne 2
567 .na
568 \fB\fBPGID\fR\fR
569 .ad
570 .RS 8n
571 The process ID of the process group leader.
572 .RE

574 .sp
575 .ne 2
576 .na
577 \fB\fBSID\fR\fR
578 .ad
579 .RS 8n
580 The process ID of the session leader.
581 .RE

583 .sp
584 .LP
585 The following two additional columns are printed when the \fB-L\fR option is
586 specified:

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587 .sp
588 .ne 2
589 .na
590 \fB\fBLWP\fR\fR
591 .ad
592 .RS 8n
593 The lwp ID of the lwp being reported.
594 .RE

596 .sp
597 .ne 2
598 .na
599 \fB\fBNLWP\fR\fR
600 .ad
601 .RS 8n
602 The number of lwps in the process (if \fB-f\fR is also specified).
603 .RE

605 .sp
606 .LP
607 Under the \fB-L\fR option, one line is printed for each lwp in the process and
608 the time-reporting fields \fB\fBTime\fR and \fB\fBLTime\fR show the values for the
609 lwp, not the process. A traditional single-threaded process contains only one
610 lwp.
611 .sp
612 .LP
613 A process that has exited and has a parent, but has not yet been waited for by
614 the parent, is marked \fB<defunct>\fR&.
615 .SS "\fB-o\fR format"
616 .sp
617 .LP
618 The \fB-o\fR option allows the output format to be specified under user
619 control.
620 .sp
621 .LP
622 The format specification must be a list of names presented as a single
623 argument, blank- or comma-separated. Each variable has a default header. The
624 default header can be overridden by appending an equals sign and the new text
625 of the header. The rest of the characters in the argument is used as the header
626 text. The fields specified are written in the order specified on the command
627 line, and should be arranged in columns in the output. The field widths are
628 selected by the system to be at least as wide as the header text (default or
629 overridden value). If the header text is null, such as \fB-o\fR \fIuser=\fR
630 the field width is at least as wide as the default header text.
631 Long names are not truncated in this mode.
632 If all header text fields are null, no header line is written.
633 the field width is at least as wide as the default header text. If all header
634 text fields are null, no header line is written.
635 .sp
636 .LP
637 The following names are recognized in the POSIX locale:
638 .sp
639 .ne 2
640 .na
641 \fB\fBuser\fR\fR
642 .ad
643 .RS 10n
644 The effective user \fB\fBID\fR of the process. This is the textual user \fB\fBID\fR,
645 if it can be obtained and the field width permits, or a decimal representation
646 otherwise.
647 .RE

647 .sp
648 .ne 2
649 .na
650 \fB\fBBruser\fR\fR

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651 .ad
652 .RS 10n
653 The real user \fBID\fR of the process. This is the textual user \fBID\fR, if it
654 can be obtained and the field width permits, or a decimal representation
655 otherwise.
656 .RE

658 .sp
659 .ne 2
660 .na
661 \fB\fBgroup\fR\fR
662 .ad
663 .RS 10n
664 The effective group \fBID\fR of the process. This is the textual group
665 \fBID\fR if it can be obtained and the field width permits, or a decimal
666 representation otherwise.
667 .RE

669 .sp
670 .ne 2
671 .na
672 \fB\fBrgroup\fR\fR
673 .ad
674 .RS 10n
675 The real group \fBID\fR of the process. This is the textual group \fBID\fR if
676 it can be obtained and the field width permits, or a decimal representation
677 otherwise.
678 .RE

680 .sp
681 .ne 2
682 .na
683 \fB\fBpid\fR\fR
684 .ad
685 .RS 10n
686 The decimal value of the process \fBID\fR.
687 .RE

689 .sp
690 .ne 2
691 .na
692 \fB\fBppid\fR\fR
693 .ad
694 .RS 10n
695 The decimal value of the parent process \fBID\fR.
696 .RE

698 .sp
699 .ne 2
700 .na
701 \fB\fBpgid\fR\fR
702 .ad
703 .RS 10n
704 The decimal value of the process group \fBID\fR.
705 .RE

707 .sp
708 .ne 2
709 .na
710 \fB\fBpcpu\fR\fR
711 .ad
712 .RS 10n
713 The ratio of CPU time used recently to CPU time available in the same period,
714 expressed as a percentage. The meaning of ``recently'' in this context is
715 unspecified. The CPU time available is determined in an unspecified manner.
716 .RE

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718 .sp
719 .ne 2
720 .na
721 \fB\fBvsz\fR\fR
722 .ad
723 .RS 10n
724 The total size of the process in virtual memory, in kilobytes.
725 .RE

727 .sp
728 .ne 2
729 .na
730 \fB\fBnice\fR\fR
731 .ad
732 .RS 10n
733 The decimal value of the system scheduling priority of the process. See
734 \fBnice(1)\fR.
735 .RE

737 .sp
738 .ne 2
739 .na
740 \fB\fBetime\fR\fR
741 .ad
742 .RS 10n
743 In the POSIX locale, the elapsed time since the process was started, in the
744 form:
745 .sp
746 \fB[\fR\fR\fR\fR-\fB]\fR\fR\fR\fR:\fB]\fR\fR\fR\fR:\fB]\fR\fR\fR\fR
747 .sp
748 where
749 .sp
750 .ne 2
751 .na
752 \fB\fR\fR\fR\fR
753 .ad
754 .RS 6n
755 is the number of days
756 .RE

758 .sp
759 .ne 2
760 .na
761 \fB\fR\fR\fR\fR
762 .ad
763 .RS 6n
764 is the number of hours
765 .RE

767 .sp
768 .ne 2
769 .na
770 \fB\fR\fR\fR\fR
771 .ad
772 .RS 6n
773 is the number of minutes
774 .RE

776 .sp
777 .ne 2
778 .na
779 \fB\fR\fR\fR\fR
780 .ad
781 .RS 6n
782 is the number of seconds

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783 .RE

785 The \fidd\fR field is a decimal integer. The \fIhh\fR, \fImm\fR and \fIss\fR
786 fields is two-digit decimal integers padded on the left with zeros.
787 .RE

789 .sp
790 .ne 2
791 .na
792 \fB\fBtime\fR\fR
793 .ad
794 .RS 10n
795 In the POSIX locale, the cumulative CPU time of the process in the form:
796 .sp
797 \fB[\fR\fidd\fR-\fB]\fR\fIhh\fR:\fImm\fR:\fIss\fR
798 .sp
799 The \fidd\fR, \fIhh\fR, \fImm\fR, and \fIss\fR fields is as described in the
800 \fBetime\fR specifier.
801 .RE

803 .sp
804 .ne 2
805 .na
806 \fB\fBtty\fR\fR
807 .ad
808 .RS 10n
809 The name of the controlling terminal of the process (if any) in the same format
810 used by the \fBwho\fR(1) command.
811 .RE

813 .sp
814 .ne 2
815 .na
816 \fB\fBcomm\fR\fR
817 .ad
818 .RS 10n
819 The name of the command being executed (\fBargv[0]\fR value) as a string.
820 .RE

822 .sp
823 .ne 2
824 .na
825 \fB\fBargs\fR\fR
826 .ad
827 .RS 10n
828 The command with all its arguments as a string. The implementation might
829 truncate this value to the field width; it is implementation-dependent whether
830 any further truncation occurs. It is unspecified whether the string represented
831 is a version of the argument list as it was passed to the command when it
832 started, or is a version of the arguments as they might have been modified by
833 the application. Applications cannot depend on being able to modify their
834 argument list and having that modification be reflected in the output of
835 \fBps\fR. The Solaris implementation limits the string to 80 bytes; the string
836 is the version of the argument list as it was passed to the command when it
837 started.
838 .RE

840 .sp
841 .LP
842 The following names are recognized in the Solaris implementation:
843 .sp
844 .ne 2
845 .na
846 \fB\fBf\fR\fR
847 .ad
848 .RS 11n

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849 Flags (hexadecimal and additive) associated with the process.
850 .RE

852 .sp
853 .ne 2
854 .na
855 \fB\fBs\fR\fR
856 .ad
857 .RS 11n
858 The state of the process.
859 .RE

861 .sp
862 .ne 2
863 .na
864 \fB\fBc\fR\fR
865 .ad
866 .RS 11n
867 Processor utilization for scheduling (obsolete).
868 .RE

870 .sp
871 .ne 2
872 .na
873 \fB\fBuid\fR\fR
874 .ad
875 .RS 11n
876 The effective user \fBUID\fR number of the process as a decimal integer.
877 .RE

879 .sp
880 .ne 2
881 .na
882 \fB\fBuid\fR\fR
883 .ad
884 .RS 11n
885 The real user \fBUID\fR number of the process as a decimal integer.
886 .RE

888 .sp
889 .ne 2
890 .na
891 \fB\fBgid\fR\fR
892 .ad
893 .RS 11n
894 The effective group \fBUID\fR number of the process as a decimal integer.
895 .RE

897 .sp
898 .ne 2
899 .na
900 \fB\fBrgid\fR\fR
901 .ad
902 .RS 11n
903 The real group \fBUID\fR number of the process as a decimal integer.
904 .RE

906 .sp
907 .ne 2
908 .na
909 \fB\fBprojid\fR\fR
910 .ad
911 .RS 11n
912 The project \fBUID\fR number of the process as a decimal integer.
913 .RE

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915 .sp
916 .ne 2
917 .na
918 \fB\fBproject\fR\fR
919 .ad
920 .RS 11n
921 The project \fBID\fR of the process as a textual value if that value can be
922 obtained; otherwise, as a decimal integer.
923 .RE

925 .sp
926 .ne 2
927 .na
928 \fB\fBzoneid\fR\fR
929 .ad
930 .RS 11n
931 The zone \fBID\fR number of the process as a decimal integer.
932 .RE

934 .sp
935 .ne 2
936 .na
937 \fB\fBzone\fR\fR
938 .ad
939 .RS 11n
940 The zone \fBID\fR of the process as a textual value if that value can be
941 obtained; otherwise, as a decimal integer.
942 .RE

944 .sp
945 .ne 2
946 .na
947 \fB\fBsid\fR\fR
948 .ad
949 .RS 11n
950 The process ID of the session leader.
951 .RE

953 .sp
954 .ne 2
955 .na
956 \fB\fBtaskid\fR\fR
957 .ad
958 .RS 11n
959 The task \fBID\fR of the process.
960 .RE

962 .sp
963 .ne 2
964 .na
965 \fB\fBclass\fR\fR
966 .ad
967 .RS 11n
968 The scheduling class of the process.
969 .RE

971 .sp
972 .ne 2
973 .na
974 \fB\fBpri\fR\fR
975 .ad
976 .RS 11n
977 The priority of the process. Higher numbers mean higher priority.
978 .RE

980 .sp

```

```

981 .ne 2
982 .na
983 \fB\fBopri\fR\fR
984 .ad
985 .RS 11n
986 The obsolete priority of the process. Lower numbers mean higher priority.
987 .RE

989 .sp
990 .ne 2
991 .na
992 \fB\fBlwp\fR\fR
993 .ad
994 .RS 11n
995 The decimal value of the lwp \fBID\fR. Requesting this formatting option causes
996 one line to be printed for each lwp in the process.
997 .RE

999 .sp
1000 .ne 2
1001 .na
1002 \fB\fBlwp\fR\fR
1003 .ad
1004 .RS 11n
1005 The number of lwps in the process.
1006 .RE

1008 .sp
1009 .ne 2
1010 .na
1011 \fB\fBpsr\fR\fR
1012 .ad
1013 .RS 11n
1014 The number of the processor to which the process or lwp is bound.
1015 .RE

1017 .sp
1018 .ne 2
1019 .na
1020 \fB\fBpset\fR\fR
1021 .ad
1022 .RS 11n
1023 The \fBID\fR of the processor set to which the process or lwp is bound.
1024 .RE

1026 .sp
1027 .ne 2
1028 .na
1029 \fB\fBaddr\fR\fR
1030 .ad
1031 .RS 11n
1032 The memory address of the process.
1033 .RE

1035 .sp
1036 .ne 2
1037 .na
1038 \fB\fBosz\fR\fR
1039 .ad
1040 .RS 11n
1041 The total size of the process in virtual memory, in pages.
1042 .RE

1044 .sp
1045 .ne 2
1046 .na

```



```

1047 \fB\fBwchan\fR\fR
1048 .ad
1049 .RS 11n
1050 The address of an event for which the process is sleeping (if \f(mi, the process
1051 is running).
1052 .RE

1054 .sp
1055 .ne 2
1056 .na
1057 \fB\fBstime\fR\fR
1058 .ad
1059 .RS 11n
1060 The starting time or date of the process, printed with no blanks.
1061 .RE

1063 .sp
1064 .ne 2
1065 .na
1066 \fB\fBbrss\fR\fR
1067 .ad
1068 .RS 11n
1069 The resident set size of the process, in kilobytes. The \fBbrss\fR value
1070 reported by \fBps\fR is an estimate provided by \fBproc\fR(4) that might
1071 underestimate the actual resident set size. Users who wish to get more accurate
1072 usage information for capacity planning should use \fBpmap\fR(1) \fB-x\fR
1073 instead.
1074 .RE

1076 .sp
1077 .ne 2
1078 .na
1079 \fB\fBpmem\fR\fR
1080 .ad
1081 .RS 11n
1082 The ratio of the process's resident set size to the physical memory on the
1083 machine, expressed as a percentage.
1084 .RE

1086 .sp
1087 .ne 2
1088 .na
1089 \fB\fBfname\fR\fR
1090 .ad
1091 .RS 11n
1092 The first 8 bytes of the base name of the process's executable file.
1093 .RE

1095 .sp
1096 .ne 2
1097 .na
1098 \fB\fBctid\fR\fR
1099 .ad
1100 .RS 11n
1101 The contract ID of the process contract the process is a member of as a decimal
1102 integer.
1103 .RE

1105 .sp
1106 .ne 2
1107 .na
1108 \fB\fBlgrp\fR\fR
1109 .ad
1110 .RS 11n
1111 The home lgroup of the process.
1112 .RE

```

```

1114 .sp
1115 .ne 2
1116 .na
1117 \fB\fBdmodel\fR\fR
1118 .ad
1119 .RS 11n
1120 The data model of the process, printed in the same manner as via
1121 \fBpflags\fR(1). The currently supported data models are _ILP32 and _LP64.
1122 .RE

1124 .sp
1125 .LP
1126 Only \fBcomm\fR and \fBargs\fR are allowed to contain blank characters; all
1127 others, including the Solaris implementation variables, are not.
1128 .sp
1129 .LP
1130 The following table specifies the default header to be used in the POSIX locale
1131 corresponding to each format specifier.
1132 .sp

1134 .sp
1135 .TS
1136 box;
1137 c c c c
1138 c c c c .
1139 Format Default Format Default
1140 Specifier Header Specifier Header
1141 _
1142 args COMMAND ppid PPID
1143 comm COMMAND rgroup RGROUP
1144 etime ELAPSED ruser RUSER
1145 group GROUP time TIME
1146 nice NI tty TT
1147 pcpu %CPU user USER
1148 pgid PGID vsz VSZ
1149 pid PID
1150 .TE

1152 .sp
1153 .LP
1154 The following table lists the Solaris implementation format specifiers and the
1155 default header used with each.
1156 .sp

1158 .sp
1159 .TS
1160 box;
1161 c c c c
1162 c c c c .
1163 Format Default Format Default
1164 Specifier Header Specifier Header
1165 _
1166 addr ADDR projid PROJID
1167 c C project PROJECT
1168 class CLS psr PSR
1169 f F rgid RGID
1170 fname COMMAND rss RSS
1171 gid GID ruid RUID
1172 lgrp LGRP s S
1173 lwp LWP sid SID
1174 nlwp NLWP stime STIME
1175 opri PRI taskid TASKID
1176 osz SZ uid UID
1177 pmem %MEM wchan WCHAN
1178 pri PRI zone ZONE

```

```

1179 ctid      CTID      zoneid  ZONEID
1180 .TE

1182 .SH EXAMPLES
1183 .LP
1184 \fBExample 1 \fRUsing \fBps\fR Command
1185 .sp
1186 .LP
1187 The command:

1189 .sp
1190 .in +2
1191 .nf
1192 example% \fBps -o user,pid,ppid=MOM -o args\fR
1193 .fi
1194 .in -2
1195 .sp

1197 .sp
1198 .LP
1199 writes the following in the POSIX locale:

1201 .sp
1202 .in +2
1203 .nf
1204 USER  PID    MOM    COMMAND
1205 helene 34     12     ps -o uid,pid,ppid=MOM -o args
1206 .fi
1207 .in -2
1208 .sp

1210 .sp
1211 .LP
1212 The contents of the \fBCOMMAND\fR field need not be the same due to possible
1213 truncation.

1215 .SH ENVIRONMENT VARIABLES
1216 .sp
1217 .LP
1218 See \fBenvron\fR(5) for descriptions of the following environment variables
1219 that affect the execution of \fBps\fR: \fBBLANG\fR, \fBBLC_ALL\fR,
1220 \fBBLC_CTYPE\fR, \fBBLC_MESSAGES\fR, \fBBLC_TIME\fR, and \fBBLSPATH\fR.
1221 .sp
1222 .ne 2
1223 .na
1224 \fB\fbCOLUMNS\fR\fR
1225 .ad
1226 .RS 11n
1227 Override the system-selected horizontal screen size, used to determine the
1228 number of text columns to display.
1229 .RE

1231 .SH EXIT STATUS
1232 .sp
1233 .LP
1234 The following exit values are returned:
1235 .sp
1236 .ne 2
1237 .na
1238 \fB\fbB0\fR\fR
1239 .ad
1240 .RS 6n
1241 Successful completion.
1242 .RE

1244 .sp

```

```

1245 .ne 2
1246 .na
1247 \fB\fb>0\fR\fR
1248 .ad
1249 .RS 6n
1250 An error occurred.
1251 .RE

1253 .SH FILES
1254 .sp
1255 .ne 2
1256 .na
1257 \fB\fb\fb/dev/pts/*\fR\fR
1258 .ad
1259 .RS 15n

1261 .RE

1263 .sp
1264 .ne 2
1265 .na
1266 \fB\fb\fb/dev/term/*\fR\fR
1267 .ad
1268 .RS 15n
1269 terminal ('`tty`') names searcher files
1270 .RE

1272 .sp
1273 .ne 2
1274 .na
1275 \fB\fb\fb/etc/passwd\fR\fR
1276 .ad
1277 .RS 15n
1278 \fB\fbUID\fR information supplier
1279 .RE

1281 .sp
1282 .ne 2
1283 .na
1284 \fB\fb\fb/proc/*\fR\fR
1285 .ad
1286 .RS 15n
1287 process control files
1288 .RE

1290 .SH ATTRIBUTES
1291 .sp
1292 .LP
1293 See \fBAttributes\fR(5) for descriptions of the following attributes:
1294 .sp

1296 .sp
1297 .TS
1298 box;
1299 c | c
1300 l | l .
1301 ATTRIBUTE TYPE    ATTRIBUTE VALUE
1302 _
1303 CSI              Enabled (see USAGE)
1304 _
1305 Interface Stability    Committed
1306 _
1307 Standard          See \fBstandards\fR(5).
1308 .TE

1310 .SH SEE ALSO

```

```
1311 .sp
1312 .LP
1313 \fBkill\fR(1), \fBlgrpinfo\fR(1), \fBnice\fR(1), \fBpagesize\fR(1),
1314 \fBpmap\fR(1), \fBpriocntl\fR(1), \fBwho\fR(1), \fBgetty\fR(1M), \fBproc\fR(4),
1315 \fBbttysrcch\fR(4), \fBattributes\fR(5), \fBenviron\fR(5),
1316 \fBresource_controls\fR(5), \fBstandards\fR(5), \fBzones\fR(5)
1317 .SH NOTES
1318 .sp
1319 .LP
1320 Things can change while \fBps\fR is running. The snapshot it gives is true only
1321 for a split-second, and it might not be accurate by the time you see it. Some
1322 data printed for defunct processes is irrelevant.
1323 .sp
1324 .LP
1325 If no options to select processes are specified, \fBps\fR reports all processes
1326 associated with the controlling terminal. If there is no controlling terminal,
1327 there is no report other than the header.
1328 .sp
1329 .LP
1330 \fBps\fR \fB-ef\fR or \fBps\fR \fB-o\fR \fBstime\fR might not report the actual
1331 start of a tty login session, but rather an earlier time, when a getty was last
1332 respawned on the tty line.
1333 .sp
1334 .LP
1335 \fBps\fR is \fBCSI\fR-enabled except for login names (usernames).
```

new/usr/src/man/man1m/prstat.1m

1

```
*****
16922 Wed Sep  4 20:46:01 2013
new/usr/src/man/man1m/prstat.1m
2989 Eliminate use of LOGNAME_MAX in ON
1166 useradd have warning with name more 8 chars
*****
1 \" te
2.\" Copyright (c) 2013 Gary Mills
3.\" Copyright (c) 2006, 2009 Sun Microsystems, Inc. All Rights Reserved.
4.\" The contents of this file are subject to the terms of the Common Development
5.\" See the License for the specific language governing permissions and limitat
6.\" the fields enclosed by brackets \"[]\" replaced with your own identifying info
7.TH PRSTAT 1M \"Apr 15, 2013\"
6.TH PRSTAT 1M \"Jun 25, 2009\"
8.SH NAME
9 prstat \- report active process statistics
10.SH SYNOPSIS
11.LP
12.nf
13 \fBprstat\fR [\fB-acHJLmRrtTvWZ\fR] [\fB-d\fR u | d] [\fB-C\fR \fIpsrsetlist\fR]
14 \fBprstat\fR [\fB-acHJLmRrtTv\fR] [\fB-d\fR u | d] [\fB-C\fR \fIpsrsetlist\fR] [
15 \fB-j\fR \fIprojlist\fR] [\fB-k\fR \fItasklist\fR] [\fB-n\fR \fIntop\fR] \fB-p\fR \fIpidlist\fR] [\fB-P\fR \fIpculist\fR] [\fB-s\fR \fIkey\fR | \fB-u\fR \fIuidlist\fR] [\fB-U\fR \fIuidlist\fR] [\fB-z\fR \fIzoneidlist\fR]
16 \fBprstat\fR [\fB-u\fR \fIuidlist\fR] [\fB-U\fR \fIuidlist\fR] [\fB-z\fR \fIzoneidlist\fR]
17 \fBprstat\fR [\fB-u\fR \fIuidlist\fR] [\fB-U\fR \fIuidlist\fR] [\fB-z\fR \fIzoneidlist\fR]
18 .fi

20.SH DESCRIPTION
21.sp
22.LP
23 The \fBprstat\fR utility iteratively examines all active processes on the
24 system and reports statistics based on the selected output mode and sort order.
25 \fBprstat\fR provides options to examine only processes matching specified
26 \fB-BPID\fRs, \fB-BUID\fRs, zone \fB-BID\fRs, \fB-BCPU\fR \fB-BID\fRs, and processor set
27 \fB-BID\fRs.
28.sp
29.LP
30 The \fB-j\fR, \fB-k\fR, \fB-C\fR, \fB-p\fR, \fB-P\fR, \fB-u\fR, \fB-U\fR, and
31 \fB-z\fR options accept lists as arguments. Items in a list can be either
32 separated by commas or enclosed in quotes and separated by commas or spaces.
33.sp
34.LP
35 If you do not specify an option, \fBprstat\fR examines all processes and
36 reports statistics sorted by \fB-CPU\fR usage.
37.SH OPTIONS
38.sp
39.LP
40 The following options are supported:
41.sp
42.ne 2
43.na
44 \fB-a\fR
45.ad
46.sp .6
47.RS 4n
48 Report information about processes and users. In this mode \fBprstat\fR
49 displays separate reports about processes and users at the same time.
50.RE

52.sp
53.ne 2
54.na
55 \fB-c\fR
56.ad
57.sp .6
```

new/usr/src/man/man1m/prstat.1m

2

```
58.RS 4n
59 Print new reports below previous reports instead of overprinting them.
60 Long names are not truncated in this mode.
61.RE

63.sp
64.ne 2
65.na
66 \fB-C\fR \fIpsrsetlist\fR
67.ad
68.sp .6
69.RS 4n
70 Report only processes or lwps that are bound to processor sets in the given
71 list. Each processor set is identified by an integer as reported by
72 \fBpsrset\fR(1M). The load averages displayed are the sum of the load averages
73 of the specified processor sets (see \fBpsrset_getloadavg\fR(3C)). Processes with
74 one or more LWPs bound to processor sets in the given list are reported even
75 when the \fB-L\fR option is not used.
76.RE

78.sp
79.ne 2
80.na
81 \fB-d\fR \fBu | d\fR
82.ad
83.sp .6
84.RS 4n
85 Specify \fBu\fR for a printed representation of the internal representation of
86 time. See \fBtime\fR(2). Specify \fBd\fR for standard date format. See
87 \fBdate\fR(1).
88.RE

90.sp
91.ne 2
92.na
93 \fB-h\fR \fIgrpelist\fR
94.ad
95.sp .6
96.RS 4n
97 Report only processes or lwps whose home \fIgroup\fR is in the given list of
98 \fIgroups\fR. No processes or lwps will be listed for invalid \fIgroups\fR.
99.RE

101.sp
102.ne 2
103.na
104 \fB-H\fR
105.ad
106.sp .6
107.RS 4n
108 Report information about home \fIgroup\fR. In this mode, \fBprstat\fR adds an
109 extra column showing process or lwps home \fIgroup\fR with the header LGRP.
110.RE

112.sp
113.ne 2
114.na
115 \fB-j\fR \fIprojlist\fR
116.ad
117.sp .6
118.RS 4n
119 Report only processes or lwps whose project \fBID\fR is in the given list. Each
120 project \fBID\fR can be specified as either a project name or a numerical
121 project \fBID\fR. See \fBproject\fR(4).
122.RE
```

```

124 .sp
125 .ne 2
126 .na
127 \fB\fB-J\fR\fR
128 .ad
129 .sp .6
130 .RS 4n
131 Report information about processes and projects. In this mode \fBprstat\fR
132 displays separate reports about processes and projects at the same time.
133 A trailing asterisk marks a long name that has been truncated
134 to fit the column.
135 .RE

137 .sp
138 .ne 2
139 .na
140 \fB\fB-k\fR \fR \fItasklist\fR
141 .ad
142 .sp .6
143 .RS 4n
144 Report only processes or lwps whose task \fBID\fR is in \fItasklist\fR.
145 .RE

147 .sp
148 .ne 2
149 .na
150 \fB\fB-L\fR\fR
151 .ad
152 .sp .6
153 .RS 4n
154 Report statistics for each light-weight process (\fBLOWP\fR). By default,
155 \fBprstat\fR reports only the number of \fBLOWP\fRs for each process.
156 .RE

158 .sp
159 .ne 2
160 .na
161 \fB\fB-m\fR\fR
162 .ad
163 .sp .6
164 .RS 4n
165 Report microstate process accounting information. In addition to all fields
166 listed in \fB-v\fR mode, this mode also includes the percentage of time the
167 process has spent processing system traps, text page faults, data page faults,
168 waiting for user locks and waiting for \fBCPU\fR (latency time).
169 .RE

171 .sp
172 .ne 2
173 .na
174 \fB\fB-n\fR \fR \fIntop\fR[\fI,nbottom\fR]\fR
175 .ad
176 .sp .6
177 .RS 4n
178 Restrict number of output lines. The \fIntop\fR argument determines how many
179 lines of process or \fBLOWP\fR statistics are reported, and the \fInbottom\fR
180 argument determines how many lines of user, task, or projects statistics are
181 reported if the \fB-a\fR, \fB-t\fR, \fB-T\fR, or \fB-J\fR options are
182 specified. By default, \fBprstat\fR displays as many lines of output that fit
183 in a window or terminal. When you specify the \fB-c\fR option or direct the
184 output to a file, the default values for \fBntop\fR and \fBnbbottom\fR are
185 \fB15\fR and \fB5\fR.
186 .RE

188 .sp
189 .ne 2

```

```

190 .na
191 \fB\fB-p\fR \fR \fIpidlist\fR
192 .ad
193 .sp .6
194 .RS 4n
195 Report only processes whose process \fBID\fR is in the given list.
196 .RE

198 .sp
199 .ne 2
200 .na
201 \fB\fB-P\fR \fR \fIcpulist\fR
202 .ad
203 .sp .6
204 .RS 4n
205 Report only processes or \fBLOWP\fRs which have most recently executed on a
206 \fBCPU\fR in the given list. Each \fBCPU\fR is identified by an integer as
207 reported by \fBpsrinfo\fR(1M).
208 .RE

210 .sp
211 .ne 2
212 .na
213 \fB\fB-R\fR\fR
214 .ad
215 .sp .6
216 .RS 4n
217 Put \fBprstat\fR in the real time scheduling class. When this option is used,
218 \fBprstat\fR is given priority over time-sharing and interactive processes.
219 This option is available only for superuser.
220 .RE

222 .sp
223 .ne 2
224 .na
225 \fB\fB-r\fR\fR
226 .ad
227 .sp .6
228 .RS 4n
229 Disable lookups for user names and project names. (Note that this does not
230 apply to lookups for the \fB-j\fR, \fB-u\fR, or \fB-U\fR options.)
231 .RE

233 .sp
234 .ne 2
235 .na
236 \fB\fB-s\fR \fR \fIkey\fR
237 .ad
238 .sp .6
239 .RS 4n
240 Sort output lines (that is, processes, \fBLOWP\fRs, or users) by \fIkey\fR in
241 descending order. Only one \fIkey\fR can be used as an argument.
242 .sp
243 There are five possible key values:
244 .sp
245 .ne 2
246 .na
247 \fBcpu\fR
248 .ad
249 .sp .6
250 .RS 4n
251 Sort by process \fBCPU\fR usage. This is the default.
252 .RE

254 .sp
255 .ne 2

```

new/usr/src/man/man1m/prstat.1m

5

```
256 .na
257 \fBpri\fR
258 .ad
259 .sp .6
260 .RS 4n
261 Sort by process priority.
262 .RE

264 .sp
265 .ne 2
266 .na
267 \fBrss\fR
268 .ad
269 .sp .6
270 .RS 4n
271 Sort by resident set size.
272 .RE

274 .sp
275 .ne 2
276 .na
277 \fBsize\fR
278 .ad
279 .sp .6
280 .RS 4n
281 Sort by size of process image.
282 .RE

284 .sp
285 .ne 2
286 .na
287 \fBtime\fR
288 .ad
289 .sp .6
290 .RS 4n
291 Sort by process execution time.
292 .RE

294 .RE

296 .sp
297 .ne 2
298 .na
299 \fB\fB-S\fR \fIkey\fR\fR
300 .ad
301 .sp .6
302 .RS 4n
303 Sort output lines by \fIkey\fR in ascending order. Possible \fIkey\fR values
304 are the same as for the \fB-s\fR option. See \fB-s\fR.
305 .RE

307 .sp
308 .ne 2
309 .na
310 \fB\fB-t\fR\fR
311 .ad
312 .sp .6
313 .RS 4n
314 Report total usage summary for each user. The summary includes the total number
315 of processes or \fBBLWP\fRs owned by the user, total size of process images,
316 total resident set size, total cpu time, and percentages of recent cpu time and
317 system memory.
318 .RE

320 .sp
321 .ne 2
```

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```
322 .na
323 \fB\fB-T\fR\fR
324 .ad
325 .sp .6
326 .RS 4n
327 Report information about processes and tasks. In this mode \fBprstat\fR
328 displays separate reports about processes and tasks at the same time.
329 .RE

331 .sp
332 .ne 2
333 .na
334 \fB\fB-u\fR \fIuidlist\fR\fR
335 .ad
336 .sp .6
337 .RS 4n
338 Report only processes whose effective user \fBID\fR is in the given list. Each
339 user \fBID\fR may be specified as either a login name or a numerical user
340 \fBID\fR.
341 .RE

343 .sp
344 .ne 2
345 .na
346 \fB\fB-U\fR \fIuidlis\fRt\fR
347 .ad
348 .sp .6
349 .RS 4n
350 Report only processes whose real user \fBID\fR is in the given list. Each user
351 \fBID\fR may be specified as either a login name or a numerical user \fBID\fR.
352 .RE

354 .sp
355 .ne 2
356 .na
357 \fB\fB-v\fR\fR
358 .ad
359 .sp .6
360 .RS 4n
361 Report verbose process usage. This output format includes the percentage of
362 time the process has spent in user mode, in system mode, and sleeping. It also
363 includes the number of voluntary and involuntary context switches, system calls
364 and the number of signals received. Statistics that are not reported are marked
365 with the \fB-\fR sign.
366 .RE

368 .sp
369 .ne 2
370 .na
371 \fB\fB-W\fR\fR
372 .ad
373 .sp .6
374 .RS 4n
375 Truncate long names even when \fBprstat\fR would normally print them
376 in full.
377 A trailing asterisk marks a long name that has been truncated
378 to fit the column.
379 .RE

381 .sp
382 .ne 2
383 .na
384 \fB\fB-z\fR \fIzoneidlist\fR\fR
385 .ad
386 .sp .6
387 .RS 4n
```

```

388 Report only processes or LWPs whose zone ID is in the given list. Each zone ID
389 can be specified as either a zone name or a numerical zone ID. See
390 \fBzones\fR(5).
391 .RE

393 .sp
394 .ne 2
395 .na
396 \fB\fB-Z\fR\fR
397 .ad
398 .sp .6
399 .RS 4n
400 Report information about processes and zones. In this mode, \fBprstat\fR
401 displays separate reports about processes and zones at the same time.
402 A trailing asterisk marks a long name that has been truncated
403 to fit the column.
404 .RE

406 .SH OUTPUT
407 .sp
408 .LP
409 The following list defines the column headings and the meanings of a
410 \fBprstat\fR report:
411 .sp
412 .ne 2
413 .na
414 \fB\fBPID\fR
415 .ad
416 .sp .6
417 .RS 4n
418 The process \fBID\fR of the process.
419 .RE

421 .sp
422 .ne 2
423 .na
424 \fB\fBUSERNAME\fR
425 .ad
426 .sp .6
427 .RS 4n
428 The real user (login) name or real user \fBID\fR.
429 A trailing asterisk marks a long name that has been truncated
430 to fit the column.
431 .RE

433 .sp
434 .ne 2
435 .na
436 \fB\fBSWAP\fR
437 .ad
438 .sp .6
439 .RS 4n
440 The total virtual memory size of the process, including all mapped files and
441 devices, in kilobytes (\fBK\fR), megabytes (\fBM\fR), or gigabytes (\fBG\fR).
442 .RE

444 .sp
445 .ne 2
446 .na
447 \fB\fBRSS\fR
448 .ad
449 .sp .6
450 .RS 4n
451 The resident set size of the process (\fBRSS\fR), in kilobytes (\fBK\fR),
452 megabytes (\fBM\fR), or gigabytes (\fBG\fR). The RSS value is an estimate
453 provided by \fBproc\fR(4) that might underestimate the actual resident set

```

```

454 size. Users who want to get more accurate usage information for capacity
455 planning should use the \fB-x\fR option to \fBpmap\fR(1) instead.
456 .RE

458 .sp
459 .ne 2
460 .na
461 \fB\fBSTATE\fR
462 .ad
463 .sp .6
464 .RS 4n
465 The state of the process:
466 .sp
467 .ne 2
468 .na
469 \fB\fBcpu\fIN\fR\fR
470 .ad
471 .sp .6
472 .RS 4n
473 Process is running on \fBCPU\fR \fBIN\fR.
474 .RE

476 .sp
477 .ne 2
478 .na
479 \fB\fBsleee\fR
480 .ad
481 .sp .6
482 .RS 4n
483 Sleeping: process is waiting for an event to complete.
484 .RE

486 .sp
487 .ne 2
488 .na
489 \fB\fBwait\fR
490 .ad
491 .sp .6
492 .RS 4n
493 Waiting: process is waiting for CPU usage to drop to the CPU-caps enforced
494 limits. See the description of \fBBCPU-caps\fR in \fBresource_controls\fR(5).
495 .RE

497 .sp
498 .ne 2
499 .na
500 \fB\fBrun\fR
501 .ad
502 .sp .6
503 .RS 4n
504 Runnable: process in on run queue.
505 .RE

507 .sp
508 .ne 2
509 .na
510 \fB\fBzombie\fR
511 .ad
512 .sp .6
513 .RS 4n
514 Zombie state: process terminated and parent not waiting.
515 .RE

517 .sp
518 .ne 2
519 .na

```

```

520 \fBstop\fR
521 .ad
522 .sp .6
523 .RS 4n
524 Process is stopped.
525 .RE

527 .RE

529 .sp
530 .ne 2
531 .na
532 \fBpri\fR
533 .ad
534 .sp .6
535 .RS 4n
536 The priority of the process. Larger numbers mean higher priority.
537 .RE

539 .sp
540 .ne 2
541 .na
542 \fBNice\fR
543 .ad
544 .sp .6
545 .RS 4n
546 Nice value used in priority computation. Only processes in certain scheduling
547 classes have a nice value.
548 .RE

550 .sp
551 .ne 2
552 .na
553 \fBtime\fR
554 .ad
555 .sp .6
556 .RS 4n
557 The cumulative execution time for the process.
558 .RE

560 .sp
561 .ne 2
562 .na
563 \fBCPU\fR
564 .ad
565 .sp .6
566 .RS 4n
567 The percentage of recent \fBCPU\fR time used by the process. If executing in a
568 non-global \fBzone\fR and the pools facility is active, the percentage will be
569 that of the processors in the processor set in use by the pool to which the
570 \fBzone\fR is bound.
571 .RE

573 .sp
574 .ne 2
575 .na
576 \fBPROCESS\fR
577 .ad
578 .sp .6
579 .RS 4n
580 The name of the process (name of executed file).
581 .RE

583 .sp
584 .ne 2
585 .na

```

```

586 \fBLWPID\fR
587 .ad
588 .sp .6
589 .RS 4n
590 The \fBlwp\fR \fBID\fR of the \fBlwp\fR being reported.
591 .RE

593 .sp
594 .ne 2
595 .na
596 \fBNLWP\fR
597 .ad
598 .sp .6
599 .RS 4n
600 The number of \fBlwp\fRs in the process.
601 .RE

603 .sp
604 .LP
605 With the some options, in addition to a number of the column headings shown
606 above, there are:
607 .sp
608 .ne 2
609 .na
610 \fBNPROC\fR
611 .ad
612 .sp .6
613 .RS 4n
614 Number of processes in a specified collection.
615 .RE

617 .sp
618 .ne 2
619 .na
620 \fBMEMORY\fR
621 .ad
622 .sp .6
623 .RS 4n
624 Percentage of memory used by a specified collection of processes.
625 .RE

627 .sp
628 .LP
629 The following columns are displayed when the \fB-v\fR or \fB-m\fR option is
630 specified
631 .sp
632 .ne 2
633 .na
634 \fBUSR\fR
635 .ad
636 .sp .6
637 .RS 4n
638 The percentage of time the process has spent in user mode.
639 .RE

641 .sp
642 .ne 2
643 .na
644 \fBSYS\fR
645 .ad
646 .sp .6
647 .RS 4n
648 The percentage of time the process has spent in system mode.
649 .RE

651 .sp

```



```

652 .ne 2
653 .na
654 \fBTRP\fR
655 .ad
656 .sp .6
657 .RS 4n
658 The percentage of time the process has spent in processing system traps.
659 .RE

661 .sp
662 .ne 2
663 .na
664 \fBTFL\fR
665 .ad
666 .sp .6
667 .RS 4n
668 The percentage of time the process has spent processing text page faults.
669 .RE

671 .sp
672 .ne 2
673 .na
674 \fBDFL\fR
675 .ad
676 .sp .6
677 .RS 4n
678 The percentage of time the process has spent processing data page faults.
679 .RE

681 .sp
682 .ne 2
683 .na
684 \fBLCK\fR
685 .ad
686 .sp .6
687 .RS 4n
688 The percentage of time the process has spent waiting for user locks.
689 .RE

691 .sp
692 .ne 2
693 .na
694 \fBSLP\fR
695 .ad
696 .sp .6
697 .RS 4n
698 The percentage of time the process has spent sleeping.
699 .RE

701 .sp
702 .ne 2
703 .na
704 \fBLAT\fR
705 .ad
706 .sp .6
707 .RS 4n
708 The percentage of time the process has spent waiting for CPU.
709 .RE

711 .sp
712 .ne 2
713 .na
714 \fBVXC\fR
715 .ad
716 .sp .6
717 .RS 4n

```

```

718 The number of voluntary context switches.
719 .RE

721 .sp
722 .ne 2
723 .na
724 \fBICX\fR
725 .ad
726 .sp .6
727 .RS 4n
728 The number of involuntary context switches.
729 .RE

731 .sp
732 .ne 2
733 .na
734 \fBSCL\fR
735 .ad
736 .sp .6
737 .RS 4n
738 The number of system calls.
739 .RE

741 .sp
742 .ne 2
743 .na
744 \fBSIG\fR
745 .ad
746 .sp .6
747 .RS 4n
748 The number of signals received.
749 .RE

751 .sp
752 .LP
753 Under the \fB-L\fR option, one line is printed for each \fBlwp\fR in the
754 process and some reporting fields show the values for the \fBlwp\fR, not the
755 process.
756 .sp
757 .LP
758 The following column is displayed when the \fB-H\fR option is specified:
759 .sp
760 .ne 2
761 .na
762 \fBLGRP\fR
763 .ad
764 .sp .6
765 .RS 4n
766 The home \fIlgroupp\fR of the process or lwp.
767 .RE

769 .SH OPERANDS
770 .sp
771 .LP
772 The following operands are supported:
773 .sp
774 .ne 2
775 .na
776 \fB\fIcount\fR\fR
777 .ad
778 .sp .6
779 .RS 4n
780 Specifies the number of times that the statistics are repeated. By default,
781 \fBprstat\fR reports statistics until a termination signal is received.
782 .RE

```

```

784 .sp
785 .ne 2
786 .na
787 \fB\fIinterval\fR\fR
788 .ad
789 .sp .6
790 .RS 4n
791 Specifies the sampling interval in seconds; the default interval is \fB5\fR
792 seconds.
793 .RE

795 .SH EXAMPLES
796 .LP
797 \fBExample 1 \fRReporting the Five Most Active Super-User Processes
798 .sp
799 .LP
800 The following command reports the five most active super-user processes running
801 on \fBCPU1\fR and \fBCPU2\fR:

803 .sp
804 .in +2
805 .nf
806 example% prstat -u root -n 5 -P 1,2 1 1

808 PID USERNAME SWAP RSS STATE PRI NICE TIME CPU PROCESS/LWP
809 306 root 3024K 1448K sleep 58 0 0:00.00 0.3% sendmail/1
810 102 root 1600K 592K sleep 59 0 0:00.00 0.1% in.rdisc/1
811 250 root 1000K 552K sleep 58 0 0:00.00 0.0% utmpd/1
812 288 root 1720K 1032K sleep 58 0 0:00.00 0.0% sac/1
813 1 root 744K 168K sleep 58 0 0:00.00 0.0% init/1
814 TOTAL: 25, load averages: 0.05, 0.08, 0.12
815 .fi
816 .in -2
817 .sp

819 .LP
820 \fBExample 2 \fRDisplaying Verbose Process Usage Information
821 .sp
822 .LP
823 The following command displays verbose process usage information about
824 processes with lowest resident set sizes owned by users \fBroot\fR and
825 \fBjohn\fR.

827 .sp
828 .in +2
829 .nf
830 example% prstat -S rss -n 5 -vc -u root,john

832 PID USERNAME USR SYS TRP TFL DFL LCK SLP LAT VCX ICX SCL SIG PROCESS/LWP
833 1 root 0.0 0.0 - - - - 100 - 0 0 0 0 init/1
834 102 root 0.0 0.0 - - - - 100 - 0 0 3 0 in.rdisc/1
835 250 root 0.0 0.0 - - - - 100 - 0 0 0 0 utmpd/1
836 1185 john 0.0 0.0 - - - - 100 - 0 0 0 0 csh/1
837 240 root 0.0 0.0 - - - - 100 - 0 0 0 0 powerd/4
838 TOTAL: 71, load averages: 0.02, 0.04, 0.08

840 .fi
841 .in -2
842 .sp

844 .SH EXIT STATUS
845 .sp
846 .LP
847 The following exit values are returned:
848 .sp
849 .ne 2

```

```

850 .na
851 \fB\fB0\fR\fR
852 .ad
853 .sp .6
854 .RS 4n
855 Successful completion.
856 .RE

858 .sp
859 .ne 2
860 .na
861 \fB\fB1\fR\fR
862 .ad
863 .sp .6
864 .RS 4n
865 An error occurred.
866 .RE

868 .SH SEE ALSO
869 .sp
870 .LP
871 \fBdate\fR(1), \fBlsrpinfo\fR(1), \fBlsrgrp\fR(1), \fBproc\fR(1), \fBps\fR(1),
872 \fBtime\fR(2), \fBpsrinfo\fR(1M), \fBpsrset\fR(1M), \fBsar\fR(1M),
873 \fBpset_getloadavg\fR(3C), \fBproc\fR(4), \fBproject\fR(4),
874 \fBattributes\fR(5), \fBresource_controls\fR(5), \fBzones\fR(5)
875 .SH NOTES
876 .sp
877 .LP
878 The snapshot of system usage displayed by \fBprstat\fR is true only for a
879 split-second, and it may not be accurate by the time it is displayed. When the
880 \fB-m\fR option is specified, \fBprstat\fR tries to turn on microstate
881 accounting for each process; the original state is restored when \fBprstat\fR
882 exits. See \fBproc\fR(4) for additional information about the microstate
883 accounting facility.
884 .sp
885 .LP
886 The total memory size reported in the SWAP and RSS columns for groups of
887 processes can sometimes overestimate the actual amount of memory used by
888 processes with shared memory segments.

```

new/usr/src/man/man1m/useradd.1m

1

\*\*\*\*\*

12884 Wed Sep 4 20:46:01 2013

new/usr/src/man/man1m/useradd.1m

2989 Eliminate use of LOGNAME\_MAX in ON

1166 useradd have warning with name more 8 chars

\*\*\*\*\*

```
1 \" te
2.\" Copyright (c) 2013 Gary Mills
3.\" Copyright (c) 2008 Sun Microsystems, Inc. All Rights Reserved.
4.\" Copyright 1989 AT&T
5.\" The contents of this file are subject to the terms of the Common Development
6.\" You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE or http:
7.\" When distributing Covered Code, include this CDDL HEADER in each file and in
8.TH USERADD 1M \"Apr 16, 2013\"
7.TH USERADD 1M \"Feb 19, 2008\"
9.SH NAME
10 useradd \- administer a new user login on the system
11.SH SYNOPSIS
12.LP
13.nf
14 \fBuseradd\fR [\fB-A\fR \fIiauthorization\fR [, \fIiauthorization...\fR]]
15 [\fB-b\fR \fIibase_dir\fR] [\fB-c\fR \fIicoment\fR] [\fB-d\fR \fIdir\fR] [\fB-f\fR
16 [\fB-f\fR \fIinactive\fR] [\fB-g\fR \fIgroup\fR] [\fB-G\fR \fIgroup\fR [, \fI
17 [\fB-K\fR \fIkey=value\fR] [\fB-m\fR [\fB-k\fR \fIIskel_dir\fR]] [\fB-p\fR \fI
18 [\fB-P\fR \fIprofile\fR [, \fIprofile...\fR]] [\fB-R\fR \fIrole\fR [, \fIrole
19 [\fB-s\fR \fIshell\fR] [\fB-u\fR \fIuid\fR] [\fB-o\fR]] \fIlogin\fR
20.fi
22.LP
23.nf
24 \fBuseradd\fR \fB-D\fR [\fB-A\fR \fIiauthorization\fR [, \fIiauthorization...\fR]]
25 [\fB-b\fR \fIibase_dir\fR] [\fB-s\fR \fIshell\fR] [\fB-k\fR \fIIskel_dir\fR]]
26 [\fB-f\fR \fIinactive\fR] [\fB-g\fR \fIgroup\fR] [\fB-K\fR \fIkey=value\fR]
27 [\fB-P\fR \fIprofile\fR [, \fIprofile...\fR]] [\fB-R\fR \fIrole\fR [, \fIrole
28.fi
30.SH DESCRIPTION
31.sp
32.LP
33 \fBuseradd\fR adds a new user to the \fB/etc/passwd\fR and \fB/etc/shadow\fR
34 and \fB/etc/user_attr\fR files. The \fB-A\fR and \fB-P\fR options respectively
35 assign authorizations and profiles to the user. The \fB-R\fR option assigns
36 roles to a user. The \fB-p\fR option associates a project with a user. The
37 \fB-K\fR option adds a \fIkey=value\fR pair to \fB/etc/user_attr\fR for the
38 user. Multiple \fIkey=value\fR pairs may be added with multiple \fB-K\fR
39 options.
40.sp
41.LP
42 \fBuseradd\fR also creates supplementary group memberships for the user
43 (\fB-G\fR option) and creates the home directory (\fB-m\fR option) for the user
44 if requested. The new login remains locked until the \fBpasswd\fR(1) command is
45 executed.
46.sp
47.LP
48 Specifying \fBuseradd\fR \fB-D\fR with the \fB-s\fR, \fB-k\fR, \fB-g\fR,
49 \fB-b\fR, \fB-f\fR, \fB-e\fR, \fB-A\fR, \fB-P\fR, \fB-p\fR, \fB-R\fR, or
50 \fB-K\fR option (or any combination of these options) sets the default values
51 for the respective fields. See the \fB-D\fR option, below. Subsequent
52 \fBuseradd\fR commands without the \fB-D\fR option use these arguments.
53.sp
54.LP
55 The system file entries created with this command have a limit of 2048
56 characters per line. Specifying long arguments to several options can exceed
57 this limit.
58.sp
59.LP
```

new/usr/src/man/man1m/useradd.1m

2

```
60 \fBuseradd\fR requires that usernames be in the format described in
61 \fBpasswd\fR(4). A warning message is displayed if these restrictions are not
62 met. See \fBpasswd\fR(4) for the requirements for usernames.
63.LP
64 To change the action of \fBuseradd\fR when the traditional login name
65 length limit of eight characters is exceeded, edit the file
66 \fB/etc/default/useradd\fR by removing the \fB#\fR (pound sign) before the
67 appropriate \fBEXCEED_TRAD=\fR entry, and adding it before the others.
68.SH OPTIONS
69.sp
70.LP
71 The following options are supported:
72.sp
73.ne 2
74.na
75 \fB-A\fR \fIiauthorization\fR
76.ad
77.sp .6
78.RS 4n
79 One or more comma separated authorizations defined in \fBauth_attr\fR(4). Only
80 a user or role who has \fBgrant\fR rights to the authorization can assign it to
81 an account.
82.RE
84.sp
85.ne 2
86.na
87 \fB-b\fR \fIibase_dir\fR
88.ad
89.sp .6
90.RS 4n
91 The base directory for new login home directories (see the \fB-d\fR option
92 below. When a new user account is being created, \fIibase_dir\fR must already
93 exist unless the \fB-m\fR option or the \fB-D\fR option is also specified.
94.RE
96.sp
97.ne 2
98.na
99 \fB-c\fR \fIicoment\fR
100.ad
101.sp .6
102.RS 4n
103 Any text string. It is generally a short description of the login, and is
104 currently used as the field for the user's full name. This information is
105 stored in the user's \fB/etc/passwd\fR entry.
106.RE
108.sp
109.ne 2
110.na
111 \fB-d\fR \fIdir\fR
112.ad
113.sp .6
114.RS 4n
115 The home directory of the new user. It defaults to
116 \fIibase_dir\fR/\fIaccount_name\fR, where \fIibase_dir\fR is the base directory
117 for new login home directories and \fIaccount_name\fR is the new login name.
118.RE
120.sp
121.ne 2
122.na
123 \fB-D\fR
124.ad
125.sp .6
```

```
126 .RS 4n
127 Display the default values for \fBgroup\fR, \fBbase_dir\fR, \fBskel_dir\fR,
128 \fBshell\fR, \fBinactive\fR, \fBexpire\fR, \fBproj\fR, \fBprojname\fR and
129 \fBkey=value\fR pairs. When used with the \fB-g\fR, \fB-b\fR, \fB-f\fR,
130 \fB-e\fR, \fB-A\fR, \fB-P\fR, \fB-p\fR, \fB-R\fR, or \fB-K\fR options, the
131 \fB-D\fR option sets the default values for the specified fields. The default
132 values are:
133 .sp
134 .ne 2
135 .na
136 \fBgroup\fR
137 .ad
138 .sp .6
139 .RS 4n
140 \fBBothr\fR (\fBGID\fR of 1)
141 .RE
143 .sp
144 .ne 2
145 .na
146 \fBbase_dir\fR
147 .ad
148 .sp .6
149 .RS 4n
150 \fB/home\fR
151 .RE
153 .sp
154 .ne 2
155 .na
156 \fBskel_dir\fR
157 .ad
158 .sp .6
159 .RS 4n
160 \fB/etc/skel\fR
161 .RE
163 .sp
164 .ne 2
165 .na
166 \fBshell\fR
167 .ad
168 .sp .6
169 .RS 4n
170 \fB/bin/sh\fR
171 .RE
173 .sp
174 .ne 2
175 .na
176 \fBinactive\fR
177 .ad
178 .sp .6
179 .RS 4n
180 \fB0\fR
181 .RE
183 .sp
184 .ne 2
185 .na
186 \fBexpire\fR
187 .ad
188 .sp .6
189 .RS 4n
190 null
191 .RE
```

```
193 .sp
194 .ne 2
195 .na
196 \fBauths\fR
197 .ad
198 .sp .6
199 .RS 4n
200 null
201 .RE
203 .sp
204 .ne 2
205 .na
206 \fBprofiles\fR
207 .ad
208 .sp .6
209 .RS 4n
210 null
211 .RE
213 .sp
214 .ne 2
215 .na
216 \fBproj\fR
217 .ad
218 .sp .6
219 .RS 4n
220 \fB3\fR
221 .RE
223 .sp
224 .ne 2
225 .na
226 \fBprojname\fR
227 .ad
228 .sp .6
229 .RS 4n
230 \fBdefault\fR
231 .RE
233 .sp
234 .ne 2
235 .na
236 \fBkey=value (pairs defined in \fBuser_attr\fR(4))\fR
237 .ad
238 .sp .6
239 .RS 4n
240 not present
241 .RE
243 .sp
244 .ne 2
245 .na
246 \fBroles\fR
247 .ad
248 .sp .6
249 .RS 4n
250 null
251 .RE
253 .RE
255 .sp
256 .ne 2
257 .na
```

```

258 \fB\fB-e\fR \fIexpire\fR\fR
259 .ad
260 .sp .6
261 .RS 4n
262 Specify the expiration date for a login. After this date, no user will be able
263 to access this login. The expire option argument is a date entered using one of
264 the date formats included in the template file \fB/etc/datemsk\fR. See
265 \fBgetdate\fR(3C).
266 .sp
267 If the date format that you choose includes spaces, it must be quoted. For
268 example, you can enter \fB10/6/90\fR or \fBOctober 6, 1990\fR. A null value
269 (\fB" "\fR) defeats the status of the expired date. This option is useful for
270 creating temporary logins.
271 .RE

273 .sp
274 .ne 2
275 .na
276 \fB\fB-f\fR \fIinactive\fR\fR
277 .ad
278 .sp .6
279 .RS 4n
280 The maximum number of days allowed between uses of a login ID before that
281 \fBID\fR is declared invalid. Normal values are positive integers. A value of
282 \fB0\fR defeats the status.
283 .RE

285 .sp
286 .ne 2
287 .na
288 \fB\fB-g\fR \fIgroup\fR\fR
289 .ad
290 .sp .6
291 .RS 4n
292 An existing group's integer \fBID\fR or character-string name. Without the
293 \fB-D\fR option, it defines the new user's primary group membership and
294 defaults to the default group. You can reset this default value by invoking
295 \fBuseradd\fR \fB-D\fR \fB-g\fR \fIgroup\fR. GIDs 0-99 are reserved for
296 allocation by the Solaris Operating System.
297 .RE

299 .sp
300 .ne 2
301 .na
302 \fB\fB-G\fR \fIgroup\fR\fR
303 .ad
304 .sp .6
305 .RS 4n
306 An existing group's integer \fBID\fR or character-string name. It defines the
307 new user's supplementary group membership. Duplicates between \fIgroup\fR with
308 the \fB-g\fR and \fB-G\fR options are ignored. No more than \fBNGROUPS_MAX\fR
309 groups can be specified. GIDs 0-99 are reserved for allocation by the Solaris
310 Operating System.
311 .RE

313 .sp
314 .ne 2
315 .na
316 \fB\fB-K\fR \fIkey=value\fR\fR
317 .ad
318 .sp .6
319 .RS 4n
320 A \fIkey=value\fR pair to add to the user's attributes. Multiple \fB-K\fR
321 options may be used to add multiple \fIkey=value\fR pairs. The generic \fB-K\fR
322 option with the appropriate key may be used instead of the specific implied key
323 options (\fB-A\fR, \fB-P\fR, \fB-R\fR, \fB-p\fR). See \fBuser_attr\fR(4) for a

```

```

324 list of valid \fIkey=value\fR pairs. The "type" key is not a valid key for this
325 option. Keys may not be repeated.
326 .RE

328 .sp
329 .ne 2
330 .na
331 \fB\fB-k\fR \fIskel_dir\fR\fR
332 .ad
333 .sp .6
334 .RS 4n
335 A directory that contains skeleton information (such as \fB&.profile\fR) that
336 can be copied into a new user's home directory. This directory must already
337 exist. The system provides the \fB/etc/skel\fR directory that can be used for
338 this purpose.
339 .RE

341 .sp
342 .ne 2
343 .na
344 \fB\fB-m\fR \fR\fR
345 .ad
346 .sp .6
347 .RS 4n
348 Create the new user's home directory if it does not already exist. If the
349 directory already exists, it must have read, write, and execute permissions by
350 \fIgroup\fR, where \fIgroup\fR is the user's primary group.
351 .RE

353 .sp
354 .ne 2
355 .na
356 \fB\fB-o\fR \fR\fR
357 .ad
358 .sp .6
359 .RS 4n
360 This option allows a \fBUID\fR to be duplicated (non-unique).
361 .RE

363 .sp
364 .ne 2
365 .na
366 \fB\fB-P\fR \fIprofile\fR\fR
367 .ad
368 .sp .6
369 .RS 4n
370 One or more comma-separated execution profiles defined in \fBprof_attr\fR(4).
371 .RE

373 .sp
374 .ne 2
375 .na
376 \fB\fB-p\fR \fIprojname\fR\fR
377 .ad
378 .sp .6
379 .RS 4n
380 Name of the project with which the added user is associated. See the
381 \fIprojname\fR field as defined in \fBproject\fR(4).
382 .RE

384 .sp
385 .ne 2
386 .na
387 \fB\fB-R\fR \fIrole\fR\fR
388 .ad
389 .sp .6

```

```

390 .RS 4n
391 One or more comma-separated execution profiles defined in \fBuser_attr\fR(4).
392 Roles cannot be assigned to other roles.
393 .RE

395 .sp
396 .ne 2
397 .na
398 \fB-s\fR \fR \fIshell\fR
399 .ad
400 .sp .6
401 .RS 4n
402 Full pathname of the program used as the user's shell on login. It defaults to
403 an empty field causing the system to use \fB/bin/sh\fR as the default. The
404 value of \fIshell\fR must be a valid executable file.
405 .RE

407 .sp
408 .ne 2
409 .na
410 \fB-u\fR \fR \fIuid\fR
411 .ad
412 .sp .6
413 .RS 4n
414 The \fBUID\fR of the new user. This \fBUID\fR must be a non-negative decimal
415 integer below \fBMAXUID\fR as defined in \fB<sys/param.h>\fR. The \fBUID\fR
416 defaults to the next available (unique) number above the highest number
417 currently assigned. For example, if \fBUID\fRs 100, 105, and 200 are assigned,
418 the next default \fBUID\fR number will be 201. \fBUID\fRs \fB0\fR-\fB99\fR are
419 reserved for allocation by the Solaris Operating System.
420 .RE

422 .SH FILES
423 .sp
424 .LP
425 \fB/etc/default/useradd\fR
426 .sp
427 .LP
428 \fB/etc/datemsk\fR
429 .sp
430 .LP
431 \fB/etc/passwd\fR
432 .sp
433 .LP
434 \fB/etc/shadow\fR
435 .sp
436 .LP
437 \fB/etc/group\fR
438 .sp
439 .LP
440 \fB/etc/skel\fR
441 .sp
442 .LP
443 \fB/usr/include/limits.h\fR
444 .sp
445 .LP
446 \fB/etc/user_attr\fR
447 .SH ATTRIBUTES
448 .sp
449 .LP
450 See \fBAttributes\fR(5) for descriptions of the following attributes:
451 .sp

453 .sp
454 .TS
455 box;

```

```

456 c | c
457 l | l .
458 ATTRIBUTE TYPE ATTRIBUTE VALUE
459 _
460 Interface Stability Committed
461 .TE

463 .SH SEE ALSO
464 .sp
465 .LP
466 \fBpasswd\fR(1), \fBprofiles\fR(1), \fBroles\fR(1), \fBusers\fR(1B),
467 \fBgroupadd\fR(1M), \fBgroupdel\fR(1M), \fBgroupmod\fR(1M), \fBgrpck\fR(1M),
468 \fBlogins\fR(1M), \fBpwck\fR(1M), \fBuserdel\fR(1M), \fBusermod\fR(1M),
469 \fBgetdate\fR(3C), \fBauth_attr\fR(4), \fBpasswd\fR(4), \fBprof_attr\fR(4),
470 \fBproject\fR(4), \fBuser_attr\fR(4), \fBattributes\fR(5)
471 .SH DIAGNOSTICS
472 .sp
473 .LP
474 In case of an error, \fBuseradd\fR prints an error message and exits with a
475 non-zero status.
476 .sp
477 .LP
478 The following indicates that \fBlogin\fR specified is already in use:
479 .sp
480 .in +2
481 .nf
482 UX: useradd: ERROR: login is already in use. Choose another.
483 .fi
484 .in -2
485 .sp

487 .sp
488 .LP
489 The following indicates that the \fBuid\fR specified with the \fB-u\fR option
490 is not unique:
491 .sp
492 .in +2
493 .nf
494 UX: useradd: ERROR: uid \fBuid\fR is already in use. Choose another.
495 .fi
496 .in -2
497 .sp

499 .sp
500 .LP
501 The following indicates that the \fBigroup\fR specified with the \fB-g\fR option
502 is already in use:
503 .sp
504 .in +2
505 .nf
506 UX: useradd: ERROR: group \fBigroup\fR does not exist. Choose another.
507 .fi
508 .in -2
509 .sp

511 .sp
512 .LP
513 The following indicates that the \fBuid\fR specified with the \fB-u\fR option
514 is in the range of reserved \fBUID\fRs (from \fB0\fR-\fB99\fR):
515 .sp
516 .in +2
517 .nf
518 UX: useradd: WARNING: uid \fBuid\fR is reserved.
519 .fi
520 .in -2
521 .sp

```

```
523 .sp
524 .LP
525 The following indicates that the \fIuid\fR specified with the \fB-u\fR option
526 exceeds \fBMAXUID\fR as defined in \fB<sys/param.h>\fR:
527 .sp
528 .in +2
529 .nf
530 UX: useradd: ERROR: uid \fIuid\fR is too big. Choose another.
531 .fi
532 .in -2
533 .sp

535 .sp
536 .LP
537 The following indicates that the \fB/etc/passwd\fR or \fB/etc/shadow\fR files
538 do not exist:
539 .sp
540 .in +2
541 .nf
542 UX: useradd: ERROR: Cannot update system files - login cannot be created.
543 .fi
544 .in -2
545 .sp

547 .SH NOTES
548 .sp
549 .LP
550 The \fBuseradd\fR utility adds definitions to only the local \fB/etc/group\fR,
551 \fB/etc/passwd\fR, \fB/etc/passwd\fR, \fB/etc/shadow\fR, \fB/etc/project\fR, and
552 \fB/etc/user_attr\fR files. If a network name service such as \fBNIS\fR or
553 \fBNIS+\fR is being used to supplement the local \fB/etc/passwd\fR file with
554 additional entries, \fBuseradd\fR cannot change information supplied by the
555 network name service. However \fBuseradd\fR will verify the uniqueness of the
556 user name (or role) and user id and the existence of any group names specified
557 against the external name service.
```

```

*****
7698 Wed Sep 4 20:46:01 2013
new/usr/src/man/man3c/getlogin.3c
2989 Eliminate use of LOGNAME_MAX in ON
1166 useradd have warning with name more 8 chars
*****
1 \" te
2.\" Copyright (c) 2013 Gary Mills
3.\" Copyright (c) 2004 Sun Microsystems, Inc. All Rights Reserved.
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5.\" Portions Copyright (c) 1992, X/Open Company Limited. All Rights Reserved.
6.\" Sun Microsystems, Inc. gratefully acknowledges The Open Group for permission
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11.\" You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE or http:
12.\" When distributing Covered Code, include this CDDL HEADER in each file and in
13.TH GETLOGIN 3C \"May 25, 2013\"
14.TH GETLOGIN 3C \"May 18, 2004\"
15.SH NAME
16.getlogin, getlogin_r \- get login name
17.SH SYNOPSIS
18.LP
19.#include <unistd.h>

21.\"Bchar *fBgetlogin(fR(fBvoid)fR);
22.fi

24.LP
25.nf
26.\"Bchar *fBgetlogin_r(fR(fBchar *fR(fInamefR, fBintfR fInamelenfR);
27.fi

29.SS \"Standard conforming\"
30.LP
31.nf
32.cc [ fIflag fR... ] fIfilefR... fB-D_POSIX_PTHREAD_SEMANTICSfR [ fIlibrar

34.fBintfR fBgetlogin_r(fR(fBchar *fR(fInamefR, fBsize_tfR fInamesizefR);
35.fi

37.SH DESCRIPTION
38.sp
39.LP
40.The fBgetlogin()fR function returns a pointer to the login name as found in
41.fB/var/adm/utmpxfR. It can be used in conjunction with fBgetpwnamfR(3C) to
42.locate the correct password file entry when the same user fBIDfR is shared by
43.several login names.
44.sp
45.LP
46.The login name plus the terminating null byte can be up to 33 characters
47.in length.
48.Newly-compiled programs should use the fBLOGIN_NAME_MAXfR symbol,
49.defined in <fBlimits.hfR>, to size the buffer.
50.Older programs that call fBgetlogin()fR expect only the legacy
51.9-character length.
52.These automatically link to a version of the fBgetlogin()fR functions that
53.truncates longer login names.
54.It's also possible to compile new programs that link to truncating versions
55.of these functions by defining fB_USE_LEGACY_LOGNAME_fR in the
56.compile environment.
57.sp
58.LP
59.Some older programs will correctly handle long login names returned

```

```

60.by the fBgetlogin()fR function.
61.For this case, the user compatibility library
62.fB/usr/lib/getloginx.so.1fR redirects to a version of the fBgetlogin()fR
63.function that returns the long name.
64.This library should be added to such an application
65.at runtime using fBLD_PRELOADfR.
66.sp
67.LP
68.If fBgetlogin()fR is called within a process that is not attached to a
69.terminal, it returns a null pointer. The correct procedure for determining the
70.login name is to call fBcuseridfR(3C), or to call fBgetlogin()fR and if it
71.fails to call fBgetpwuidfR(3C).
72.sp
73.LP
74.The fBgetlogin_r()fR function has the same functionality as fBgetlogin()fR
75.except that the caller must supply a buffer fInamefR with length
76.fInamelenfR to store the result. The fInamefR buffer must be at least
77.fBLOGIN_NAME_MAXfR bytes in size (defined in <fBlimits.hfR>). The
78.fB_POSIX_LOGIN_NAME_MAXfR bytes in size (defined in <fBlimits.hfR>). The
79.POSIX version (see fBstandardsfR(5)) of fBgetlogin_r()fR takes a
79.fInamesizefR parameter of type fBsize_tfR.
80.SH RETURN VALUES
81.sp
82.LP
83.Upon successful completion, fBgetlogin()fR returns a pointer to the login
84.name or a null pointer if the user's login name cannot be found. Otherwise it
85.returns a null pointer and sets fBerrnofR to indicate the error.
86.sp
87.LP
88.The standard-conforming fBgetlogin_r()fR returns fB0fR if successful, or
89.the error number upon failure.
90.SH ERRORS
91.sp
92.LP
93.The fBgetlogin_r()fR function will fail if:
94.sp
95.ne 2
96.na
97.fB\FBERANGEfRfR
98.ad
99.RS 10n
100.The size of the buffer is smaller than the result to be returned.
101.RE

103.sp
104.ne 2
105.na
106.fB\FBEINVALfRfR
107.ad
108.RS 10n
109.And entry for the current user was not found in the fB/var/adm/utmpxfR file.
110.RE

112.sp
113.LP
114.The fBgetlogin()fR and fBgetlogin_r()fR functions may fail if:
115.sp
116.ne 2
117.na
118.fB\FBEMFILEfRfR
119.ad
120.RS 10n
121.There are {fBOPEN_MAXfR} file descriptors currently open in the calling
122.process.
123.RE

```



```

125 .sp
126 .ne 2
127 .na
128 \fB\fBENFILE\fR\fR
129 .ad
130 .RS 10n
131 The maximum allowable number of files is currently open in the system.
132 .RE

134 .sp
135 .ne 2
136 .na
137 \fB\fBENXIO\fR\fR
138 .ad
139 .RS 10n
140 The calling process has no controlling terminal.
141 .RE

143 .sp
144 .LP
145 The \fBgetlogin_r()\fR function may fail if:
146 .sp
147 .ne 2
148 .na
149 \fB\fBERANGE\fR\fR
150 .ad
151 .RS 10n
152 The size of the buffer is smaller than the result to be returned.
153 .RE

155 .SH USAGE
156 .sp
157 .LP
158 The return value of \fBgetlogin()\fR points to thread-specific data whose
159 content is overwritten on each call by the same thread.
160 .sp
161 .LP
162 Three names associated with the current process can be determined:
163 \fBgetpwnam()\fR, \fBgetuid()\fR, \fBgetuid()\fR returns the name associated with the
164 effective user ID of the process; \fBgetlogin()\fR returns the name associated
165 with the current login activity; and \fBgetpwnam()\fR, \fBgetuid()\fR, \fBgetuid()\fR
166 returns the name associated with the real user ID of the process.
167 .SH FILES
168 .sp
169 .ne 2
170 .na
171 \fB\fB/var/adm/utmpx\fR\fR
172 .ad
173 .RS 18n
174 user access and administration information
175 .RE

177 .sp
178 .ne 2
179 .na
180 \fB\fB/usr/lib/getloginx.so.1\fR\fR
181 .ad
182 .RS 18n
183 A compatibility library that returns long login names to older applications.
184 .RE

186 .sp
187 .ne 2
188 .na
189 \fB\fB/usr/lib/64/getloginx.so.1\fR\fR
190 .ad

```

```

191 .RS 18n
192 A 64-bit compatibility library to return long login names.
193 .RE

195 .SH ATTRIBUTES
196 .sp
197 .LP
198 See \fBattributes\fR(5) for descriptions of the following attributes:
199 .sp

201 .sp
202 .TS
203 box;
204 c | c
205 l | l .
206 ATTRIBUTE TYPE ATTRIBUTE VALUE
207 _
208 Interface Stability Standard
209 _
210 MT-Level See below.
211 .TE

213 .SH SEE ALSO
214 .sp
215 .LP
216 \fBgetuid()\fR(2), \fBgetuid()\fR(2), \fBgetuid()\fR(3C), \fBgetgrnam()\fR(3C),
217 \fBgetpwnam()\fR(3C), \fBgetpwnam()\fR(3C), \fBgetpwnam()\fR(4), \fBattributes()\fR(5),
218 \fBstandards()\fR(5)
219 .SH NOTES
220 .sp
221 .LP
222 When compiling multithreaded programs, see \fBintro\fR(3).
223 .sp
224 .LP
225 The \fBgetlogin()\fR function is safe to use in multithreaded applications, but
226 is discouraged. The \fBgetlogin_r()\fR function should be used instead.
227 .sp
228 .LP
229 Solaris 2.4 and earlier releases provided a \fBgetlogin_r()\fR as specified in
230 POSIX.1c Draft 6. The final POSIX.1c standard changed the interface as
231 described above. Support for the Draft 6 interface is provided for
232 compatibility only and may not be supported in future releases. New
233 applications and libraries should use the standard-conforming interface.

```

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28316 Wed Sep 4 20:46:01 2013

new/usr/src/man/man3c/sysconf.3c

2989 Eliminate use of LOGNAME\_MAX in ON

1166 useradd have warning with name more 8 chars

\*\*\*\*\*

```

1  \" te
2 .\" Copyright (c) 2013 Gary Mills
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5 .\" Copyright 1989 AT&T
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12 .\" When distributing Covered Code, include this CDDL HEADER in each file and in
13 .TH SYSCONF 3C \"Apr 16, 2013\"
14 .TH SYSCONF 3C \"Mar 26, 2008\"
15 .SH NAME
16 sysconf \- get configurable system variables
17 .LP
18 .nf
19 #include <unistd.h>

```

```

21 \fBlong\fR \fBsysconf\fR(\fBint\fR \fBname\fR);
22 .fi

```

```

24 .SH DESCRIPTION
25 .sp
26 .LP
27 The \fBsysconf()\fR function provides a method for an application to determine
28 the current value of a configurable system limit or option (variable).
29 .sp
30 .LP
31 The \fBname\fR argument represents the system variable to be queried. The
32 following table lists the minimal set of system variables from \fB<limits.h>\fR
33 and \fB<unistd.h>\fR that can be returned by \fBsysconf()\fR and the symbolic
34 constants defined in \fB<unistd.h>\fR that are the corresponding values used
35 for \fBname\fR on the SPARC and x86 platforms.
36 .sp
37 .in +2
38 .nf

```

Name	Return Value	Meaning
_SC_2_C_BIND	_POSIX2_C_BIND	Supports the C language binding option
_SC_2_C_DEV	_POSIX2_C_DEV	Supports the C language development utilities option
_SC_2_C_VERSION	_POSIX2_C_VERSION	Integer value indicates version of ISO POSIX-2 standard (Commands)
_SC_2_CHAR_TERM	_POSIX2_CHAR_TERM	Supports at least one terminal
_SC_2_FORT_DEV	_POSIX2_FORT_DEV	Supports FORTRAN Development
_SC_2_FORT_RUN	_POSIX2_FORT_RUN	Utilities Option Supports FORTRAN Run-time Utilities
_SC_2_LOCALEDEF	_POSIX2_LOCALEDEF	Option Supports creation of locales by the

60			localedef utility
61	_SC_2_SW_DEV	_POSIX2_SW_DEV	Supports Software
62			Development Utility
63			Option
64	_SC_2_UPE	_POSIX2_UPE	Supports User
65			Portability
66			Utilities Option
67	_SC_2_VERSION	_POSIX2_VERSION	Integer value
68			indicates version
69			of ISO POSIX-2
70			standard (C language
71			binding)
72	_SC_AIO_LISTIO_MAX	AIO_LISTIO_MAX	Max number of I/O
73			operations in a
74			single list I/O call
75			supported
76	_SC_AIO_MAX	AIO_MAX	Max number of
77			outstanding
78			asynchronous I/O
79			operations supported
80	_SC_AIO_PRIO_DELTA_MAX	AIO_PRIO_DELTA_MAX	Max amount by which
81			process can decrease
82			its asynchronous
83			I/O priority level
84			from its own
85			scheduling priority
86	_SC_ARG_MAX	ARG_MAX	Max size of argv[]
87			plus envp[]
88	_SC_ASYNCHRONOUS_IO	_POSIX_ASYNCHRONOUS_IO	Supports
89			Asynchronous I/O
90	_SC_ATEXIT_MAX	ATEXIT_MAX	Max number of
91			functions that can
92			be registered with
93			atexit()
94	_SC_AVPHYS_PAGES		Number of physical
95			memory pages not
96			currently in use by
97			system
98	_SC_BARRIERS	_POSIX_BARRIERS	Supports Barriers
99			option
100	_SC_BC_BASE_MAX	BC_BASE_MAX	Maximum obase values
101			allowed by bc
102	_SC_BC_DIM_MAX	BC_DIM_MAX	Max number of
103			elements permitted
104			in array by bc
105	_SC_BC_SCALE_MAX	BC_SCALE_MAX	Max scale value
106			allowed by bc
107	_SC_BC_STRING_MAX	BC_STRING_MAX	Max length of string
108			constant allowed by
109			bc
110	_SC_CHILD_MAX	CHILD_MAX	Max processes
111			allowed to a UID
112	_SC_CLK_TCK	CLK_TCK	Ticks per second
113			(clock_t)
114	_SC_CLOCK_SELECTION	_POSIX_CLOCK_SELECTION	Supports Clock
115			Selection option
116	_SC_COLL_WEIGHTS_MAX	COLL_WEIGHTS_MAX	Max number of
117			weights that can be
118			assigned to entry of
119			the LC_COLLATE order
120			keyword in locale
121			definition file
122	_SC_CPUID_MAX		Max possible
123			processor ID
124	_SC_DELAYTIMER_MAX	DELAYTIMER_MAX	Max number of timer
125			expiration overruns

126	_SC_EXPR_NEST_MAX	EXPR_NEST_MAX	Max number of parentheses by expr
127			Supports File Synchronization
128	_SC_FSYNC	_POSIX_FSYNC	Max size of group entry buffer
129			Max size of password entry buffer
130	_SC_GETGR_R_SIZE_MAX		Maximum length of a host name (excluding terminating null)
131			Max number of iovec structures available to one process for use with readv() and writev()
132	_SC_GETPW_R_SIZE_MAX		Job control supported?
133			Max length of input line
134	_SC_HOST_NAME_MAX	_POSIX_HOST_NAME_MAX	Max length of login name
135			
136	_SC_IOV_MAX	IOV_MAX	Max length of login name
137			
138			
139			
140			
141			
142	_SC_JOB_CONTROL	_POSIX_JOB_CONTROL	Max length of login name
143			
144	_SC_LINE_MAX	LINE_MAX	Max length of login name
145			
146	_SC_LOGIN_NAME_MAX	LOGIN_NAME_MAX	Max length of login name
147	_SC_LOGIN_NAME_MAX	LOGNAME_MAX + 1	Max length of login name
148			
149	_SC_LOGNAME_MAX	LOGNAME_MAX	Max length of login name
150	_SC_MAPPED_FILES	_POSIX_MAPPED_FILES	Max length of login name
151			
152	_SC_MAXPID		Max pid value
153	_SC_MEMLOCK	_POSIX_MEMLOCK	Max pid value
154			
155	_SC_MEMLOCK_RANGE	_POSIX_MEMLOCK_RANGE	Max pid value
156			
157	_SC_MEMORY_PROTECTION	_POSIX_MEMORY_PROTECTION	Max pid value
158			
159	_SC_MESSAGE_PASSING	_POSIX_MESSAGE_PASSING	Max pid value
160			
161	_SC_MONOTONIC_CLOCK	_POSIX_MONOTONIC_CLOCK	Max pid value
162			
163	_SC_MQ_OPEN_MAX	MQ_OPEN_MAX	Max pid value
164			
165	_SC_MQ_PRIO_MAX	MQ_PRIO_MAX	Max pid value
166			
167			
168	_SC_NGROUPS_MAX	NGROUPS_MAX	Max pid value
169			
170			
171	_SC_NPROCESSORS_CONF		Max pid value
172			
173	_SC_NPROCESSORS_MAX		Max pid value
174			
175			
176	_SC_NPROCESSORS_ONLN		Max pid value
177			
178	_SC_OPEN_MAX	OPEN_MAX	Max pid value
179			
180	_SC_PAGESIZE	PAGESIZE	Max pid value
181			
182	_SC_PAGE_SIZE	PAGESIZE	Max pid value
183	_SC_PASS_MAX	PASS_MAX	Max pid value
184			
185			
186	_SC_PHYS_PAGES		Max pid value
187			
188			
189	_SC_PRIORITIZED_IO	_POSIX_PRIORITIZED_IO	Max pid value
190			

191	_SC_PRIORITY_SCHEDULING	_POSIX_PRIORITY_SCHEDULING	Supports Process Scheduling
192			Supports Raw Sockets option
193	_SC_RAW_SOCKETS	_POSIX_RAW_SOCKETS	Max number of repeated occurrences of a regular expression permitted when using interval notation \e{m,n\}e
194			Supports IPv6 option
195	_SC_RE_DUP_MAX	RE_DUP_MAX	Supports Realtime Signals
196			Supports Regular Expression Handling option
197			Max number of realtime signals reserved for application use
198			Saved IDs (seteuid()) supported?
199			Max number of POSIX semaphores a process can have
200			Max value a POSIX semaphore can have
201	_SC_READER_WRITER_LOCKS	_POSIX_READER_WRITER_LOCKS	Max value a POSIX semaphore can have
202	_SC_REALTIME_SIGNALS	_POSIX_REALTIME_SIGNALS	Supports Semaphores
203			Supports Shared Memory Objects
204	_SC_REGEX	_POSIX_REGEX	Supports POSIX shell
205			Max number of queued signals that a process can send and have pending at receiver(s) at a time
206			Supports Spawn option
207	_SC_RTSIG_MAX	RTSIG_MAX	Supports Spin Locks option
208			Default stack protection
209			Number of streams one process can have open at a time
210			Max number of symbolic links that can be reliably traversed in the resolution of a pathname in the absence of a loop
211	_SC_SAVED_IDS	_POSIX_SAVED_IDS	Supports Synchronized I/O
212			Supports Thread Stack Address Attribute option
213			Supports Thread Stack Size Attribute option
214	_SC_SEM_NSEMS_MAX	SEM_NSEMS_MAX	Number attempts made to destroy thread-specific data on thread exit
215			Max number of data keys per process
216			
217	_SC_SEM_VALUE_MAX	SEM_VALUE_MAX	
218			
219	_SC_SEMAPHORES	_POSIX_SEMAPHORES	
220	_SC_SHARED_MEMORY	_POSIX_SHARED_MEMORY	
221	OBJECTS		
222	_SC_SHELL	_POSIX_SHELL	
223	_SC_SIGQUEUE_MAX	SIGQUEUE_MAX	
224			
225			
226			
227			
228			
229	_SC_SPAWN	_POSIX_SPAWN	
230	_SC_SPIN_LOCKS	_POSIX_SPIN_LOCKS	
231			
232	_SC_STACK_PROT		
233			
234	_SC_STREAM_MAX	STREAM_MAX	
235			
236			
237	_SC_SYMLINK_MAX	_POSIX_SYMLINK_MAX	
238			
239			
240			
241			
242			
243	_SC_SYNCHRONIZED_IO	_POSIX_SYNCHRONIZED_IO	
244			
245	_SC_THREAD_ATTR	_POSIX_THREAD_ATTR	
246	STACKADDR	STACKADDR	
247			
248	_SC_THREAD_ATTR	_POSIX_THREAD_ATTR	
249	STACKSIZE	STACKSIZE	
250			
251	_SC_THREAD_DESTRUCTOR	PTHREAD_DESTRUCTOR	
252	ITERATIONS	ITERATIONS	
253			
254			
255	_SC_THREAD_KEYS_MAX	PTHREAD_KEYS_MAX	
256			

257	_SC_THREAD_PRIO_	_POSIX_THREAD_PRIO_	Supports Priority
258	INHERIT	INHERIT	Inheritance option
259	_SC_THREAD_PRIO_	_POSIX_THREAD_PRIO_	Supports Priority
260	PROTECT	PROTECT	Protection option
261	_SC_THREAD_PRIORITY_	_POSIX_THREAD_PRIORITY_	Supports Thread
262	SCHEDULING	SCHEDULING	Execution
263			Scheduling option
264	_SC_THREAD_PROCESS_	_POSIX_THREAD_PROCESS_	Supports
265	SHARED	SHARED	Process-Shared
266			Synchronization
267			option
268	_SC_THREAD_SAFE_	_POSIX_THREAD_SAFE_	Supports Thread-Safe
269	FUNCTIONS	FUNCTIONS	Functions option
270	_SC_THREAD_STACK_MIN	PTHREAD_STACK_MIN	Min byte size of
271			thread stack storage
272	_SC_THREAD_THREADS_MAX	PTHREAD_THREADS_MAX	Max number of
273			threads per process
274	_SC_THREADS	_POSIX_THREADS	Supports Threads
275			option
276	_SC_TIMEOITS	_POSIX_TIMEOITS	Supports Timeouts
277			option
278	_SC_TIMER_MAX	TIMER_MAX	Max number of timer
279			per process
280			supported
281	_SC_TIMERS	_POSIX_TIMERS	Supports Timers
282	_SC_TTY_NAME_MAX	TTYNAME_MAX	Max length of tty
283			device name
284	_SC_TZNAME_MAX	TZNAME_MAX	Max number of bytes
285			supported for name
286			of a time zone
287	_SC_V6_ILP32_OFF32	_POSIX_V6_ILP32_OFF32	Supports X/Open
288			ILP32 w/32-bit
289			offset build
290			environment
291	_SC_V6_ILP32_OFFBIG	_POSIX_V6_ILP32_OFFBIG	Supports X/Open
292			ILP32 w/64-bit
293			offset build
294			environment
295	_SC_V6_LP64_OFF64	_POSIX_V6_LP64_OFF64	Supports X/Open
296			LP64 w/64-bit
297			offset build
298			environment
299	_SC_V6_LPBIG_OFFBIG	_POSIX_V6_LPBIG_OFFBIG	Same as
300			_SC_V6_LP64_OFF64
301	_SC_VERSION	_POSIX_VERSION	POSIX.1 version
302			supported
303	_SC_XBS5_ILP32_OFF32	_XBS_ILP32_OFF32	Indicates support
304			for X/Open ILP32
305			w/32-bit offset
306			build environment
307	_SC_XBS5_ILP32_OFFBIG	_XBS5_ILP32_OFFBIG	Indicates support
308			for X/Open ILP32
309			w/64-bit offset
310			build environment
311	_SC_XBS5_LP64_OFF64	_XBS5_LP64_OFF64	Indicates support of
312			X/Open LP64,
313			64-bit offset
314			build environment
315	_SC_XBS5_LPBIG_OFFBIG	_XBS5_LP64_OFF64	Same as
316			_SC_XBS5_LP64_OFF64
317	_SC_XOPEN_CRYPT	_XOPEN_CRYPT	Supports X/Open
318			Encryption Feature
319			Group
320	_SC_XOPEN_ENH_I18N	_XOPEN_ENH_I18N	Supports X/Open
321			Enhanced
322			Internationalization

323			Feature Group
324	_SC_XOPEN_LEGACY	_XOPEN_LEGACY	Supports X/Open
325			Legacy Feature Group
326	_SC_XOPEN_REALTIME	_XOPEN_REALTIME	Supports X/Open
327			POSIX Realtime
328			Feature Group
329	_SC_XOPEN_REALTIME_	_XOPEN_REALTIME_THREADS	Supports X/Open
330	THREADS		POSIX Reatime
331			Threads Feature
332			Group
333	_SC_XOPEN_SHM	_XOPEN_SHM	Supports X/Open
334			Shared Memory
335			Feature Group
336	_SC_XOPEN_STREAMS	_POSIX_XOPEN_STREAMS	Supports XSI Streams
337			option group
338	_SC_XOPEN_UNIX	_XOPEN_UNIX	Supports X/Open CAE
339			Specification,
340			August 1994, System
341			Interfaces and
342			Headers, Issue 4,
343			Version 2
344	_SC_XOPEN_VERSION	_XOPEN_VERSION	Integer value
345			indicates version of
346			X/Open Portability
347			Guide to which
348			implementation
349			conforms
350	_SC_XOPEN_XCU_VERSION	_XOPEN_XCU_VERSION	Integer value
351			indicates version of
352			XCU specification to
353			which implementation
354			conforms
355	.fi		
356	.in -2		
357	.sp		
359	.sp		
360	.LP		
361	The following options are not supported and return \ (mil:		
362	.sp		
364	.sp		
365	.TS		
366	l l		
367	l l .		
368	\fb_SC_2_PBS\fr \fb_POSIX2_PBS\fr		
369	\fb_SC_2_PBS_ACCOUNTING\fr \fb_POSIX2_PBS_ACCOUNTING\fr		
370	\fb_SC_2_PBS_CHECKPOINT\fr \fb_POSIX2_PBS_CHECKPOINT\fr		
371	\fb_SC_2_PBS_LOCATE\fr \fb_POSIX2_PBS_LOCATE\fr		
372	\fb_SC_2_PBS_MESSAGE\fr \fb_POSIX2_PBS_MESSAGE\fr		
373	\fb_SC_2_PBS_TRACK\fr \fb_POSIX2_PBS_TRACK\fr		
374	\fb_SC_ADVISORY_INFO\fr \fb_POSIX_ADVISORY_INFO\fr		
375	\fb_SC_CPUTIME\fr \fb_POSIX_CPUTIME\fr		
376	\fb_SC_SPORADIC_SERVER\fr \fb_POSIX_SPORADIC_SERVER\fr		
377	\fb_SC_SS_REPL_MAX\fr \fb_POSIX_SS_REPL_MAX\fr		
378	\fb_SC_THREAD_CPUTIME\fr \fb_POSIX_THREAD_CPUTIME\fr		
379	\fb_SC_THREAD_SPORADIC_SERVER\fr \fb_POSIX_THREAD_SPORADIC_SERVER\fr		
380	\fb_SC_TRACE\fr \fb_POSIX_TRACE\fr		
381	\fb_SC_TRACE_EVENT_FILTER\fr \fb_POSIX_TRACE_EVENT_FILTER\fr		
382	\fb_SC_TRACE_EVENT_NAME_MAX\fr \fb_POSIX_TRACE_EVENT_NAME_MAX\fr		
383	\fb_SC_TRACE_INHERIT\fr \fb_POSIX_TRACE_INHERIT\fr		
384	\fb_SC_TRACE_LOG\fr \fb_POSIX_TRACE_LOG\fr		
385	\fb_SC_TRACE_NAME_MAX\fr \fb_POSIX_TRACE_NAME_MAX\fr		
386	\fb_SC_TRACE_SYS_MAX\fr \fb_POSIX_TRACE_SYS_MAX\fr		
387	\fb_SC_TRACE_USER_EVENT_MAX\fr \fb_POSIX_TRACE_USER_EVENT_MAX\fr		
388	\fb_SC_TYPED_MEMORY_OBJECTS\fr \fb_POSIX_TYPED_MEMORY_OBJECTS\fr		

```

389 .TE

391 .SH RETURN VALUES
392 .sp
393 .LP
394 Upon successful completion, \fBsysconf()\fR returns the current variable value
395 on the system. The value returned will not be more restrictive than the
396 corresponding value described to the application when it was compiled with the
397 implementation's <\fBlimits.h\fR>, <\fBunistd.h\fR> or <\fBtime.h\fR>. With
398 only a few obvious exceptions such as \fB_SC_AVPHYS_PAGES\fR and
399 \fB_SC_NPROCESSORS_ONLN\fR, the value will not change during the lifetime of
400 the calling process.
401 .sp
402 .LP
403 If \fIname\fR is an invalid value, \fBsysconf()\fR returns \fB\{mil\}fR and sets
404 \fBerrno\fR to indicate the error. If the variable corresponding to \fIname\fR
405 is associated with functionality that is not supported by the system,
406 \fBsysconf()\fR returns \fB\{mil\}fR without changing the value of \fBerrno\fR.
407 .sp
408 .LP
409 Calling \fBsysconf()\fR with the following returns \fB\{mil\}fR without setting
410 \fBerrno\fR, because no maximum limit can be determined. The system supports at
411 least the minimum values and can support higher values depending upon system
412 resources.
413 .sp
414 .in +2
415 .nf
416 Variable                Minimum supported value
417 _SC_AIO_MAX              _POSIX_AIO_MAX
418 _SC_ATEXIT_MAX           32
419 _SC_MQ_OPEN_MAX          32
420 _SC_THREAD_THREADS_MAX   _POSIX_THREAD_THREADS_MAX
421 _SC_THREAD_KEYS_MAX      _POSIX_THREAD_KEYS_MAX
422 _SC_THREAD_DESTRUCTOR_ITERATIONS _POSIX_THREAD_DESTRUCTOR_ITERATIONS
423 .fi
424 .in -2

426 .sp
427 .LP
428 The following SPARC and x86 platform variables return \fBEINVAL\fR:
429 .sp
430 .in +2
431 .nf
432 _SC_COHER_BLKSZ          _SC_DCACHE_ASSOC
433 _SC_DCACHE_BLKSZ         _SC_DCACHE_LINESZ
434 _SC_DCACHE_SZ            _SC_DCACHE_TBLKSZ
435 _SC_ICACHE_ASSOC         _SC_ICACHE_BLKSZ
436 _SC_ICACHE_LINESZ        _SC_ICACHE_SZ
437 _SC_SPLIT_CACHE
438 .fi
439 .in -2

441 .SH ERRORS
442 .sp
443 .LP
444 The \fBsysconf()\fR function will fail if:
445 .sp
446 .ne 2
447 .na
448 \fBEINVAL\fR
449 .ad
450 .RS 10n
451 The value of the \fIname\fR argument is invalid.
452 .RE

454 .SH ATTRIBUTES

```

```

455 .sp
456 .LP
457 See \fBattributes\fR(5) for descriptions of the following attributes:
458 .sp

460 .sp
461 .TS
462 box;
463 c | c
464 l | l .
465 ATTRIBUTE TYPE      ATTRIBUTE VALUE
466 _
467 Architecture        SPARC and x86
468 _
469 Interface Stability  Committed
470 _
471 MT-Level             MT-Safe, Async-Signal-Safe
472 _
473 Standard             See \fBstandards\fR(5).
474 .TE

476 .SH SEE ALSO
477 .sp
478 .LP
479 \fBpooladm\fR(1M), \fBzoneadm\fR(1M), \fBfpathconf\fR(2), \fBseteuid\fR(2),
480 \fBsetrlimit\fR(2), \fBconfstr\fR(3C), \fBattributes\fR(5), \fBstandards\fR(5)
481 .SH NOTES
482 .sp
483 .LP
484 A call to \fBsetrlimit()\fR can cause the value of \fBOPEN_MAX\fR to change.
485 .sp
486 .LP
487 Multiplying \fBsysconf\fR(\fB_SC_PHYS_PAGES\fR) or
488 \fBsysconf\fR(\fB_SC_AVPHYS_PAGES\fR) by \fBsysconf\fR(\fB_SC_PAGESIZE\fR) to
489 determine memory amount in bytes can exceed the maximum values representable in
490 a 32-bit signed or unsigned integer.
491 .sp
492 .LP
493 The value of \fBCLK_TCK\fR can be variable and it should not be assumed that
494 \fBCLK_TCK\fR is a compile-time constant.
495 .sp
496 .LP
497 If the caller is in a non-global zone and the pools facility is active,
498 \fBsysconf\fR(\fB_SC_NPROCESSORS_CONF\fR) and
499 \fBsysconf\fR(\fB_SC_NPROCESSORS_ONLN\fR) return the number of processors in
500 the processor set of the pool to which the zone is bound.

```

new/usr/src/man/man4/passwd.4

1

\*\*\*\*\*

9883 Wed Sep 4 20:46:02 2013

new/usr/src/man/man4/passwd.4

2989 Eliminate use of LOGNAME\_MAX in ON

1166 useradd have warning with name more 8 chars

\*\*\*\*\*

```
1 \" te
2.\" Copyright (c) 2013 Gary Mills
3.\" Copyright (c) 2004, Sun Microsystems, Inc. All Rights Reserved.
4.\" Copyright 1989 AT&T
5.\" The contents of this file are subject to the terms of the Common Development
6.\" You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE or http:
7.\" When distributing Covered Code, include this CDDL HEADER in each file and in
8.TH PASSWD 4 "Apr 16, 2013"
9.TH PASSWD 4 "Jul 28, 2004"
10.SH NAME
10 passwd \- password file
11.SH SYNOPSIS
12.LP
13.nf
14 \fB/etc/passwd\fR
15.fi

17.SH DESCRIPTION
18.sp
19.LP
20 The file \fB/etc/passwd\fR is a local source of information about users'
21 accounts. The password file can be used in conjunction with other naming
22 sources, such as the \fBNIS\fR maps \fBpasswd.byname\fR and \fBpasswd.bygid\fR,
23 data from the \fBNIS+\fR \fBpasswd\fR table, or password data stored on an LDAP
24 server. Programs use the \fBgetpwnam\fR(3C) routines to access this
25 information.
26.sp
27.LP
28 Each \fBpasswd\fR entry is a single line of the form:
29.sp
30.in +2
31.nf
32 \fIusername\fR:\fB:\fR\fIpassword\fR:\fB:\fR\fIuid\fR:\fB:\fR
33 \fIgid\fR:\fB:\fR\fIgcosp-field\fR:\fB:\fR\fIhome-dir\fR:\fB:\fR
34 \fIlogin-shell\fR
35.fi
36.in -2
37.sp

39.sp
40.LP
41 where
42.sp
43.ne 2
44.na
45 \fB\fIusername\fR\fR
46.ad
47.RS 15n
48 is the user's login name.
49.sp
50 The login (\fBlogin\fR) and role (\fBrole\fR) fields accept a string of no more
51 than 32 bytes consisting of characters from the set of alphabetic
52 than eight bytes consisting of characters from the set of alphabetic
53 characters, numeric characters, period (\fB\.\fR), underscore (\fB_\fR), and
54 hyphen (\fB-\fR). The first character should be alphabetic and the field should
55 contain at least one lower case alphabetic character. A warning message is
56 displayed if these restrictions are not met.
57.sp
57 The \fBlogin\fR and \fBrole\fR fields must contain at least one character and
58 must not contain a colon (\fB:\fR) or a newline (\fB\n\fR).
```

new/usr/src/man/man4/passwd.4

2

59 .RE

61 .sp

62 .ne 2

63 .na

64 \fB\fIpassword\fR\fR

65 .ad

66 .RS 15n

67 is an empty field. The encrypted password for the user is in the corresponding

68 entry in the \fB/etc/shadow\fR file. \fBpwconv\fR(1M) relies on a special value

69 of '\fBx\fR' in the password field of \fB/etc/passwd\fR. If this value

70 of '\fBx\fR' exists in the password field of \fB/etc/passwd\fR, this indicates

71 that the password for the user is already in \fB/etc/shadow\fR and should not

72 be modified.

73 .RE

75 .sp

76 .ne 2

77 .na

78 \fB\fIuid\fR\fR

79 .ad

80 .RS 15n

81 is the user's unique numerical \fBID\fR for the system.

82 .RE

84 .sp

85 .ne 2

86 .na

87 \fB\fIgid\fR\fR

88 .ad

89 .RS 15n

90 is the unique numerical \fBID\fR of the group that the user belongs to.

91 .RE

93 .sp

94 .ne 2

95 .na

96 \fB\fIgcosp-field\fR\fR

97 .ad

98 .RS 15n

99 is the user's real name, along with information to pass along in a mail-message

100 heading. (It is called the gcosp-field for historical reasons.) An '\fB&\fR' (

101 ampersand) in this field stands for the login name (in cases where the login

102 name appears in a user's real name).

103 .RE

105 .sp

106 .ne 2

107 .na

108 \fB\fIhome-dir\fR\fR

109 .ad

110 .RS 15n

111 is the pathname to the directory in which the user is initially positioned upon

112 logging in.

113 .RE

115 .sp

116 .ne 2

117 .na

118 \fB\fIlogin-shell\fR\fR

119 .ad

120 .RS 15n

121 is the user's initial shell program. If this field is empty, the default shell

122 is \fB/usr/bin/sh\fR.

123 .RE

```

125 .sp
126 .LP
127 The maximum value of the \fIuid\fR and \fIgid\fR fields is \fB2147483647\fR. To
128 maximize interoperability and compatibility, administrators are recommended to
129 assign users a range of \fBUID\fRs and \fBGID\fRs below \fB60000\fR where
130 possible. (\fBUID\fRs from \fB0\fR-\fB99\fR inclusive are reserved by the
131 operating system vendor for use in future applications. Their use by end system
132 users or vendors of layered products is not supported and may cause security
133 related issues with future applications.)
134 .sp
135 .LP
136 The password file is an \fBASCII\fR file that resides in the \fB/etc\fR
137 directory. Because the encrypted passwords on a secure system are always kept
138 in the \fBshadow\fR file, \fB/etc/passwd\fR has general read permission on all
139 systems and can be used by routines that map between numerical user \fBID\fRs
140 and user names.
141 .sp
142 .LP
143 Blank lines are treated as malformed entries in the \fBpasswd\fR file and cause
144 consumers of the file, such as \fBgetpwnam\fR(3C), to fail.
145 .sp
146 .LP
147 The password file can contain entries beginning with a '+' (plus sign) or '-'
148 (minus sign) to selectively incorporate entries from another naming service
149 source, such as NIS, NIS+, or LDAP.
150 .sp
151 .LP
152 A line beginning with a '+' means to incorporate entries from the naming
153 service source. There are three styles of the '+' entries in this file. A
154 single + means to insert all the entries from the alternate naming service
155 source at that point, while a +\fIname\fR means to insert the specific entry,
156 if one exists, from the naming service source. A +@\fInetgroup\fR means to
157 insert the entries for all members of the network group \fInetgroup\fR from the
158 alternate naming service. If a +\fIname\fR entry has a non-null \fBpassword\fR,
159 \fIgc\fR, \fIhome-dir\fR, or \fIlogin-shell\fR field, the value of that field
160 overrides what is contained in the alternate naming service. The \fIuid\fR and
161 \fIgid\fR fields cannot be overridden.
162 .sp
163 .LP
164 A line beginning with a '\(mi' means to disallow entries from the alternate
165 naming service. There are two styles of '-' entries in this file. -\fIname\fR
166 means to disallow any subsequent entries (if any) for \fIname\fR (in this file
167 or in a naming service), and -@\fInetgroup\fR means to disallow any subsequent
168 entries for all members of the network group \fInetgroup\fR.
169 .sp
170 .LP
171 This is also supported by specifying 'compat' in
172 \fBnsswitch.conf\fR(4). The "compat" source might not be supported in future
173 releases. The preferred sources are \fBfiles\fR followed by the identifier of a
174 name service, such as \fBnis\fR or \fBldap\fR. This has the effect of
175 incorporating the entire contents of the naming service's \fBpasswd\fR database
176 or password-related information after the \fBpasswd\fR file.
177 .sp
178 .LP
179 Note that in compat mode, for every \fB/etc/passwd\fR entry, there must be a
180 corresponding entry in the \fB/etc/shadow\fR file.
181 .sp
182 .LP
183 Appropriate precautions must be taken to lock the \fB/etc/passwd\fR file
184 against simultaneous changes if it is to be edited with a text editor;
185 \fBvipw\fR(1B) does the necessary locking.
186 .SH EXAMPLES
187 .LP
188 \fBExample 1 \fRSample \fBpasswd\fR File
189 .sp
190 .LP

```

191 The following is a sample \fBpasswd\fR file:

```

193 .sp
194 .in +2
195 .nf
196 root:x:0:1:Super-User:/:/sbin/sh
197 fred:6k/7KCFRPNVXg:508:10:& Fredericks:/usr2/fred:/bin/csh
198 .fi
199 .in -2
200 .sp

202 .sp
203 .LP
204 and the sample password entry from \fBnsswitch.conf\fR:

206 .sp
207 .in +2
208 .nf
209 passwd: files ldap
210 .fi
211 .in -2
212 .sp

214 .sp
215 .LP
216 In this example, there are specific entries for users \fBroot\fR and \fBfred\fR
217 to assure that they can login even when the system is running single-user. In
218 addition, anyone whose password information is stored on an LDAP server will be
219 able to login with their usual password, shell, and home directory.

221 .sp
222 .LP
223 If the password file is:

225 .sp
226 .in +2
227 .nf
228 root:x:0:1:Super-User:/:/sbin/sh
229 fred:6k/7KCFRPNVXg:508:10:& Fredericks:/usr2/fred:/bin/csh
230 +
231 .fi
232 .in -2
233 .sp

235 .sp
236 .LP
237 and the password entry in \fBnsswitch.conf\fR is:

239 .sp
240 .in +2
241 .nf
242 passwd: compat
243 .fi
244 .in -2
245 .sp

247 .sp
248 .LP
249 then all the entries listed in the \fBNIS\fR \fBpasswd.byuid\fR and
250 \fBpasswd.byname\fR maps will be effectively incorporated after the entries for
251 \fBroot\fR and \fBfred\fR. If the password entry in \fBnsswitch.conf\fR is:

253 .sp
254 .in +2
255 .nf
256 passwd_compat: ldap

```

```

257 passwd: compat
258 .fi
259 .in -2

261 .sp
262 .LP
263 then all password-related entries stored on the LDAP server will be
264 incorporated after the entries for \fBroot\fR and \fBfred\fR.

266 .sp
267 .LP
268 The following is a sample \fBpasswd\fR file when \fBshadow\fR does not exist:

270 .sp
271 .in +2
272 .nf
273 root:q.mJzTnu8icf.:0:1:Super-User:/:/sbin/sh
274 fred:6k/7KCFRPNVXg:508:10:& Fredericks:/usr2/fred:/bin/csh
275 +john:
276 +@documentation:no-login:
277 +:::Guest
278 .fi
279 .in -2
280 .sp

282 .sp
283 .LP
284 The following is a sample \fBpasswd\fR file when \fBshadow\fR does exist:

286 .sp
287 .in +2
288 .nf
289 root:##root:0:1:Super-User:/:/sbin/sh
290 fred:##fred:508:10:& Fredericks:/usr2/fred:/bin/csh
291 +john:
292 +@documentation:no-login:
293 +:::Guest
294 .fi
295 .in -2
296 .sp

298 .sp
299 .LP
300 In this example, there are specific entries for users \fBroot\fR and
301 \fBfred\fR, to assure that they can log in even when the system is running
302 standalone. The user \fBjohn\fR will have his password entry in the naming
303 service source incorporated without change, anyone in the netgroup
304 \fBdocumentation\fR will have their password field disabled, and anyone else
305 will be able to log in with their usual password, shell, and home directory,
306 but with a \fBfigcos\fR field of \fBGuest\fR

308 .SH FILES
309 .sp
310 .ne 2
311 .na
312 \fB\fR/etc/nsswitch.conf\fR\fR
313 .ad
314 .RS 22n

316 .RE

318 .sp
319 .ne 2
320 .na
321 \fB\fR/etc/passwd\fR\fR
322 .ad

```

```

323 .RS 22n

325 .RE

327 .sp
328 .ne 2
329 .na
330 \fB\fR/etc/shadow\fR\fR
331 .ad
332 .RS 22n

334 .RE

336 .SH SEE ALSO
337 .sp
338 .LP
339 \fB\fR(1), \fB\fR(1), \fB\fR(1), \fB\fR(1),
340 \fB\fR(1), \fB\fR(1), \fB\fR(1), \fB\fR(1), \fB\fR(1),
341 \fB\fR(1), \fB\fR(1), \fB\fR(1), \fB\fR(1), \fB\fR(1),
342 \fB\fR(1), \fB\fR(1), \fB\fR(1), \fB\fR(1), \fB\fR(1),
343 \fB\fR(1), \fB\fR(1), \fB\fR(1), \fB\fR(1), \fB\fR(1),
344 \fB\fR(3C), \fB\fR(3C), \fB\fR(3C), \fB\fR(3C),
345 \fB\fR(3C), \fB\fR(3C), \fB\fR(3C), \fB\fR(4), \fB\fR(4),
346 \fB\fR(4), \fB\fR(4), \fB\fR(5),
347 \fB\fR(3HEAD)
348 .sp
349 .LP
350 \fB\fR System Administration Guide: Basic Administration\fR

```



new/usr/src/pkg/manifests/SUNWcs.mf

1

```
*****
89641 Wed Sep  4 20:46:02 2013
new/usr/src/pkg/manifests/SUNWcs.mf
2989 Eliminate use of LOGNAME_MAX in ON
1166 useradd have warning with name more 8 chars
*****
1 #
2 # CDDL HEADER START
3 #
4 # The contents of this file are subject to the terms of the
5 # Common Development and Distribution License (the "License").
6 # You may not use this file except in compliance with the License.
7 #
8 # You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE
9 # or http://www.opensolaris.org/os/licensing.
10 # See the License for the specific language governing permissions
11 # and limitations under the License.
12 #
13 # When distributing Covered Code, include this CDDL HEADER in each
14 # file and include the License file at usr/src/OPENSOLARIS.LICENSE.
15 # If applicable, add the following below this CDDL HEADER, with the
16 # fields enclosed by brackets "[]" replaced with your own identifying
17 # information: Portions Copyright [yyyy] [name of copyright owner]
18 #
19 # CDDL HEADER END
20 #
21 #
22 #
23 # Copyright (c) 2010, Oracle and/or its affiliates. All rights reserved.
24 # Copyright 2012 Nexenta Systems, Inc. All rights reserved.
25 # Copyright (c) 2013 Gary Mills
26 #
27 #
28 <include SUNWcs.man1.inc>
29 <include SUNWcs.man1m.inc>
30 <include SUNWcs.man4.inc>
31 <include SUNWcs.man5.inc>
32 <include SUNWcs.man7d.inc>
33 <include SUNWcs.man7fs.inc>
34 set name=pkg.fmri value=pkg:/SUNWcs@$(PKGVERS)
35 set name=pkg.description \
36     value="core software for a specific instruction-set architecture"
37 set name=pkg.summary value="Core Solaris"
38 set name=info.classification value=org.opensolaris.category.2008:System/Core
39 set name=variant.arch value=$(ARCH)
40 dir path=dev group=sys
41 dir path=etc group=sys
42 dir path=etc/cron.d group=sys
43 dir path=etc/crypto group=sys
44 dir path=etc/crypto/certs group=sys
45 dir path=etc/crypto/crls group=sys
46 dir path=etc/default group=sys
47 dir path=etc/dev group=sys
48 dir path=etc/devices group=sys
49 dir path=etc/dfs group=sys
50 dir path=etc/dhcp group=sys
51 dir path=etc/fs group=sys
52 dir path=etc/fs/dev group=sys
53 dir path=etc/fs/hsfs group=sys
54 dir path=etc/fs/ufs group=sys
55 dir path=etc/ftpd group=sys
56 dir path=etc/inet group=sys
57 dir path=etc/init.d group=sys
58 dir path=etc/lib group=sys
59 dir path=etc/logadm.d group=sys
60 dir path=etc/mail group=mail
```

new/usr/src/pkg/manifests/SUNWcs.mf

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```
61 dir path=etc/net group=sys
62 dir path=etc/net/ticlts group=sys
63 dir path=etc/net/ticots group=sys
64 dir path=etc/net/ticotsord group=sys
65 dir path=etc/opt group=sys
66 dir path=etc/rc0.d group=sys
67 dir path=etc/rc1.d group=sys
68 dir path=etc/rc2.d group=sys
69 dir path=etc/rc3.d group=sys
70 dir path=etc/rcS.d group=sys
71 dir path=etc/rpcsec group=sys
72 dir path=etc/saf
73 dir path=etc/saf/zsmon group=sys
74 dir path=etc/sasl group=sys
75 dir path=etc/security group=sys
76 dir path=etc/security/audit group=sys
77 dir path=etc/security/audit/localhost group=sys
78 dir path=etc/security/auth_attr.d group=sys
79 dir path=etc/security/dev group=sys
80 dir path=etc/security/exec_attr.d group=sys
81 dir path=etc/security/lib group=sys
82 dir path=etc/security/prof_attr.d group=sys
83 dir path=etc/skel group=sys
84 dir path=etc/svc group=sys
85 dir path=etc/svc/profile group=sys
86 dir path=etc/svc/profile/site group=sys
87 dir path=etc/svc/volatile group=sys
88 dir path=etc/sysevent group=sys
89 dir path=etc/sysevent/config group=sys
90 dir path=etc/tm group=sys
91 dir path=etc/user_attr.d group=sys
92 dir path=export group=sys
93 dir path=home group=root mode=0555
94 dir path=lib
95 dir path=lib/crypto
96 dir path=lib/inet
97 dir path=lib/svc
98 dir path=lib/svc/bin
99 dir path=lib/svc/capture
100 dir path=lib/svc/manifest group=sys
101 dir path=lib/svc/manifest/application group=sys
102 dir path=lib/svc/manifest/application/management group=sys
103 dir path=lib/svc/manifest/application/security group=sys
104 dir path=lib/svc/manifest/device group=sys
105 dir path=lib/svc/manifest/milestone group=sys
106 dir path=lib/svc/manifest/network group=sys
107 dir path=lib/svc/manifest/network/dns group=sys
108 dir path=lib/svc/manifest/network/ipsec group=sys
109 dir path=lib/svc/manifest/network/ldap group=sys
110 dir path=lib/svc/manifest/network/routing group=sys
111 dir path=lib/svc/manifest/network/rpc group=sys
112 dir path=lib/svc/manifest/network/shares group=sys
113 dir path=lib/svc/manifest/network/ssl group=sys
114 dir path=lib/svc/manifest/platform group=sys
115 $(sparc_ONLY)dir path=lib/svc/manifest/platform/sun4u group=sys
116 dir path=lib/svc/manifest/site group=sys
117 dir path=lib/svc/manifest/system group=sys
118 dir path=lib/svc/manifest/system/device group=sys
119 dir path=lib/svc/manifest/system/filesystem group=sys
120 dir path=lib/svc/manifest/system/security group=sys
121 dir path=lib/svc/manifest/system/svc group=sys
122 dir path=lib/svc/method
123 dir path=lib/svc/monitor
124 dir path=lib/svc/seed
125 dir path=lib/svc/share
126 dir path=mnt group=sys
```

## new/usr/src/pkg/manifests/SUNWcs.mf

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```
127 dir path=opt group=sys
128 dir path=proc group=root mode=0555
129 dir path=root group=root mode=0700
130 dir path=sbin group=sys
131 dir path=system group=root
132 dir path=system/contract group=root mode=0555
133 dir path=system/object group=root mode=0555
134 dir path=tmp group=sys mode=1777
135 dir path=usr group=sys
136 dir path=usr/bin
137 dir path=usr/bin/$(ARCH32)
138 dir path=usr/bin/$(ARCH64)
139 dir path=usr/ccs
140 dir path=usr/ccs/bin
141 dir path=usr/demo
142 dir path=usr/games
143 dir path=usr/has
144 dir path=usr/has/bin
145 dir path=usr/has/lib
146 dir path=usr/has/man
147 dir path=usr/has/man/man1has
148 dir path=usr/kernel group=sys
149 dir path=usr/kernel/drv group=sys
150 dir path=usr/kernel/drv/$(ARCH64) group=sys
151 dir path=usr/kernel/exec group=sys
152 dir path=usr/kernel/exec/$(ARCH64) group=sys
153 dir path=usr/kernel/fs group=sys
154 dir path=usr/kernel/fs/$(ARCH64) group=sys
155 dir path=usr/kernel/pcbe group=sys
156 dir path=usr/kernel/pcbe/$(ARCH64) group=sys
157 dir path=usr/kernel/sched group=sys
158 dir path=usr/kernel/sched/$(ARCH64) group=sys
159 dir path=usr/kernel/strmod group=sys
160 dir path=usr/kernel/strmod/$(ARCH64) group=sys
161 dir path=usr/kernel/sys group=sys
162 dir path=usr/kernel/sys/$(ARCH64) group=sys
163 dir path=usr/kvm
164 dir path=usr/lib
165 dir path=usr/lib/$(ARCH64)
166 dir path=usr/lib/audit
167 dir path=usr/lib/class
168 dir path=usr/lib/class/FX
169 dir path=usr/lib/class/IA
170 dir path=usr/lib/class/RT
171 dir path=usr/lib/class/SDC
172 dir path=usr/lib/class/TS
173 dir path=usr/lib/crypto
174 dir path=usr/lib/devfsadm group=sys
175 dir path=usr/lib/devfsadm/linkmod group=sys
176 dir path=usr/lib/fs group=sys
177 dir path=usr/lib/fs/autofs group=sys
178 dir path=usr/lib/fs/autofs/$(ARCH64) group=sys
179 dir path=usr/lib/fs/cacheefs group=sys
180 dir path=usr/lib/fs/ctfs group=sys
181 dir path=usr/lib/fs/dev group=sys
182 dir path=usr/lib/fs/fd group=sys
183 dir path=usr/lib/fs/hsfs group=sys
184 dir path=usr/lib/fs/lofs group=sys
185 dir path=usr/lib/fs/mntfs group=sys
186 dir path=usr/lib/fs/nfs group=sys
187 dir path=usr/lib/fs/nfs/$(ARCH64) group=sys
188 dir path=usr/lib/fs/objfs group=sys
189 dir path=usr/lib/fs/proc group=sys
190 dir path=usr/lib/fs/sharefs group=sys
191 dir path=usr/lib/fs/tmpfs group=sys
192 dir path=usr/lib/fs/ufs group=sys
```

## new/usr/src/pkg/manifests/SUNWcs.mf

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```
193 dir path=usr/lib/help
194 dir path=usr/lib/help/auths
195 dir path=usr/lib/help/auths/locale
196 dir path=usr/lib/help/auths/locale/C
197 dir path=usr/lib/help/profiles
198 dir path=usr/lib/help/profiles/locale
199 dir path=usr/lib/help/profiles/locale/C
200 dir path=usr/lib/iconv
201 dir path=usr/lib/inet
202 dir path=usr/lib/inet/$(ARCH32)
203 dir path=usr/lib/inet/$(ARCH64)
204 dir path=usr/lib/inet/dhccp
205 dir path=usr/lib/inet/dhccp/nsu
206 dir path=usr/lib/inet/dhccp/svc
207 dir path=usr/lib/locale
208 dir path=usr/lib/locale/C
209 dir path=usr/lib/locale/C/LC_COLLATE
210 dir path=usr/lib/locale/C/LC_CTYPE
211 dir path=usr/lib/locale/C/LC_MESSAGES
212 dir path=usr/lib/locale/C/LC_MONETARY
213 dir path=usr/lib/locale/C/LC_NUMERIC
214 dir path=usr/lib/locale/C/LC_TIME
215 dir path=usr/lib/netsvc group=sys
216 dir path=usr/lib/pci
217 dir path=usr/lib/rcm
218 dir path=usr/lib/rcm/modules
219 dir path=usr/lib/rcm/scripts
220 dir path=usr/lib/reparsed
221 dir path=usr/lib/saf
222 dir path=usr/lib/secure
223 dir path=usr/lib/secure/$(ARCH64)
224 dir path=usr/lib/security
225 dir path=usr/lib/sysevent
226 dir path=usr/lib/sysevent/modules
227 dir path=usr/net group=sys
228 dir path=usr/net/nls group=sys
229 dir path=usr/net/servers group=sys
230 dir path=usr/old
231 dir path=usr/platform group=sys
232 dir path=usr/sadm
233 dir path=usr/sadm/bin
234 dir path=usr/sadm/install
235 dir path=usr/sadm/install/scripts
236 dir path=usr/sbin
237 $(i386_ONLY)dir path=usr/sbin/$(ARCH32)
238 dir path=usr/sbin/$(ARCH64)
239 dir path=usr/share
240 dir path=usr/share/doc group=other
241 dir path=usr/share/doc/ksh
242 dir path=usr/share/doc/ksh/images
243 dir path=usr/share/doc/ksh/images/callouts
244 dir path=usr/share/lib
245 dir path=usr/share/lib/mailx
246 dir path=usr/share/lib/pub
247 dir path=usr/share/lib/tabset
248 dir path=usr/share/lib/xml group=sys
249 dir path=usr/share/lib/xml/dtd group=sys
250 dir path=usr/share/lib/xml/style group=sys
251 dir path=usr/share/man
252 dir path=usr/share/man/man1
253 dir path=usr/share/man/man1m
254 dir path=usr/share/man/man4
255 dir path=usr/share/man/man5
256 dir path=usr/share/man/man7d
257 dir path=usr/share/man/man7fs
258 dir path=usr/share/src group=sys
```

```
259 dir path=var group=sys
260 dir path=var/adm group=sys mode=0775
261 dir path=var/adm/exacct group=adm owner=adm
262 dir path=var/adm/log group=adm owner=adm
263 dir path=var/adm/streams group=sys
264 dir path=var/audit group=sys
265 dir path=var/cores group=sys
266 dir path=var/cron group=sys
267 dir path=var/games
268 dir path=var/idmap group=daemon owner=daemon
269 dir path=var/inet group=sys
270 dir path=var/ld
271 dir path=var/ld/${ARCH64}
272 dir path=var/log group=sys
273 dir path=var/logadm
274 dir path=var/mail group=mail mode=1777
275 dir path=var/mail/:saved group=mail mode=0775
276 dir path=var/news
277 dir path=var/opt group=sys
278 dir path=var/preserve mode=1777
279 dir path=var/run group=sys
280 dir path=var/sadm group=sys
281 dir path=var/sadm/system group=sys
282 dir path=var/sadm/system/admin group=sys
283 dir path=var/saf
284 dir path=var/saf/zsmon group=sys
285 dir path=var/spool
286 dir path=var/spool/cron group=sys
287 dir path=var/spool/cron/atjobs group=sys
288 dir path=var/spool/cron/crontabs group=sys
289 dir path=var/spool/locks group=uucp owner=uucp
290 dir path=var/svc group=sys
291 dir path=var/svc/log group=sys
292 dir path=var/svc/manifest group=sys
293 dir path=var/svc/manifest/application group=sys
294 dir path=var/svc/manifest/application/management group=sys
295 dir path=var/svc/manifest/application/print group=sys
296 dir path=var/svc/manifest/application/security group=sys
297 dir path=var/svc/manifest/device group=sys
298 dir path=var/svc/manifest/milestone group=sys
299 dir path=var/svc/manifest/network group=sys
300 dir path=var/svc/manifest/network/dns group=sys
301 dir path=var/svc/manifest/network/ipsec group=sys
302 dir path=var/svc/manifest/network/ldap group=sys
303 dir path=var/svc/manifest/network/nfs group=sys
304 dir path=var/svc/manifest/network/nis group=sys
305 dir path=var/svc/manifest/network/routing group=sys
306 dir path=var/svc/manifest/network/rpc group=sys
307 dir path=var/svc/manifest/network/security group=sys
308 dir path=var/svc/manifest/network/shares group=sys
309 dir path=var/svc/manifest/network/ssl group=sys
310 dir path=var/svc/manifest/platform group=sys
311 $(sparc_ONLY)dir path=var/svc/manifest/platform/sun4u group=sys
312 $(sparc_ONLY)dir path=var/svc/manifest/platform/sun4v group=sys
313 dir path=var/svc/manifest/site group=sys
314 dir path=var/svc/manifest/system group=sys
315 dir path=var/svc/manifest/system/device group=sys
316 dir path=var/svc/manifest/system/filesystem group=sys
317 dir path=var/svc/manifest/system/security group=sys
318 dir path=var/svc/manifest/system/svc group=sys
319 dir path=var/svc/profile group=sys
320 dir path=var/tmp group=sys mode=1777
321 driver name=dump perms="dump 0660 root sys"
322 driver name=fssnap \
323     policy="ctl_read_priv_set=sys_config write_priv_set=sys_config" \
324     perms="** 0640 root sys" perms="ctl 0666 root sys"
```

```
325 driver name=kstat perms="** 0666 root sys"
326 driver name=ksyms perms="** 0666 root sys"
327 driver name=logindmux
328 driver name=ptm clone_perms="ptmx 0666 root sys"
329 driver name=pts perms="** 0644 root sys" perms="0 0620 root tty" \
330     perms="1 0620 root tty" perms="2 0620 root tty" perms="3 0620 root tty"
331 file path=etc/.login group=sys preserve=renamew
332 file path=etc/cron.d/.proto group=sys mode=0744
333 file path=etc/cron.d/at.deny group=sys preserve=true
334 file path=etc/cron.d/cron.deny group=sys preserve=true
335 file path=etc/cron.d/queuedefs group=sys
336 file path=etc/crypto/kmf.conf group=sys preserve=true
337 file path=etc/crypto/pkcs11.conf group=sys preserve=true
338 file path=etc/datems group=sys mode=0444
339 file path=etc/default/cron group=sys preserve=true
340 file path=etc/default/devfsadm group=sys preserve=true
341 file path=etc/default/fs group=sys preserve=true
342 file path=etc/default/init group=sys preserve=true
343 file path=etc/default/keyserv group=sys preserve=true
344 file path=etc/default/login group=sys preserve=true
345 file path=etc/default/nss group=sys preserve=true
346 file path=etc/default/passwd group=sys preserve=true
347 file path=etc/default/su group=sys preserve=true
348 file path=etc/default/syslogd group=sys preserve=true
349 file path=etc/default/tar group=sys preserve=true
350 file path=etc/default/useradd group=sys preserve=true
351 file path=etc/default/utmpd group=sys preserve=true
352 file path=etc/dev/reserved_devnames group=sys preserve=true
353 file path=etc/device.tab group=root mode=0444 preserve=true
354 file path=etc/dfs/dfstab group=sys preserve=true
355 file path=etc/dfs/fstypes group=root preserve=true
356 file path=etc/dfs/sharetab group=root mode=0444 preserve=true
357 file path=etc/dgroup.tab group=sys mode=0444 preserve=true
358 file path=etc/dhcp/inittab group=sys preserve=true
359 file path=etc/dhcp/inittab6 group=sys preserve=true
360 file path=etc/dumpdates group=sys mode=0664 preserve=true
361 file path=etc/format.dat group=sys preserve=true
362 file path=etc/fs/dev/mount mode=0555
363 file path=etc/fs/hfs/mount mode=0555
364 file path=etc/fs/ufs/mount mode=0555
365 file path=etc/ftpd/ftpusers group=sys preserve=true
366 file path=etc/group group=sys preserve=true
367 file path=etc/inet/hosts group=sys preserve=true
368 file path=etc/inet/inetd.conf group=sys preserve=true
369 file path=etc/inet/ipaddrsel.conf group=sys preserve=true
370 file path=etc/inet/netmasks group=sys preserve=true
371 file path=etc/inet/networks group=sys preserve=true
372 file path=etc/inet/protocols group=sys preserve=true
373 file path=etc/inet/services group=sys preserve=true
374 file path=etc/inet/wanboot.conf.sample group=sys mode=0444
375 file path=etc/init.d/PRESERVE group=sys mode=0744 preserve=true
376 file path=etc/init.d/README group=sys preserve=true
377 file path=etc/init.d/cache/daemon group=sys mode=0744 preserve=true
378 file path=etc/init.d/ldap.client group=sys mode=0744
379 file path=etc/init.d/nscd group=sys mode=0744
380 file path=etc/init.d/yssetup group=sys mode=0744 preserve=true
381 file path=etc/init.d/ufs_quota group=sys mode=0744 preserve=true
382 file path=etc/inittab group=sys preserve=true
383 file path=etc/ioctl.syscon group=sys preserve=true
384 file path=etc/ksh.kshrc group=sys preserve=renamew
385 file path=etc/logadm.conf group=sys preserve=true timestamp=19700101T000000Z
386 file path=etc/logindevperm group=sys preserve=true
387 file path=etc/magic mode=0444
388 file path=etc/mail/mail.rc preserve=true
389 file path=etc/mailcap preserve=true
390 file path=etc/mime.types preserve=true
```

```
391 file path=etc/mnttab group=root mode=0444 preserve=true
392 file path=etc/motd group=sys preserve=true
393 file path=etc/net/ticlts/hosts group=sys
394 file path=etc/net/ticlts/services group=sys preserve=true
395 file path=etc/net/ticots/hosts group=sys
396 file path=etc/net/ticots/services group=sys preserve=true
397 file path=etc/net/ticotsord/hosts group=sys
398 file path=etc/net/ticotsord/services group=sys preserve=true
399 file path=etc/netconfig group=sys preserve=true
400 file path=etc/nscd.conf group=sys preserve=true
401 file path=etc/nsswitch.ad group=sys
402 file path=etc/nsswitch.conf group=sys preserve=true
403 file path=etc/nsswitch.dns group=sys
404 file path=etc/nsswitch.files group=sys
405 file path=etc/nsswitch.ldap group=sys
406 file path=etc/pam.conf group=sys preserve=true
407 file path=etc/passwd group=sys preserve=true
408 file path=etc/profile group=sys preserve=true
409 file path=etc/project group=sys preserve=true
410 file path=etc/rc2.d/README group=sys
411 file path=etc/rc3.d/README group=sys
412 file path=etc/rcS.d/README group=sys
413 file path=etc/remote preserve=true
414 file path=etc/rpc group=sys preserve=true
415 file path=etc/saf/_sactab group=sys preserve=true
416 file path=etc/saf/_sysconfig group=sys preserve=true
417 file path=etc/saf/zsmon/_pmtab group=sys preserve=true
418 file path=etc/security/audit_class group=sys preserve=renamew
419 file path=etc/security/audit_event group=sys preserve=renamew
420 file path=etc/security/audit_warn group=sys mode=0740 preserve=renamew
421 file path=etc/security/auth_attr group=sys preserve=true \
422     timestamp=19700101T000000Z
423 file path=etc/security/auth_attr.d/SUNWcs group=sys
424 file path=etc/security/crypt.conf group=sys preserve=renamew
425 file path=etc/security/dev/audio mode=0400
426 file path=etc/security/dev/fd0 mode=0400
427 file path=etc/security/dev/sr0 mode=0400
428 file path=etc/security/dev/st0 mode=0400
429 file path=etc/security/dev/st1 mode=0400
430 file path=etc/security/exec_attr group=sys preserve=true \
431     timestamp=19700101T000000Z
432 file path=etc/security/exec_attr.d/SUNWcs group=sys
433 file path=etc/security/kmfpolicy.xml
434 file path=etc/security/lib/audio_clean group=sys mode=0555
435 file path=etc/security/lib/fd_clean group=sys mode=0555
436 file path=etc/security/lib/sr_clean group=sys mode=0555
437 file path=etc/security/lib/st_clean group=sys mode=0555
438 file path=etc/security/policy.conf group=sys preserve=true
439 file path=etc/security/priv_names group=sys preserve=renamew
440 file path=etc/security/prof_attr group=sys preserve=true \
441     timestamp=19700101T000000Z
442 file path=etc/security/prof_attr.d/SUNWcs group=sys
443 file path=etc/shadow group=sys mode=0400 preserve=true
444 file path=etc/skel/.profile group=other preserve=true
445 file path=etc/skel/local.cshrc group=sys preserve=true
446 file path=etc/skel/local.login group=sys preserve=true
447 file path=etc/skel/local.profile group=sys preserve=true
448 file path=etc/svc/profile/generic_limited_net.xml group=sys mode=0444
449 file path=etc/svc/profile/generic_open.xml group=sys mode=0444
450 file path=etc/svc/profile/inetd_generic.xml group=sys mode=0444
451 file path=etc/svc/profile/inetd_upgrade.xml group=sys mode=0444
452 file path=etc/svc/profile/ns_dns.xml group=sys mode=0444
453 file path=etc/svc/profile/ns_files.xml group=sys mode=0444
454 file path=etc/svc/profile/ns_ldap.xml group=sys mode=0444
455 file path=etc/svc/profile/ns_nis.xml group=sys mode=0444
456 file path=etc/svc/profile/ns_none.xml group=sys mode=0444
```

```
457 $(sparc_ONLY)file path=etc/svc/profile/platform_SUNW,SPARC-Enterprise.xml \
458     group=sys mode=0444
459 $(sparc_ONLY)file path=etc/svc/profile/platform_SUNW,Sun-Fire-15000.xml \
460     group=sys mode=0444
461 $(sparc_ONLY)file path=etc/svc/profile/platform_SUNW,Sun-Fire-880.xml \
462     group=sys mode=0444
463 $(sparc_ONLY)file path=etc/svc/profile/platform_SUNW,Sun-Fire.xml group=sys \
464     mode=0444
465 $(sparc_ONLY)file \
466     path=etc/svc/profile/platform_SUNW,Ultra-Enterprise-10000.xml group=sys \
467     mode=0444
468 $(sparc_ONLY)file \
469     path=etc/svc/profile/platform_SUNW,UltraSPARC-III-Netrtract.xml group=sys \
470     mode=0444
471 file path=etc/svc/profile/platform_none.xml group=sys mode=0444
472 $(sparc_ONLY)file path=etc/svc/profile/platform_sun4v.xml group=sys mode=0444
473 file path=etc/sysevent/config/README group=sys mode=0444
474 file path=etc/sysevent/config/SUNW,EC_dr,ESC_dr_req,sysevent.conf group=sys
475 file path=etc/syslog.conf group=sys preserve=true
476 file path=etc/ttydefs group=sys preserve=true
477 file path=etc/ttysrch group=sys preserve=true
478 file path=etc/user_attr group=sys preserve=true timestamp=19700101T000000Z
479 file path=etc/user_attr.d/SUNWcs group=sys
480 file path=etc/vfstab group=sys preserve=true
481 file path=lib/inet/in.mpathd mode=0555
482 file path=lib/inet/ipmgmt mode=0555
483 file path=lib/inet/netcfgd mode=0555
484 file path=lib/inet/nwamd mode=0555
485 file path=lib/svc/bin/lsvcrun group=sys mode=0555
486 file path=lib/svc/bin/mfstscan group=sys mode=0555
487 file path=lib/svc/bin/restore_repository group=sys mode=0555
488 file path=lib/svc/bin/sqlite group=sys mode=0555
489 file path=lib/svc/bin/svc.configd group=sys mode=0555
490 file path=lib/svc/bin/svc.ipfd group=sys mode=0555
491 file path=lib/svc/bin/svc.startd group=sys mode=0555
492 file path=lib/svc/manifest/milestone/multi-user-server.xml group=sys mode=0444
493 file path=lib/svc/manifest/milestone/multi-user.xml group=sys mode=0444
494 file path=lib/svc/manifest/milestone/name-services.xml group=sys mode=0444
495 file path=lib/svc/manifest/milestone/network.xml group=sys mode=0444
496 file path=lib/svc/manifest/milestone/single-user.xml group=sys mode=0444
497 file path=lib/svc/manifest/milestone/sysconfig.xml group=sys mode=0444
498 file path=lib/svc/manifest/network/dlmgmt.xml group=sys mode=0444
499 file path=lib/svc/manifest/network/dns/client.xml group=sys mode=0444
500 file path=lib/svc/manifest/network/dns/install.xml group=sys mode=0444
501 file path=lib/svc/manifest/network/forwarding.xml group=sys mode=0444
502 file path=lib/svc/manifest/network/inetd-upgrade.xml group=sys mode=0444
503 file path=lib/svc/manifest/network/inetd.xml group=sys mode=0444
504 file path=lib/svc/manifest/network/ipsec/ike.xml group=sys mode=0444
505 file path=lib/svc/manifest/network/ipsec/ipsecalgs.xml group=sys mode=0444
506 file path=lib/svc/manifest/network/ipsec/manual-key.xml group=sys mode=0444
507 file path=lib/svc/manifest/network/ipsec/policy.xml group=sys mode=0444
508 file path=lib/svc/manifest/network/ldap/client.xml group=sys mode=0444
509 file path=lib/svc/manifest/network/network-initial.xml group=sys mode=0444
510 file path=lib/svc/manifest/network/network-install.xml group=sys mode=0444
511 file path=lib/svc/manifest/network/network-ipmgmt.xml group=sys mode=0444
512 file path=lib/svc/manifest/network/network-ipqos.xml group=sys mode=0444
513 file path=lib/svc/manifest/network/network-iptun.xml group=sys mode=0444
514 file path=lib/svc/manifest/network/network-location.xml group=sys mode=0444
515 file path=lib/svc/manifest/network/network-loopback.xml group=sys mode=0444
516 file path=lib/svc/manifest/network/network-netcfg.xml group=sys mode=0444
517 file path=lib/svc/manifest/network/network-netmask.xml group=sys mode=0444
518 file path=lib/svc/manifest/network/network-physical.xml group=sys mode=0444
519 file path=lib/svc/manifest/network/network-routing-setup.xml group=sys \
520     mode=0444
521 file path=lib/svc/manifest/network/network-service.xml group=sys mode=0444
522 file path=lib/svc/manifest/network/routing/legacy-routing.xml group=sys \
```

```
523     mode=0444
524 file path=lib/svc/manifest/network/rpc/bind.xml group=sys mode=0444
525 file path=lib/svc/manifest/network/rpc/keyserv.xml group=sys mode=0444
526 file path=lib/svc/manifest/network/shares/group.xml group=sys mode=0444
527 file path=lib/svc/manifest/network/shares/reparsed.xml group=sys mode=0444
528 file path=lib/svc/manifest/network/socket-filter-kssl.xml group=sys mode=0444
529 file path=lib/svc/manifest/network/ssl/kssl-proxy.xml group=sys mode=0444
530 file path=lib/svc/manifest/system/auditd.xml group=sys mode=0444
531 file path=lib/svc/manifest/system/auditset.xml group=sys mode=0444
532 file path=lib/svc/manifest/system/boot-archive-update.xml group=sys mode=0444
533 file path=lib/svc/manifest/system/boot-archive.xml group=sys mode=0444
534 file path=lib/svc/manifest/system/boot-config.xml group=sys mode=0444
535 file path=lib/svc/manifest/system/consadm.xml group=sys mode=0444
536 file path=lib/svc/manifest/system/console-login.xml group=sys mode=0444
537 file path=lib/svc/manifest/system/coreadm.xml group=sys mode=0444
538 file path=lib/svc/manifest/system/cron.xml group=sys mode=0444
539 file path=lib/svc/manifest/system/cryptosvc.xml group=sys mode=0444
540 file path=lib/svc/manifest/system/device/allocate.xml group=sys mode=0444
541 file path=lib/svc/manifest/system/device/devices-audio.xml group=sys mode=0444
542 file path=lib/svc/manifest/system/device/devices-local.xml group=sys mode=0444
543 file path=lib/svc/manifest/system/device/mpxio-upgrade.xml group=sys mode=0444
544 file path=lib/svc/manifest/system/early-manifest-import.xml group=sys \
545     mode=0444
546 file path=lib/svc/manifest/system/extended-accounting.xml group=sys mode=0444
547 file path=lib/svc/manifest/system/filesystem/local-fs.xml group=sys mode=0444
548 file path=lib/svc/manifest/system/filesystem/minimal-fs.xml group=sys \
549     mode=0444
550 file path=lib/svc/manifest/system/filesystem/root-fs.xml group=sys mode=0444
551 file path=lib/svc/manifest/system/filesystem/usr-fs.xml group=sys mode=0444
552 $(i386_ONLY)file path=lib/svc/manifest/system/hostid.xml group=sys mode=0444
553 file path=lib/svc/manifest/system/hotplug.xml group=sys mode=0444
554 file path=lib/svc/manifest/system/identity.xml group=sys mode=0444
555 file path=lib/svc/manifest/system/idmap.xml group=sys mode=0444
556 file path=lib/svc/manifest/system/keymap.xml group=sys mode=0444
557 file path=lib/svc/manifest/system/logadm-upgrade.xml group=sys mode=0444
558 file path=lib/svc/manifest/system/manifest-import.xml group=sys mode=0444
559 file path=lib/svc/manifest/system/name-service-cache.xml group=sys mode=0444
560 file path=lib/svc/manifest/system/pfexecd.xml group=sys mode=0444
561 file path=lib/svc/manifest/system/rbac.xml group=sys mode=0444
562 file path=lib/svc/manifest/system/rmtmpfiles.xml group=sys mode=0444
563 file path=lib/svc/manifest/system/sac.xml group=sys mode=0444
564 file path=lib/svc/manifest/system/svc/global.xml group=sys mode=0444
565 file path=lib/svc/manifest/system/svc/restarter.xml group=sys mode=0444
566 file path=lib/svc/manifest/system/system-log.xml group=sys mode=0444
567 file path=lib/svc/manifest/system/utmp.xml group=sys mode=0444
568 file path=lib/svc/manifest/system/vtdaemon.xml group=sys mode=0444
569 file path=lib/svc/method/boot-archive mode=0555
570 file path=lib/svc/method/boot-archive-update mode=0555
571 file path=lib/svc/method/console-login mode=0555
572 file path=lib/svc/method/devices-audio mode=0555
573 file path=lib/svc/method/devices-local mode=0555
574 file path=lib/svc/method/dns-install mode=0555
575 file path=lib/svc/method/fs-local mode=0555
576 file path=lib/svc/method/fs-minimal mode=0555
577 file path=lib/svc/method/fs-root mode=0555
578 file path=lib/svc/method/fs-usr mode=0555
579 file path=lib/svc/method/identity-domain mode=0555
580 file path=lib/svc/method/identity-node mode=0555
581 file path=lib/svc/method/inetd-upgrade mode=0555
582 file path=lib/svc/method/keymap mode=0555
583 file path=lib/svc/method/ldap-client mode=0555
584 file path=lib/svc/method/logadm-upgrade mode=0555
585 file path=lib/svc/method/manifest-import mode=0555
586 file path=lib/svc/method/mpxio-upgrade mode=0555
587 file path=lib/svc/method/net-init mode=0555
588 file path=lib/svc/method/net-install mode=0555
```

```
589 file path=lib/svc/method/net-ipmgmt mode=0555
590 file path=lib/svc/method/net-ipqos mode=0555
591 file path=lib/svc/method/net-iptun mode=0555
592 file path=lib/svc/method/net-loc mode=0555
593 file path=lib/svc/method/net-loopback mode=0555
594 file path=lib/svc/method/net-netmask mode=0555
595 file path=lib/svc/method/net-nwam mode=0555
596 file path=lib/svc/method/net-physical mode=0555
597 file path=lib/svc/method/net-routing-setup mode=0555
598 file path=lib/svc/method/net-svc mode=0555
599 file path=lib/svc/method/rmtmpfiles mode=0555
600 file path=lib/svc/method/rpc-bind mode=0555
601 file path=lib/svc/method/svc-allocate mode=0555
602 file path=lib/svc/method/svc-auditd mode=0555
603 file path=lib/svc/method/svc-auditset mode=0555
604 file path=lib/svc/method/svc-boot-config mode=0555
605 file path=lib/svc/method/svc-consadm mode=0555
606 file path=lib/svc/method/svc-cron mode=0555
607 file path=lib/svc/method/svc-dlmgmt mode=0555
608 file path=lib/svc/method/svc-forwarding mode=0555
609 $(i386_ONLY)file path=lib/svc/method/svc-hostid mode=0555
610 file path=lib/svc/method/svc-hotplug mode=0555
611 file path=lib/svc/method/svc-legacy-routing mode=0555
612 file path=lib/svc/method/svc-nscd mode=0555
613 file path=lib/svc/method/svc-rbac mode=0555
614 file path=lib/svc/method/svc-sockfilter mode=0555
615 file path=lib/svc/method/svc-utmpd mode=0555
616 file path=lib/svc/method/system-log mode=0555
617 file path=lib/svc/method/vtdaemon mode=0555
618 file path=lib/svc/method/yp mode=0555
619 # global.db is not needed in non-global zones, and it's pretty large.
620 file path=lib/svc/seed/global.db group=sys mode=0444 \
621     variant.opensolaris.zone=global
622 # symmetrically, nonglobal.db is not needed in global zones.
623 file path=lib/svc/seed/nonglobal.db group=sys mode=0444 \
624     variant.opensolaris.zone=nonglobal
625 file path=lib/svc/share/README mode=0444
626 file path=lib/svc/share/fs_include.sh mode=0444
627 file path=lib/svc/share/ipf_include.sh mode=0444
628 file path=lib/svc/share/mfsthistory mode=0444
629 file path=lib/svc/share/net_include.sh mode=0444
630 file path=lib/svc/share/routing_include.sh mode=0444
631 file path=lib/svc/share/smf_include.sh mode=0444
632 file path=root/.bashrc group=root preserve=true
633 file path=root/.profile group=root preserve=true
634 file path=sbin/autopush mode=0555
635 $(i386_ONLY)file path=sbin/biosdev mode=0555
636 file path=sbin/bootadm mode=0555
637 file path=sbin/cryptoadm mode=0555
638 file path=sbin/devprop mode=0555
639 file path=sbin/dhccpagent mode=0555
640 file path=sbin/dhccpinfo mode=0555
641 file path=sbin/dlmgmt mode=0555
642 file path=sbin/fdisk mode=0555
643 file path=sbin/fiocompress mode=0555
644 file path=sbin/hostconfig mode=0555
645 file path=sbin/ifconfig mode=0555
646 file path=sbin/ifparse mode=0555
647 file path=sbin/init group=sys mode=0555
648 $(i386_ONLY)file path=sbin/installgrub group=sys mode=0555
649 file path=sbin/impstat mode=0555
650 file path=sbin/mount mode=0555
651 file path=sbin/mountall group=sys mode=0555
652 file path=sbin/netstrategy mode=0555
653 file path=sbin/rc0 group=sys mode=0744
654 file path=sbin/rc1 group=sys mode=0744
```

```
655 file path=sbin/rc2 group=sys mode=0744
656 file path=sbin/rc3 group=sys mode=0744
657 file path=sbin/rcS group=sys mode=0744
658 file path=sbin/route mode=0555
659 file path=sbin/routeadm mode=0555
660 file path=sbin/soconfig mode=0555
661 file path=sbin/su.static group=sys mode=0555
662 file path=sbin/sulogin mode=0555
663 file path=sbin/swapadd group=sys mode=0744
664 file path=sbin/sync mode=0555
665 file path=sbin/tzreload mode=0555
666 file path=sbin/uadmin group=sys mode=0555
667 file path=sbin/umount mode=0555
668 file path=sbin/umountall group=sys mode=0555
669 file path=sbin/uname mode=0555
670 file path=sbin/wusbadm mode=0555
671 file path=sbin/zonename mode=0555
672 $(i386_ONLY)file path=usr/bin/$(ARCH32)/amt mode=0555
673 file path=usr/bin/$(ARCH32)/decrypt mode=0555
674 file path=usr/bin/$(ARCH32)/digest mode=0555
675 file path=usr/bin/$(ARCH32)/ksh93 mode=0555
676 $(i386_ONLY)file path=usr/bin/$(ARCH32)/newtask group=sys mode=4555
677 $(i386_ONLY)file path=usr/bin/$(ARCH32)/nohup mode=0555
678 $(i386_ONLY)file path=usr/bin/$(ARCH32)/prctl mode=0555
679 $(i386_ONLY)file path=usr/bin/$(ARCH32)/prstat mode=0555
680 $(i386_ONLY)file path=usr/bin/$(ARCH32)/ps mode=0555
681 file path=usr/bin/$(ARCH32)/savecore mode=0555
682 $(i386_ONLY)file path=usr/bin/$(ARCH32)/setuname mode=0555
683 $(i386_ONLY)file path=usr/bin/$(ARCH32)/uptime mode=4555
684 file path=usr/bin/$(ARCH64)/amt mode=0555
685 file path=usr/bin/$(ARCH64)/crle mode=0555
686 file path=usr/bin/$(ARCH64)/decrypt mode=0555
687 file path=usr/bin/$(ARCH64)/digest mode=0555
688 file path=usr/bin/$(ARCH64)/ksh93 mode=0555
689 file path=usr/bin/$(ARCH64)/ls mode=0555
690 file path=usr/bin/$(ARCH64)/moe mode=0555
691 file path=usr/bin/$(ARCH64)/newtask group=sys mode=4555
692 file path=usr/bin/$(ARCH64)/nohup mode=0555
693 file path=usr/bin/$(ARCH64)/prctl mode=0555
694 file path=usr/bin/$(ARCH64)/prstat mode=0555
695 file path=usr/bin/$(ARCH64)/ps mode=0555
696 file path=usr/bin/$(ARCH64)/savecore mode=0555
697 file path=usr/bin/$(ARCH64)/setuname mode=0555
698 file path=usr/bin/$(ARCH64)/uptime mode=4555
699 $(i386_ONLY)file path=usr/bin/addbadsec mode=0555
700 file path=usr/bin/alias mode=0555
701 file path=usr/bin/amt mode=0555
702 file path=usr/bin/arch mode=0555
703 file path=usr/bin/at group=sys mode=4755
704 file path=usr/bin/atq group=sys mode=4755
705 file path=usr/bin/atrm group=sys mode=4755
706 file path=usr/bin/auths mode=0555
707 file path=usr/bin/basename mode=0555
708 file path=usr/bin/busstat mode=0555
709 file path=usr/bin/captainfo mode=0555
710 file path=usr/bin/cat mode=0555
711 file path=usr/bin/chgrp mode=0555
712 file path=usr/bin/chmod mode=0555
713 file path=usr/bin/chown mode=0555
714 file path=usr/bin/ckdate mode=0555
715 file path=usr/bin/ckgid mode=0555
716 file path=usr/bin/ckint mode=0555
717 file path=usr/bin/ckitem mode=0555
718 file path=usr/bin/ckkeywd mode=0555
719 file path=usr/bin/ckpath mode=0555
720 file path=usr/bin/ckrange mode=0555
```

```
721 file path=usr/bin/ckstr mode=0555
722 file path=usr/bin/cktime mode=0555
723 file path=usr/bin/ckuid mode=0555
724 file path=usr/bin/ckyorn mode=0555
725 file path=usr/bin/clear mode=0555
726 file path=usr/bin/coreadm mode=0555
727 file path=usr/bin/cp mode=0555
728 file path=usr/bin/cpio mode=0555
729 file path=usr/bin/crle mode=0555
730 file path=usr/bin/crontab mode=4555
731 file path=usr/bin/crypt mode=0555
732 file path=usr/bin/csh mode=0555
733 file path=usr/bin/ctrunc mode=0555
734 file path=usr/bin/ctstat mode=0555
735 file path=usr/bin/ctwatch mode=0555
736 file path=usr/bin/date mode=0555
737 file path=usr/bin/dd mode=0555
738 file path=usr/bin/devattr mode=0555
739 file path=usr/bin/devfree mode=0555
740 file path=usr/bin/devreserv mode=0555
741 file path=usr/bin/dirname mode=0555
742 $(i386_ONLY)file path=usr/bin/diskscan mode=0555
743 file path=usr/bin/domainname mode=0555
744 file path=usr/bin/du mode=0555
745 file path=usr/bin/dumpcs mode=0555
746 file path=usr/bin/dumpkeys mode=0555
747 file path=usr/bin/echo mode=0555
748 file path=usr/bin/ed mode=0555
749 file path=usr/bin/egrep mode=0555
750 file path=usr/bin/eject mode=0555
751 file path=usr/bin/env mode=0555
752 file path=usr/bin/expr mode=0555
753 file path=usr/bin/false mode=0555
754 file path=usr/bin/fdetach mode=0555
755 file path=usr/bin/fdformat mode=4555
756 file path=usr/bin/fgrep mode=0555
757 file path=usr/bin/file mode=0555
758 file path=usr/bin/find mode=0555
759 file path=usr/bin/fmt mode=0555
760 file path=usr/bin/fmtmsg mode=0555
761 file path=usr/bin/fold mode=0555
762 file path=usr/bin/fsstat mode=0555
763 file path=usr/bin/geniconvtbl mode=0555
764 file path=usr/bin/getconf mode=0555
765 file path=usr/bin/getdev mode=0555
766 file path=usr/bin/getdgrp mode=0555
767 file path=usr/bin/getent mode=0555
768 file path=usr/bin/getfacl mode=0555
769 file path=usr/bin/getopt mode=0555
770 file path=usr/bin/gettext mode=0555
771 file path=usr/bin/getvol mode=0555
772 file path=usr/bin/grep mode=0555
773 file path=usr/bin/groups mode=0555
774 file path=usr/bin/head mode=0555
775 file path=usr/bin/hostid mode=0555
776 file path=usr/bin/hostname mode=0555
777 file path=usr/bin/i286 mode=0555
778 file path=usr/bin/iconv mode=0555
779 file path=usr/bin/id mode=0555
780 file path=usr/bin/infocmp mode=0555
781 file path=usr/bin/iostat mode=0555
782 file path=usr/bin/isainfo mode=0555
783 file path=usr/bin/isalist mode=0555
784 file path=usr/bin/kbd mode=0555
785 file path=usr/bin/keylogin mode=0555
786 file path=usr/bin/keylogout mode=0555
```

```
787 file path=usr/bin/kmfcfg mode=0555
788 file path=usr/bin/kvmstat mode=0555
789 file path=usr/bin/line mode=0555
790 file path=usr/bin/listdgrp mode=0555
791 file path=usr/bin/listusers mode=0555
792 file path=usr/bin/loadkeys mode=0555
793 file path=usr/bin/logger mode=0555
794 file path=usr/bin/login mode=4555
795 file path=usr/bin/logins mode=0750
796 file path=usr/bin/ls mode=0555
797 file path=usr/bin/m4 mode=0555
798 file path=usr/bin/mach mode=0555
799 file path=usr/bin/mail group=mail mode=2511
800 file path=usr/bin/mailx group=mail mode=2511
801 file path=usr/bin/makedev mode=0555
802 file path=usr/bin/mesg mode=0555
803 file path=usr/bin/mkdir mode=0555
804 file path=usr/bin/mkpwdict mode=0555
805 file path=usr/bin/mktemp mode=0555
806 file path=usr/bin/moe mode=0555
807 file path=usr/bin/more mode=0555
808 file path=usr/bin/mpstat mode=0555
809 file path=usr/bin/mt mode=0555
810 file path=usr/bin/netstat mode=0555
811 file path=usr/bin/newgrp group=sys mode=4755
812 file path=usr/bin/nice mode=0555
813 file path=usr/bin/optisa mode=0555
814 file path=usr/bin/pagesize mode=0555
815 file path=usr/bin/passwd group=sys mode=6555
816 file path=usr/bin/pathchk mode=0555
817 file path=usr/bin/pax mode=0555
818 file path=usr/bin/pfexec mode=0555
819 file path=usr/bin/pg mode=0555
820 file path=usr/bin/pgrep mode=0555
821 file path=usr/bin/pktool mode=0555
822 file path=usr/bin/pr mode=0555
823 file path=usr/bin/printf mode=0555
824 file path=usr/bin/priocntl mode=0555
825 file path=usr/bin/profiles mode=0555
826 file path=usr/bin/projects mode=0555
827 file path=usr/bin/putdev mode=0555
828 file path=usr/bin/putdgrp mode=0555
829 file path=usr/bin/pwd mode=0555
830 file path=usr/bin/renice mode=0555
831 file path=usr/bin/rm mode=0555
832 file path=usr/bin/rmdir mode=0555
833 file path=usr/bin/roles mode=0555
834 file path=usr/bin/rpcinfo mode=0555
835 file path=usr/bin/runat mode=0555
836 file path=usr/bin/script mode=0555
837 file path=usr/bin/sed mode=0555
838 file path=usr/bin/setfacl mode=0555
839 file path=usr/bin/setpgpr group=sys mode=0555
840 file path=usr/bin/settime mode=0555
841 file path=usr/bin/shcomp mode=0555
842 file path=usr/bin/strchg group=root mode=0555
843 file path=usr/bin/strconf group=root mode=0555
844 file path=usr/bin/stty mode=0555
845 file path=usr/bin/su group=sys mode=4555
846 file path=usr/bin/svcprop mode=0555
847 file path=usr/bin/svcs mode=0555
848 file path=usr/bin/tabs mode=0555
849 file path=usr/bin/tail mode=0555
850 file path=usr/bin/tic mode=0555
851 file path=usr/bin/time mode=0555
852 file path=usr/bin/tip mode=4511 owner=uucp
```

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853 file path=usr/bin/tpmadm mode=0555
854 file path=usr/bin/tput mode=0555
855 file path=usr/bin/tr mode=0555
856 file path=usr/bin/true mode=0555
857 file path=usr/bin/tty mode=0555
858 file path=usr/bin/tzselect mode=0555
859 file path=usr/bin/userattr mode=0555
860 file path=usr/bin/vmstat mode=0555
861 file path=usr/bin/which mode=0555
862 file path=usr/bin/who mode=0555
863 file path=usr/bin/wracct mode=0555
864 file path=usr/bin/write group=tty mode=2555
865 file path=usr/bin/xargs mode=0555
866 file path=usr/bin/xstr mode=0555
867 file path=usr/has/bin/edit mode=0555
868 file path=usr/has/bin/sh mode=0555
869 file path=usr/has/man/man1has/edit.lhas
870 file path=usr/has/man/man1has/ex.lhas
871 file path=usr/has/man/man1has/sh.lhas
872 file path=usr/has/man/man1has/vi.lhas
873 file path=usr/kernel/drv/$(ARCH64)/dump group=sys
874 file path=usr/kernel/drv/$(ARCH64)/fssnap group=sys
875 file path=usr/kernel/drv/$(ARCH64)/kstat group=sys
876 file path=usr/kernel/drv/$(ARCH64)/ksyms group=sys
877 file path=usr/kernel/drv/$(ARCH64)/logindmux group=sys
878 file path=usr/kernel/drv/$(ARCH64)/ptm group=sys
879 file path=usr/kernel/drv/$(ARCH64)/pts group=sys
880 $(i386_ONLY)file path=usr/kernel/drv/dump group=sys
881 file path=usr/kernel/drv/dump.conf group=sys
882 $(i386_ONLY)file path=usr/kernel/drv/fssnap group=sys
883 file path=usr/kernel/drv/fssnap.conf group=sys
884 $(i386_ONLY)file path=usr/kernel/drv/kstat group=sys
885 file path=usr/kernel/drv/kstat.conf group=sys
886 $(i386_ONLY)file path=usr/kernel/drv/ksyms group=sys
887 file path=usr/kernel/drv/ksyms.conf group=sys
888 $(i386_ONLY)file path=usr/kernel/drv/logindmux group=sys
889 file path=usr/kernel/drv/logindmux.conf group=sys
890 $(i386_ONLY)file path=usr/kernel/drv/ptm group=sys
891 file path=usr/kernel/drv/ptm.conf group=sys
892 $(i386_ONLY)file path=usr/kernel/drv/pts group=sys
893 file path=usr/kernel/drv/pts.conf group=sys
894 file path=usr/kernel/exec/$(ARCH64)/javaexec group=sys mode=0755
895 file path=usr/kernel/exec/$(ARCH64)/shbinexec group=sys mode=0755
896 $(i386_ONLY)file path=usr/kernel/exec/javaexec group=sys mode=0755
897 $(i386_ONLY)file path=usr/kernel/exec/shbinexec group=sys mode=0755
898 file path=usr/kernel/fs/$(ARCH64)/fdfs group=sys mode=0755
899 file path=usr/kernel/fs/$(ARCH64)/pcfs group=sys mode=0755
900 $(i386_ONLY)file path=usr/kernel/fs/fdfs group=sys mode=0755
901 $(i386_ONLY)file path=usr/kernel/fs/pcfs group=sys mode=0755
902 file path=usr/kernel/sched/$(ARCH64)/FX group=sys mode=0755
903 file path=usr/kernel/sched/$(ARCH64)/FX_DPTBL group=sys mode=0755
904 file path=usr/kernel/sched/$(ARCH64)/IA group=sys mode=0755
905 file path=usr/kernel/sched/$(ARCH64)/RT group=sys mode=0755
906 file path=usr/kernel/sched/$(ARCH64)/RT_DPTBL group=sys mode=0755
907 $(i386_ONLY)file path=usr/kernel/sched/FX group=sys mode=0755
908 $(i386_ONLY)file path=usr/kernel/sched/FX_DPTBL group=sys mode=0755
909 $(i386_ONLY)file path=usr/kernel/sched/IA group=sys mode=0755
910 $(i386_ONLY)file path=usr/kernel/sched/RT group=sys mode=0755
911 $(i386_ONLY)file path=usr/kernel/sched/RT_DPTBL group=sys mode=0755
912 file path=usr/kernel/strmod/$(ARCH64)/cryptmod group=sys mode=0755
913 file path=usr/kernel/strmod/$(ARCH64)/rlmod group=sys mode=0755
914 file path=usr/kernel/strmod/$(ARCH64)/telmod group=sys mode=0755
915 $(i386_ONLY)file path=usr/kernel/strmod/cryptmod group=sys mode=0755
916 $(i386_ONLY)file path=usr/kernel/strmod/rlmod group=sys mode=0755
917 $(i386_ONLY)file path=usr/kernel/strmod/telmod group=sys mode=0755
918 file path=usr/kernel/sys/$(ARCH64)/acctctl group=sys mode=0755
```

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919 file path=usr/kernel/sys/${ARCH64}/exacctsys group=sys mode=0755
920 file path=usr/kernel/sys/${ARCH64}/sysacct group=sys mode=0755
921 file path=usr/kernel/sys/acctctl group=sys mode=0755
922 file path=usr/kernel/sys/exacctsys group=sys mode=0755
923 file path=usr/kernel/sys/sysacct group=sys mode=0755
924 file path=usr/kvm/README group=sys
925 file path=usr/lib/${ARCH64}/libshare.so.1
926 file path=usr/lib/audit/audit_record_attr mode=0444
927 file path=usr/lib/calprog mode=0555
928 file path=usr/lib/class/FX/FXdispadmin mode=0555
929 file path=usr/lib/class/FX/FXprioctl mode=0555
930 file path=usr/lib/class/IA/IAdispadmin mode=0555
931 file path=usr/lib/class/IA/IAprioctl mode=0555
932 file path=usr/lib/class/RT/RTdispadmin mode=0555
933 file path=usr/lib/class/RT/RTprioctl mode=0555
934 file path=usr/lib/class/SDC/SDCdispadmin mode=0555
935 file path=usr/lib/class/SDC/SDCprioctl mode=0555
936 file path=usr/lib/class/TS/TSdispadmin mode=0555
937 file path=usr/lib/class/TS/TSprioctl mode=0555
938 file path=usr/lib/devfsadm/linkmod/SUNW_audio_link.so group=sys
939 file path=usr/lib/devfsadm/linkmod/SUNW_cfg_link.so group=sys
940 file path=usr/lib/devfsadm/linkmod/SUNW_disk_link.so group=sys
941 file path=usr/lib/devfsadm/linkmod/SUNW_fssnap_link.so group=sys
942 file path=usr/lib/devfsadm/linkmod/SUNW_ieee1394_link.so group=sys
943 file path=usr/lib/devfsadm/linkmod/SUNW_lofi_link.so group=sys
944 file path=usr/lib/devfsadm/linkmod/SUNW_md_link.so group=sys
945 file path=usr/lib/devfsadm/linkmod/SUNW_misc_link.so group=sys
946 file path=usr/lib/devfsadm/linkmod/SUNW_misc_link_${ARCH}.so group=sys
947 file path=usr/lib/devfsadm/linkmod/SUNW_port_link.so group=sys
948 file path=usr/lib/devfsadm/linkmod/SUNW_ramdisk_link.so group=sys
949 file path=usr/lib/devfsadm/linkmod/SUNW_sgen_link.so group=sys
950 file path=usr/lib/devfsadm/linkmod/SUNW_smp_link.so group=sys
951 file path=usr/lib/devfsadm/linkmod/SUNW_tape_link.so group=sys
952 file path=usr/lib/devfsadm/linkmod/SUNW_usb_link.so group=sys
953 file path=usr/lib/devfsadm/linkmod/SUNW_xen_link.so group=sys
954 file path=usr/lib/diffh mode=0555
955 file path=usr/lib/expreserve mode=0555
956 file path=usr/lib/exrecover mode=0555
957 file path=usr/lib/fs/cachefs/cachefsd mode=0555
958 file path=usr/lib/fs/cachefs/cachefslog mode=0555
959 file path=usr/lib/fs/cachefs/cachefspack mode=0555
960 file path=usr/lib/fs/cachefs/cachefsstat mode=0555
961 file path=usr/lib/fs/cachefs/cachefswssize mode=0555
962 file path=usr/lib/fs/cachefs/cfsadmin mode=0555
963 file path=usr/lib/fs/cachefs/cfsfstype mode=0555
964 file path=usr/lib/fs/cachefs/cfstagchk mode=0555
965 file path=usr/lib/fs/cachefs/dfshares mode=0555
966 file path=usr/lib/fs/cachefs/fsck mode=0555
967 file path=usr/lib/fs/cachefs/mount mode=0555
968 file path=usr/lib/fs/cachefs/share mode=0555
969 file path=usr/lib/fs/cachefs/umount mode=0555
970 file path=usr/lib/fs/cachefs/unshare mode=0555
971 file path=usr/lib/fs/ctfs/mount mode=0555
972 file path=usr/lib/fs/fd/mount mode=0555
973 file path=usr/lib/fs/hsfs/fstyp.so.1 mode=0555
974 file path=usr/lib/fs/hsfs/labelit mode=0555
975 file path=usr/lib/fs/lofs/mount mode=0555
976 file path=usr/lib/fs/mntfs/mount mode=0555
977 file path=usr/lib/fs/objfs/mount mode=0555
978 file path=usr/lib/fs/proc/mount mode=0555
979 file path=usr/lib/fs/sharefs/mount mode=0555
980 file path=usr/lib/fs/tmpfs/mount mode=0555
981 file path=usr/lib/fs/ufs/clri mode=0555
982 file path=usr/lib/fs/ufs/df mode=0555
983 file path=usr/lib/fs/ufs/edquota mode=0555
984 file path=usr/lib/fs/ufs/ff mode=0555
```

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985 file path=usr/lib/fs/ufs/fsck mode=0555
986 file path=usr/lib/fs/ufs/fsckall mode=0555
987 file path=usr/lib/fs/ufs/fsdb mode=0555
988 file path=usr/lib/fs/ufs/fsirand mode=0555
989 file path=usr/lib/fs/ufs/fssnap mode=0555
990 file path=usr/lib/fs/ufs/fstyp.so.1 mode=0555
991 file path=usr/lib/fs/ufs/labelit mode=0555
992 file path=usr/lib/fs/ufs/lockfs mode=0555
993 file path=usr/lib/fs/ufs/mkfs mode=0555
994 file path=usr/lib/fs/ufs/ncheck mode=0555
995 file path=usr/lib/fs/ufs/newfs mode=0555
996 file path=usr/lib/fs/ufs/quot mode=0555
997 file path=usr/lib/fs/ufs/quota mode=4555
998 file path=usr/lib/fs/ufs/quotacheck mode=0555
999 file path=usr/lib/fs/ufs/quotaoff mode=0555
1000 file path=usr/lib/fs/ufs/repquota mode=0555
1001 file path=usr/lib/fs/ufs/tunefs mode=0555
1002 file path=usr/lib/fs/ufs/ufsdump mode=4555
1003 file path=usr/lib/fs/ufs/ufsrestore mode=4555
1004 file path=usr/lib/fs/ufs/volcopy mode=0555
1005 file path=usr/lib/getoptvt mode=0555
1006 file path=usr/lib/help/auths/locale/C/AllSolAuthsHeader.html
1007 file path=usr/lib/help/auths/locale/C/AuditHeader.html
1008 file path=usr/lib/help/auths/locale/C/AuthJobsAdmin.html
1009 file path=usr/lib/help/auths/locale/C/AuthJobsUser.html
1010 file path=usr/lib/help/auths/locale/C/AuthProfmgrAssign.html
1011 file path=usr/lib/help/auths/locale/C/AuthProfmgrDelegate.html
1012 file path=usr/lib/help/auths/locale/C/AuthProfmgrExecattrWrite.html
1013 file path=usr/lib/help/auths/locale/C/AuthProfmgrRead.html
1014 file path=usr/lib/help/auths/locale/C/AuthProfmgrWrite.html
1015 file path=usr/lib/help/auths/locale/C/AuthReadNDMP.html
1016 file path=usr/lib/help/auths/locale/C/AuthReadSMB.html
1017 file path=usr/lib/help/auths/locale/C/AuthRoleAssign.html
1018 file path=usr/lib/help/auths/locale/C/AuthRoleDelegate.html
1019 file path=usr/lib/help/auths/locale/C/AuthRoleWrite.html
1020 file path=usr/lib/help/auths/locale/C/BindStates.html
1021 file path=usr/lib/help/auths/locale/C/DevAllocHeader.html
1022 file path=usr/lib/help/auths/locale/C/DevAllocate.html
1023 file path=usr/lib/help/auths/locale/C/DevConfig.html
1024 file path=usr/lib/help/auths/locale/C/DevGrant.html
1025 file path=usr/lib/help/auths/locale/C/DevRevoke.html
1026 file path=usr/lib/help/auths/locale/C/DhccpmgrHeader.html
1027 file path=usr/lib/help/auths/locale/C/DhccpmgrWrite.html
1028 file path=usr/lib/help/auths/locale/C/HotplugHeader.html
1029 file path=usr/lib/help/auths/locale/C/HotplugModify.html
1030 file path=usr/lib/help/auths/locale/C/IdmapRules.html
1031 file path=usr/lib/help/auths/locale/C/JobHeader.html
1032 file path=usr/lib/help/auths/locale/C/JobsGrant.html
1033 file path=usr/lib/help/auths/locale/C/LinkSecurity.html
1034 file path=usr/lib/help/auths/locale/C/LoginEnable.html
1035 file path=usr/lib/help/auths/locale/C/LoginHeader.html
1036 file path=usr/lib/help/auths/locale/C/LoginRemote.html
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1043 file path=usr/lib/help/auths/locale/C/NetworkILBenable.html
1044 file path=usr/lib/help/auths/locale/C/NetworkInterfaceConfig.html
1045 file path=usr/lib/help/auths/locale/C/NetworkVRRP.html
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1048 file path=usr/lib/help/auths/locale/C/RoleHeader.html
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1050 file path=usr/lib/help/auths/locale/C/SmfAutofsStates.html
```



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1109 file path=usr/lib/help/auths/locale/C/SysDate.html  
1110 file path=usr/lib/help/auths/locale/C/SysHeader.html  
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1113 file path=usr/lib/help/auths/locale/C/SysPowerMgmtHeader.html  
1114 file path=usr/lib/help/auths/locale/C/SysPowerMgmtSuspend.html  
1115 file path=usr/lib/help/auths/locale/C/SysPowerMgmtSuspendtoDisk.html  
1116 file path=usr/lib/help/auths/locale/C/SysPowerMgmtSuspendtoRAM.html

1117 file path=usr/lib/help/auths/locale/C/SysShutdown.html  
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1123 file path=usr/lib/help/auths/locale/C/ZoneHeader.html  
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1125 file path=usr/lib/help/auths/locale/C/ZoneManage.html  
1126 file path=usr/lib/help/profiles/locale/C/RtAcctadm.html  
1127 file path=usr/lib/help/profiles/locale/C/RtAll.html  
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1171 file path=usr/lib/help/profiles/locale/C/RtNetSecure.html  
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1174 file path=usr/lib/help/profiles/locale/C/RtNetWifiSecure.html  
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1178 file path=usr/lib/help/profiles/locale/C/RtPrntAdmin.html  
1179 file path=usr/lib/help/profiles/locale/C/RtProcManagement.html  
1180 file path=usr/lib/help/profiles/locale/C/RtRepairMngmnt.html  
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1184 file path=usr/lib/help/profiles/locale/C/RtSMBMngmnt.html
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1186 file path=usr/lib/help/profiles/locale/C/RtSysAdmin.html
1187 file path=usr/lib/help/profiles/locale/C/RtSysEvMngmnt.html
1188 file path=usr/lib/help/profiles/locale/C/RtSysPowerMgmt.html
1189 file path=usr/lib/help/profiles/locale/C/RtSysPowerMgmtBrightness.html
1190 file path=usr/lib/help/profiles/locale/C/RtSysPowerMgmtSuspend.html
1191 file path=usr/lib/help/profiles/locale/C/RtSysPowerMgmtSuspendtoDisk.html
1192 file path=usr/lib/help/profiles/locale/C/RtSysPowerMgmtSuspendtoRAM.html
1193 file path=usr/lib/help/profiles/locale/C/RtUserMngmnt.html
1194 file path=usr/lib/help/profiles/locale/C/RtUserSecurity.html
1195 file path=usr/lib/help/profiles/locale/C/RtVscanMngmnt.html
1196 file path=usr/lib/help/profiles/locale/C/RtZFSFileSysMngmnt.html
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1198 file path=usr/lib/help/profiles/locale/C/RtZoneMngmnt.html
1199 file path=usr/lib/help/profiles/locale/C/RtZoneSecurity.html
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1202 file path=usr/lib/iconv/646de.8859.t mode=0444
1203 file path=usr/lib/iconv/646en.8859.t mode=0444
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1210 file path=usr/lib/iconv/8859.646de.t mode=0444
1211 file path=usr/lib/iconv/8859.646en.t mode=0444
1212 file path=usr/lib/iconv/8859.646es.t mode=0444
1213 file path=usr/lib/iconv/8859.646fr.t mode=0444
1214 file path=usr/lib/iconv/8859.646it.t mode=0444
1215 file path=usr/lib/iconv/8859.646sv.t mode=0444
1216 file path=usr/lib/iconv/iconv_data mode=0444
1217 file path=usr/lib/idmapd mode=0555
1218 file path=usr/lib/inet/$(ARCH32)/in.iked mode=0555
1219 file path=usr/lib/inet/$(ARCH64)/in.iked mode=0555
1220 file path=usr/lib/inet/certdb mode=0555
1221 file path=usr/lib/inet/certlocal mode=0555
1222 file path=usr/lib/inet/certrdb mode=0555
1223 file path=usr/lib/inet/inetd mode=0555
1224 file path=usr/lib/intrd mode=0555
1225 file path=usr/lib/isaexec mode=0555
1226 file path=usr/lib/ksladm mode=0555
1227 $(sparc_ONLY)file path=usr/lib/ld.so
1228 file path=usr/lib/libshare.so.1
1229 file path=usr/lib/makekey mode=0555
1230 file path=usr/lib/more.help
1231 file path=usr/lib/newsyslog group=sys mode=0555
1232 file path=usr/lib/passmgmt group=sys mode=0555
1233 file path=usr/lib/pci/pcidr mode=0555
1234 file path=usr/lib/pci/pcidr.plugin.so
1235 file path=usr/lib/pfexecd mode=0555
1236 file path=usr/lib/platexec mode=0555
1237 file path=usr/lib/rcm/modules/SUNW_aggr_rcm.so mode=0555
1238 file path=usr/lib/rcm/modules/SUNW_cluster_rcm.so mode=0555
1239 file path=usr/lib/rcm/modules/SUNW_dump_rcm.so mode=0555
1240 file path=usr/lib/rcm/modules/SUNW_filesys_rcm.so mode=0555
1241 file path=usr/lib/rcm/modules/SUNW_ibpart_rcm.so mode=0555
1242 file path=usr/lib/rcm/modules/SUNW_ip_anon_rcm.so mode=0555
1243 file path=usr/lib/rcm/modules/SUNW_ip_rcm.so mode=0555
1244 file path=usr/lib/rcm/modules/SUNW_mpxio_rcm.so mode=0555
1245 file path=usr/lib/rcm/modules/SUNW_network_rcm.so mode=0555
1246 file path=usr/lib/rcm/modules/SUNW_swap_rcm.so mode=0555
1247 $(sparc_ONLY)file path=usr/lib/rcm/modules/SUNW_ttymux_rcm.so mode=0555
1248 file path=usr/lib/rcm/modules/SUNW_vlan_rcm.so mode=0555
```

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1249 file path=usr/lib/rcm/modules/SUNW_vnic_rcm.so mode=0555
1250 file path=usr/lib/rcm/rcm_daemon mode=0555
1251 file path=usr/lib/reparse/reparsed group=sys mode=0555
1252 file path=usr/lib/saf/listen group=sys mode=0755
1253 file path=usr/lib/saf/nlps_server group=sys mode=0755
1254 file path=usr/lib/saf/sac group=sys mode=0555
1255 file path=usr/lib/saf/ttymon group=sys mode=0555
1256 file path=usr/lib/sysevent/modules/datalink_mod.so
1257 file path=usr/lib/sysevent/modules/devfsadmd_mod.so
1258 file path=usr/lib/sysevent/modules/sysevent_conf_mod.so
1259 file path=usr/lib/sysevent/modules/sysevent_reg_mod.so
1260 file path=usr/lib/sysevent/syseventconfd mode=0555
1261 file path=usr/lib/sysevent/syseventd mode=0555
1262 file path=usr/lib/utmp_update mode=4555
1263 file path=usr/lib/utmpd mode=0555
1264 file path=usr/lib/vtdaemon mode=0555
1265 file path=usr/lib/vtinfo mode=0555
1266 file path=usr/lib/vtxlock mode=0555
1267 file path=usr/sadm/bin/puttext mode=0555
1268 file path=usr/sadm/install/miniroot.db group=sys mode=0444
1269 file path=usr/sadm/install/scripts/i.ipsecalg group=sys mode=0555
1270 file path=usr/sadm/install/scripts/i.kcfcnf group=sys mode=0555
1271 file path=usr/sadm/install/scripts/i.kmfcnf group=sys mode=0555
1272 file path=usr/sadm/install/scripts/i.manifest group=sys mode=0555
1273 file path=usr/sadm/install/scripts/i.pkcs11cnf group=sys mode=0555
1274 file path=usr/sadm/install/scripts/i.rbac group=sys mode=0555
1275 file path=usr/sadm/install/scripts/r.ipsecalg group=sys mode=0555
1276 file path=usr/sadm/install/scripts/r.kcfcnf group=sys mode=0555
1277 file path=usr/sadm/install/scripts/r.kmfcnf group=sys mode=0555
1278 file path=usr/sadm/install/scripts/r.manifest group=sys mode=0555
1279 file path=usr/sadm/install/scripts/r.pkcs11cnf group=sys mode=0555
1280 file path=usr/sadm/install/scripts/r.rbac group=sys mode=0555
1281 file path=usr/sadm/updates mode=0444
1282 $(i386_ONLY)file path=usr/sbin/$(ARCH32)/add_drv group=sys mode=0555
1283 $(i386_ONLY)file path=usr/sbin/$(ARCH32)/modinfo group=sys mode=0555
1284 $(i386_ONLY)file path=usr/sbin/$(ARCH32)/modload group=sys mode=0555
1285 $(i386_ONLY)file path=usr/sbin/$(ARCH32)/modunload group=sys mode=0555
1286 $(i386_ONLY)file path=usr/sbin/$(ARCH32)/pbind group=sys mode=0555
1287 $(i386_ONLY)file path=usr/sbin/$(ARCH32)/prtconf group=sys mode=2555
1288 $(i386_ONLY)file path=usr/sbin/$(ARCH32)/psrset group=sys mode=0555
1289 $(i386_ONLY)file path=usr/sbin/$(ARCH32)/rem_drv group=sys mode=0555
1290 $(i386_ONLY)file path=usr/sbin/$(ARCH32)/swap group=sys mode=2555
1291 $(i386_ONLY)file path=usr/sbin/$(ARCH32)/sysdef group=sys mode=2555
1292 $(i386_ONLY)file path=usr/sbin/$(ARCH32)/update_drv group=sys mode=0555
1293 $(i386_ONLY)file path=usr/sbin/$(ARCH32)/whodo mode=4555
1294 file path=usr/sbin/$(ARCH64)/add_drv group=sys mode=0555
1295 file path=usr/sbin/$(ARCH64)/modinfo group=sys mode=0555
1296 file path=usr/sbin/$(ARCH64)/modload group=sys mode=0555
1297 file path=usr/sbin/$(ARCH64)/modunload group=sys mode=0555
1298 file path=usr/sbin/$(ARCH64)/pbind group=sys mode=0555
1299 file path=usr/sbin/$(ARCH64)/prtconf group=sys mode=2555
1300 file path=usr/sbin/$(ARCH64)/psrset group=sys mode=0555
1301 file path=usr/sbin/$(ARCH64)/rem_drv group=sys mode=0555
1302 file path=usr/sbin/$(ARCH64)/swap group=sys mode=2555
1303 file path=usr/sbin/$(ARCH64)/sysdef group=sys mode=2555
1304 file path=usr/sbin/$(ARCH64)/update_drv group=sys mode=0555
1305 file path=usr/sbin/$(ARCH64)/whodo mode=4555
1306 file path=usr/sbin/6to4relay mode=0555
1307 file path=usr/sbin/acctadm mode=0555
1308 file path=usr/sbin/allocate mode=4555
1309 file path=usr/sbin/arp mode=0555
1310 file path=usr/sbin/audit mode=0555
1311 file path=usr/sbin/auditconfig mode=0555
1312 file path=usr/sbin/auditd mode=0555
1313 file path=usr/sbin/auditrecord mode=0555
1314 file path=usr/sbin/auditreduce mode=0555
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1315 file path=usr/sbin/auditstat mode=0555
1316 file path=usr/sbin/cfgadm mode=0555
1317 file path=usr/sbin/chroot mode=0555
1318 file path=usr/sbin/clear_locks mode=0555
1319 file path=usr/sbin/clinfo mode=0555
1320 file path=usr/sbin/clri mode=0555
1321 file path=usr/sbin/consadm group=sys mode=0555
1322 file path=usr/sbin/cron group=sys mode=0555
1323 file path=usr/sbin/devfsadm group=sys mode=0755
1324 file path=usr/sbin/devinfo mode=0555
1325 file path=usr/sbin/df mode=0555
1326 file path=usr/sbin/dfmounts mode=0555
1327 file path=usr/sbin/dispadm mode=0555
1328 file path=usr/sbin/dminfo mode=0555
1329 file path=usr/sbin/dumpadm mode=0555
1330 file path=usr/sbin/EEPROM group=sys mode=2555
1331 file path=usr/sbin/ff mode=0555
1332 file path=usr/sbin/fmthard group=sys mode=0555
1333 file path=usr/sbin/format mode=0555
1334 file path=usr/sbin/fsck mode=0555
1335 file path=usr/sbin/fstyp group=sys mode=0555
1336 file path=usr/sbin/fuser mode=0555
1337 file path=usr/sbin/getdevpolicy group=sys mode=0555
1338 file path=usr/sbin/getmajor group=sys mode=0755
1339 file path=usr/sbin/groupadd group=sys mode=0555
1340 file path=usr/sbin/groupdel group=sys mode=0555
1341 file path=usr/sbin/groupmod group=sys mode=0555
1342 file path=usr/sbin/grpck mode=0555
1343 file path=usr/sbin/halt mode=0755
1344 file path=usr/sbin/hotplug mode=0555
1345 file path=usr/sbin/idmap mode=0555
1346 file path=usr/sbin/if_mpadm mode=0555
1347 file path=usr/sbin/ikeadm mode=0555
1348 file path=usr/sbin/ikecert mode=0555
1349 file path=usr/sbin/inetadm mode=0555
1350 file path=usr/sbin/inetconv mode=0555
1351 file path=usr/sbin/install mode=0555
1352 file path=usr/sbin/installboot group=sys mode=0555
1353 file path=usr/sbin/ipaddrsel mode=0555
1354 file path=usr/sbin/ipsecalg mode=0555
1355 file path=usr/sbin/ipsecconf mode=0555
1356 file path=usr/sbin/ipseckey mode=0555
1357 file path=usr/sbin/keyserv group=sys mode=0555
1358 file path=usr/sbin/killall mode=0555
1359 file path=usr/sbin/ksslcfg mode=0555
1360 file path=usr/sbin/link mode=0555
1361 file path=usr/sbin/locator mode=0555
1362 file path=usr/sbin/lofiadm mode=0555
1363 file path=usr/sbin/logadm mode=0555
1364 file path=usr/sbin/makedbm mode=0555
1365 file path=usr/sbin/mkdevalloc mode=0555
1366 file path=usr/sbin/mkfile mode=0555
1367 file path=usr/sbin/mknod mode=0555
1368 file path=usr/sbin/mountall group=sys mode=0555
1369 file path=usr/sbin/msgid mode=0555
1370 file path=usr/sbin/mvdir mode=0555
1371 file path=usr/sbin/ndd mode=0555
1372 file path=usr/sbin/nlsadmin group=adm mode=0755
1373 file path=usr/sbin/nscd mode=0555
1374 file path=usr/sbin/nwamadm mode=0555
1375 file path=usr/sbin/nwamcfg mode=0555
1376 file path=usr/sbin/pmadm group=sys mode=0555
1377 file path=usr/sbin/praudit mode=0555
1378 $(i386_ONLY)file path=usr/sbin/prtdiag group=sys mode=2755
1379 file path=usr/sbin/prtvtoc group=sys mode=0555
1380 file path=usr/sbin/psradm group=sys mode=0555
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1381 file path=usr/sbin/psrinfo group=sys mode=0555
1382 file path=usr/sbin/pwck mode=0555
1383 file path=usr/sbin/pwconv group=sys mode=0555
1384 file path=usr/sbin/raidctl mode=0555
1385 file path=usr/sbin/ramdiskadm mode=0555
1386 file path=usr/sbin/rctladm mode=0555
1387 file path=usr/sbin/root_archive group=sys mode=0555
1388 file path=usr/sbin/rpcbind mode=0555
1389 $(i386_ONLY)file path=usr/sbin/rtc mode=0555
1390 file path=usr/sbin/sacadm group=sys mode=4755
1391 file path=usr/sbin/setmnt mode=0555
1392 file path=usr/sbin/shareall mode=0555
1393 file path=usr/sbin/sharectl mode=0555
1394 file path=usr/sbin/sharemgr mode=0555
1395 file path=usr/sbin/shutdown group=sys mode=0755
1396 file path=usr/sbin/smbios mode=0555
1397 file path=usr/sbin/stmsboot mode=0555
1398 file path=usr/sbin/strace group=sys mode=0555
1399 file path=usr/sbin/strclean group=sys mode=0555
1400 file path=usr/sbin/strerr group=sys mode=0555
1401 file path=usr/sbin/ttydefs group=sys mode=0755
1402 file path=usr/sbin/svcadm mode=0555
1403 file path=usr/sbin/svccfg mode=0555
1404 file path=usr/sbin/syncinit mode=0555
1405 file path=usr/sbin/syncloop mode=0555
1406 file path=usr/sbin/syncstat mode=0555
1407 file path=usr/sbin/syseventadm group=sys mode=0555
1408 file path=usr/sbin/syslogd group=sys mode=0555
1409 file path=usr/sbin/tar mode=0555
1410 file path=usr/sbin/traceroute mode=4555
1411 file path=usr/sbin/trapstat mode=0555
1412 file path=usr/sbin/ttyadm group=sys mode=0755
1413 $(i386_ONLY)file path=usr/sbin/ucodeadm mode=0555
1414 file path=usr/sbin/umountall group=sys mode=0555
1415 file path=usr/sbin/unlink mode=0555
1416 file path=usr/sbin/unshareall mode=0555
1417 file path=usr/sbin/useradd group=sys mode=0555
1418 file path=usr/sbin/userdel group=sys mode=0555
1419 file path=usr/sbin/usermod group=sys mode=0555
1420 $(sparc_ONLY)file path=usr/sbin/virtinfo mode=0555
1421 file path=usr/sbin/volcopy mode=0555
1422 file path=usr/sbin/wall group=tty mode=2555
1423 file path=usr/sbin/zdump mode=0555
1424 file path=usr/sbin/zic mode=0555
1425 file path=usr/share/doc/ksh/COMPATIBILITY
1426 file path=usr/share/doc/ksh/DESIGN
1427 file path=usr/share/doc/ksh/OBSOLETE
1428 file path=usr/share/doc/ksh/README
1429 file path=usr/share/doc/ksh/RELEASE
1430 file path=usr/share/doc/ksh/TYPES
1431 file path=usr/share/doc/ksh/images/callouts/1.png
1432 file path=usr/share/doc/ksh/images/callouts/10.png
1433 file path=usr/share/doc/ksh/images/callouts/2.png
1434 file path=usr/share/doc/ksh/images/callouts/3.png
1435 file path=usr/share/doc/ksh/images/callouts/4.png
1436 file path=usr/share/doc/ksh/images/callouts/5.png
1437 file path=usr/share/doc/ksh/images/callouts/6.png
1438 file path=usr/share/doc/ksh/images/callouts/7.png
1439 file path=usr/share/doc/ksh/images/callouts/8.png
1440 file path=usr/share/doc/ksh/images/callouts/9.png
1441 file path=usr/share/doc/ksh/images/tag_bourne.png
1442 file path=usr/share/doc/ksh/images/tag_i18n.png
1443 file path=usr/share/doc/ksh/images/tag_ksh.png
1444 file path=usr/share/doc/ksh/images/tag_ksh88.png
1445 file path=usr/share/doc/ksh/images/tag_ksh93.png
1446 file path=usr/share/doc/ksh/images/tag_l10n.png
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1447 file path=usr/share/doc/ksh/images/tag_perf.png
1448 file path=usr/share/doc/ksh/shell_styleguide.docbook
1449 file path=usr/share/doc/ksh/shell_styleguide.html
1450 file path=usr/share/lib/mailx/mailx.help
1451 file path=usr/share/lib/mailx/mailx.help~
1452 file path=usr/share/lib/tabset/3101
1453 file path=usr/share/lib/tabset/beehive
1454 file path=usr/share/lib/tabset/hds
1455 file path=usr/share/lib/tabset/hds3
1456 file path=usr/share/lib/tabset/std
1457 file path=usr/share/lib/tabset/stdcrt
1458 file path=usr/share/lib/tabset/teleray
1459 file path=usr/share/lib/tabset/vt100
1460 file path=usr/share/lib/tabset/wyse-adds
1461 file path=usr/share/lib/tabset/xerox1720
1462 file path=usr/share/lib/termcap
1463 file path=usr/share/lib/unittab
1464 file path=usr/share/lib/xml/dtd/adt_record.dtd.1
1465 file path=usr/share/lib/xml/dtd/kmfpolicy.dtd
1466 file path=usr/share/lib/xml/dtd/service_bundle.dtd.1 group=sys
1467 file path=usr/share/lib/xml/style/adt_record.xsl.1
1468 file path=var/adm/aculog mode=0600 owner=uucp preserve=true
1469 file path=var/adm/spellhist mode=0666 preserve=true
1470 file path=var/adm/utmpx preserve=true
1471 file path=var/adm/wtmpx group=adm owner=adm preserve=true
1472 file path=var/log/authlog group=sys mode=0600 preserve=true
1473 file path=var/log/syslog group=sys preserve=true
1474 file path=var/sadm/system/admin/default_java group=sys mode=0444
1475 file path=var/saf/zsmon/log group=sys preserve=true
1476 file path=var/spool/cron/crontabs/adm group=sys mode=0600 preserve=true
1477 file path=var/spool/cron/crontabs/root group=sys mode=0600 preserve=true
1478 hardlink path=etc/rc2.d/S20syssetup target=../etc/init.d/syssetup
1479 hardlink path=etc/rc2.d/S73cachefs.daemon \
1480     target=../etc/init.d/cachefs.daemon
1481 hardlink path=etc/rc2.d/S89PRESERVE target=../etc/init.d/PRESERVE
1482 $(sparc_ONLY)hardlink path=etc/svc/profile/platform_SUNW,Sun-Fire-V890.xml \
1483     target=../platform_SUNW,Sun-Fire-880.xml
1484 $(sparc_ONLY)hardlink \
1485     path=etc/svc/profile/platform_SUNW,UltraSPARC-IIe-NetraCT-40.xml \
1486     target=../platform_SUNW,UltraSPARC-IIi-Netract.xml
1487 $(sparc_ONLY)hardlink \
1488     path=etc/svc/profile/platform_SUNW,UltraSPARC-IIe-NetraCT-60.xml \
1489     target=../platform_SUNW,UltraSPARC-IIi-Netract.xml
1490 hardlink path=sbin/rc5 target=../sbin/rc0
1491 hardlink path=sbin/rc6 target=../sbin/rc0
1492 hardlink path=usr/bin/$(ARCH32)/encrypt target=decrypt
1493 hardlink path=usr/bin/$(ARCH32)/ksh target=ksh93
1494 hardlink path=usr/bin/$(ARCH32)/mac target=digest
1495 hardlink path=usr/bin/$(ARCH32)/rksh target=ksh93
1496 hardlink path=usr/bin/$(ARCH32)/rksh93 target=ksh93
1497 $(i386_ONLY)hardlink path=usr/bin/$(ARCH32)/w target=uptime
1498 hardlink path=usr/bin/$(ARCH64)/encrypt target=decrypt
1499 hardlink path=usr/bin/$(ARCH64)/ksh target=ksh93
1500 hardlink path=usr/bin/$(ARCH64)/mac target=digest
1501 hardlink path=usr/bin/$(ARCH64)/rksh target=ksh93
1502 hardlink path=usr/bin/$(ARCH64)/rksh93 target=ksh93
1503 hardlink path=usr/bin/$(ARCH64)/w target=uptime
1504 hardlink path=usr/bin/bg target=../usr/bin/alias
1505 hardlink path=usr/bin/cd target=../usr/bin/alias
1506 hardlink path=usr/bin/cksum target=../usr/bin/alias
1507 hardlink path=usr/bin/cmp target=../usr/bin/alias
1508 hardlink path=usr/bin/comm target=../usr/bin/alias
1509 hardlink path=usr/bin/command target=../usr/bin/alias
1510 hardlink path=usr/bin/cut target=../usr/bin/alias
1511 hardlink path=usr/bin/decrypt target=../usr/lib/isaexec
1512 hardlink path=usr/bin/digest target=../usr/lib/isaexec
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1513 hardlink path=usr/bin/dispgid target=../usr/bin/ckgid
1514 hardlink path=usr/bin/dispuid target=../usr/bin/ckuid
1515 hardlink path=usr/bin/edit target=../usr/bin/edit
1516 hardlink path=usr/bin/encrypt target=../usr/lib/isaexec
1517 hardlink path=usr/bin/fc target=../usr/bin/alias
1518 hardlink path=usr/bin/fg target=../usr/bin/alias
1519 hardlink path=usr/bin/getopts target=../usr/bin/alias
1520 hardlink path=usr/bin/hash target=../usr/bin/alias
1521 hardlink path=usr/bin/i386 target=../usr/bin/i286
1522 hardlink path=usr/bin/i486 target=../usr/bin/i286
1523 hardlink path=usr/bin/i860 target=../usr/bin/i286
1524 hardlink path=usr/bin/i86pc target=../usr/bin/i286
1525 hardlink path=usr/bin/iAPX286 target=../usr/bin/i286
1526 hardlink path=usr/bin/jobs target=../usr/bin/alias
1527 hardlink path=usr/bin/join target=../usr/bin/alias
1528 hardlink path=usr/bin/kill target=../usr/bin/alias
1529 hardlink path=usr/bin/ksh target=../usr/lib/isaexec
1530 hardlink path=usr/bin/ksh93 target=../usr/lib/isaexec
1531 hardlink path=usr/bin/ln target=../usr/bin/cp
1532 hardlink path=usr/bin/logname target=../usr/bin/alias
1533 hardlink path=usr/bin/m68k target=../usr/bin/i286
1534 hardlink path=usr/bin/mac target=../usr/lib/isaexec
1535 hardlink path=usr/bin/mc68000 target=../usr/bin/i286
1536 hardlink path=usr/bin/mc68010 target=../usr/bin/i286
1537 hardlink path=usr/bin/mc68020 target=../usr/bin/i286
1538 hardlink path=usr/bin/mc68030 target=../usr/bin/i286
1539 hardlink path=usr/bin/mc68040 target=../usr/bin/i286
1540 hardlink path=usr/bin/mv target=../usr/bin/cp
1541 hardlink path=usr/bin/newtask target=../usr/lib/isaexec
1542 hardlink path=usr/bin/nohup target=../usr/lib/isaexec
1543 hardlink path=usr/bin/page target=../usr/bin/more
1544 hardlink path=usr/bin/paste target=../usr/bin/alias
1545 hardlink path=usr/bin/pdpl1 target=../usr/bin/i286
1546 hardlink path=usr/bin/pfbash target=../usr/bin/pfexec
1547 hardlink path=usr/bin/pfcsh target=../usr/bin/pfexec
1548 hardlink path=usr/bin/pfksh target=../usr/bin/pfexec
1549 hardlink path=usr/bin/pfksh93 target=../usr/bin/pfexec
1550 hardlink path=usr/bin/pfrksh target=../usr/bin/pfexec
1551 hardlink path=usr/bin/pfrksh93 target=../usr/bin/pfexec
1552 hardlink path=usr/bin/pfsh target=../usr/bin/pfexec
1553 hardlink path=usr/bin/pftcsh target=../usr/bin/pfexec
1554 hardlink path=usr/bin/pfzsh target=../usr/bin/pfexec
1555 hardlink path=usr/bin/pkill target=../usr/bin/pgrep
1556 hardlink path=usr/bin/prctl target=../usr/lib/isaexec
1557 hardlink path=usr/bin/print target=../usr/bin/alias
1558 hardlink path=usr/bin/prstat target=../usr/lib/isaexec
1559 hardlink path=usr/bin/ps target=../usr/lib/isaexec
1560 hardlink path=usr/bin/read target=../usr/bin/alias
1561 hardlink path=usr/bin/red target=../usr/bin/ed
1562 hardlink path=usr/bin/rev target=../usr/bin/alias
1563 hardlink path=usr/bin/rksh target=../usr/lib/isaexec
1564 hardlink path=usr/bin/rksh93 target=../usr/lib/isaexec
1565 hardlink path=usr/bin/savecore target=../usr/lib/isaexec
1566 hardlink path=usr/bin/setuname target=../usr/lib/isaexec
1567 hardlink path=usr/bin/sleep target=../usr/bin/alias
1568 hardlink path=usr/bin/sparc target=../usr/bin/i286
1569 hardlink path=usr/bin/sum target=../usr/bin/alias
1570 hardlink path=usr/bin/sun target=../usr/bin/i286
1571 hardlink path=usr/bin/sun2 target=../usr/bin/i286
1572 hardlink path=usr/bin/sun3 target=../usr/bin/i286
1573 hardlink path=usr/bin/sun3x target=../usr/bin/i286
1574 hardlink path=usr/bin/sun4 target=../usr/bin/i286
1575 hardlink path=usr/bin/sun4c target=../usr/bin/i286
1576 hardlink path=usr/bin/sun4d target=../usr/bin/i286
1577 hardlink path=usr/bin/sun4e target=../usr/bin/i286
1578 hardlink path=usr/bin/sun4m target=../usr/bin/i286
```

```

1579 hardlink path=usr/bin/tee target=../../usr/bin/alias
1580 hardlink path=usr/bin/test target=../../usr/bin/alias
1581 hardlink path=usr/bin/touch target=../../usr/bin/settime
1582 hardlink path=usr/bin/type target=../../usr/bin/alias
1583 hardlink path=usr/bin/u370 target=../../usr/bin/i286
1584 hardlink path=usr/bin/u3b target=../../usr/bin/i286
1585 hardlink path=usr/bin/u3b15 target=../../usr/bin/i286
1586 hardlink path=usr/bin/u3b2 target=../../usr/bin/i286
1587 hardlink path=usr/bin/u3b5 target=../../usr/bin/i286
1588 hardlink path=usr/bin/ulimit target=../../usr/bin/alias
1589 hardlink path=usr/bin/umask target=../../usr/bin/alias
1590 hardlink path=usr/bin/unalias target=../../usr/bin/alias
1591 hardlink path=usr/bin/uniq target=../../usr/bin/alias
1592 hardlink path=usr/bin/uptime target=../../usr/lib/isaexec
1593 hardlink path=usr/bin/vax target=../../usr/bin/i286
1594 hardlink path=usr/bin/vedit target=../has/bin/edit
1595 hardlink path=usr/bin/w target=../../usr/lib/isaexec
1596 hardlink path=usr/bin/wait target=../../usr/bin/alias
1597 hardlink path=usr/bin/wc target=../../usr/bin/alias
1598 hardlink path=usr/has/bin/ex target=edit
1599 hardlink path=usr/has/bin/pfsh target=../../bin/pfexec
1600 hardlink path=usr/has/bin/vedit target=edit
1601 hardlink path=usr/has/bin/vi target=edit
1602 hardlink path=usr/has/bin/view target=edit
1603 hardlink path=usr/lib/fs/hfs/fstyp target=../../sbin/fstyp
1604 hardlink path=usr/lib/fs/ufs/dcopy target=../../usr/lib/fs/ufs/clri
1605 hardlink path=usr/lib/fs/ufs/fstyp target=../../sbin/fstyp
1606 hardlink path=usr/lib/fs/ufs/quotaoon \
1607     target=../../usr/lib/fs/ufs/quotaooff
1608 hardlink path=usr/lib/inet/in.iked target=../../usr/lib/isaexec
1609 hardlink path=usr/sadm/bin/dispgid target=../../usr/bin/ckgid
1610 hardlink path=usr/sadm/bin/dispuid target=../../usr/bin/ckuid
1611 hardlink path=usr/sadm/bin/errange target=../../usr/bin/ckrange
1612 hardlink path=usr/sadm/bin/errdate target=../../usr/bin/ckdate
1613 hardlink path=usr/sadm/bin/errgid target=../../usr/bin/ckgid
1614 hardlink path=usr/sadm/bin/errint target=../../usr/bin/ckint
1615 hardlink path=usr/sadm/bin/erritem target=../../usr/bin/ckitem
1616 hardlink path=usr/sadm/bin/errpath target=../../usr/bin/ckpath
1617 hardlink path=usr/sadm/bin/errstr target=../../usr/bin/ckstr
1618 hardlink path=usr/sadm/bin/errtime target=../../usr/bin/cktime
1619 hardlink path=usr/sadm/bin/erruid target=../../usr/bin/ckuid
1620 hardlink path=usr/sadm/bin/erryorin target=../../usr/bin/ckyorin
1621 hardlink path=usr/sadm/bin/helpdate target=../../usr/bin/ckdate
1622 hardlink path=usr/sadm/bin/helpgid target=../../usr/bin/ckgid
1623 hardlink path=usr/sadm/bin/helpint target=../../usr/bin/ckint
1624 hardlink path=usr/sadm/bin/helpitem target=../../usr/bin/ckitem
1625 hardlink path=usr/sadm/bin/helppath target=../../usr/bin/ckpath
1626 hardlink path=usr/sadm/bin/helpprange target=../../usr/bin/ckrange
1627 hardlink path=usr/sadm/bin/helpstr target=../../usr/bin/ckstr
1628 hardlink path=usr/sadm/bin/helptime target=../../usr/bin/cktime
1629 hardlink path=usr/sadm/bin/helpuid target=../../usr/bin/ckuid
1630 hardlink path=usr/sadm/bin/helpyorin target=../../usr/bin/ckyorin
1631 hardlink path=usr/sadm/bin/valdate target=../../usr/bin/ckdate
1632 hardlink path=usr/sadm/bin/valgid target=../../usr/bin/ckgid
1633 hardlink path=usr/sadm/bin/valint target=../../usr/bin/ckint
1634 hardlink path=usr/sadm/bin/valpath target=../../usr/bin/ckpath
1635 hardlink path=usr/sadm/bin/valrange target=../../usr/bin/ckrange
1636 hardlink path=usr/sadm/bin/valstr target=../../usr/bin/ckstr
1637 hardlink path=usr/sadm/bin/valtime target=../../usr/bin/cktime
1638 hardlink path=usr/sadm/bin/valuid target=../../usr/bin/ckuid
1639 hardlink path=usr/sadm/bin/valyorin target=../../usr/bin/ckyorin
1640 hardlink path=usr/sbin/add_drv target=../../usr/lib/isaexec
1641 hardlink path=usr/sbin/audlinks target=../devfsadm
1642 hardlink path=usr/sbin/consadm target=../../usr/sbin/consadm
1643 hardlink path=usr/sbin/deallocate target=../../usr/sbin/allocate
1644 hardlink path=usr/sbin/devlinks target=../devfsadm

```

```

1645 hardlink path=usr/sbin/dfshares target=../../usr/sbin/dfmounts
1646 hardlink path=usr/sbin/disks target=../devfsadm
1647 hardlink path=usr/sbin/drvconfig target=../devfsadm
1648 hardlink path=usr/sbin/list_devices target=../../usr/sbin/allocate
1649 hardlink path=usr/sbin/mkdevmaps target=../../usr/sbin/mkdevalloc
1650 hardlink path=usr/sbin/modinfo target=../../usr/lib/isaexec
1651 hardlink path=usr/sbin/modload target=../../usr/lib/isaexec
1652 hardlink path=usr/sbin/modunload target=../../usr/lib/isaexec
1653 hardlink path=usr/sbin/pbind target=../../usr/lib/isaexec
1654 hardlink path=usr/sbin/ports target=../devfsadm
1655 hardlink path=usr/sbin/poweroff target=../halt
1656 hardlink path=usr/sbin/prtconf target=../../usr/lib/isaexec
1657 $(sparc_ONLY)hardlink path=usr/sbin/prtdiag target=../../usr/lib/platexec
1658 hardlink path=usr/sbin/psrset target=../../usr/lib/isaexec
1659 hardlink path=usr/sbin/reboot target=../halt
1660 hardlink path=usr/sbin/rem_drv target=../../usr/lib/isaexec
1661 hardlink path=usr/sbin/roleadd target=../../usr/sbin/useradd
1662 hardlink path=usr/sbin/roledel target=../../usr/sbin/userdel
1663 hardlink path=usr/sbin/rolemod target=../../usr/sbin/usermod
1664 hardlink path=usr/sbin/share target=../../usr/sbin/sharemgr
1665 hardlink path=usr/sbin/swap target=../../usr/lib/isaexec
1666 hardlink path=usr/sbin/sysdef target=../../usr/lib/isaexec
1667 hardlink path=usr/sbin/tapes target=../devfsadm
1668 hardlink path=usr/sbin/unshare target=../../usr/sbin/sharemgr
1669 hardlink path=usr/sbin/update_drv target=../../usr/lib/isaexec
1670 hardlink path=usr/sbin/whodo target=../../usr/lib/isaexec
1671 legacy pkg=SUNWcsr \
1672     desc="core software for a specific instruction-set architecture" \
1673     name="Core Solaris, (Root)"
1674 legacy pkg=SUNWcsu \
1675     desc="core software for a specific instruction-set architecture" \
1676     name="Core Solaris, (Usr)"
1677 legacy pkg=SUNWftpr desc="FTP Server Configuration Files" \
1678     name="FTP Server, (Root)"
1679 license cr_Sun license=cr_Sun
1680 license lic_CDDL license=lic_CDDL
1681 license usr/src/cmd/cmd-inet/sbin/ifparse/THIRDPARTYLICENSE \
1682     license=usr/src/cmd/cmd-inet/sbin/ifparse/THIRDPARTYLICENSE
1683 license usr/src/cmd/cmd-inet/usr.lib/in.mpathd/THIRDPARTYLICENSE \
1684     license=usr/src/cmd/cmd-inet/usr.lib/in.mpathd/THIRDPARTYLICENSE
1685 license usr/src/cmd/cmd-inet/usr/sbin/THIRDPARTYLICENSE.arp \
1686     license=usr/src/cmd/cmd-inet/usr/sbin/THIRDPARTYLICENSE.arp
1687 license usr/src/cmd/cmd-inet/usr/sbin/THIRDPARTYLICENSE.route \
1688     license=usr/src/cmd/cmd-inet/usr/sbin/THIRDPARTYLICENSE.route
1689 license usr/src/cmd/cmd-inet/usr/sbin/ifconfig/THIRDPARTYLICENSE \
1690     license=usr/src/cmd/cmd-inet/usr/sbin/ifconfig/THIRDPARTYLICENSE
1691 license usr/src/cmd/cmd-inet/usr/sbin/in.ftpd/LICENSE \
1692     license=usr/src/cmd/cmd-inet/usr/sbin/in.ftpd/LICENSE
1693 license usr/src/cmd/cmd-inet/usr/sbin/traceroute/THIRDPARTYLICENSE \
1694     license=usr/src/cmd/cmd-inet/usr/sbin/traceroute/THIRDPARTYLICENSE
1695 license usr/src/cmd/cron/THIRDPARTYLICENSE \
1696     license=usr/src/cmd/cron/THIRDPARTYLICENSE
1697 license usr/src/cmd/csh/THIRDPARTYLICENSE \
1698     license=usr/src/cmd/csh/THIRDPARTYLICENSE
1699 license usr/src/cmd/eeeprom/THIRDPARTYLICENSE \
1700     license=usr/src/cmd/eeeprom/THIRDPARTYLICENSE
1701 license usr/src/cmd/fs.d/ufs/THIRDPARTYLICENSE \
1702     license=usr/src/cmd/fs.d/ufs/THIRDPARTYLICENSE
1703 license usr/src/cmd/mt/THIRDPARTYLICENSE \
1704     license=usr/src/cmd/mt/THIRDPARTYLICENSE
1705 license usr/src/cmd/script/THIRDPARTYLICENSE \
1706     license=usr/src/cmd/script/THIRDPARTYLICENSE
1707 license usr/src/cmd/sed/THIRDPARTYLICENSE \
1708     license=usr/src/cmd/sed/THIRDPARTYLICENSE
1709 license usr/src/cmd/stat/vmstat/THIRDPARTYLICENSE \
1710     license=usr/src/cmd/stat/vmstat/THIRDPARTYLICENSE

```

```
1711 license usr/src/cmd/tail/THIRDPARTYLICENSE \
1712     license=usr/src/cmd/tail/THIRDPARTYLICENSE
1713 license usr/src/cmd/tip/THIRDPARTYLICENSE \
1714     license=usr/src/cmd/tip/THIRDPARTYLICENSE
1715 license usr/src/cmd/tr/THIRDPARTYLICENSE \
1716     license=usr/src/cmd/tr/THIRDPARTYLICENSE
1717 license usr/src/cmd/vi/THIRDPARTYLICENSE \
1718     license=usr/src/cmd/vi/THIRDPARTYLICENSE
1719 license usr/src/cmd/which/THIRDPARTYLICENSE \
1720     license=usr/src/cmd/which/THIRDPARTYLICENSE
1721 license usr/src/cmd/xstr/THIRDPARTYLICENSE \
1722     license=usr/src/cmd/xstr/THIRDPARTYLICENSE
1723 license usr/src/common/bzip2/LICENSE license=usr/src/common/bzip2/LICENSE
1724 link path=bin target=./usr/bin
1725 link path=etc/TIMEZONE target=./default/init
1726 link path=etc/autopush target=./sbin/autopush
1727 link path=etc/cfgadm target=./usr/sbin/cfgadm
1728 link path=etc/clri target=./usr/sbin/clri
1729 link path=etc/cron target=./usr/sbin/cron
1730 link path=etc/dcopy target=./usr/sbin/dcopy
1731 link path=etc/ff target=./usr/sbin/ff
1732 link path=etc/fmthard target=./usr/sbin/fmthard
1733 link path=etc/format target=./usr/sbin/format
1734 link path=etc/fsck target=./usr/sbin/fsck
1735 link path=etc/fsdb target=./usr/sbin/fsdb
1736 link path=etc/fstyp target=./usr/sbin/fstyp
1737 link path=etc/getty target=./usr/lib/saf/ttymon
1738 link path=etc/grpck target=./usr/sbin/grpck
1739 link path=etc/halt target=./usr/sbin/halt
1740 link path=etc/hosts target=./inet/hosts
1741 link path=etc/inet/ipnodes target=./hosts
1742 link path=etc/inetd.conf target=./inet/inetd.conf
1743 link path=etc/init target=./sbin/init
1744 link path=etc/install target=./usr/sbin/install
1745 link path=etc/killall target=./usr/sbin/killall
1746 link path=etc/labelit target=./usr/sbin/labelit
1747 link path=etc/lib/ld.so.1 target=./lib/ld.so.1
1748 link path=etc/lib/libdl.so.1 target=./lib/libdl.so.1
1749 link path=etc/lib/nss_files.so.1 target=./lib/nss_files.so.1
1750 link path=etc/log target=./var/adm/log
1751 link path=etc/mkfs target=./usr/sbin/mkfs
1752 link path=etc/mknod target=./usr/sbin/mknod
1753 link path=etc/mount target=./sbin/mount
1754 link path=etc/mountall target=./sbin/mountall
1755 link path=etc/ncheck target=./usr/sbin/ncheck
1756 link path=etc/netmasks target=./inet/netmasks
1757 link path=etc/networks target=./inet/networks
1758 link path=etc/protocols target=./inet/protocols
1759 link path=etc/prtconf target=./usr/sbin/prtconf
1760 link path=etc/prtvtoct target=./usr/sbin/prtvtoct
1761 link path=etc/rc0 target=./sbin/rc0
1762 link path=etc/rc1 target=./sbin/rc1
1763 link path=etc/rc2 target=./sbin/rc2
1764 link path=etc/rc3 target=./sbin/rc3
1765 link path=etc/rc5 target=./sbin/rc5
1766 link path=etc/rc6 target=./sbin/rc6
1767 link path=etc/rcS target=./sbin/rcS
1768 link path=etc/reboot target=./usr/sbin/halt
1769 link path=etc/security/audit/localhost/files target=./var/audit
1770 link path=etc/services target=./inet/services
1771 link path=etc/setmnt target=./usr/sbin/setmnt
1772 link path=etc/shutdown target=./usr/sbin/shutdown
1773 link path=etc/sulogin target=./sbin/sulogin
1774 link path=etc/swap target=./usr/sbin/swap
1775 link path=etc/swapadd target=./sbin/swapadd
1776 link path=etc/sysdef target=./usr/sbin/sysdef
```

```
1777 link path=etc/tar target=./usr/sbin/tar
1778 link path=etc/telinit target=./sbin/init
1779 link path=etc/uadmin target=./sbin/uadmin
1780 link path=etc/umount target=./sbin/umount
1781 link path=etc/umountall target=./sbin/umountall
1782 link path=etc/utmpx target=./var/adm/utmpx
1783 link path=etc/volcopy target=./usr/sbin/volcopy
1784 link path=etc/wall target=./usr/sbin/wall
1785 link path=etc/whodo target=./usr/sbin/whodo
1786 link path=etc/wtmpx target=./var/adm/wtmpx
1787 link path=sbin/in.mpathd target=./lib/inet/in.mpathd
1788 link path=sbin/jsh target=./usr/bin/ksh93
1789 link path=sbin/pfsh target=./usr/bin/pfexec
1790 link path=sbin/sh target=./usr/bin/$(ARCH32)/ksh93
1791 link path=sbin/su target=./usr/bin/su
1792 link path=usr/adm target=./var/adm
1793 link path=usr/bin/cacheftp target=./lib/fs/cacheftp/cacheftp
1794 link path=usr/bin/cacheftpstat target=./lib/fs/cacheftp/cacheftpstat
1795 link path=usr/bin/df target=./sbin/df
1796 link path=usr/bin/jsh target=ksh93
1797 link path=usr/bin/pwconv target=./sbin/pwconv
1798 link path=usr/bin/rmail target=./mail
1799 link path=usr/bin/sh target=$(ARCH32)/ksh93
1800 link path=usr/bin/strclean target=./sbin/strclean
1801 link path=usr/bin/strerr target=./sbin/strerr
1802 link path=usr/bin/sync target=./sbin/sync
1803 link path=usr/bin/tar target=./sbin/tar
1804 link path=usr/bin/uname target=./sbin/uname
1805 link path=usr/ccs/bin/m4 target=./bin/m4
1806 link path=usr/has/bin/jsh target=sh
1807 link path=usr/has/lib/rsh target=./bin/sh
1808 link path=usr/lib/$(ARCH64)/ld.so.1 target=./lib/$(ARCH64)/ld.so.1
1809 link path=usr/lib/cron target=./etc/cron.d
1810 link path=usr/lib/devfsadm/devfsadmd target=./sbin/devfsadm
1811 link path=usr/lib/embedded_su target=./bin/su
1812 link path=usr/lib/fs/dev/mount target=./etc/fs/dev/mount
1813 link path=usr/lib/fs/hsfs/mount target=./etc/fs/hsfs/mount
1814 link path=usr/lib/fs/ufs/mount target=./etc/fs/ufs/mount
1815 link path=usr/lib/inet/in.mpathd target=./lib/inet/in.mpathd
1816 link path=usr/lib/ld.so.1 target=./lib/ld.so.1
1817 link path=usr/lib/locale/POSIX target=./C
1818 link path=usr/lib/rsh target=./bin/ksh93
1819 link path=usr/lib/secure/32 target=.
1820 link path=usr/lib/secure/64 target=$(ARCH64)
1821 link path=usr/lib/wusbd target=./sbin/wusbadm
1822 link path=usr/mail target=./var/mail
1823 link path=usr/net/nls/listen target=./lib/saf/listen
1824 link path=usr/net/nls/nlps_server target=./lib/saf/nlps_server
1825 link path=usr/news target=./var/news
1826 link path=usr/preserve target=./var/preserve
1827 link path=usr/pub target=./share/lib/pub
1828 link path=usr/sbin/autopush target=./sbin/autopush
1829 link path=usr/sbin/bootadm target=./sbin/bootadm
1830 link path=usr/sbin/cacheftplog target=./lib/fs/cacheftp/cacheftplog
1831 link path=usr/sbin/cacheftpssize target=./lib/fs/cacheftp/cacheftpssize
1832 link path=usr/sbin/cfsadmin target=./lib/fs/cacheftp/cfsadmin
1833 link path=usr/sbin/cryptoadm target=./sbin/cryptoadm
1834 link path=usr/sbin/dcopy target=./clri
1835 link path=usr/sbin/devnm target=./df
1836 link path=usr/sbin/dladm target=./sbin/dladm
1837 link path=usr/sbin/dlstat target=./sbin/dlstat
1838 link path=usr/sbin/edquota target=./lib/fs/ufs/edquota
1839 link path=usr/sbin/fdisk target=./sbin/fdisk
1840 link path=usr/sbin/fiocompress target=./sbin/fiocompress
1841 link path=usr/sbin/flowadm target=./sbin/flowadm
1842 link path=usr/sbin/flowstat target=./sbin/flowstat
```

```
1843 link path=usr/sbin/fsdb target=./clri
1844 link path=usr/sbin/fsirand target=./lib/fs/ufs/fsirand
1845 link path=usr/sbin/fssnap target=./clri
1846 link path=usr/sbin/hostconfig target=./../sbin/hostconfig
1847 link path=usr/sbin/ifconfig target=./../sbin/ifconfig
1848 link path=usr/sbin/inetd target=./lib/inet/inetd
1849 link path=usr/sbin/init target=./../sbin/init
1850 $(i386_ONLY)link path=usr/sbin/installgrub target=./../sbin/installgrub
1851 link path=usr/sbin/ipadm target=./../sbin/ipadm
1852 link path=usr/sbin/impstat target=./../sbin/impstat
1853 link path=usr/sbin/labelit target=./clri
1854 link path=usr/sbin/lockfs target=./lib/fs/ufs/lockfs
1855 link path=usr/sbin/mkfs target=./clri
1856 link path=usr/sbin/mount target=./../sbin/mount
1857 link path=usr/sbin/ncheck target=./ff
1858 link path=usr/sbin/newfs target=./lib/fs/ufs/newfs
1859 link path=usr/sbin/quot target=./lib/fs/ufs/quot
1860 link path=usr/sbin/quota target=./lib/fs/ufs/quota
1861 link path=usr/sbin/quotacheck target=./lib/fs/ufs/quotacheck
1862 link path=usr/sbin/quotaoff target=./lib/fs/ufs/quotaoff
1863 link path=usr/sbin/quotaon target=./lib/fs/ufs/quotaon
1864 link path=usr/sbin/repquota target=./lib/fs/ufs/repquota
1865 link path=usr/sbin/route target=./../sbin/route
1866 link path=usr/sbin/routadm target=./../sbin/routadm
1867 link path=usr/sbin/sync target=./../sbin/sync
1868 link path=usr/sbin/tunefs target=./lib/fs/ufs/tunefs
1869 link path=usr/sbin/tzreload target=./../sbin/tzreload
1870 link path=usr/sbin/uadmin target=./../sbin/uadmin
1871 link path=usr/sbin/ufsdump target=./lib/fs/ufs/ufsdump
1872 link path=usr/sbin/ufsrestore target=./lib/fs/ufs/ufsrestore
1873 link path=usr/sbin/umount target=./../sbin/umount
1874 link path=usr/sbin/wusbadm target=./../sbin/wusbadm
1875 link path=usr/spool target=./var/spool
1876 link path=usr/src target=./share/src
1877 link path=usr/tmp target=./var/tmp
1878 link path=var/ld/32 target=.
1879 link path=var/ld/64 target=$(ARCH64)
1880 #
1881 # The bootadm binary needs the etc/release file.
1882 #
1883 depend fmri=release/name type=require
1884 #
1885 # intrd and others use the illumos-defaulted perl interpreter
1886 #
1887 depend fmri=runtime/perl-510 type=require
1888 #
1889 # The loadkeys binary needs the keytables.
1890 #
1891 depend fmri=system/data/keyboard/keytables type=require
1892 #
1893 # Depend on terminfo data.
1894 #
1895 depend fmri=system/data/terminfo type=require
1896 #
1897 # Depend on zoneinfo data.
1898 #
1899 depend fmri=system/data/zoneinfo type=require
```

new/usr/src/pkg/manifests/system-library.mf

1

```
*****
60132 Wed Sep  4 20:46:02 2013
new/usr/src/pkg/manifests/system-library.mf
2989 Eliminate use of LOGNAME_MAX in ON
1166 useradd have warning with name more 8 chars
*****
1 #
2 # CDDL HEADER START
3 #
4 # The contents of this file are subject to the terms of the
5 # Common Development and Distribution License (the "License").
6 # You may not use this file except in compliance with the License.
7 #
8 # You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE
9 # or http://www.opensolaris.org/os/licensing.
10 # See the License for the specific language governing permissions
11 # and limitations under the License.
12 #
13 # When distributing Covered Code, include this CDDL HEADER in each
14 # file and include the License file at usr/src/OPENSOLARIS.LICENSE.
15 # If applicable, add the following below this CDDL HEADER, with the
16 # fields enclosed by brackets "[]" replaced with your own identifying
17 # information: Portions Copyright [yyyy] [name of copyright owner]
18 #
19 # CDDL HEADER END
20 #
21 #
22 #
23 # Copyright 2011 Nexenta Systems, Inc. All rights reserved.
24 # Copyright (c) 2010, Oracle and/or its affiliates. All rights reserved.
25 # Copyright 2012 OmniTI Computer Consulting, Inc. All rights reserved.
26 # Copyright (c) 2013 Gary Mills
27 #
28 #
29 <include system-library.man3.inc>
30 <include system-library.man3bsm.inc>
31 <include system-library.man3c.inc>
32 <include system-library.man3c_db.inc>
33 <include system-library.man3cfgadm.inc>
34 <include system-library.man3commutil.inc>
35 <include system-library.man3contract.inc>
36 <include system-library.man3curses.inc>
37 <include system-library.man3devinfo.inc>
38 <include system-library.man3devinfo.inc>
39 <include system-library.man3dlpi.inc>
40 <include system-library.man3elf.inc>
41 <include system-library.man3exacct.inc>
42 <include system-library.man3ext.inc>
43 <include system-library.man3fstyp.inc>
44 <include system-library.man3gen.inc>
45 <include system-library.man3kstat.inc>
46 <include system-library.man3kvm.inc>
47 <include system-library.man3ldap.inc>
48 <include system-library.man3lgrp.inc>
49 <include system-library.man3lib.inc>
50 <include system-library.man3mail.inc>
51 <include system-library.man3malloc.inc>
52 <include system-library.man3mp.inc>
53 <include system-library.man3nsl.inc>
54 <include system-library.man3nvpair.inc>
55 <include system-library.man3pam.inc>
56 <include system-library.man3scf.inc>
57 <include system-library.man3sec.inc>
58 <include system-library.man3secdb.inc>
59 <include system-library.man3sip.inc>
60 <include system-library.man3socket.inc>
```

new/usr/src/pkg/manifests/system-library.mf

2

```
61 <include system-library.man3tsol.inc>
62 <include system-library.man3uuid.inc>
63 <include system-library.man3volmgt.inc>
64 <include system-library.man3xcurses.inc>
65 <include system-library.man3xnet.inc>
66 <include system-library.man4.inc>
67 <include system-library.man5.inc>
68 <include system-library.man7p.inc>
69 set name=pkg.fmri value=pkg:/system/library@$(PKGVERS)
70 set name=pkg.description \
71     value="core shared libraries for a specific instruction-set architecture"
72 set name=pkg.summary value="Core Solaris, (Shared Libs)"
73 set name=info.classification value=org.opensolaris.category.2008:System/Core
74 set name=variant.arch value=$(ARCH)
75 $(i386_ONLY)dir path=etc group=sys
76 $(i386_ONLY)dir path=etc/flash group=sys
77 $(i386_ONLY)dir path=etc/flash/postcreation group=sys mode=0700
78 $(i386_ONLY)dir path=etc/flash/precreation group=sys mode=0700
79 $(i386_ONLY)dir path=etc/flash/preexit group=sys mode=0700
80 dir path=lib
81 dir path=lib/$(ARCH64)
82 dir path=lib/crypto
83 dir path=lib/crypto/$(ARCH64)
84 dir path=lib/mpxio
85 dir path=lib/secure
86 dir path=lib/secure/$(ARCH64)
87 dir path=usr group=sys
88 dir path=usr/bin
89 dir path=usr/ccs
90 dir path=usr/ccs/lib
91 dir path=usr/ccs/lib/$(ARCH64)
92 dir path=usr/lib
93 dir path=usr/lib/$(ARCH64)
94 dir path=usr/lib/cfgadm
95 dir path=usr/lib/cfgadm/$(ARCH64)
96 dir path=usr/lib/iconv/$(ARCH64)
97 $(i386_ONLY)dir path=usr/lib/libc
98 dir path=usr/lib/lwp
99 dir path=usr/lib/lwp/$(ARCH64)
100 dir path=usr/lib/python2.6
101 dir path=usr/lib/python2.6/vendor-packages
102 dir path=usr/lib/python2.6/vendor-packages/solaris
103 dir path=usr/lib/raidcfg
104 dir path=usr/lib/raidcfg/$(ARCH64)
105 dir path=usr/lib/scsi
106 dir path=usr/lib/scsi/$(ARCH64)
107 dir path=usr/lib/scsi/plugins
108 dir path=usr/lib/scsi/plugins/scsi
109 dir path=usr/lib/scsi/plugins/scsi/engines
110 dir path=usr/lib/scsi/plugins/scsi/engines/$(ARCH64)
111 dir path=usr/lib/scsi/plugins/ses
112 dir path=usr/lib/scsi/plugins/ses/framework
113 dir path=usr/lib/scsi/plugins/ses/framework/$(ARCH64)
114 dir path=usr/lib/scsi/plugins/ses/vendor
115 $(sparc_ONLY)dir path=usr/lib/scsi/plugins/ses/vendor/$(ARCH64)
116 dir path=usr/lib/scsi/plugins/smp
117 dir path=usr/lib/scsi/plugins/smp/engine
118 dir path=usr/lib/scsi/plugins/smp/engine/$(ARCH64)
119 dir path=usr/lib/scsi/plugins/smp/framework
120 dir path=usr/lib/scsi/plugins/smp/framework/$(ARCH64)
121 dir path=usr/lib/security
122 dir path=usr/lib/security/$(ARCH64)
123 dir path=usr/share/man
124 dir path=usr/share/man/man3
125 dir path=usr/share/man/man3bsm
126 dir path=usr/share/man/man3c
```



```
127 dir path=usr/share/man/man3c_db
128 dir path=usr/share/man/man3cfgadm
129 dir path=usr/share/man/man3computil
130 dir path=usr/share/man/man3contract
131 dir path=usr/share/man/man3curses
132 dir path=usr/share/man/man3devic
133 dir path=usr/share/man/man3devinfo
134 dir path=usr/share/man/man3dlpi
135 dir path=usr/share/man/man3elf
136 dir path=usr/share/man/man3exacct
137 dir path=usr/share/man/man3ext
138 dir path=usr/share/man/man3fstyp
139 dir path=usr/share/man/man3gen
140 dir path=usr/share/man/man3kstat
141 dir path=usr/share/man/man3kvm
142 dir path=usr/share/man/man3ldap
143 dir path=usr/share/man/man3lgrp
144 dir path=usr/share/man/man3lib
145 dir path=usr/share/man/man3mail
146 dir path=usr/share/man/man3malloc
147 dir path=usr/share/man/man3mp
148 dir path=usr/share/man/man3nsl
149 dir path=usr/share/man/man3nvpair
150 dir path=usr/share/man/man3pam
151 dir path=usr/share/man/man3pool
152 dir path=usr/share/man/man3scf
153 dir path=usr/share/man/man3sec
154 dir path=usr/share/man/man3secdb
155 dir path=usr/share/man/man3sip
156 dir path=usr/share/man/man3socket
157 dir path=usr/share/man/man3tsol
158 dir path=usr/share/man/man3uuid
159 dir path=usr/share/man/man3volmgt
160 dir path=usr/share/man/man3xcurses
161 dir path=usr/share/man/man3xnet
162 dir path=usr/share/man/man5
163 dir path=usr/share/man/man7p
164 dir path=usr/xpg4
165 dir path=usr/xpg4/lib
166 dir path=usr/xpg4/lib/$(ARCH64)
167 $(i386_ONLY)file path=etc/flash/precreation/caplib group=sys mode=0500
168 file path=lib/$(ARCH64)/c_synonyms.so.1
169 file path=lib/$(ARCH64)/ld.so.1
170 file path=lib/$(ARCH64)/libadm.so.1
171 file path=lib/$(ARCH64)/libaio.so.1
172 file path=lib/$(ARCH64)/libavl.so.1
173 file path=lib/$(ARCH64)/libbsm.so.1
174 file path=lib/$(ARCH64)/libc.so.1
175 file path=lib/$(ARCH64)/libc_db.so.1
176 file path=lib/$(ARCH64)/libcmdutils.so.1
177 file path=lib/$(ARCH64)/libcontract.so.1
178 file path=lib/$(ARCH64)/libcryptoutil.so.1
179 file path=lib/$(ARCH64)/libctf.so.1
180 file path=lib/$(ARCH64)/libcurses.so.1
181 file path=lib/$(ARCH64)/libdevice.so.1
182 file path=lib/$(ARCH64)/libdevic.so.1
183 file path=lib/$(ARCH64)/libdevinfo.so.1
184 file path=lib/$(ARCH64)/libdhcputil.so.1
185 file path=lib/$(ARCH64)/libdl.so.1
186 file path=lib/$(ARCH64)/libdladm.so.1
187 file path=lib/$(ARCH64)/libdlpi.so.1
188 file path=lib/$(ARCH64)/libdoor.so.1
189 file path=lib/$(ARCH64)/libefi.so.1
190 file path=lib/$(ARCH64)/libelf.so.1
191 $(i386_ONLY)file path=lib/$(ARCH64)/libfdisk.so.1
192 file path=lib/$(ARCH64)/libgen.so.1
```

```
193 file path=lib/$(ARCH64)/libinetutil.so.1
194 file path=lib/$(ARCH64)/libintl.so.1
195 file path=lib/$(ARCH64)/libkmf.so.1
196 file path=lib/$(ARCH64)/libkmfberder.so.1
197 file path=lib/$(ARCH64)/libkstat.so.1
198 file path=lib/$(ARCH64)/libld.so.4
199 file path=lib/$(ARCH64)/liblddb.so.4
200 file path=lib/$(ARCH64)/libmd.so.1
201 file path=lib/$(ARCH64)/libmd5.so.1
202 file path=lib/$(ARCH64)/libmp.so.2
203 file path=lib/$(ARCH64)/libnsl.so.1
204 file path=lib/$(ARCH64)/libnvpair.so.1
205 file path=lib/$(ARCH64)/libpam.so.1
206 file path=lib/$(ARCH64)/libproc.so.1
207 file path=lib/$(ARCH64)/libpthread.so.1
208 file path=lib/$(ARCH64)/librcm.so.1
209 file path=lib/$(ARCH64)/libresolv.so.2
210 file path=lib/$(ARCH64)/librestart.so.1
211 file path=lib/$(ARCH64)/librpcsvc.so.1
212 file path=lib/$(ARCH64)/librt.so.1
213 file path=lib/$(ARCH64)/librtld.so.1
214 file path=lib/$(ARCH64)/librtld_db.so.1
215 file path=lib/$(ARCH64)/libscf.so.1
216 file path=lib/$(ARCH64)/libsec.so.1
217 file path=lib/$(ARCH64)/libsecdb.so.1
218 file path=lib/$(ARCH64)/libsendfile.so.1
219 file path=lib/$(ARCH64)/libsocket.so.1
220 file path=lib/$(ARCH64)/libsysevent.so.1
221 file path=lib/$(ARCH64)/libtermcap.so.1
222 file path=lib/$(ARCH64)/libthread.so.1
223 file path=lib/$(ARCH64)/libtsnet.so.1
224 file path=lib/$(ARCH64)/libtsol.so.2
225 file path=lib/$(ARCH64)/libumem.so.1
226 file path=lib/$(ARCH64)/libuuid.so.1
227 file path=lib/$(ARCH64)/libutil.so.1
228 file path=lib/$(ARCH64)/libw.so.1
229 file path=lib/$(ARCH64)/libxnet.so.1
230 file path=lib/$(ARCH64)/nss_compat.so.1
231 file path=lib/$(ARCH64)/nss_dns.so.1
232 file path=lib/$(ARCH64)/nss_files.so.1
233 file path=lib/$(ARCH64)/nss_nis.so.1
234 file path=lib/$(ARCH64)/nss_user.so.1
235 file path=lib/c_synonyms.so.1
236 file path=lib/crypto/$(ARCH64)/kmf_mapper_cn.so.1
237 file path=lib/crypto/$(ARCH64)/kmf_nss.so.1
238 file path=lib/crypto/$(ARCH64)/kmf_openssl.so.1
239 file path=lib/crypto/$(ARCH64)/kmf_pkcs11.so.1
240 file path=lib/crypto/kmf_mapper_cn.so.1
241 file path=lib/crypto/kmf_nss.so.1
242 file path=lib/crypto/kmf_openssl.so.1
243 file path=lib/crypto/kmf_pkcs11.so.1
244 file path=lib/ld.so.1
245 file path=lib/libadm.so.1
246 file path=lib/libaio.so.1
247 file path=lib/libavl.so.1
248 file path=lib/libbsm.so.1
249 file path=lib/libc.so.1 reboot-needed=true
250 file path=lib/libc_db.so.1
251 file path=lib/libcmdutils.so.1
252 file path=lib/libcontract.so.1
253 file path=lib/libcryptoutil.so.1
254 file path=lib/libctf.so.1
255 file path=lib/libcurses.so.1
256 file path=lib/libdevice.so.1
257 file path=lib/libdevic.so.1
258 file path=lib/libdevinfo.so.1
```

```
259 file path=lib/libdhcpageant.so.1
260 file path=lib/libdhcputil.so.1
261 file path=lib/libddl.so.1
262 file path=lib/libdldadm.so.1
263 file path=lib/libdldpi.so.1
264 file path=lib/libdoor.so.1
265 file path=lib/libefi.so.1
266 file path=lib/libelf.so.1
267 file path=lib/libelfsign.so.1
268 $(i386_ONLY)file path=lib/libfdisk.so.1
269 file path=lib/libgen.so.1
270 file path=lib/libinetutil.so.1
271 file path=lib/libintl.so.1
272 file path=lib/libipadm.so.1
273 file path=lib/libipmp.so.1
274 file path=lib/libkcf.so.1
275 file path=lib/libkmf.so.1
276 file path=lib/libkmfberder.so.1
277 file path=lib/libkstat.so.1
278 file path=lib/libld.so.4
279 file path=lib/liblddbg.so.4
280 file path=lib/libmd.so.1
281 file path=lib/libmd5.so.1
282 file path=lib/libmp.so.1
283 file path=lib/libmp.so.2
284 file path=lib/libnsl.so.1
285 file path=lib/libnvpair.so.1
286 file path=lib/libnwm.so.1
287 file path=lib/libpam.so.1
288 file path=lib/libproc.so.1
289 file path=lib/libpthread.so.1
290 file path=lib/librcm.so.1
291 file path=lib/libresolv.so.1
292 file path=lib/libresolv.so.2
293 file path=lib/librestart.so.1
294 file path=lib/librpcsvc.so.1
295 file path=lib/librt.so.1
296 file path=lib/librtd.so.1
297 file path=lib/librtd_db.so.1
298 file path=lib/libscf.so.1
299 file path=lib/libsec.so.1
300 file path=lib/libsecdb.so.1
301 file path=lib/libsendfile.so.1
302 file path=lib/libsocket.so.1
303 file path=lib/libsysevent.so.1
304 file path=lib/libtermcap.so.1
305 file path=lib/libthread.so.1
306 file path=lib/libtsnet.so.1
307 file path=lib/libtsol.so.2
308 file path=lib/libumem.so.1
309 file path=lib/libuuid.so.1
310 file path=lib/libuutil.so.1
311 file path=lib/libw.so.1
312 file path=lib/libxnet.so.1
313 file path=lib/mpxio/stmsboot_util mode=0555
314 file path=lib/nss_compat.so.1
315 file path=lib/nss_dns.so.1
316 file path=lib/nss_files.so.1
317 file path=lib/nss_nis.so.1
318 file path=lib/nss_user.so.1
319 file path=usr/lib/$(ARCH64)/0@0.so.1
320 file path=usr/lib/$(ARCH64)/getloginx.so.1
321 file path=usr/lib/$(ARCH64)/libadutils.so.1
322 file path=usr/lib/$(ARCH64)/libast.so.1
323 file path=usr/lib/$(ARCH64)/libbsdmalloc.so.1
324 file path=usr/lib/$(ARCH64)/libcfadm.so.1
```

```
325 file path=usr/lib/$(ARCH64)/libcmd.so.1
326 file path=usr/lib/$(ARCH64)/libcommutil.so.1
327 file path=usr/lib/$(ARCH64)/libcrle.so.1
328 file path=usr/lib/$(ARCH64)/libcrypt.so.1
329 file path=usr/lib/$(ARCH64)/libdisasm.so.1
330 file path=usr/lib/$(ARCH64)/libdll.so.1
331 file path=usr/lib/$(ARCH64)/libexacct.so.1
332 file path=usr/lib/$(ARCH64)/libform.so.1
333 file path=usr/lib/$(ARCH64)/libfstyp.so.1
334 file path=usr/lib/$(ARCH64)/libhotplug.so.1
335 file path=usr/lib/$(ARCH64)/libidmap.so.1
336 file path=usr/lib/$(ARCH64)/libike.so.1
337 file path=usr/lib/$(ARCH64)/libipmi.so.1
338 file path=usr/lib/$(ARCH64)/libipp.so.1
339 file path=usr/lib/$(ARCH64)/libipsecutil.so.1
340 file path=usr/lib/$(ARCH64)/libkvm.so.1
341 file path=usr/lib/$(ARCH64)/libl.so.1
342 file path=usr/lib/$(ARCH64)/libldap.so.5
343 file path=usr/lib/$(ARCH64)/liblgrp.so.1
344 file path=usr/lib/$(ARCH64)/liblm.so.1
345 file path=usr/lib/$(ARCH64)/libmail.so.1
346 file path=usr/lib/$(ARCH64)/libmalloc.so.1
347 file path=usr/lib/$(ARCH64)/libmapmalloc.so.1
348 file path=usr/lib/$(ARCH64)/libmenu.so.1
349 file path=usr/lib/$(ARCH64)/libmtmalloc.so.1
350 file path=usr/lib/$(ARCH64)/libnls.so.1
351 file path=usr/lib/$(ARCH64)/libpanel.so.1
352 file path=usr/lib/$(ARCH64)/libpcidb.so.1
353 file path=usr/lib/$(ARCH64)/libpkcs11.so.1
354 file path=usr/lib/$(ARCH64)/libproject.so.1
355 file path=usr/lib/$(ARCH64)/libraidcfg.so.1
356 file path=usr/lib/$(ARCH64)/librepase.so.1
357 $(i386_ONLY)file path=usr/lib/$(ARCH64)/libsavargs.so.1
358 file path=usr/lib/$(ARCH64)/libsched.so.1
359 file path=usr/lib/$(ARCH64)/libsctp.so.1
360 file path=usr/lib/$(ARCH64)/libshell.so.1
361 file path=usr/lib/$(ARCH64)/libsip.so.1
362 file path=usr/lib/$(ARCH64)/libsldap.so.1
363 file path=usr/lib/$(ARCH64)/libsmbios.so.1
364 file path=usr/lib/$(ARCH64)/libsoftcrypto.so.1
365 file path=usr/lib/$(ARCH64)/libsum.so.1
366 $(sparc_ONLY)file path=usr/lib/$(ARCH64)/libv12n.so.1
367 file path=usr/lib/$(ARCH64)/libvolmgt.so.1
368 file path=usr/lib/$(ARCH64)/liby.so.1
369 file path=usr/lib/$(ARCH64)/libzoneinfo.so.1
370 file path=usr/lib/$(ARCH64)/nss_ad.so.1
371 file path=usr/lib/$(ARCH64)/nss_ldap.so.1
372 file path=usr/lib/$(ARCH64)/passwdutil.so.1
373 file path=usr/lib/$(ARCH64)/straddr.so.2
374 file path=usr/lib/$(ARCH64)/watchmalloc.so.1
375 file path=usr/lib/0@0.so.1
376 file path=usr/lib/cfgadm/$(ARCH64)/ib.so.1
377 file path=usr/lib/cfgadm/$(ARCH64)/pci.so.1
378 $(i386_ONLY)file path=usr/lib/cfgadm/$(ARCH64)/sata.so.1
379 file path=usr/lib/cfgadm/$(ARCH64)/scsi.so.1
380 file path=usr/lib/cfgadm/$(ARCH64)/shp.so.1
381 file path=usr/lib/cfgadm/$(ARCH64)/usb.so.1
382 file path=usr/lib/cfgadm/ib.so.1
383 file path=usr/lib/cfgadm/pci.so.1
384 $(i386_ONLY)file path=usr/lib/cfgadm/sata.so.1
385 file path=usr/lib/cfgadm/scsi.so.1
386 file path=usr/lib/cfgadm/shp.so.1
387 file path=usr/lib/cfgadm/usb.so.1
388 file path=usr/lib/extendedFILE.so.1
389 file path=usr/lib/getloginx.so.1
390 file path=usr/lib/lib.b mode=0444
```

```
391 file path=usr/lib/libadutils.so.1
392 file path=usr/lib/libast.so.1
393 file path=usr/lib/libbsdmalloc.so.1
394 $(i386_ONLY)file path=usr/lib/libc/libc_hwcapi.so.1 reboot-needed=true
395 $(i386_ONLY)file path=usr/lib/libc/libc_hwcapi2.so.1 reboot-needed=true
396 $(i386_ONLY)file path=usr/lib/libc/libc_hwcapi3.so.1 reboot-needed=true
397 file path=usr/lib/libc/gadm.so.1
398 file path=usr/lib/libcmd.so.1
399 file path=usr/lib/libcommutil.so.1
400 file path=usr/lib/libcrl.so.1
401 file path=usr/lib/libcrypt.so.1
402 file path=usr/lib/libdisasm.so.1
403 file path=usr/lib/libdll.so.1
404 file path=usr/lib/libexacct.so.1
405 file path=usr/lib/libform.so.1
406 file path=usr/lib/libfstyp.so.1
407 file path=usr/lib/libhotplug.so.1
408 file path=usr/lib/libidmap.so.1
409 file path=usr/lib/libike.so.1
410 file path=usr/lib/libinetsvc.so.1
411 file path=usr/lib/libipmi.so.1
412 file path=usr/lib/libipp.so.1
413 file path=usr/lib/libipsecutil.so.1
414 file path=usr/lib/libkvm.so.1
415 file path=usr/lib/libl.so.1
416 file path=usr/lib/libldap.so.5
417 file path=usr/lib/liblgrp.so.1
418 file path=usr/lib/liblm.so.1
419 file path=usr/lib/libmail.so.1
420 file path=usr/lib/libmalloc.so.1
421 file path=usr/lib/libmapmalloc.so.1
422 file path=usr/lib/libmenu.so.1
423 file path=usr/lib/libmtmalloc.so.1
424 file path=usr/lib/libnls.so.1
425 file path=usr/lib/libpanel.so.1
426 file path=usr/lib/libpcidb.so.1
427 file path=usr/lib/libpkcs11.so.1
428 file path=usr/lib/libproject.so.1
429 file path=usr/lib/libraidcfg.so.1
430 file path=usr/lib/librepase.so.1
431 file path=usr/lib/libsched.so.1
432 file path=usr/lib/libscpt.so.1
433 file path=usr/lib/libshell.so.1
434 file path=usr/lib/libsip.so.1
435 file path=usr/lib/libslldap.so.1
436 file path=usr/lib/libsbios.so.1
437 file path=usr/lib/libsoftcrypto.so.1
438 file path=usr/lib/libsum.so.1
439 file path=usr/lib/libsys.so.1
440 $(sparc_ONLY)file path=usr/lib/libv12n.so.1
441 file path=usr/lib/libvolmgt.so.1
442 file path=usr/lib/libwrap.so.1.0
443 file path=usr/lib/liby.so.1
444 file path=usr/lib/libzoneinfo.so.1
445 file path=usr/lib/nss_ad.so.1
446 file path=usr/lib/nss_ldap.so.1
447 file path=usr/lib/passwdutil.so.1
448 file path=usr/lib/python2.6/vendor-packages/solaris/__init__.py
449 file path=usr/lib/python2.6/vendor-packages/solaris/__init__.pyc
450 file path=usr/lib/python2.6/vendor-packages/solaris/misc.so
451 file path=usr/lib/raidcfg/$(ARCH64)/mpt.so.1
452 file path=usr/lib/raidcfg/mpt.so.1
453 file path=usr/lib/scsi/$(ARCH64)/libscsi.so.1
454 file path=usr/lib/scsi/$(ARCH64)/libsmp.so.1
455 file path=usr/lib/scsi/$(ARCH64)/libsmp.so.1
456 file path=usr/lib/scsi/libscsi.so.1
```

```
457 file path=usr/lib/scsi/libses.so.1
458 file path=usr/lib/scsi/libsmpt.so.1
459 file path=usr/lib/scsi/plugins/scsi/engines/$(ARCH64)/uscsi.so
460 file path=usr/lib/scsi/plugins/scsi/engines/uscsi.so
461 file path=usr/lib/scsi/plugins/ses/framework/$(ARCH64)/libses.so
462 file path=usr/lib/scsi/plugins/ses/framework/$(ARCH64)/ses2.so
463 file path=usr/lib/scsi/plugins/ses/framework/libses.so
464 file path=usr/lib/scsi/plugins/ses/framework/ses2.so
465 file path=usr/lib/scsi/plugins/smp/engine/$(ARCH64)/usmp.so
466 file path=usr/lib/scsi/plugins/smp/engine/usmp.so
467 file path=usr/lib/scsi/plugins/smp/framework/$(ARCH64)/sas2.so
468 file path=usr/lib/scsi/plugins/smp/framework/sas2.so
469 file path=usr/lib/security/$(ARCH64)/crypt_bsdh.so.1
470 file path=usr/lib/security/$(ARCH64)/crypt_bsdh5.so.1
471 file path=usr/lib/security/$(ARCH64)/crypt_sha256.so.1
472 file path=usr/lib/security/$(ARCH64)/crypt_sha512.so.1
473 file path=usr/lib/security/$(ARCH64)/crypt_sunmd5.so.1
474 file path=usr/lib/security/$(ARCH64)/pam_allow.so.1
475 file path=usr/lib/security/$(ARCH64)/pam_authok_check.so.1
476 file path=usr/lib/security/$(ARCH64)/pam_authok_get.so.1
477 file path=usr/lib/security/$(ARCH64)/pam_authok_store.so.1
478 file path=usr/lib/security/$(ARCH64)/pam_deny.so.1
479 file path=usr/lib/security/$(ARCH64)/pam_dhkeys.so.1
480 file path=usr/lib/security/$(ARCH64)/pam_dial_auth.so.1
481 file path=usr/lib/security/$(ARCH64)/pam_ldap.so.1
482 file path=usr/lib/security/$(ARCH64)/pam_list.so.1
483 file path=usr/lib/security/$(ARCH64)/pam_passwd_auth.so.1
484 file path=usr/lib/security/$(ARCH64)/pam_rhosts_auth.so.1
485 file path=usr/lib/security/$(ARCH64)/pam_roles.so.1
486 file path=usr/lib/security/$(ARCH64)/pam_sample.so.1
487 file path=usr/lib/security/$(ARCH64)/pam_tsol_account.so.1
488 file path=usr/lib/security/$(ARCH64)/pam_unix_account.so.1
489 file path=usr/lib/security/$(ARCH64)/pam_unix_auth.so.1
490 file path=usr/lib/security/$(ARCH64)/pam_unix_cred.so.1
491 file path=usr/lib/security/$(ARCH64)/pam_unix_session.so.1
492 file path=usr/lib/security/$(ARCH64)/pkcs11_kernel.so.1
493 file path=usr/lib/security/$(ARCH64)/pkcs11_softtoken.so.1
494 file path=usr/lib/security/$(ARCH64)/pkcs11_tpm.so.1
495 file path=usr/lib/security/audit_binfile.so.1
496 file path=usr/lib/security/audit_remote.so.1
497 file path=usr/lib/security/audit_syslog.so.1
498 file path=usr/lib/security/crypt_bsdh.so.1
499 file path=usr/lib/security/crypt_bsdh5.so.1
500 file path=usr/lib/security/crypt_sha256.so.1
501 file path=usr/lib/security/crypt_sha512.so.1
502 file path=usr/lib/security/crypt_sunmd5.so.1
503 file path=usr/lib/security/pam_allow.so.1
504 file path=usr/lib/security/pam_authok_check.so.1
505 file path=usr/lib/security/pam_authok_get.so.1
506 file path=usr/lib/security/pam_authok_store.so.1
507 file path=usr/lib/security/pam_deny.so.1
508 file path=usr/lib/security/pam_dhkeys.so.1
509 file path=usr/lib/security/pam_dial_auth.so.1
510 file path=usr/lib/security/pam_ldap.so.1
511 file path=usr/lib/security/pam_list.so.1
512 file path=usr/lib/security/pam_passwd_auth.so.1
513 file path=usr/lib/security/pam_rhosts_auth.so.1
514 file path=usr/lib/security/pam_roles.so.1
515 file path=usr/lib/security/pam_sample.so.1
516 file path=usr/lib/security/pam_tsol_account.so.1
517 file path=usr/lib/security/pam_unix_account.so.1
518 file path=usr/lib/security/pam_unix_auth.so.1
519 file path=usr/lib/security/pam_unix_cred.so.1
520 file path=usr/lib/security/pam_unix_session.so.1
521 file path=usr/lib/security/pkcs11_kernel.so.1
522 file path=usr/lib/security/pkcs11_softtoken.so.1
```

```

523 file path=usr/lib/security/pkcs11_tpm.so.1
524 file path=usr/lib/straddr.so.2
525 file path=usr/lib/watchmallocc.so.1
526 # XXX: Obsoleted by open il8n?
527 file path=usr/xpg4/lib/$(ARCH64)/libcurses.so.1
528 file path=usr/xpg4/lib/$(ARCH64)/libcurses.so.2
529 file path=usr/xpg4/lib/libcurses.so.1
530 file path=usr/xpg4/lib/libcurses.so.2
531 legacy pkg=SUNWcsl \
532   desc="core shared libraries for a specific instruction-set architecture" \
533   name="Core Solaris, (Shared Libs)"
534 legacy pkg=SUNWcslr \
535   desc="core software for a specific instruction-set architecture" \
536   name="Core Solaris Libraries (Root)"
537 license cr_Sun license=cr_Sun
538 license lic_CDDL license=lic_CDDL
539 license lic_OSBL license=lic_OSBL
540 license lic_OSBL_preamble license=lic_OSBL_preamble
541 # libwrap is part of tcp wrappers along with tcpd
542 license usr/src/cmd/tcpd/THIRDPARTYLICENSE \
543   license=usr/src/cmd/tcpd/THIRDPARTYLICENSE
544 license usr/src/common/crypto/THIRDPARTYLICENSE.cryptogams \
545   license=usr/src/common/crypto/THIRDPARTYLICENSE.cryptogams
546 license usr/src/common/crypto/aes/amd64/THIRDPARTYLICENSE.gladman \
547   license=usr/src/common/crypto/aes/amd64/THIRDPARTYLICENSE.gladman
548 license usr/src/common/crypto/aes/amd64/THIRDPARTYLICENSE.openssl \
549   license=usr/src/common/crypto/aes/amd64/THIRDPARTYLICENSE.openssl
550 license usr/src/common/crypto/ecc/THIRDPARTYLICENSE \
551   license=usr/src/common/crypto/ecc/THIRDPARTYLICENSE
552 license usr/src/common/crypto/md5/amd64/THIRDPARTYLICENSE \
553   license=usr/src/common/crypto/md5/amd64/THIRDPARTYLICENSE
554 license usr/src/common/mpi/THIRDPARTYLICENSE \
555   license=usr/src/common/mpi/THIRDPARTYLICENSE
556 license usr/src/lib/libast/THIRDPARTYLICENSE \
557   license=usr/src/lib/libast/THIRDPARTYLICENSE
558 license usr/src/lib/libbsdmallocc/THIRDPARTYLICENSE \
559   license=usr/src/lib/libbsdmallocc/THIRDPARTYLICENSE
560 license usr/src/lib/libc/THIRDPARTYLICENSE \
561   license=usr/src/lib/libc/THIRDPARTYLICENSE
562 license usr/src/lib/libcmd/THIRDPARTYLICENSE \
563   license=usr/src/lib/libcmd/THIRDPARTYLICENSE
564 license usr/src/lib/libdll/THIRDPARTYLICENSE \
565   license=usr/src/lib/libdll/THIRDPARTYLICENSE
566 license usr/src/lib/libinetutil/common/THIRDPARTYLICENSE \
567   license=usr/src/lib/libinetutil/common/THIRDPARTYLICENSE
568 license usr/src/lib/libkmf/THIRDPARTYLICENSE \
569   license=usr/src/lib/libkmf/THIRDPARTYLICENSE
570 license usr/src/lib/libldap5/THIRDPARTYLICENSE \
571   license=usr/src/lib/libldap5/THIRDPARTYLICENSE
572 license usr/src/lib/libmp/common/THIRDPARTYLICENSE \
573   license=usr/src/lib/libmp/common/THIRDPARTYLICENSE
574 license usr/src/lib/libresolv/THIRDPARTYLICENSE \
575   license=usr/src/lib/libresolv/THIRDPARTYLICENSE
576 license usr/src/lib/libresolv2/THIRDPARTYLICENSE \
577   license=usr/src/lib/libresolv2/THIRDPARTYLICENSE
578 license usr/src/lib/libshell/THIRDPARTYLICENSE \
579   license=usr/src/lib/libshell/THIRDPARTYLICENSE
580 license usr/src/lib/libsum/THIRDPARTYLICENSE \
581   license=usr/src/lib/libsum/THIRDPARTYLICENSE
582 license usr/src/lib/pam_modules/authok_check/THIRDPARTYLICENSE \
583   license=usr/src/lib/pam_modules/authok_check/THIRDPARTYLICENSE
584 license usr/src/lib/passwdutil/THIRDPARTYLICENSE \
585   license=usr/src/lib/passwdutil/THIRDPARTYLICENSE
586 license usr/src/lib/pkcs11/pkcs11_tpm/THIRDPARTYLICENSE \
587   license=usr/src/lib/pkcs11/pkcs11_tpm/THIRDPARTYLICENSE
588 license usr/src/uts/common/sys/THIRDPARTYLICENSE.unicode \

```

```

589   license=usr/src/uts/common/sys/THIRDPARTYLICENSE.unicode
590 link path=lib/$(ARCH64)/libadm.so target=libadm.so.1
591 link path=lib/$(ARCH64)/libaio.so target=libaio.so.1
592 link path=lib/$(ARCH64)/libbsm.so target=libbsm.so.1
593 link path=lib/$(ARCH64)/libc.so reboot-needed=true target=libc.so.1
594 link path=lib/$(ARCH64)/libc_db.so target=libc_db.so.1
595 link path=lib/$(ARCH64)/libcontract.so target=libcontract.so.1
596 link path=lib/$(ARCH64)/libcryptoutil.so target=libcryptoutil.so.1
597 link path=lib/$(ARCH64)/libctf.so target=libctf.so.1
598 link path=lib/$(ARCH64)/libcurses.so target=libcurses.so.1
599 link path=lib/$(ARCH64)/libdevice.so target=libdevice.so.1
600 link path=lib/$(ARCH64)/libdevid.so target=libdevid.so.1
601 link path=lib/$(ARCH64)/libdevinfo.so target=libdevinfo.so.1
602 link path=lib/$(ARCH64)/libdl.so target=libdl.so.1
603 link path=lib/$(ARCH64)/libdladm.so target=libdladm.so.1
604 link path=lib/$(ARCH64)/libdmpi.so target=libdmpi.so.1
605 link path=lib/$(ARCH64)/libdoor.so target=libdoor.so.1
606 link path=lib/$(ARCH64)/libefi.so target=libefi.so.1
607 link path=lib/$(ARCH64)/libelf.so target=libelf.so.1
608 $(i386_ONLY)link path=lib/$(ARCH64)/libfdisk.so target=libfdisk.so.1
609 link path=lib/$(ARCH64)/libgen.so target=libgen.so.1
610 link path=lib/$(ARCH64)/libintl.so target=libintl.so.1
611 link path=lib/$(ARCH64)/libkmf.so target=libkmf.so.1
612 link path=lib/$(ARCH64)/libkmfberder.so target=libkmfberder.so.1
613 link path=lib/$(ARCH64)/libkstat.so target=libkstat.so.1
614 link path=lib/$(ARCH64)/libmd.so target=libmd.so.1
615 link path=lib/$(ARCH64)/libmd5.so target=libmd5.so.1
616 link path=lib/$(ARCH64)/libmp.so target=libmp.so.2
617 link path=lib/$(ARCH64)/libnsl.so target=libnsl.so.1
618 link path=lib/$(ARCH64)/libnvpair.so target=libnvpair.so.1
619 link path=lib/$(ARCH64)/libpam.so target=libpam.so.1
620 link path=lib/$(ARCH64)/libposix4.so target=libposix4.so.1
621 link path=lib/$(ARCH64)/libposix4.so.1 target=librt.so.1
622 link path=lib/$(ARCH64)/libproc.so target=libproc.so.1
623 link path=lib/$(ARCH64)/libpthread.so target=libpthread.so.1
624 link path=lib/$(ARCH64)/librcm.so target=librcm.so.1
625 link path=lib/$(ARCH64)/libresolv.so target=libresolv.so.2
626 link path=lib/$(ARCH64)/librestart.so target=librestart.so.1
627 link path=lib/$(ARCH64)/librpcsvc.so target=librpcsvc.so.1
628 link path=lib/$(ARCH64)/librt.so target=librt.so.1
629 link path=lib/$(ARCH64)/librtld_db.so target=librtld_db.so.1
630 link path=lib/$(ARCH64)/libscf.so target=libscf.so.1
631 link path=lib/$(ARCH64)/libsec.so target=libsec.so.1
632 link path=lib/$(ARCH64)/libsecdb.so target=libsecdb.so.1
633 link path=lib/$(ARCH64)/libsendfile.so target=libsendfile.so.1
634 link path=lib/$(ARCH64)/libsocket.so target=libsocket.so.1
635 link path=lib/$(ARCH64)/libsysevent.so target=libsysevent.so.1
636 link path=lib/$(ARCH64)/libtermcap.so target=libtermcap.so.1
637 link path=lib/$(ARCH64)/libtermmlib.so target=libtermmlib.so.1
638 link path=lib/$(ARCH64)/libtermmlib.so.1 target=libcurses.so.1
639 link path=lib/$(ARCH64)/libthread.so target=libthread.so.1
640 link path=lib/$(ARCH64)/libthread_db.so target=libc_db.so.1
641 link path=lib/$(ARCH64)/libthread_db.so.1 target=libc_db.so.1
642 link path=lib/$(ARCH64)/libtsnet.so target=libtsnet.so.1
643 link path=lib/$(ARCH64)/libtsol.so target=libtsol.so.2
644 link path=lib/$(ARCH64)/libumem.so target=libumem.so.1
645 link path=lib/$(ARCH64)/libuuid.so target=libuuid.so.1
646 link path=lib/$(ARCH64)/libuutil.so target=libuutil.so.1
647 link path=lib/$(ARCH64)/libw.so target=libw.so.1
648 link path=lib/$(ARCH64)/libxnet.so target=libxnet.so.1
649 link path=lib/32 target=.
650 link path=lib/64 target=$(ARCH64)
651 link path=lib/crypto/32 target=.
652 link path=lib/crypto/64 target=$(ARCH64)
653 link path=lib/libadm.so target=libadm.so.1
654 link path=lib/libaio.so target=libaio.so.1

```

```

655 link path=lib/libbssm.so target=libbssm.so.1
656 link path=lib/libc.so target=libc.so.1
657 link path=lib/libc_db.so target=libc_db.so.1
658 link path=lib/libcontract.so target=libcontract.so.1
659 link path=lib/libcryptoutil.so target=libcryptoutil.so.1
660 link path=lib/libctf.so target=libctf.so.1
661 link path=lib/libcurses.so target=libcurses.so.1
662 link path=lib/libdevice.so target=libdevice.so.1
663 link path=lib/libdevinfo.so target=libdevinfo.so.1
664 link path=lib/libdevinfo.so target=libdevinfo.so.1
665 link path=lib/libdl.so target=libdl.so.1
666 link path=lib/libdladm.so target=libdladm.so.1
667 link path=lib/libdldpi.so target=libdldpi.so.1
668 link path=lib/libdoor.so target=libdoor.so.1
669 link path=lib/libefi.so target=libefi.so.1
670 link path=lib/libelf.so target=libelf.so.1
671 link path=lib/libelfsign.so target=libelfsign.so.1
672 link path=lib/libfdisk.so target=libfdisk.so.1
673 link path=lib/libgen.so target=libgen.so.1
674 link path=lib/libintl.so target=libintl.so.1
675 link path=lib/libipmp.so target=libipmp.so.1
676 link path=lib/libkrmf.so target=libkrmf.so.1
677 link path=lib/libkrmfberder.so target=libkrmfberder.so.1
678 link path=lib/libkstat.so target=libkstat.so.1
679 link path=lib/libmd.so target=libmd.so.1
680 link path=lib/libmd5.so target=libmd5.so.1
681 link path=lib/libmp.so target=libmp.so.2
682 link path=lib/libnsl.so target=libnsl.so.1
683 link path=lib/libnvpair.so target=libnvpair.so.1
684 link path=lib/libnwam.so target=libnwam.so.1
685 link path=lib/libpam.so target=libpam.so.1
686 link path=lib/libposix4.so target=libposix4.so.1
687 link path=lib/libposix4.so.1 target=librt.so.1
688 link path=lib/libproc.so target=libproc.so.1
689 link path=lib/libpthread.so target=libpthread.so.1
690 link path=lib/librcm.so target=librcm.so.1
691 link path=lib/libresolv.so target=libresolv.so.2
692 link path=lib/librpcsvc.so target=librpcsvc.so.1
693 link path=lib/librt.so target=librt.so.1
694 link path=lib/librtld_db.so target=librtld_db.so.1
695 link path=lib/libscf.so target=libscf.so.1
696 link path=lib/libsec.so target=libsec.so.1
697 link path=lib/libsecdb.so target=libsecdb.so.1
698 link path=lib/libsendfile.so target=libsendfile.so.1
699 link path=lib/libsocket.so target=libsocket.so.1
700 link path=lib/libsysevent.so target=libsysevent.so.1
701 link path=lib/libtermcap.so target=libtermcap.so.1
702 link path=lib/libtermcap.so target=libtermcap.so.1
703 link path=lib/libtermcap.so target=libtermcap.so.1
704 link path=lib/libthread.so target=libthread.so.1
705 link path=lib/libthread_db.so target=libthread_db.so.1
706 link path=lib/libthread_db.so.1 target=libthread_db.so.1
707 link path=lib/libtsol.so target=libtsol.so.2
708 link path=lib/libumem.so target=libumem.so.1
709 link path=lib/libuuid.so target=libuuid.so.1
710 link path=lib/libw.so target=libw.so.1
711 link path=lib/libxnet.so target=libxnet.so.1
712 link path=lib/libsecure/32 target=libsecure/32
713 link path=lib/libsecure/64 target=libsecure/64
714 link path=usr/ccs/lib/libcurses.so target=libcurses.so.1
715 link path=usr/ccs/lib/libcurses.so target=libcurses.so.1
716 link path=usr/ccs/lib/libform.so target=libform.so.1
717 link path=usr/ccs/lib/libform.so target=libform.so.1
718 link path=usr/ccs/lib/libgen.so target=libgen.so.1
719 link path=usr/ccs/lib/libgen.so target=libgen.so.1
720 link path=usr/ccs/lib/libl.so target=libl.so.1

```

```

721 link path=usr/ccs/lib/libl.so target=libl.so.1
722 link path=usr/ccs/lib/libmalloc.so target=libmalloc.so.1
723 link path=usr/ccs/lib/libmalloc.so target=libmalloc.so.1
724 link path=usr/ccs/lib/libmenu.so target=libmenu.so.1
725 link path=usr/ccs/lib/libmenu.so target=libmenu.so.1
726 link path=usr/ccs/lib/libpanel.so target=libpanel.so.1
727 link path=usr/ccs/lib/libpanel.so target=libpanel.so.1
728 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
729 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
730 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
731 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
732 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
733 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
734 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
735 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
736 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
737 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
738 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
739 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
740 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
741 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
742 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
743 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
744 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
745 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
746 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
747 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
748 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
749 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
750 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
751 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
752 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
753 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
754 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
755 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
756 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
757 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
758 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
759 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
760 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
761 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
762 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
763 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
764 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
765 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
766 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
767 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
768 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
769 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
770 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
771 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
772 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
773 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
774 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
775 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
776 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
777 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
778 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
779 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
780 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
781 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
782 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
783 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
784 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
785 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1
786 link path=usr/ccs/lib/libtermcap.so target=libtermcap.so.1

```

```
787 target=../../../../lib/$(ARCH64)/libcourses.so.1
788 link path=usr/lib/$(ARCH64)/libdevice.so \
789 target=../../../../lib/$(ARCH64)/libdevice.so.1
790 link path=usr/lib/$(ARCH64)/libdevice.so.1 \
791 target=../../../../lib/$(ARCH64)/libdevice.so.1
792 link path=usr/lib/$(ARCH64)/libdevvid.so \
793 target=../../../../lib/$(ARCH64)/libdevvid.so.1
794 link path=usr/lib/$(ARCH64)/libdevvid.so.1 \
795 target=../../../../lib/$(ARCH64)/libdevvid.so.1
796 link path=usr/lib/$(ARCH64)/libdevinfo.so \
797 target=../../../../lib/$(ARCH64)/libdevinfo.so.1
798 link path=usr/lib/$(ARCH64)/libdevinfo.so.1 \
799 target=../../../../lib/$(ARCH64)/libdevinfo.so.1
800 link path=usr/lib/$(ARCH64)/libdhcputil.so.1 \
801 target=../../../../lib/$(ARCH64)/libdhcputil.so.1
802 link path=usr/lib/$(ARCH64)/libdisasm.so target=libdisasm.so.1
803 link path=usr/lib/$(ARCH64)/libdl.so target=../../../../lib/$(ARCH64)/libdl.so.1
804 link path=usr/lib/$(ARCH64)/libdl.so.1 \
805 target=../../../../lib/$(ARCH64)/libdl.so.1
806 link path=usr/lib/$(ARCH64)/libdlpi.so \
807 target=../../../../lib/$(ARCH64)/libdlpi.so.1
808 link path=usr/lib/$(ARCH64)/libdlpi.so.1 \
809 target=../../../../lib/$(ARCH64)/libdlpi.so.1
810 link path=usr/lib/$(ARCH64)/libdoor.so \
811 target=../../../../lib/$(ARCH64)/libdoor.so.1
812 link path=usr/lib/$(ARCH64)/libdoor.so.1 \
813 target=../../../../lib/$(ARCH64)/libdoor.so.1
814 link path=usr/lib/$(ARCH64)/libefi.so \
815 target=../../../../lib/$(ARCH64)/libefi.so.1
816 link path=usr/lib/$(ARCH64)/libefi.so.1 \
817 target=../../../../lib/$(ARCH64)/libefi.so.1
818 link path=usr/lib/$(ARCH64)/libelf.so \
819 target=../../../../lib/$(ARCH64)/libelf.so.1
820 link path=usr/lib/$(ARCH64)/libelf.so.1 \
821 target=../../../../lib/$(ARCH64)/libelf.so.1
822 link path=usr/lib/$(ARCH64)/libexacct.so target=libexacct.so.1
823 $(i386_ONLY)link path=usr/lib/$(ARCH64)/libfdisk.so \
824 target=../../../../lib/$(ARCH64)/libfdisk.so.1
825 $(i386_ONLY)link path=usr/lib/$(ARCH64)/libfdisk.so.1 \
826 target=../../../../lib/$(ARCH64)/libfdisk.so.1
827 link path=usr/lib/$(ARCH64)/libform.so target=libform.so.1
828 link path=usr/lib/$(ARCH64)/libfstyp.so target=libfstyp.so.1
829 link path=usr/lib/$(ARCH64)/libgen.so \
830 target=../../../../lib/$(ARCH64)/libgen.so.1
831 link path=usr/lib/$(ARCH64)/libgen.so.1 \
832 target=../../../../lib/$(ARCH64)/libgen.so.1
833 link path=usr/lib/$(ARCH64)/libhotplug.so target=libhotplug.so.1
834 link path=usr/lib/$(ARCH64)/libidmap.so target=libidmap.so.1
835 link path=usr/lib/$(ARCH64)/libinetutil.so.1 \
836 target=../../../../lib/$(ARCH64)/libinetutil.so.1
837 link path=usr/lib/$(ARCH64)/libintl.so \
838 target=../../../../lib/$(ARCH64)/libintl.so.1
839 link path=usr/lib/$(ARCH64)/libintl.so.1 \
840 target=../../../../lib/$(ARCH64)/libintl.so.1
841 link path=usr/lib/$(ARCH64)/libipmi.so target=libipmi.so.1
842 link path=usr/lib/$(ARCH64)/libipp.so target=libipp.so.1
843 link path=usr/lib/$(ARCH64)/libkstat.so \
844 target=../../../../lib/$(ARCH64)/libkstat.so.1
845 link path=usr/lib/$(ARCH64)/libkstat.so.1 \
846 target=../../../../lib/$(ARCH64)/libkstat.so.1
847 link path=usr/lib/$(ARCH64)/libkvm.so target=libkvm.so.1
848 link path=usr/lib/$(ARCH64)/libl.so target=libl.so.1
849 link path=usr/lib/$(ARCH64)/libldap.so target=libldap.so.5
850 link path=usr/lib/$(ARCH64)/liblddbg.so.4 \
851 target=../../../../lib/$(ARCH64)/liblddbg.so.4
852 link path=usr/lib/$(ARCH64)/liblgrp.so target=liblgrp.so.1
```

```
853 link path=usr/lib/$(ARCH64)/liblm.so target=liblm.so.1
854 link path=usr/lib/$(ARCH64)/libmail.so target=libmail.so.1
855 link path=usr/lib/$(ARCH64)/libmalloc.so target=libmalloc.so.1
856 link path=usr/lib/$(ARCH64)/libmapmalloc.so target=libmapmalloc.so.1
857 link path=usr/lib/$(ARCH64)/libmd.so target=../../../../lib/$(ARCH64)/libmd.so.1
858 link path=usr/lib/$(ARCH64)/libmd.so.1 \
859 target=../../../../lib/$(ARCH64)/libmd.so.1
860 link path=usr/lib/$(ARCH64)/libmd5.so \
861 target=../../../../lib/$(ARCH64)/libmd5.so.1
862 link path=usr/lib/$(ARCH64)/libmd5.so.1 \
863 target=../../../../lib/$(ARCH64)/libmd5.so.1
864 link path=usr/lib/$(ARCH64)/libmenu.so target=libmenu.so.1
865 link path=usr/lib/$(ARCH64)/libmp.so target=../../../../lib/$(ARCH64)/libmp.so.2
866 link path=usr/lib/$(ARCH64)/libmp.so.2 \
867 target=../../../../lib/$(ARCH64)/libmp.so.2
868 link path=usr/lib/$(ARCH64)/libmtmalloc.so target=libmtmalloc.so.1
869 link path=usr/lib/$(ARCH64)/libnls.so target=libnls.so.1
870 link path=usr/lib/$(ARCH64)/libnsl.so \
871 target=../../../../lib/$(ARCH64)/libnsl.so.1
872 link path=usr/lib/$(ARCH64)/libnsl.so.1 \
873 target=../../../../lib/$(ARCH64)/libnsl.so.1
874 link path=usr/lib/$(ARCH64)/libnvpair.so \
875 target=../../../../lib/$(ARCH64)/libnvpair.so.1
876 link path=usr/lib/$(ARCH64)/libnvpair.so.1 \
877 target=../../../../lib/$(ARCH64)/libnvpair.so.1
878 link path=usr/lib/$(ARCH64)/libpam.so \
879 target=../../../../lib/$(ARCH64)/libpam.so.1
880 link path=usr/lib/$(ARCH64)/libpam.so.1 \
881 target=../../../../lib/$(ARCH64)/libpam.so.1
882 link path=usr/lib/$(ARCH64)/libpanel.so target=libpanel.so.1
883 link path=usr/lib/$(ARCH64)/libpkcs11.so target=libpkcs11.so.1
884 link path=usr/lib/$(ARCH64)/libposix4.so \
885 target=../../../../lib/$(ARCH64)/librt.so.1
886 link path=usr/lib/$(ARCH64)/libposix4.so.1 \
887 target=../../../../lib/$(ARCH64)/librt.so.1
888 link path=usr/lib/$(ARCH64)/libproc.so \
889 target=../../../../lib/$(ARCH64)/libproc.so.1
890 link path=usr/lib/$(ARCH64)/libproc.so.1 \
891 target=../../../../lib/$(ARCH64)/libproc.so.1
892 link path=usr/lib/$(ARCH64)/libproject.so target=libproject.so.1
893 link path=usr/lib/$(ARCH64)/libpthread.so \
894 target=../../../../lib/$(ARCH64)/libpthread.so.1
895 link path=usr/lib/$(ARCH64)/libpthread.so.1 \
896 target=../../../../lib/$(ARCH64)/libpthread.so.1
897 link path=usr/lib/$(ARCH64)/librcm.so \
898 target=../../../../lib/$(ARCH64)/librcm.so.1
899 link path=usr/lib/$(ARCH64)/librcm.so.1 \
900 target=../../../../lib/$(ARCH64)/librcm.so.1
901 link path=usr/lib/$(ARCH64)/libreparse.so target=libreparse.so.1
902 link path=usr/lib/$(ARCH64)/libresolv.so \
903 target=../../../../lib/$(ARCH64)/libresolv.so.2
904 link path=usr/lib/$(ARCH64)/libresolv.so.2 \
905 target=../../../../lib/$(ARCH64)/libresolv.so.2
906 $(i386_ONLY)link path=usr/lib/$(ARCH64)/librestart.so \
907 target=../../../../lib/$(ARCH64)/librestart.so.1
908 link path=usr/lib/$(ARCH64)/librestart.so.1 \
909 target=../../../../lib/$(ARCH64)/librestart.so.1
910 link path=usr/lib/$(ARCH64)/librpcsvc.so \
911 target=../../../../lib/$(ARCH64)/librpcsvc.so.1
912 link path=usr/lib/$(ARCH64)/librpcsvc.so.1 \
913 target=../../../../lib/$(ARCH64)/librpcsvc.so.1
914 link path=usr/lib/$(ARCH64)/librt.so target=../../../../lib/$(ARCH64)/librt.so.1
915 link path=usr/lib/$(ARCH64)/librt.so.1 \
916 target=../../../../lib/$(ARCH64)/librt.so.1
917 link path=usr/lib/$(ARCH64)/librtld.so.1 \
918 target=../../../../lib/$(ARCH64)/librtld.so.1
```

```
919 link path=usr/lib/$(ARCH64)/librtld_db.so \
920     target=../../../../lib/$(ARCH64)/librtld_db.so.1
921 link path=usr/lib/$(ARCH64)/librtld_db.so.1 \
922     target=../../../../lib/$(ARCH64)/librtld_db.so.1
923 link path=usr/lib/$(ARCH64)/libscf.so \
924     target=../../../../lib/$(ARCH64)/libscf.so.1
925 link path=usr/lib/$(ARCH64)/libscf.so.1 \
926     target=../../../../lib/$(ARCH64)/libscf.so.1
927 link path=usr/lib/$(ARCH64)/libsched.so target=libsched.so.1
928 link path=usr/lib/$(ARCH64)/libsctp.so target=libsctp.so.1
929 link path=usr/lib/$(ARCH64)/libsec.so \
930     target=../../../../lib/$(ARCH64)/libsec.so.1
931 link path=usr/lib/$(ARCH64)/libsec.so.1 \
932     target=../../../../lib/$(ARCH64)/libsec.so.1
933 link path=usr/lib/$(ARCH64)/libsecdb.so \
934     target=../../../../lib/$(ARCH64)/libsecdb.so.1
935 link path=usr/lib/$(ARCH64)/libsecdb.so.1 \
936     target=../../../../lib/$(ARCH64)/libsecdb.so.1
937 link path=usr/lib/$(ARCH64)/libsendfile.so \
938     target=../../../../lib/$(ARCH64)/libsendfile.so.1
939 link path=usr/lib/$(ARCH64)/libsendfile.so.1 \
940     target=../../../../lib/$(ARCH64)/libsendfile.so.1
941 link path=usr/lib/$(ARCH64)/libsip.so target=libsip.so.1
942 link path=usr/lib/$(ARCH64)/libsldap.so target=libsldap.so.1
943 link path=usr/lib/$(ARCH64)/libsbios.so target=libsbios.so.1
944 link path=usr/lib/$(ARCH64)/libsocket.so \
945     target=../../../../lib/$(ARCH64)/libsocket.so.1
946 link path=usr/lib/$(ARCH64)/libsocket.so.1 \
947     target=../../../../lib/$(ARCH64)/libsocket.so.1
948 link path=usr/lib/$(ARCH64)/libsoftcrypto.so target=libsoftcrypto.so.1
949 link path=usr/lib/$(ARCH64)/libsysevent.so \
950     target=../../../../lib/$(ARCH64)/libsysevent.so.1
951 link path=usr/lib/$(ARCH64)/libsysevent.so.1 \
952     target=../../../../lib/$(ARCH64)/libsysevent.so.1
953 link path=usr/lib/$(ARCH64)/libtermcap.so \
954     target=../../../../lib/$(ARCH64)/libtermcap.so.1
955 link path=usr/lib/$(ARCH64)/libtermcap.so.1 \
956     target=../../../../lib/$(ARCH64)/libtermcap.so.1
957 link path=usr/lib/$(ARCH64)/libtermplib.so \
958     target=../../../../lib/$(ARCH64)/libcurses.so.1
959 link path=usr/lib/$(ARCH64)/libtermplib.so.1 \
960     target=../../../../lib/$(ARCH64)/libcurses.so.1
961 link path=usr/lib/$(ARCH64)/libthread.so \
962     target=../../../../lib/$(ARCH64)/libthread.so.1
963 link path=usr/lib/$(ARCH64)/libthread.so.1 \
964     target=../../../../lib/$(ARCH64)/libthread.so.1
965 link path=usr/lib/$(ARCH64)/libthread_db.so \
966     target=../../../../lib/$(ARCH64)/libc_db.so.1
967 link path=usr/lib/$(ARCH64)/libthread_db.so.1 \
968     target=../../../../lib/$(ARCH64)/libc_db.so.1
969 link path=usr/lib/$(ARCH64)/libtsnet.so \
970     target=../../../../lib/$(ARCH64)/libtsnet.so.1
971 link path=usr/lib/$(ARCH64)/libtsnet.so.1 \
972     target=../../../../lib/$(ARCH64)/libtsnet.so.1
973 link path=usr/lib/$(ARCH64)/libtsol.so \
974     target=../../../../lib/$(ARCH64)/libtsol.so.2
975 link path=usr/lib/$(ARCH64)/libtsol.so.2 \
976     target=../../../../lib/$(ARCH64)/libtsol.so.2
977 link path=usr/lib/$(ARCH64)/libumem.so \
978     target=../../../../lib/$(ARCH64)/libumem.so.1
979 link path=usr/lib/$(ARCH64)/libumem.so.1 \
980     target=../../../../lib/$(ARCH64)/libumem.so.1
981 link path=usr/lib/$(ARCH64)/libuuid.so \
982     target=../../../../lib/$(ARCH64)/libuuid.so.1
983 link path=usr/lib/$(ARCH64)/libuuid.so.1 \
984     target=../../../../lib/$(ARCH64)/libuuid.so.1
```

```
985 $(i386_ONLY)link path=usr/lib/$(ARCH64)/libuutil.so \
986     target=../../../../lib/$(ARCH64)/libuutil.so.1
987 link path=usr/lib/$(ARCH64)/libuutil.so.1 \
988     target=../../../../lib/$(ARCH64)/libuutil.so.1
989 $(sparc_ONLY)link path=usr/lib/$(ARCH64)/libv12n.so target=libv12n.so.1
990 link path=usr/lib/$(ARCH64)/libvolmgt.so target=libvolmgt.so.1
991 link path=usr/lib/$(ARCH64)/libw.so target=../../../../lib/$(ARCH64)/libw.so.1
992 link path=usr/lib/$(ARCH64)/libw.so.1 target=../../../../lib/$(ARCH64)/libw.so.1
993 link path=usr/lib/$(ARCH64)/libxnet.so \
994     target=../../../../lib/$(ARCH64)/libxnet.so.1
995 link path=usr/lib/$(ARCH64)/libxnet.so.1 \
996     target=../../../../lib/$(ARCH64)/libxnet.so.1
997 link path=usr/lib/$(ARCH64)/liby.so target=liby.so.1
998 link path=usr/lib/$(ARCH64)/libzoneinfo.so target=libzoneinfo.so.1
999 link path=usr/lib/$(ARCH64)/nss_compat.so.1 \
1000     target=../../../../lib/$(ARCH64)/nss_compat.so.1
1001 link path=usr/lib/$(ARCH64)/nss_dns.so.1 \
1002     target=../../../../lib/$(ARCH64)/nss_dns.so.1
1003 link path=usr/lib/$(ARCH64)/nss_files.so.1 \
1004     target=../../../../lib/$(ARCH64)/nss_files.so.1
1005 link path=usr/lib/$(ARCH64)/nss_nis.so.1 \
1006     target=../../../../lib/$(ARCH64)/nss_nis.so.1
1007 link path=usr/lib/$(ARCH64)/nss_user.so.1 \
1008     target=../../../../lib/$(ARCH64)/nss_user.so.1
1009 link path=usr/lib/$(ARCH64)/straddr.so target=straddr.so.2
1010 link path=usr/lib/32 target=.
1011 link path=usr/lib/64 target=$(ARCH64)
1012 link path=usr/lib/cfgadm/$(ARCH64)/ib.so target=ib.so.1
1013 link path=usr/lib/cfgadm/$(ARCH64)/pci.so target=pci.so.1
1014 $(i386_ONLY)link path=usr/lib/cfgadm/$(ARCH64)/sata.so target=sata.so.1
1015 link path=usr/lib/cfgadm/$(ARCH64)/scsi.so target=scsi.so.1
1016 link path=usr/lib/cfgadm/$(ARCH64)/shp.so target=shp.so.1
1017 link path=usr/lib/cfgadm/$(ARCH64)/usb.so target=usb.so.1
1018 link path=usr/lib/cfgadm/ib.so target=ib.so.1
1019 link path=usr/lib/cfgadm/pci.so target=pci.so.1
1020 $(i386_ONLY)link path=usr/lib/cfgadm/sata.so target=sata.so.1
1021 link path=usr/lib/cfgadm/scsi.so target=scsi.so.1
1022 link path=usr/lib/cfgadm/shp.so target=shp.so.1
1023 link path=usr/lib/cfgadm/usb.so target=usb.so.1
1024 link path=usr/lib/libadm.so target=lib/liblibadm.so.1
1025 link path=usr/lib/libadm.so.1 target=lib/liblibadm.so.1
1026 link path=usr/lib/libadutils.so target=lib/libadutils.so.1
1027 link path=usr/lib/libaio.so target=lib/liblibaio.so.1
1028 link path=usr/lib/libaio.so.1 target=lib/liblibaio.so.1
1029 link path=usr/lib/libavl.so.1 target=lib/liblibavl.so.1
1030 link path=usr/lib/libbsdmalloc.so target=lib/libbsdmalloc.so.1
1031 link path=usr/lib/libbsm.so target=lib/liblibbsm.so.1
1032 link path=usr/lib/libbsm.so.1 target=lib/liblibbsm.so.1
1033 link path=usr/lib/libc.so target=lib/liblibc.so.1
1034 link path=usr/lib/libc.so.1 target=lib/liblibc.so.1
1035 link path=usr/lib/libc_db.so target=lib/liblibc_db.so.1
1036 link path=usr/lib/libc_db.so.1 target=lib/liblibc_db.so.1
1037 link path=usr/lib/libcfgadm.so target=lib/libcfgadm.so.1
1038 link path=usr/lib/libcmd.so target=lib/libcmd.so.1
1039 link path=usr/lib/libcmdutils.so.1 target=lib/libcmdutils.so.1
1040 link path=usr/lib/libcommutil.so target=lib/libcommutil.so.1
1041 link path=usr/lib/libcontract.so target=lib/liblibcontract.so.1
1042 link path=usr/lib/libcontract.so.1 target=lib/liblibcontract.so.1
1043 link path=usr/lib/libcrypt.so target=lib/libcrypt.so.1
1044 link path=usr/lib/libcrypt_d.so target=lib/libcrypt.so.1
1045 link path=usr/lib/libcrypt_d.so.1 target=lib/libcrypt.so.1
1046 link path=usr/lib/libcrypt_i.so target=lib/libcrypt.so.1
1047 link path=usr/lib/libcrypt_i.so.1 target=lib/libcrypt.so.1
1048 link path=usr/lib/libctf.so target=lib/liblibctf.so.1
1049 link path=usr/lib/libctf.so.1 target=lib/liblibctf.so.1
1050 link path=usr/lib/libcurses.so target=lib/libcurses.so.1
```

```

1051 link path=usr/lib/libcurses.so.1 target=../lib/libcurses.so.1
1052 link path=usr/lib/libdevice.so target=../lib/libdevice.so.1
1053 link path=usr/lib/libdevice.so.1 target=../lib/libdevice.so.1
1054 link path=usr/lib/libdevvid.so target=../lib/libdevvid.so.1
1055 link path=usr/lib/libdevvid.so.1 target=../lib/libdevvid.so.1
1056 link path=usr/lib/libdevinfo.so target=../lib/libdevinfo.so.1
1057 link path=usr/lib/libdevinfo.so.1 target=../lib/libdevinfo.so.1
1058 link path=usr/lib/libdhcpcagent.so.1 target=../lib/libdhcpcagent.so.1
1059 link path=usr/lib/libdhcputil.so.1 target=../lib/libdhcputil.so.1
1060 link path=usr/lib/libdisasm.so target=../lib/libdisasm.so.1
1061 link path=usr/lib/libddl.so target=../lib/libddl.so.1
1062 link path=usr/lib/libddlpi.so target=../lib/libddlpi.so.1
1063 link path=usr/lib/libddlpi.so.1 target=../lib/libddlpi.so.1
1064 link path=usr/lib/libdoor.so target=../lib/libdoor.so.1
1065 link path=usr/lib/libdoor.so target=../lib/libdoor.so.1
1066 link path=usr/lib/libdoor.so.1 target=../lib/libdoor.so.1
1067 link path=usr/lib/libefi.so target=../lib/libefi.so.1
1068 link path=usr/lib/libefi.so.1 target=../lib/libefi.so.1
1069 link path=usr/lib/libelf.so target=../lib/libelf.so.1
1070 link path=usr/lib/libelf.so.1 target=../lib/libelf.so.1
1071 link path=usr/lib/libexacct.so target=../lib/libexacct.so.1
1072 $(i386_ONLY)link path=usr/lib/libfdisk.so target=../lib/libfdisk.so.1
1073 $(i386_ONLY)link path=usr/lib/libfdisk.so.1 target=../lib/libfdisk.so.1
1074 link path=usr/lib/libform.so target=../lib/libform.so.1
1075 link path=usr/lib/libfstyp.so target=../lib/libfstyp.so.1
1076 link path=usr/lib/libgen.so target=../lib/libgen.so.1
1077 link path=usr/lib/libgen.so.1 target=../lib/libgen.so.1
1078 link path=usr/lib/libhotplug.so target=../lib/libhotplug.so.1
1079 link path=usr/lib/libidmap.so target=../lib/libidmap.so.1
1080 link path=usr/lib/libinetutil.so.1 target=../lib/libinetutil.so.1
1081 link path=usr/lib/libintl.so target=../lib/libintl.so.1
1082 link path=usr/lib/libintl.so.1 target=../lib/libintl.so.1
1083 link path=usr/lib/libipmi.so target=../lib/libipmi.so.1
1084 link path=usr/lib/libipp.so target=../lib/libipp.so.1
1085 link path=usr/lib/libkstat.so target=../lib/libkstat.so.1
1086 link path=usr/lib/libkstat.so.1 target=../lib/libkstat.so.1
1087 link path=usr/lib/libkvm.so target=../lib/libkvm.so.1
1088 link path=usr/lib/libl.so target=../lib/libl.so.1
1089 link path=usr/lib/libldap.so target=../lib/libldap.so.5
1090 link path=usr/lib/liblddbg.so.4 target=../lib/liblddbg.so.4
1091 link path=usr/lib/liblgrp.so target=../lib/liblgrp.so.1
1092 link path=usr/lib/liblm.so target=../lib/liblm.so.1
1093 link path=usr/lib/libmail.so target=../lib/libmail.so.1
1094 link path=usr/lib/libmalloc.so target=../lib/libmalloc.so.1
1095 link path=usr/lib/libmapmalloc.so target=../lib/libmapmalloc.so.1
1096 link path=usr/lib/libmd.so target=../lib/libmd.so.1
1097 link path=usr/lib/libmd.so.1 target=../lib/libmd.so.1
1098 link path=usr/lib/libmd5.so target=../lib/libmd5.so.1
1099 link path=usr/lib/libmd5.so.1 target=../lib/libmd5.so.1
1100 link path=usr/lib/libmenu.so target=../lib/libmenu.so.1
1101 link path=usr/lib/libmp.so target=../lib/libmp.so.2
1102 link path=usr/lib/libmp.so.1 target=../lib/libmp.so.1
1103 link path=usr/lib/libmp.so.2 target=../lib/libmp.so.2
1104 link path=usr/lib/libmtmalloc.so target=../lib/libmtmalloc.so.1
1105 link path=usr/lib/libnls.so target=../lib/libnls.so.1
1106 link path=usr/lib/libnsl.so target=../lib/libnsl.so.1
1107 link path=usr/lib/libnsl.so.1 target=../lib/libnsl.so.1
1108 link path=usr/lib/libnvpair.so target=../lib/libnvpair.so.1
1109 link path=usr/lib/libnvpair.so.1 target=../lib/libnvpair.so.1
1110 link path=usr/lib/libpam.so target=../lib/libpam.so.1
1111 link path=usr/lib/libpam.so.1 target=../lib/libpam.so.1
1112 link path=usr/lib/libpanel.so target=../lib/libpanel.so.1
1113 link path=usr/lib/libpkcs11.so target=../lib/libpkcs11.so.1
1114 link path=usr/lib/libposix4.so target=../lib/librt.so.1
1115 link path=usr/lib/libposix4.so.1 target=../lib/librt.so.1
1116 link path=usr/lib/libproc.so target=../lib/libproc.so.1

```

```

1117 link path=usr/lib/libproc.so.1 target=../lib/libproc.so.1
1118 link path=usr/lib/libproject.so target=../lib/libproject.so.1
1119 link path=usr/lib/libpthread.so target=../lib/libpthread.so.1
1120 link path=usr/lib/libpthread.so.1 target=../lib/libpthread.so.1
1121 link path=usr/lib/librcm.so target=../lib/librcm.so.1
1122 link path=usr/lib/librcm.so.1 target=../lib/librcm.so.1
1123 link path=usr/lib/librepase.so target=../lib/librepase.so.1
1124 link path=usr/lib/libresolv.so target=../lib/libresolv.so.2
1125 link path=usr/lib/libresolv.so.1 target=../lib/libresolv.so.1
1126 link path=usr/lib/libresolv.so.2 target=../lib/libresolv.so.2
1127 link path=usr/lib/librestart.so.1 target=../lib/librestart.so.1
1128 link path=usr/lib/librpcsvc.so target=../lib/librpcsvc.so.1
1129 link path=usr/lib/librpcsvc.so.1 target=../lib/librpcsvc.so.1
1130 link path=usr/lib/librt.so target=../lib/librt.so.1
1131 link path=usr/lib/librt.so.1 target=../lib/librt.so.1
1132 link path=usr/lib/librtld.so.1 target=../lib/librtld.so.1
1133 link path=usr/lib/librtld_db.so target=../lib/librtld_db.so.1
1134 link path=usr/lib/librtld_db.so.1 target=../lib/librtld_db.so.1
1135 link path=usr/lib/libscf.so target=../lib/libscf.so.1
1136 link path=usr/lib/libscf.so.1 target=../lib/libscf.so.1
1137 link path=usr/lib/libsched.so target=../lib/libsched.so.1
1138 link path=usr/lib/libscct.so target=../lib/libscct.so.1
1139 link path=usr/lib/libsec.so target=../lib/libsec.so.1
1140 link path=usr/lib/libsec.so.1 target=../lib/libsec.so.1
1141 link path=usr/lib/libsecdb.so target=../lib/libsecdb.so.1
1142 link path=usr/lib/libsecdb.so.1 target=../lib/libsecdb.so.1
1143 link path=usr/lib/libsendfile.so target=../lib/libsendfile.so.1
1144 link path=usr/lib/libsendfile.so.1 target=../lib/libsendfile.so.1
1145 link path=usr/lib/libsip.so target=../lib/libsip.so.1
1146 link path=usr/lib/libslapd.so target=../lib/libslapd.so.1
1147 link path=usr/lib/libsmbios.so target=../lib/libsmbios.so.1
1148 link path=usr/lib/libsocket.so target=../lib/libsocket.so.1
1149 link path=usr/lib/libsocket.so.1 target=../lib/libsocket.so.1
1150 link path=usr/lib/libsoftcrypto.so target=../lib/libsoftcrypto.so.1
1151 link path=usr/lib/libsys.so target=../lib/libsys.so.1
1152 link path=usr/lib/libsyssevent.so target=../lib/libsyssevent.so.1
1153 link path=usr/lib/libsyssevent.so.1 target=../lib/libsyssevent.so.1
1154 link path=usr/lib/libtermcap.so target=../lib/libtermcap.so.1
1155 link path=usr/lib/libtermcap.so.1 target=../lib/libtermcap.so.1
1156 link path=usr/lib/libtermmlib.so target=../lib/libcurses.so.1
1157 link path=usr/lib/libtermmlib.so.1 target=../lib/libcurses.so.1
1158 link path=usr/lib/libthread.so target=../lib/libthread.so.1
1159 link path=usr/lib/libthread.so.1 target=../lib/libthread.so.1
1160 link path=usr/lib/libthread_db.so target=../lib/libc_db.so.1
1161 link path=usr/lib/libthread_db.so.1 target=../lib/libc_db.so.1
1162 link path=usr/lib/libtsnet.so target=../lib/libtsnet.so.1
1163 link path=usr/lib/libtsnet.so.1 target=../lib/libtsnet.so.1
1164 link path=usr/lib/libtsol.so target=../lib/libtsol.so.2
1165 link path=usr/lib/libtsol.so.2 target=../lib/libtsol.so.2
1166 link path=usr/lib/libumem.so target=../lib/libumem.so.1
1167 link path=usr/lib/libumem.so.1 target=../lib/libumem.so.1
1168 link path=usr/lib/libuuid.so target=../lib/libuuid.so.1
1169 link path=usr/lib/libuuid.so.1 target=../lib/libuuid.so.1
1170 link path=usr/lib/libuutil.so.1 target=../lib/libuutil.so.1
1171 $(sparc_ONLY)link path=usr/lib/libv12n.so target=../libv12n.so.1
1172 link path=usr/lib/libvolmgt.so target=../libvolmgt.so.1
1173 link path=usr/lib/libw.so target=../lib/libw.so.1
1174 link path=usr/lib/libw.so.1 target=../lib/libw.so.1
1175 link path=usr/lib/libwrap.so target=../libwrap.so.1.0
1176 link path=usr/lib/libwrap.so.1 target=../libwrap.so.1.0
1177 link path=usr/lib/libxnet.so target=../lib/libxnet.so.1
1178 link path=usr/lib/libxnet.so.1 target=../lib/libxnet.so.1
1179 link path=usr/lib/liby.so target=../liby.so.1
1180 link path=usr/lib/libzoneinfo.so target=../libzoneinfo.so.1
1181 link path=usr/lib/lwp/$(ARCH64)/libthread.so.1 \
1182 target=../lib/$(ARCH64)/libthread.so.1

```



```
1183 link path=usr/lib/lwp/${ARCH64}/libthread_db.so.1 \
1184     target=../${ARCH64}/libthread_db.so.1
1185 link path=usr/lib/lwp/32 target=.
1186 link path=usr/lib/lwp/64 target=${ARCH64}
1187 link path=usr/lib/lwp/libthread.so.1 target=../libthread.so.1
1188 link path=usr/lib/lwp/libthread_db.so.1 target=../libthread_db.so.1
1189 link path=usr/lib/nss_compat.so.1 target=../lib/nss_compat.so.1
1190 link path=usr/lib/nss_dns.so.1 target=../lib/nss_dns.so.1
1191 link path=usr/lib/nss_files.so.1 target=../lib/nss_files.so.1
1192 link path=usr/lib/nss_nis.so.1 target=../lib/nss_nis.so.1
1193 link path=usr/lib/nss_user.so.1 target=../lib/nss_user.so.1
1194 link path=usr/lib/scsi/${ARCH64}/libscsi.so target=../libscsi.so.1
1195 link path=usr/lib/scsi/${ARCH64}/libsesc.so target=../libsesc.so.1
1196 link path=usr/lib/scsi/${ARCH64}/libsmp.so target=../libsmp.so.1
1197 link path=usr/lib/scsi/libscsi.so target=../libscsi.so.1
1198 link path=usr/lib/scsi/libsesc.so target=../libsesc.so.1
1199 link path=usr/lib/scsi/libsmp.so target=../libsmp.so.1
1200 link path=usr/lib/security/${ARCH64}/crypt_bsdbf.so target=../crypt_bsdbf.so.1
1201 link path=usr/lib/security/${ARCH64}/crypt_bsdbf5.so \
1202     target=../crypt_bsdbf5.so.1
1203 link path=usr/lib/security/${ARCH64}/crypt_sha256.so \
1204     target=../crypt_sha256.so.1
1205 link path=usr/lib/security/${ARCH64}/crypt_sha512.so \
1206     target=../crypt_sha512.so.1
1207 link path=usr/lib/security/${ARCH64}/crypt_sunmd5.so \
1208     target=../crypt_sunmd5.so.1
1209 link path=usr/lib/security/${ARCH64}/pam_allow.so target=../pam_allow.so.1
1210 link path=usr/lib/security/${ARCH64}/pam_authtok_check.so \
1211     target=../pam_authtok_check.so.1
1212 link path=usr/lib/security/${ARCH64}/pam_authtok_get.so \
1213     target=../pam_authtok_get.so.1
1214 link path=usr/lib/security/${ARCH64}/pam_authtok_store.so \
1215     target=../pam_authtok_store.so.1
1216 link path=usr/lib/security/${ARCH64}/pam_deny.so target=../pam_deny.so.1
1217 link path=usr/lib/security/${ARCH64}/pam_dhkeys.so target=../pam_dhkeys.so.1
1218 link path=usr/lib/security/${ARCH64}/pam_dial_auth.so \
1219     target=../pam_dial_auth.so.1
1220 link path=usr/lib/security/${ARCH64}/pam_ldap.so target=../pam_ldap.so.1
1221 link path=usr/lib/security/${ARCH64}/pam_list.so target=../pam_list.so.1
1222 link path=usr/lib/security/${ARCH64}/pam_passwd_auth.so \
1223     target=../pam_passwd_auth.so.1
1224 link path=usr/lib/security/${ARCH64}/pam_rhosts_auth.so \
1225     target=../pam_rhosts_auth.so.1
1226 link path=usr/lib/security/${ARCH64}/pam_roles.so target=../pam_roles.so.1
1227 link path=usr/lib/security/${ARCH64}/pam_sample.so target=../pam_sample.so.1
1228 link path=usr/lib/security/${ARCH64}/pam_tsol_account.so \
1229     target=../pam_tsol_account.so.1
1230 link path=usr/lib/security/${ARCH64}/pam_unix_account.so \
1231     target=../pam_unix_account.so.1
1232 link path=usr/lib/security/${ARCH64}/pam_unix_auth.so \
1233     target=../pam_unix_auth.so.1
1234 link path=usr/lib/security/${ARCH64}/pam_unix_cred.so \
1235     target=../pam_unix_cred.so.1
1236 link path=usr/lib/security/${ARCH64}/pam_unix_session.so \
1237     target=../pam_unix_session.so.1
1238 link path=usr/lib/security/${ARCH64}/pkcs11_kernel.so \
1239     target=../pkcs11_kernel.so.1
1240 link path=usr/lib/security/${ARCH64}/pkcs11_softtoken.so \
1241     target=../pkcs11_softtoken.so.1
1242 link path=usr/lib/security/${ARCH64}/pkcs11_tpm.so target=../pkcs11_tpm.so.1
1243 link path=usr/lib/security/64 target=${ARCH64}
1244 link path=usr/lib/security/audit_binfile.so target=../audit_binfile.so.1
1245 link path=usr/lib/security/audit_remote.so target=../audit_remote.so.1
1246 link path=usr/lib/security/audit_syslog.so target=../audit_syslog.so.1
1247 link path=usr/lib/security/crypt_bsdbf.so target=../crypt_bsdbf.so.1
1248 link path=usr/lib/security/crypt_bsdbf5.so target=../crypt_bsdbf5.so.1
```

```
1249 link path=usr/lib/security/crypt_sha256.so target=../crypt_sha256.so.1
1250 link path=usr/lib/security/crypt_sha512.so target=../crypt_sha512.so.1
1251 link path=usr/lib/security/crypt_sunmd5.so target=../crypt_sunmd5.so.1
1252 link path=usr/lib/security/pam_allow.so target=../pam_allow.so.1
1253 link path=usr/lib/security/pam_authtok_check.so \
1254     target=../pam_authtok_check.so.1
1255 link path=usr/lib/security/pam_authtok_get.so target=../pam_authtok_get.so.1
1256 link path=usr/lib/security/pam_authtok_store.so \
1257     target=../pam_authtok_store.so.1
1258 link path=usr/lib/security/pam_deny.so target=../pam_deny.so.1
1259 link path=usr/lib/security/pam_dhkeys.so target=../pam_dhkeys.so.1
1260 link path=usr/lib/security/pam_dial_auth.so target=../pam_dial_auth.so.1
1261 link path=usr/lib/security/pam_ldap.so target=../pam_ldap.so.1
1262 link path=usr/lib/security/pam_list.so target=../pam_list.so.1
1263 link path=usr/lib/security/pam_passwd_auth.so target=../pam_passwd_auth.so.1
1264 link path=usr/lib/security/pam_rhosts_auth.so target=../pam_rhosts_auth.so.1
1265 link path=usr/lib/security/pam_roles.so target=../pam_roles.so.1
1266 link path=usr/lib/security/pam_sample.so target=../pam_sample.so.1
1267 link path=usr/lib/security/pam_tsol_account.so target=../pam_tsol_account.so.1
1268 link path=usr/lib/security/pam_unix_account.so target=../pam_unix_account.so.1
1269 link path=usr/lib/security/pam_unix_auth.so target=../pam_unix_auth.so.1
1270 link path=usr/lib/security/pam_unix_cred.so target=../pam_unix_cred.so.1
1271 link path=usr/lib/security/pam_unix_session.so target=../pam_unix_session.so.1
1272 link path=usr/lib/security/pkcs11_kernel.so target=../pkcs11_kernel.so.1
1273 link path=usr/lib/security/pkcs11_softtoken.so target=../pkcs11_softtoken.so.1
1274 link path=usr/lib/security/pkcs11_tpm.so target=../pkcs11_tpm.so.1
1275 link path=usr/lib/straddr.so target=../straddr.so.2
1276 link path=usr/xpg4/lib/${ARCH64}/libcurses.so target=libcurses.so.2
1277 link path=usr/xpg4/lib/64 target=${ARCH64}
1278 link path=usr/xpg4/lib/libcurses.so target=../libcurses.so.2
1279 #
1280 # libsesc.so needs to dlopen(3C) plugins from usr/lib/scsi/plugins/ses/vendor/,
1281 # a dependency which cannot be automatically derived
1282 #
1283 depend fmri=system/library/storage/scsi-plugins type=require
```