Xenix Quick Reference Manual

April 14, 1983
Radio Shack Technicial Support

AT - Execute Commands at a Specified Time
$ at time [day] [file]
Execute commands in file at time on day

CAL - Print Calendar
$ cal [month] year or entire year
month = decimal number from 1 to 20
year = decimal number from 1 to 9999

CAT - Concatenate and Print

$ cat file...
Display file contents.

CD - Change Working Directory
$ cd
Return to your login directory.
$ cd directory
Change working directory to directory.

CHMOD - Change Mode
$ chmod [who] op-code permission...file...
Change the permission modes for files and directories.
Who:
u   Login owner (user)
g   Group
o   All others
a   All of above (default)
Op-codes:
+   Add permission
-    Remove permission
=   Assign absolute permission
Permissions:
r   Read
w   Write
x   Execute
u   User permission from present mode
g   Group permission from present mode
o   Other permission from present mode

CP - File Copy
$ cp file 1, file 2
Make a copy of file 1 and name it file 2.
$ cp file 1, file 2...dirname
Copy one or more files into the specified directory.

DATE - Print Current Time and Date
            $ date
            Display the current time and date.

DISABLE - turn off terminals
            $ disable ttyn...

DU - Summarize Disk Usage
            $ du [-s] [-a] [name]...
            Disk usage for directory or file name.
Options:
            -s   Total number of blocks for all files
            -a   Display an entry for each file

ED - the standard text editor
            $ ed [filename]
commands once in the editor:
            . or ^d   exit to ed's command mode
            nd or n,nd   delete the numbered line(s)
            na
            <text>   adds the following text after line n
            e filename   cleans the buffer & then loads filename into it
            ni
            <text>   adds the following text before line n
            w [filename]   writes the buffer to disk as filename
            q   exits the editor
            np or n,np   displays the line(s) n on the screen
options:
            .   the current line
            $ the last line
            n   any decimal line number

ECHO - Echo Arguments
            $ echo [-n] [arg]...
            Writes its arguments separated by blanks and ends in
            newline unless -n option is used.

ENABLE - turn on terminals
            $ enable [-ed] ttyn...
            -e   enable logins (default)
            -d   disable logins (use disable)

FILE - Determine File Type
            $ file file...
            Classify the type of file

FSCK - File system consistancy check and repair
        $ fsck [filesystem]

KILL - Terminate a Process
            $ kill number...
        Terminate process number.

LN - Make Link
            $ ln name1 [name2]
        Make link to name1, naming it name2, or use the last
        component of name1 file pathname if name2 is omitted.

LPR - Line Printer Spooler
            $ lpr -options file...
        Put file in line printer queue.
Options:
            -r   Remove file after placing in queue
            -c   make copy of file for queue
            -m   Report by mail when printed
            -n   Do not report by mail (default case)

LS - List Contents of Directory
            $ ls [ltasdru] name...
        List contents of directory and information on files.
Options:
            -l   Long format
            -t   Sort by modification time
            -a   List all entries
            -s   Size in blocks
            -d   Directory status information
            -r   List in reverse order
            -u   Sort by last access time

MAIL - Send or Receive Electronic Mail Among Users
            $ mail loginname...
        Sends a message to loginname.
            $ mail [-rpq] [-f file]
        Reads each message in your "mailbox."
Options
            -r   Reverse ordering to first-in, first-out
            -q   Exit after an interrupt
            -p   Print entire mailbox
            -f   print file as if it were a mail file

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Disposition of messages:

```
        <CR> Go to next message
        d    Delete the last message
        p    Print message again
        -    Go back to previous message
        s [file]...
        Saves messages in file
        (mbox if no file named)
        w [file]...
        same as s, only no header is supplied
        m [loginname]...
        Mails the message to loginname
        ^D   Exit mail
        ^q   Exit mail
        x    Exit mail
        !cmd Execute shell command
        ?    Print this command summary
```

MAN - Print On-Line Unix Programmer's Manual

```
        $ man - options section title...
        Locates and displays the pages of the UNIX Programer's
        Manual named title in the specified section.
```

Options:

```
        -t   Phototypesets the section using TROFF
        -n   Prints the section on the standard output using NROFF
        -e   Use with -t or -n to preprocess by neqn or eqn;
        -w   Pathname to manual section
```

MBASIC - Invoke interpreter basic

```
        $ mbasic [program] [-m memory size] [-e]
        -m specify memory size
        -e suppress the OK prompt
```

MESG- Permit or Deny Messages

```
        $ mesg [-n] ]-y]
        Report (no option) or set non-user write permission on terminal.
```

Options:

```
        n    Deny non-user write permission (cannot write to you)
        y    Enable non-user write permission
```

MKDIR - Make a Directory

```
        $ mkdir dirname...
        Create directories in your current directory.
```

MKFS - construct a file system

          $ mkfs [device] size interleave #sectors
          used to setup the Xenix file system

MOUNT - mount a filesystem

          mount [device] [dirname]
          used to add a drive to xenix

MV - Move or Rename Files and Directories

          $ mv file1 file2.
          Change name of file1 to file2.
          $ mv file...dirname
          Move one or more files to the directory dirname.
          $ mv dirname newdirname
          Rename the directory dirname to newdirname.

PASSWD - Change Login Password

          $ passwd
          Change your password for logging into the **Xenix** system

PR - Print File with Pagination

          $ pr -options file...
Formatted printing of file...
Options:
          -n Produce n-column output
          +n Start printing at page n
          -h Customized page header title line
          -wn Page width n
          -ln Page length n
          -sc Separate column with character c
          -m Print all files in multiple columns

PS - Process Status

          $ ps [-aklx] process number...
          Print information about active processes.
Options:
          -a For all processes
          -k Used for post-mortem system debugging
          -l Long listing of information
          -x include info for non-terminal processes

PWD - Print Working Directory

          $ pwd
          Display the full pathname of your current directory.

RM - Remove Files or Directories

        $ rm [-fri] file...
        Remove one or more files.

Options:

        -f Force removal of write-protected files
        -r Recursively delete directory
        -i Interactively delete with query
        $ rmdir emptydir
        Remove the empty directory emptydir.

STTY - Set Terminal Options

        $ stty [option...]
        Report setting of options or set options.

Options:

even/-even	Enable/disable even parity
odd/-odd	Enable/disable odd parity
raw/-raw	enable/disable raw mode
cbreak	read character at a time
-cbreak	Read line at a time
nl	Accept only newlines to end line
-nl	Accept cr-if to end line
echo/-echo	Echo/do not echo back characters
lcase	Map upper case to lower case
-lcase	Do not map case
tabs	Preserve tabs
-tabs	Replace tabs by spaces
ek	Reset erase and kill characters
erase c	Set erase character to c
kill c	Set kill character to c

cr0 cr1 cr2 cr3
                Carriage return delay
nl0 nl1 nl2 nl3
                Newline delay
tab0 tab1 tab2 tab3
                tab delay

ff0 ff1	form feed delay
bs0 bs1	Backspace delay
tty33	Mode for Teletype33
tty37	Mode for Teletype37
vt05	Mode for DEC VT05
tn300	Mode for GE TermiNet 300
ti700	Mode for TI 700
tek	Mode for tektronix 4014
hup	Hang up dataphone on last close
0	Hang up phone immediately

50 75 110 134 150 200 300 600
1200 1800 2400 4800 9600
set baud rate

TAR - disk archiver

```
$ tar [-cvxfbk] [device] block size files
c  create a new tape
v  display the file being copied
x  extract the named files
f  use the next argument as the archive device
b  use the next argument as the blocking factor
k  use the next argument as the size of the disk
```

examples

```
$ tar -cvfbk /dev/rfd0 16 1224 /
```
will save an entire hard disk system to **formatted double sided**
floppy disks
```
$ tar -xvfb /dev/rfd0 16
```
will restore a **tar** save disk set

TEE - Pipe Fitting

```
$ tee [-i] [-a] file...
```
Divert as copy of data to file.

Options:

```
-i  Ignore interrupt signals
-a  Append to file
```

TR - Translate Characters

```
$ tr [-cds] string1 [string2]
```
Translate with substitution or deletion of characters.

Options:

```
-c  Complement of string1
-d  Delete characters in string1
-s  Squeeze option
```

TTY - Get Terminal Name

```
$ tty
```
PRINT PATHNAME OF USER'S TERMINAL.

TX - TRSDOS to Xenix convert utility
              $ **tx** :d [-aclprsvx] TFspec Xdir
              $ **tx** :d [-aclprsvx] TFspec XFspec
              $ **tx** :0 -f
              a   absolute, copy files even if the already exist
              c   do not convert file name from uppercase to lower case
              1   do not add a line feed to TRSDOS-II VLR files
              p   prompt operator on each file
              r   specifies that the source disk is a TRSDOS-II save disk
              s   do not strip the length byte from TRSDOS-II VLR files
              v   verbose, display the files being converted
              x   converts <CR>s to <LF>s
              TFspec = TRSDOS-II filespec
              Xdir   = TRS-XENIX directory
              XFspec = TRS-XENIX filespec
              :d   = specifies the drive containing the TRSDOS-II diskette

UMOUNT - dismount a file system
              $ **umount** [device]
              Used to remove a disk from the system

WHO - Who is on the System
              $ **who**
              List on-line user's login name, terminal, and login time.
              $ **who am I**
              Lists your login name.

WRITE - WRITE TO ANOTHER USER
              $ **write** user [ttyname]
              Write to user on terminal ttyname (ttyname is optional).

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Special Files in Xenix

File: /etc/rc

Purpose: Execution file on system startup

Typical changes: Change boot up message.
                              Required mounts of disk drives
                              Automatic startup of programs upon boot up

Sample file:

```
PATH=/bin:/usr/bin
echo '^L'
TRS-XENIX version 1.0.0    January 15, 1983.

Microsoft XENIX-68000 V2.3A

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to the terms stated in the customer Non-Disclosure Agreement.

"tsh" and "tx" Copyright 1983 TANDY CORPORATION.  All rights reserved.
' > /dev/console
> /etc/mtab
cat /etc/null > /etc/utmp
/etc/asktime </dev/console >/dev/console 2>&1
/etc/dmesg - >> /usr/adm/messages
chmod a+w /etc/mtab
/usr/lib/ex2.13preserve all
rm -f /usr/spool/lpd/lock; /usr/lib/lpd
rm -f /tmp/* /usr/tmp/*
/etc/update
/etc/cron
/etc/mount /dev/hd1 /mnt1
```

            system startup message
           time prompt
          start printer
         start additional backround tasks
       add a secondary hard disk - example

File: /etc/ttys

Purpose: To define terminal status, characteristics, and name

Typical changes: to define baud rate

Sample file:

```
lhconsole
13tty01
12tty02
```

```
            ┌──────terminal name
      ┌─────baud rate
      │                h= hard wired console
      │                0= 300 / 1200 /150 / 110 baud
      │                1= 150 baud
      │                2= 9600 baud
      │                3= 1200 / 300 baud
      │                4= Dec LA36
      │                5= 300 / 1200
      │                6= 2400 baud
      │                9= 9600 baud
      └────────status (set by the enable disable command)
                       1= enabled
                       0= disabled
```

File: /usr/adm/messages

Purpose: To store old power up messages and error messages

Typical changes: None (It is there to log error messages)

Sample file:

Apr 9 14:59
...
TRS-XENIX version 1.2.0
Microsoft Xenix-68000 V2.3A
System 92k User 676k
Root area 20961 blocks
Swap area 2057 blocks

Apr 9 15:05
FLOPPY DISK 0: not ready

Apr 14 12:05
...
soft err FE00 on wrt of trk 24 side 0 sect 16
FLOPPY DISK 0: active drive not ready
FLOPPY DISK 0: drive closed; error cleared

Apr 14 20:42
...
TRS-XENIX version 1.2.0
Microsoft Xenix-68000 V2.3A
System 92k User 676k
Root area 20961 blocks
Swap area 2057 blocks

DT1 settings for use with Xenix

DT-1 Baud rate codes

Use the /etc/ttys file to set the channels baud rate
Xenix uses an 8 bit word, 1 stop bit, and no parity

DT1 setting	Baud rate
0 0 0 1	75
0 0 1 0	110
0 0 1 1	150
0 1 0 0	300
0 1 0 1	600
0 1 1 0	1200
0 1 1 1	2400
1 0 0 0	4800
1 0 0 1	9600
0	8 bit word
1	7 bit word
0	1 stop bit
1	2 stop bits
0	odd parity
1	even parity
0	no parity
1	parity enabled