ConvexOS and Utilities V10.0 Release Notice

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Overview

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This Release Notice describes the V10.0 release of ConvexOS and the ConvexOS Utilities. It is designed to supplement the permanent documentation with information that was developed too late for inclusion. Always refer to this document before reporting problems, your questions may be answered here. This Release Notice also lists fixes and workarounds that may save you time if you encounter a known problem.

Prerequisites

The V10.0 release of ConvexOS has the following prerequisites:

- If you are performing an upgrade, your system must be running V9.1 or V9.0 of ConvexOS.
- You must be running version the appropriate versions of SPU OS, System Diagnostics and Diagnostic Database, as shown in the following table:

CONVEX System	SPU OS	System Diagnostics	Diagnostic Database
C120	V5.2	V6.6 or later	V2.7 or later
C2x0, C32x0	V5.2	V3.5 or later	V3.7 or later
C34x0	V6.0	X1.0 or later	X1.0 or later
C38x0	X0.5.0.0	X0.5.0.0 or later	X0.5.0.0 or later

Required UIDs and GIDs

UIDs and GIDs 0 through 99 are reserved for used by CONVEX. Future releases may use UIDs in this range on an as-needed basis. You should not assign UIDs or GIDs in this range to users or groups at your site.

The following tables list required UIDs and GIDs. Names marked with a dagger (†) are new requirements for ConvexOS V10.0.

User name	UID	GID
root	0	10
daemon	1	1
convex	2	10
anon	4	13
nouser	8	8
notes	10	13
uucp	14	40
test	16	49
auth†	20	20
audit†	21	21
fs†	22	22
lpr†	23	23
cron†	26	26

Group name	GID
daemon	1
kmem	2
sys	3
tty	4
nogroup	8
bin	10
notes	13
auth†	20
audit†	21
fs†	22
lpr†	23
batch†	24
backup†	25
cron†	26
tapeadm†	27
operator	28
tapeop†	29
preserve†	30
guest	31
uucp	40
staff	49

/etc/services

You must add the following entry to your /etc/services file:

```
ntalk       518/udp
```

Layered Products

The following table lists the versions of layered products that are compatible with ConvexOS and Utilities V10.0.

Product	Minimum V10.0-compatible version
CONVEX FORTRAN	V6.0
CONVEX C	V4.0
CONVEX Ada	V2.0
CONVEX Internet Services	V10.0
CONVEX NFS	V10.0
CONVEX CXbatch	V2.0
COVUEshell	V8.2
COVUEnet	V2.2
COVUEbatch	V2.1
COVUEedt	V1.1
COVUElib	V1.0
COVUEbinary	V1.0
CONVEX CXwindows	V2.1
CONVEX Consultant	V8.0, V8.1, V8.2, V9.0

All CONVEX Consultant utilities in V8.0, V8.1, and V8.2 will work successfully with ConvexOS V10.0 except for gprof. If gprof is in use at your site, you must install V9.0 of CONVEX Consultant.

Due to a change in the installation process, there are different minimum required versions for COVUE products installed *after* ConvexOS V10.0. If you install (or re-install) a COVUE product after you upgrade to ConvexOS V10.0, you must have the version listed in the following table. COVUE products already in place before the ConvexOS V10.0 upgrade will not be affected.

Product	Minimum version required if installed after ConvexOS V10.0
COVUEshell	V8.2.3
COVUEbatch	V2.1.2
COVUEedt	V1.2.1
COVUElib	V2.0.1
COVUEbinary	V1.0.1

Please note that these new versions represent only a change in the installation procedure, there are no functionality changes.

COVUEnet is not affected by this change.

Associated Documentation

The following documents are new with this release:

- *CONVEX Tape System User's Guide*, Second Edition
- *ConvexOS Tape System Quick Reference*, First Edition
- *ConvexOS* `dump` *and* `restore` *Quick Reference*, First Edition
- *CONVEX SPU System Manager's Guide*, First Edition
- *The ConvexOS Primer*, First Edition. This book replaces the *CONVEX UNIX Primer.*
- *The ConvexOS Extensions User Guide.* This book replaces
  - *CONVEX Checkpoint Restart Guide*
  - *CONVEX Share Concepts*
  - *CONVEX POSIX Concepts*

The following documents have been revised for this release:

- *ConvexOS Man Pages for Users*, Second Edition
- *ConvexOS Man Pages for Programmers*, Second Edition
- *ConvexOS Man Pages for System Managers*, Second Edition
- *Managing ConvexOS: Configuration Guide*, Second Edition
- *Managing ConvexOS: Operations Guide*, Second Edition
- *CONVEX Guide to Writing Device Drivers*
- *CONVEX POSIX Conformance*, Second Edition
- *CONVEX Networking Concepts*, Second Edition
- *ConvexOS Tutorial Papers*, EighthEdition

The following documents have been previously published and are current for this release:

- *CONVEX Portable C User's Guide*, Fourth Edition
- *The C Programming Language*, First Edition. By Brian Kernighan and Dennis Ritchie, published by Prentice-Hall,
- *Programming perl*, First Edition. By Larry Wall and Randal L. Schwartz, published by O'Reilly and Associates, Inc.
- *GNU Emacs Manual*, Sixth Edition. By Richard Stallman, published by the Free Software Foundation
- *CONVEX Architecture Reference*, Fifth Edition
- *CONVEX adb Debugger User's Guide*, Sixth Edition
- *CONVEX Share*, First Edition
- *vi Quick Reference*, First Edition

The *CONVEX Assembly Language User's Guide* and the *CONVEX Loader User's Guide* are no longer bundled with releases of ConvexOS. They are now part of a new product, CONVEX ALL (Assembler, Loader and Libraries), and are contained in the *CONVEX Compiler Utilities User's Guides.* CONVEX ALL V1.0 will be distributed to all customers free of charge before the release of ConvexOS V10.0.

New Features

2

This chapter describes new features in ConvexOS V10.0.

Virtual Volume Manager (VVM)

The CONVEX Virtual Volume Manager improves the reliability of striped file systems through the use of data redundancy. There are two methods of redundancy: mirroring and parity.

Mirrored file systems maintain two copies of each stripe partition on different disks. If the primary disk fails, data can be retrieved from the second disk.

In parity file systems, parity information calculated from the other disks in the stripe is stored on each disk. If one of the disks fails, the data on that disk can be reconstructed using parity information.

VVM also supports "hot spares". You may designate certain disks or disk partitions to be hot spares. If hot spare disk space is available when a disk fails, VVM will automatically reconstruct the data from the failed disk onto the hot spare, and the hot spare will replace the failed disk in the stripe. If you do not have a hot spare, console error messages direct you to reconstruct the data manually.

For additional information, see Chapter 4, "Setting Up the Disk System" in *Managing ConvexOS: Configuration Guide.*

/etc/stripecap

The format of /etc/stripecap has changed with this release. Your existing /etc/stripecap file will be converted to the new format during the ConvexOS V10.0 installation process. (A copy will be kept in /etc/stripecap.old.)

For additional information about the new format, see the stripecap(5) man page.

vvmdaemon

vvmdaemon is the daemon for the Virtual Volume Manager. It must be started from /etc/rc.std.

vvmdaemon is responsible for

- reconstructing data once a disk failure has occurred
- restarting reconstruction operations that did not complete normally due to a system crash.

For additional information, see the vvmdaemon(8) man page.

New Utilities

Three new utilities are provided to help manage redundant partitions.

mvst

The `mvst` utility allows data from an existing stripe partition to be moved to a new partition. It may be used with redundant and non-redundant stripes.

You must be the superuser to use this utility.

For additional information, see the mvst(8) man page.

rmst

`rmst` deletes a stripe entry from kernel memory. It is also used to remove partitions from the hot spare list.

You must be the superuser to use this utility.

For additional information, see the rmst(8) man page.

qst

`qst` reports stripe information from /etc/stripecap for a specified disk device. For example:

```
# qst /dev/du2
/dev/du2h is used in /dev/st2 (redundant)
/dev/du2g is used in /dev/st4 (non-redundant)
```

You must be the superuser to use this utility.

Enhancements to Existing Stripe Utilities

Three stripe utilities have been enhanced to create and manage redundant partitions.

newst

The `-R` option to `newst` enables stripe redundancy. By default, a two-partition stripe will be mirrored; stripes with more than two partitions will use parity.

The `-H` option is used to add a specified partition to the hot spare list.

getst

The output of `getst` will include additional information for redundant stripes, as shown in this example:

```
# getst st0
stripe st0: redundant, sector size 2048 bytes, mounted on /usr/local
 section a: size 49200 Kbytes/partition, blocking factor 8 Kbytes
    partition 0: du6f (64, 1542) offset 0 Kbytes
    partition 1: du0f (64, 6) offset 0 Kbytes
    partition 2: du4a (64, 1025) offset 0 Kbytes
 section b: size 48600 Kbytes/partition, blocking factor 8 Kbytes
    partition 0: du6f (64, 1542) offset 49200 Kbytes
```

The `-H` option to `getst` may be used to display information about disk partitions in the hot spare list.

putst

The `-p` option to `putst` may be used to manually check the parity information on a redundant stripe.

Large Files Support

ConvexOS now supports files and file systems up to one terabyte in size. Files and file systems larger than 2 gigabytes are considered "large".

System Administration

Large file systems are created and mounted normally with `newfs`, `newst`, and `mount`.

By default, file systems are mounted with large file capability. This means that files greater than 2Gb may be created in them.

You can disable large file capability on a specific file system with the `nolf` option to `mount`. For example, the following line in /etc/fstab will cause /usr to be mounted without large file capability:

```
/dev/st2        /usr        4.2     rw,nolf
```

This option only prevents the creation of new large files. Large files that already exist in a file system may still be accessed in their entirety if the file system is later mounted with the `nolf` option.

Large file systems (file systems greater than 2Gb) are not required to be large file aware. Likewise, large files (files greater than 2Gb) that contain "holes" may reside in file systems that are not large.

Utility Support

Some utilities have been enhanced to support large files:

- `ls, cp, mv, tail, find`
- `ftp, rcp`
- `tar, cpio, pax` (for files up to 8Gb only)
- `dd, compact`
- `dump, xdump, restore`
- `chkpnt, restart`

Manipulating large files with other utilities may have serious consequences. Please refer to the "Restrictions" section below.

Programming Interface

Several system calls have been added or changed to handle large files. For additional information on the large files programming interface, refer to the *ConvexOS Extensions User Guide.*

Restrictions

Interactive editors such as `vi` and `Emacs` will truncate large files to 2Gb.

Shell redirection (<, >, >>) will not work properly on large files.

You may use other utilities with large files if you use pipes. For example, the command:

```
cat largefile | grep foo
```

will work on a large file while

```
grep foo largefile
```

will not.

The current NFS protocol does not support large files. As a result, only the first 2Gb of a large file can be accessed over NFS.

You will be unable to copy or move entire large files to a filesystem that has been mounted with the `nolf` option. If you try to do so, both `cp` and `mv` will truncate the file to 2Gb. However, the original file will remain undisturbed.

Changes to Utilities and Procedures

3

This chapter describes changes to existing procedures and utilities.

Utilities

Changes have been made to several utilities.

GNU Emacs

Version 18.57 of GNU Emacs is now supported. This version mainly provides bug fixes. There is one significant functional change. The line-move function is now called move-line-internal. Initialization files that call line-move by name must be changed to call move-line-internal instead.

Perl

Version 4.03 of Perl is now supported. This is the version that is described in *Programming perl*, by Larry Wall and Randal L. Schwartz, which is distributed with ConvexOS. This version contains many bug fixes and some enhancements over the previous version.

`acctconv`

The `acctconv` utility, which was designed to convert accounting files to a new format for ConvexOS V8.1, is no longer supported.

`csh`

An enhanced version of `csh` is now supported. `tcsh`, which was originally developed at Ohio State University and is in the public domain, will be installed as /bin/csh. The previous version of `csh` will be available as /bin/oldcsh.

This version contains all the functionality of previous versions of `csh`, and has many new features, including

- File name completion
- `vi` and Emacs-like command line editing
- Terminal mode checking and resetting
- Spelling correction of command, file, and user names

For additional information on these new features, please refer to the `tcsh` man pages in Appendix A of the *ConvexOS V10.0 Advance Notice*. Please note, however, that `tcsh` will be installed as /bin/csh.

chkpnt

The checkpoint file format has been changed to support large files. As a result, checkpoint files created under ConvexOS V9.0 or V9.1 cannot be restarted after upgrading to ConvexOS V10.0.

chown and chgrp

`chown` now supports the `-R` flag, which causes it to recursively descend directory arguments, changing the owner as specified.

For example, the command

```
# /etc/chown -R joe .
```

will make user joe the owner of the current directory, and of all files and directories below the current directory.

`chgrp` also supports the `-R` option. The command

```
% chgrp -R staff .
```

will make staff the group for all files in the current directory, and for all files and directories below the current directory.

`chown` can also be used to change the owner and group of a file simultaneously. For example, the command

```
# chown joe.staff myfile
```

changes the owner of myfile to joe and the group to staff. The group and owner may also be a numerical GID or UID.

cron

There have been several enhancements to `cron`:

- World or group-writable .crontab files are now ignored by `cron`. Users with world or group-readable .crontab files will receive mail instructing them to execute the following command:

  ```
  % chmod 644 .crontab
  ```

- The line

  ```
  CRONREPORT=1
  ```

  in a .cronrc file will indicate that the user would like to receive notification of output and failed requests via electronic mail. If `cron` is started at boot time with the `-m` option, CRONREPORT will be set for all users.

- `cron` now supports machine-specific .crontab files. Files named .crontab.*hostname* (where *hostname* is the name of the machine where the contents of the file should be executed) will be executed if they exist. If there is no crontab.*hostname* file, .crontab will be executed as usual. This feature can prevent multiple executions of .crontab files that are mounted on more than one machine via NFS.

make

The built-in `make` rules for generating executables from EFL (Extended FORTRAN Language) sources have been removed. `make` no longer has built-in rules for handling files ending in .e or .e,v.

Users who use `make` to perform operations on files with these suffixes may provide a rule for .e or .e,v files in their makefile.

man

`man` now supports a `-g` option, which will grep through all the man pages for a specified Perl regular expression. For example, the command

```
% man -g "crontab"
```

will report all the occurrences of the word "crontab" in the man page database.

This option will work with compressed man pages as well.

sh

/bin/sh has been upgraded to the AT&T System V, Release 2 version. The new version contains:

- shell functions
- restricted shell

as well as many bug fixes. This change should not affect existing `sh` scripts.

For additional information, see the sh(1) man page.

fsck

`fsck` has been upgraded to the 4.3BSD Tahoe release.

"Dirty bit" functionality has been added. When executed normally via `preen`, `fsck` only checks file systems that were in use (marked "dirty") when the machine went down.

When executed from the command line, `fsck` checks a specified file system even if it is marked "clean".

The new `-f` option to `fsck` can be passed through `preen` to force checking on file systems even if they are marked "clean":

```
# preen -f
```

You should force checking on file systems if

- a disk or disk controller error occurs
- a dirty file system is mounted with the -F option to `mount` (see below).

This version also contains performance enhancements.

For additional information, see *Managing ConvexOS: Operations Guide* or the fsck(1) man page.

mount

The `-F` option has been added to `mount` to force mounting of a "dirty" file system. Normally, dirty bits will be cleared by `fsck`, so all the file systems encountered by `mount` will be clean.

Forcing the mount of a dirty file system with `mount -F` will also clear the dirty bit, but the file system will remain dirty. This action could eventually cause the system to panic, and is not recommended for use in normal circumstances.

lpr and lpd

Beginning with this release, the /usr/spool/lpd directory and its contents must be owned by user lpr and group lpr.

Before you begin the ConvexOS V10.0 installation, you should create user lpr with UID 23 and GID 23.

The installation script will automatically change the owner and group for the /usr/spool/lpd directory and for all the printer queues within that directory.

sendmail

The default `sendmail` configuration file has been significantly enhanced. For more information, see the /usr/lib/conf/sendmail/README file.

opreq

Several changes have been made to `opreq`:

- Users no longer need to be the superuser to perform operator activities. Users that belong to the operator group (as specified in /etc/group) can execute the `select-done` and `select-cancel` commands. If you choose to take advantage of this feature, you must create an operator group and add the appropriate users to it.
- The interface has been improved. In addition to arrow keys, `vi` movement keys (**h,j,k,l**) and Emacs movement keys (**CTRL-f, CTRL-b, CTRL-n, CTRL-p**) may be used to move around the opreq screen.
- Mount, replace, and unmount messages can be logged in /usr/adm/opreq-acct. This file records the information about a message when `select-done` or `select-cancel` is performed. If you choose to log this information, you must create the file /usr/adm/opreq-acct. Like all accounting files, this file can get very large and should be trimmed periodically.
- Operators are notified when a tape request is satisfied via automatic volume recognition (a feature of the CONVEX ACS system). These messages are of type "Info" and will only be displayed if the .opreqrc file includes this message type.
- The status of "Info" and "Unmount" messages is changed to "Done" after two minutes. These messages are informative and don't require operator action.
- Multiple-tape mount requests now display all the tapes associated with a request simultaneously, so operators can retrieve all the necessary tapes at once.

- The `configure-drives` command has been added. This command allows the operator to enable or disable tape drives from within `opreq`.

For additional information about `opreq`, refer to Chapter 8, "Managing the Tape System", in *Managing ConvexOS: Operations Guide.*

`crashdump`

`crashdump` has been modified to work with 9-track, Rack Mount 3480, or DAT tape drives. Previously, `crashdump` only worked with 9-track drives.

If there is only one valid tape drive, `crashdump` will automatically use that drive. If there is more than one valid tape drive and one of those tape drives is a 9-track, that will be the default drive. If there is more than one valid tape drive, and none of them are 9-track, the user will be asked to select between valid drives.

The `-S` option to `crashdump` will allow a user to specify a tape drive other than the default. When this option is specified, the user will be presented with a menu listing all available tape drives.

For additional information about `crashdump`, refer to Chapter 14 of *Managing ConvexOS: Operations Guide.*

crypt Library Routine

Due to export restrictions on DES encryption, the crypt library routine included in international distributions will not function correctly. If called, crypt will return an error.

This restriction does not apply to sites located within the United States or Canada.

CONVEX Internet Services

In this release, the Maximum Transmission Unit (MTU) of the HYPERchannel network interface driver has been increased from 32 Kbytes to approximately 64 Kbytes. The larger MTU results in higher speed bulk data transfers over the HYPERchannel network interface. The MTU is set on a per-route basis using the `hyroute` command.

CONVEX NFS

There are two major enhancements to CONVEX NFS.

lockd

The lock manager system has been upgraded to the ONC 4.1 version. With the new lock manager, local file locking is done entirely within the kernel. The lock daemon (lockd) is no longer required to be running for local files locks to operate properly.

NFS Installation

Installs of NFS at domestic (United States and Canada) sites will automatically sysgen modules necessary for secure NFS functionality into vmunix and install the secure NFS utilities. Secure NFS is no longer a separate installation item.

Due to export restrictions on DES encryption, Secure NFS is not available in international distributions.

Tape System Enhancements

The ConvexOS Tape System now includes support for ANSI or IBM labeled tapes. For additional information, refer to the ConvexOS Tape System User's Guide.

Several enhancements have been made to tpconfig

- Users can be required to mount labeled tapes only
- Users can be required to label tapes with restricted access only
- Users can be required to set restricted access for each file on a tape

For more information, see *Managing ConvexOS: Configuration Guide.*

68000 Tools

Beginning with this release, the CONVEX 68000 development tools are bundled with ConvexOS, rather than with the CONVEX Device Drivers optional product.

The following utilites are now included with ConvexOS:

- `a68` - assembler
- `adb68` - assembly-level debugger
- `cc68` - C compiler
- `cs86` - checksum generator
- `ld68` - link editor
- `lint68` - syntax checker
- `lorder68` - archive generation tool
- `nm68` - dispaly name lists
- `o68` - object code generator
- `pr68` - display formatted dump of 68000 object files
- `size68` - display size of 68000 object files
- `text68` - disassemble 68000 object files

Kernel Source Tree Modifications

ConvexOS V10.0 contains changes to the structure of the kernel source tree.

These modifications affect:

- /sys files
- /usr/include/sys files
- /usr/68k/include files
- `sysgen`

If you have user written device drivers that require these files, or if you have modified the kernel via sysgen, please read this section before installing ConvexOS V10.0. If you require assistance contact the Convex Technical Assistance Center (TAC).

Please note that although current functionality of ConvexOS does not change, sysgened layered and optional products must be reinstalled after installing ConvexOS V10.0.

Backward binary compatibility has been maintained for all programs.

Compatibility

This section describes ramifications on new kernel source and new kernel binary objects.

Kernel source compatibility

The CPU source portion of the ConvexOS V10.0 kernel is now compiled in the extended ANSI C mode (-ext) of the compiler. New CPU source that is added to the kernel must be ANSI C compliant.

The structure and organization of the kernel include files have changed with the ConvexOS V10.0 release, but the content of files that are needed by new kernel source has been maintained.

The include files that were previously in the following directories:

- /sys/dev_ccu
- /sys/dev_hsp
- /sys/dev_iop
- /sys/dev_viop
- /sys/kern20
- /sys/kern68k
- /sys/kernhsp
- /sys/kerniop
- /sys/kernviop
- /sys/mbs

have been moved to the directories:

- /sys/io/interfaces/ccu_if and its subdirectories
- /sys/io/interfaces/msg_if/mbs and its subdirectories
- /sys/io/lib

The contents of these files have been maintained as much as possible.

Return value from device drive close routine

The V10.0 kernel now respects the return value from a device driver close routine and passes it back to the user as the value of errno after the close() system call. User written device drivers must be sure to explicitly return a value (return zero if successful) and avoid "falling off the end" of the driver close function, which may be interpreted incorrectly as a non-zero return value.

Kernel binary object compatibility

A binary object that was compiled for use with ConvexOS V9.1 or earlier may not work with ConvexOS V10.0. You should only put objects that have been compiled specifically for or have been thoroughly tested with ConvexOS V10.0 into the ConvexOS V10.0 kernel.

sysgen

The order of `make` commands used to generate a custom ConvexOS has changed. Beginning with this release, `make` commands must be invoked in system-generated directories one at a time, and must be allowed to finish before additional `make` commands are started.

For additional information, see Chapter 16," Generating System Images" in *Managing ConvexOS: Configuration Guide.*

/sys Files

Due to the structure changes in the kernel source tree, the following directories in /sys have been obsoleted:

- /sys/cmi
- /sys/dev_ccu
- /sys/dev_hsp
- /sys/dev_iop
- /sys/kern20
- /sys/kern68k
- /sys/kernhsp
- /sys/kerniop
- /sys/kernviop
- /sys/mbs

These directories are replaced by

- /sys/io and its subdirectories
- /sys/kio
- /sys/netif

/usr/include Files

The structure and organization of the system include files have changed with the ConvexOS V10.0 release, but the user-visible content of files has been maintained as much as possible. Backward binary compatibility has been maintained for all programs.

Some programs which include system header files may require changes to the include file set in order to recompile successfully. In general, this will only affect programs that are highly dependent upon the operating system and its internals.

As a result of the structure changes of the kernel source tree, the following symbolic links have been obsoleted:

- /usr/include/cmi
- /usr/include/dev_ccu
- /usr/include/dev_hsp
- /usr/include/dev_viop
- /usr/include/kern20

- /usr/include/kern68k
- /usr/include/kernhsp
- /usr/include/kerniop
- /usr/include/kernviop

Previously, /usr/include/dev_iop and /usr/include/mbs were symbolic links. They have been replaced by directories of the same name.

Also, symbolic links from

- /usr/include/kio to /sys/kio
- /usr/include/interfaces to /sys/io/interfaces

have been added.

/usr/68k/include Files

The structure and organization of the 68000 Tools include files have changed with the ConvexOS V10.0 release, but the user-visible content of files has been maintained as much as possible. Backward binary compatibility has been maintained for all programs.

Some programs which include 68000 Tools header files may require changes to the include file set in order to recompile successfully. In general, this will only affect programs that are highly dependent on the operating system and its internals.

The following symbolic links have been obsoleted:

- /usr/68k/include/dev_ccu
- /usr/68k/include/dev_hsp
- /usr/68k/include/dev_viop
- /usr/68k/include/kern20
- /usr/68k/include/kern68k
- /usr/68k/include/kernhsp
- /usr/68k/include/kerniop
- /usr/68k/include/kernviop

Also, the symbolic link /usr/68k/include/dev_iop now refers to /usr/include/dev_iop. Likewise, /usr/68k/include/mbs now refers to /usr/include/mbs.

Bug Information

4

Fixed Kernel Bugs

This section lists problems with the ConvexOS kernel that have been fixed in this release.

(PR-09006) - It would be nice to have filesystems larger than 2 GB.

Resolution: The file and file system size limit has been increased to 1 terabyte.

(PR-18283) - This is a request for providing error indication to the event daemon. A CONVEX errno (error number) should be assigned to the MSL (Mass Storage Library - an E-Systems application) event daemon software. This assignment will allow the event daemon to indicate a failure to the application software when processing a kernel event call-out. This is necessary to provide an MSL user with the ability to distinguish between a CONVEX operating system error and an application event daemon error.

Resolution: Added the requested errno. Name EMASS Value 116 Text Event daemon application software processing error

(PR-19265) - jpstat.jp is built as a c2mp file, even on a C1.

Resolution: This bug is fixed for V10.0. It has been made to compile for a C1 on a C1.

(PR-19659) - The ConvexOS Configuration guide, First Edition, should include an entry for VME HYPERChannel in Table 3-1. LAN-204 HYPERChannel VME controller Table 3-2 should include entries for UltraNet and HYPERChannel.

Resolution: The required information is added in the V10.0 version of Managing ConvexOS: Configuration.

crash

(PR-19101) - System crash with the message, free: freeing free frag

Resolution: Fixed in patch 9.0.7 and V10.0

init

(PR-16066, PR-16150) - The operating system should have the capability to override XOFF on the console. It would be nice if it were implemented as a tunable: tune cpu console_auto_xon = 1

Resolution: In V10.0 flow control on the console will time out after 120 seconds.

kern

(PR-15829) - System crashed with a nonresident opte error when executing a ported version of the Austin Kioto Lisp code that uses mremap(2) system call.

Resolution: Fixed.

(PR-19279) - System crashed with an error 9925 ialloc.

Resolution: Fixed in patch 9.0.7 and OS V10.0

(PR-18766) - There needs to be krpc-specific error return codes for processes using the krpc mechanism.

Resolution: This has been done. Here are the details: NameEMASS Value116 TextEvent daemon application software processing error

(PR-19802) - As of Convex-OS 9.0, Convex has decided to disable execution of setuid/setgid shell scripts invoked through the #! mechanism. While this certainly fixes the security problems inherent with set[ug]id scripts on a BSD-based system, the "solution" Convex has taken is too strict. The correct solution would be for the kernel to just ignore the set[ug]id bits on a script, but to invoke the script anyway. This way one could write secure perl scripts with the "suidperl" mechanism.

Resolution: Due to conflicting demands from different sites, a new tunable, suid_shell_script, has been added. The default value of 0 causes attempted execution of setuid or setgid shell scripts to fail with errno EPERM (this has been the default behavior since version 9.0). A value of 1 causes setuid or setgid shell scripts to run as before 9.0 (i.e. the uid and gid are changed as they would be for a true a.out format file). A value of 2 causes the script to run, but the uid and gid of the caller are not modified.

(PR-21962) - mmap man page description of errno return code [EINVAL] does not include possibility that the maximum number of segments per process has been exceeded.

Resolution: mmap now returns ENOMEM.

kio

(PR-16477) - The performance of the stripe driver through the raw interface (/dev/rst*) is less than adequate.

Resolution: This problem is fixed in ConvexOS 10.0. The stripe driver has been completely overhauled.

krpc

(PR-17362) - Disk space is not freed for an unlinked file when a particular sequence of events occurs while using event daemons/krpc. The lost blocks are reclaimed only by "fsck".

Resolution: Fixed.

sgen

(PR-17440 PR-19313) - There is a documentation error (and it is repeated several times) on page 16-17 of the Managing ConvexOS: Configuration Guide. Each example of when the make utility gets invoked begins: `# ./make ...` The make utility would have to be resident in the current directory for this to work and it is clearly not. Each example should be changed such that it begins: `# make ...`

Resolution: The appropriate changes are made in the V10.0 chapter on sysgen.

sysc

(PR-16657) - dmon_ioctl 26 demonstrates a problem whereby the process will hang.

Resolution: Fixed

(PR-16686) - dmon_fcntl(...DMON_FDGETASSOC) as cshtst without permissions on the file does not result in EPERM.

Resolution: Fixed.

(PR-16829 PR-16831) - The pipe(2) man page says read(2) on an empty pipe with only one end returns an end-of-file; it actually returns 0.

Resolution: Changed wording to be more clear about what end-of-file means, namely that 0 is returned when nothing is read.

(PR-18338 PR-20528) - When gdb makes a "large" (e.g. > 12k) read request on a process file descriptor returned from pattach, the machine will panic.

Resolution: vs_kmap would loop through the regions that occupied the pages between vlow & vhigh where these were defined as:

vlow = btop(vaddr)

vhigh = btop(vaddr+bytes-1) vaddr+bytes > 2^32

and would then cause vhigh < vlow. This case was silently ignored which caused the kernel pte's not to be properly set up.

(PR-18796) - System crash; pte violation. pro_rw() did not update t.t_rval1 which is used by read() to update the f_offset in the struct file for the process. The seek() system call should not allow invalid offset for a process_file descriptor.

Resolution: Fixed.

(PR-21871) - The setgroups(2) man page does not appear in the printed version of the man pages.

Resolution: Fixed In ConvexOS Man Pages for Programmers, 2nd ed, released with ConvexOS V10.0.

sysgen

(PR-22434) - Performing a make after adding a files file which contains references to sources files fails when the /sys/h/object.h file is used in a compile. There is no "vm/mi_vm_vnode.h" to be included.

Resolution: Fixed.

tty

(PR-15457) - With ConvexOS 8.0, flow control support at the console appears to be be too slow. The problem was first observed by noticing that system consoles had data loss problems when the printer was enabled. This was confirmed with and without a printer on a C1. The problem is not present at 7.1, but is at 8.x and 9.0.

Resolution: Fixed.

ufs

(PR-19312) - It would be better if the uap structures created by the truncate and cvxtruncate calls were the same.

Resolution: Fixed in Patch V9.0.7 and in V10.0

(PR-20008) - The fhpath() system call will hang the system if called incorrectly by specifying file handles for both arguments.

Resolution: Fixed.

(PR-20004) - When mounting a file system without specifying a HIBLK mark, NO/LOBLK callouts are continuously generated once file system free space drops below LOBLK.

Resolution: mount has been fixed to disallow this situation.

(PR-20032 PR-22948) - When using the rename() system call to rename a directory through an event daemon, if the rename function fails, no unlink() is performed. The correct error is passed back to the application. This leaves the file system in an inconsistent state.

Resolution: Fixed.

(PR-20553) - When a device is associated with a daemon by use of a filehandle, LOBLK and HIBLK callouts are not received.

Resolution: Fixed.

(PR-22600) - An inherited event daemon association of a file may be lost if the inode cache entry is flushed and "iget" is used to retrieve the inode from disk.

Resolution: Fixed.

vfs

(PR-22596) - fdpath(2) and fhpath(2) do not correctly handle path components that start with '..'

Resolution: Fixed.

(PR-22690) - A kernel event daemon gets a write(2) error (ENODMON) when trying to write to a migrated, unlinked file. The association is being cleared after callouts are resumed (because the inode has no links), thus preventing the daemon from writing to the file.

Resolution: Fixed. The daemon association is now only cleared when the daemon itself removes the final link to the file.

vm

(PR-19023 PR-19271) - System crashed with Fatal Convex Unix Error: VM, 6648 cvx_free: multiple frees

Resolution: This bug is fixed in V10.0

Known Kernel Bugs

This section lists problems with the ConvexOS kernel that are known at the time of release.

arch

(PR-18162, PR-18445) - Certain bootcmd.local files will not boot a C2 with a large number of ptys. Reducing the number of ptys to 128 will allow the boot to complete.

asio

(PR-04079) - Async I/O behaves differently than buffered I/O. When using a SIGINT/SIGTERM handler that reopens stdin as /dev/null and then returns, an EOF is encountered on the next read of stdin and the program terminates gracefully when using buffered I/O. When using async I/O, the read returns a -1 indicating an I/O error.

cnvx

(PR-21015) - Several programs that were working under ConvexOS V9.0 and cc V4.1 will no longer compile under OS V9.1. Include files are in conflict. It seems to be attributed to the kernel reorganization under V9.1.

(PR-22405) - Something in the kernel interface for the debuggers periodically causes the debug process to hang. This has occured over several releases of the OS and has been reportedly seen in csd, CXdb, and a.db.

(PR-22901) - A call to cvx_restart_td with a null user pointer hangs instead of returning EINVAL.

(PR-22902) - The cvx_restart_td system call hangs if called with a null proc parameter, rather than returning EINVAL.

iosw

(PR-03774) - The remote crashdump server (crashreceive) does not include state transitions for all error events. For example, if the name of the tape device is typed incorrectly, then the crashreceive program returns an error packet and remains in the "waiting for BOF" state. When the crashdump program is restarted on the client machine, it sends a beginning-of-dump (bod) message to the crashreceive program. The crashreceive program rejects the bod and remains in the "waiting for BOF" state.

(PR-13906) - When the /tmp directory on the spu is missing, the 'spu' command gives an error that denies the file on the spu disk exists. 'spucmd' says that there is a file or directory missing, but doesn't say which one. If /tmp is missing on the spu, the software should either create it or give a better error message.

(PR-14638) - The crashdump -H option will fail if files like 'hsp' are not existent on the SPU even though they are not needed.

(PR-19318) - In both ConvexOS V9.0 and ConvexOS V9.1, the default statement for the switch(msg -> me_udata[0]) in kernviop/viop_dev.c on line 224 says: printf ("iop_dev: Unknown request %d from processor %d n", It should say: printf ("viop_dev: Unknown request %d from processor %d n", This can be very misleading when troubleshooting.

kern

(PR-16678, PR-17621) - On systems that are NOT networked, system time gains approximately 2 minutes per day.

(PR-17358) - The Australian time zone daylight savings rule (AEST/AEDT) does not work. When ConvexOS is installed and this daylight savings algorithm is chosen, the SPU correctly switches over to AEDT but the JP remains an hour slow at AEST. The times are correct, but the time zone is not, which makes the JP seem slow.

(PR-18083) - In the #if part of __stdc__, the line extern void exit(int) ; and in the #else part, the line extern void exit() ; is missing.

(PR-17460) - Signal handler will not continue after trap is received. When a trap (ie divide by zero) is received, the signal handler would like to note the error, skip over the offending instruction, and continue processing. There seems to be no way of achieving this goal. All attempts to skip the offending instruction fail.

Workaround: Supported work-around for this bug is to use setjmp/longjmp around the offending instruction.

(PR-19474) - swapstress causes a vgetstack kernel panic.

(PR-20244) - System hang. Probable cause is that vcopywanted is unsemaphored, which resulted in corrupted data structures.

(PR-21011) - Doing a simple example to lock a whole program in memory, it appears that everyone is able to specify and use pre-paged. If the program allocates almost all of physical memory, it crashes the Convex everytime. This has been reproduced on a C2 and a C1 with ConvexOS V9.0 and ConvexOS V9.1.

(PR-22330) - Calls to brk() and sbrk() fail after a call to mremap has been made.

(PR-22229) - The utility /usr/etc/rivet is designed to work with less than 5000 symbols. When executing a sysgen of OSI WAN 1.1 into ConvexOS, the resulting kernel contains about 5400 symbols. rivet does not check when exceeding the range of internal arrays defined at 5000 entries. Things get overwritten with data and the program aborts.

kio

(PR-13945) - The vprintf(3S) routines need to be interruptable when writing to a pipe.

(PR-12575) - If write(2) is called with a valid fd, but the buffer supplied is an invalid address (0, for example), -1 is returned and errno is set to EFAULT - which is correct. However, data is written to the file regardless of the error.

(PR-18881) - During performance testing for ITC, there was approximatly 8ms of overhead for 1Mb write operations. About 6ms were in vslock + vsunlock (called from physio). Currently, vslock+vsunlock are costing ITC a loss in transfer rate of about 1Mb/s or 7.6%.

(PR-20278) - System paniced with the following messages: [CPU00@15:40:05] illegal request... extends past end of device. [CPU00@15:40:05] ^G ConvexOS: FATAL ERROR: (kio,8002) ststrategy: empty queue

(PR-20633, PR-22034, PR-22389, PR-22518) - Closing a block special device may cause a kernel panic.

(PR-21410) - Device drivers will not open a device thought to have been closed by another process.

krpc

(PR-16818) - Running the acct test in either the os/eventd/order/nfs suite or the os/eventd/order/ufs suite causes the machine to go into a state where no process may exit.

(PR-17363) - A daemon(dmon) association with a device/file system is lost under certain conditions. The associations must be re-established when an offending sequence occurs.

(PR-18024) - A bmaphole callout was received for a file/file handle while callouts were suspended.

(PR-19342) - When /etc/faillog is logging to /usr/adm/failure_log, any perfectly valid man or syspic command puts an error into the file. This happens even when the file ownership, group, and permissions are correct.

(PR-21437) - The dmon association of a block device is only checked when the device is mounted. Therefore, to enable callouts on a fileysystem that is already mounted, you have to unmount and re-mount the filesystem. It should be possible to enable callouts for a block device at any time by setting the association.

(PR-20298) - Using the event dmon software, it it possible to create file systems that are unmountable, because the reference count on the vnode is incorrect. After the process is killed, the vnode will have a reference count of one, even though no process has the file open.

(PR-22213) - If a retry of a specific filesystem operation on a specific file system object is attempted while an event daemon is processing the first request, the attempt succeeds without involving the daemon. Commands such as touch and mkdir have exhibited this behavior.

(PR-22640) - Sending a fatal signal to a krpc client at the right time may cause the krpc server to spin forever, thus hanging the cpu.

os_pr

(PR-15319) - The mmap(2) man page does not describe the MAP_NOCORE option.

(PR-15748) - The manual page for sigvec has an incorrect type for the sv_handler field in the sigvec structure. sv_handler is shown as a pointer to an int function but is actually of type _SigFunc_Ptr_t, which turns out to be a pointer to a function returning type void. The man page should reflect this. Note that for -pcc compile mode, the man page is correct.

(PR-15800) - The fcntl(2) man page does not explain the FNDELAY flag under the Convex extensions. It only appears in the BUGS section.

(PR-17603) - The man page for cvxfhtruncate(2) states that EISDEV should be returned for the cvxtruncate family if the target file is a device special file.

(PR-17844) - The brk(2) man page has the following for the synopsis of the brk() function: SYNOPSIS caddr_t brk(addr) caddr_t addr; When this function declaration is included in a program, the compiler chokes on the caddr_t type, which is declared in the <sys/types.h> header file. Also, is the function declared in some other header file that should also be included?

(PR-17920) - The man page for setpid(2) does not document the fact that this system call is available only for programs compiled with ANSI C (and not K&R C). Either the function should be included in libc_old.a also, or the man page should specify that it is not available with programs compiled with the -pcc option.

(((PR-19072) - The tty(4) man page makes no mention of the POSIX-required restriction that limits the tty TIOCGPRGP ioctl call to the calling process' controlling terminal (even for root). Furthermore, it should point out that tcgetpgrp() is the preferred mechanism for this functionality and the tcgetpgrp() man page should be consulted for more details.) - PR-21215) - The man page for faillog(2) states the errno returned (in the errors section): [EISDIR] The named file is a directory. Yet, when passing a directory to faillog, it returns EACCES (Permission denied) instead.

(PR-20135) - The man page for sigblock states: Signal i is blocked if the i-th bit in mask is a 1. The file /usr/include/signal.h defines a macro, sigmask # define sigmask(m) (1 << ((m)-1)) This seems to imply that bit i-1 corresponds to signal i.

(PR-20605) - The routine vadvise disappeared, but is described in the man pages. The routine madvise, as mentioned in the vadvise man page is not described in the man pages or manual.

(PR-22251) - The mmap man page makes reference to the number NBPG (number of bytes per page) but this is not defined in the include files that it references: sys/types.h and sys/mman.h . In reality, this is defined in pagsiz.h.

(PR-22278) - The "SEE ALSO" section of the mremap(2) man page needs to be made more explicit. > SEE ALSO > mmap(2), munmap(2), msleep(2), mwakeup(2), msync(2), tas(3) > Using Shared Memory ^^^^^^^^^^^^^^^^^^^^ Should probably be CONVEX Interprocess Communication Programming Guide.

(PR-22580) - The O_LARGEFILE option is not documented on the fhopen(2) man page.

pm

(PR-08915) - If the last file descriptor is used as a process descriptor, a lock in sys_process.c is not released when the process tries to exit and the system hangs. This problem is aggravated by a bug in the debugger which doesn't close process file descriptors when they are no longer needed.

(PR-12370) - The CPU time hard limit is ignored by the kernel. A process can ignore the SIGXCPU signal and run forever, no matter what its hard limit is. Once a process exceeds its hard CPU limit it should be terminated. Also, if a program sets up a signal handler for SIGXCPU and then exceeds its hard limit it will receive SIGXCPU continuously. It should receive the SIGXCPU once, after it exceeds its soft limit.

(PR-17527, PR-18041) - The setrlimit system call documents that the RLIMIT_RSS value encourages a maximum resident set size for processes. When this call is made, the operating system places the specified value in the vs_maxrss field in the virtual space structure for the process and the process' children. However, the operating system doesn't reference this field. In other words, setting the maximum resident set size doesn't do anything. This includes CXbatch, since it uses setrlimit.

(PR-20331) - ConvexOS: FATAL ERROR: (pm,8516) trap: unresolved kernel pte violation The apparent cause was a failure in the kernremap function. It somehow managed to return an invalid address.

(PR-20643) - System crashed with crash code (pm, 8516), "trap: unresolved kernel pte violation". The panic occurred in the NFS code due to a duplicate allocation of cvx_malloc() memory.

scfs

(PR-15787) - The system crashed with: Fatal Convex Unix Error: dustrategy: odd block number (bad makefs parameters)

schd

(PR-18285, PR-19545) - System crash. The problem appears to be that the freelist defined by fn_buf and fn_bufend in the fifonode structure has been corrupted. This may have been caused by the absence of locks in the fifo_close and fifo_buffree functions.

(PR-18597, PR-21270) - There is a long term problem that has been difficult to reproduce: debuggers hang waiting for a context switch (?). csd and gdb both experience this problem.

(PR-21637) - ConvexOS sometimes allows the Frame Length bits in the PSW to be changed. Presumably this happens when a process is rescheduled.

(PR-22193) - Shell processes that start up other long running cpu intensive programs should go to an idle state after 20 seconds of doing nothing. Instead they are stuck in disk wait, causing share to malfunction.

sgen

(PR-07681) - Sysgen does not flag an unsupported disk type as an error.

(PR-18365) - If all references to a certain device are removed from the sysgen configuration file and a new kernel built, the kernel will still contain the device driver for the removed devices.

sync

(PR-21105) - Looks like head one and head two have deadlocked the system contending over a semaphore. The other possibility is that someone has previously set rws_write in the semaphore structure, and these two guys are stuck in busy loops trying to get it. This would be unfortunate, since there is no way for the process holding the lock to reawaken and release it.

sysc

(PR-15617) - The creat(2) system call does not allow a path name of length equal to PATH_MAX; it only allows a path name length of PATH_MAX - 1. The green POSIX book, on page 46, defines PATH_MAX as "Maximum number of bytes in a pathname (not a string length; count excludes a terminating null)."

(PR-15666) - In the test os/syscalls/comm/send/send11, the test is able to send data when it should be denied. Also, when trying to get the msg size overflow error, it gets a no buffer space available error instead.

(PR-15956) - When using write() on a tty line and the V/async is interrupted, write() does NOT return the correct number of bytes written.

(PR-16685) - dmon_fcntl(...DMON_FDCLEARASSOC,4) does not return ENODMON; it returns without an error.

(PR-17629) - If fdpath(2) is called on the fd resulting from fhopen(2) then the process will go into <exiting> state when it exits.

(PR-17544) - The cvxtruncate call does not return the EISDIR message. Additionally, information returned upon inspection of the test directory is not correct.

(PR-19075) - When calling sigaction() to set the signal handler for SIGSTOP to SIG_DFL the routine returns with EINVAL, but should succeed.

(PR-20856) - When uname(2) is called, systems from other vendors return such things as "SunOS" or "AIX", but ConvexOS returns "vmunix" for SYSNAME.

(PR-21115) - The setgroups() system call causes a core dump when the gidset parameter is NULL.

(PR-22239) - System call getsysinfo returns incorrect interleave factor on a C3800.

(PR-22454) - A call to getrusage returns wrong values for the ru_msgsnd and ru_msgrcv fields of the rusage structure when run on a C1.

tty

(PR-16963) - Under the POSIX tty driver using the termio routines, turning off IEXTEN causes the tty driver to no longer honor the output post processing request of mapping newline to carriage-return/newline. Instead, it just echos the newline.

(PR-17053) - When using the old tty line discipline, setting tty attributes using the TIOCSETP ioctl command with any arguments causes the ECHOCTL bit (in the c_lflag) to be set in the tty's termios structure.

ufs

(PR-07259) - umount -a leaves a process behind if a file system is busy. Future attempts to umount the file system fail even if it is not busy anymore. The user must explicitly kill the running umount -a before issuing the command again in order for it to work.

(PR-19546) - swapstress causes a kernel panic in the filesystem.

(PR-19291) - Sometimes when booting, the nfsd daemons do not start. The if statement in the /etc/rc.local does not evaluate correctly. This causes the xtab to be left in an old and outdated state which is confusing once the system is up, i.e. it appears NFS mounts are done but they are not.

(PR-19990) - System crashed with (ufs,9932) free: freeing free frag. Delayed write buffers get sync'ed asynchronously, and nothing checks for an error return status when the write completes. If a failure occurs, the delayed write flag should be turned back on so the system will retry.

(PR-20663) - The kernel can hang in the vcopy routine when doing block moves involving filesystems with large block sizes.

(PR-20977) - When directly accessing stripes via the block interface, performance doesn't scale up as the size of the I/O transfer increases. This requires the use of obscure async I/O techniques to get high performance. Performance should be more predictable when accessing stripes via the block interface, and should scale up with the width of the stripe and the size of each individual transfer.

(PR-21129) - A process pended in a system call because it is waiting in a dmon callout will see the system call fail with errno set to EINTR after being suspended with a SIGTSTP and resumed with a SIGCONT.

(PR-21893) - An application doing I/O on a block or character device is able to do negative offsets to lseek. An application that is doing I/O to a block device such as /dev/du8g that accidentally does an lseek to a negative offset can inadvertently write on the /dev/du8b partition.

(PR-20844) - It is possible for the freelist to be trashed in iget() due to race conditions.

(PR-22534) - The indirect address pointers in the inode structure are not replaced with a -1 when the associated data is migrated. Consequently, the indirect data blocks containing addresses to the data are not freed (the data blocks containing the actual data are freed). This results in an accumulation of unusable disk space.

(PR-22604) - A process that opens a file and then forks, yields unexpected results when both the parent and child process write to the same file descriptor.

vfs

(PR-19788) - cvxfhtruncate on NFS file sets errno incorrectly. errno is set to ENOENT rather than EREMOTE.

(PR-20065) - Disk performance testing on systems with many disks shows vastly different performance depending on the size of the installed memory.

((PR-20971) - PR-20971) - If a system with a stripe with one failed disk crashes, the data on that stripe can become corrupt.

Workaround: Systems should not use failed mode as normal mode of operation.

(PR-21750) - Measurements of redundant disk performance on a C240 (2 IDC controllers, 40 IPI disks, 512M memory), indicate that redundant stripe performance can substantially degrade when writing out a stream of data larger than about 256M. This only occurs on systems with large amounts of memory that expect to do large sequential writes.

vm

(PR-07687) - Page table entries are not always cleared when a buffer is part of a kluster, or when physmap is used.

(PR-09296) - When using mmap to create shared memory segments between two processes (one controlling the other via pattach), the mmap call on the controlled process' side fails when trying to mmap the *first* segment mmap'd by the controlling process.

(PR-13358) - The swapper ignores IO errors.

(PR-20900) - System panics with 'panic(vm,6631) non-resident opte' after running short C program that calls mmap(2).

(PR-22653) - Access (via mmap) of an 8k file on a file system with an 8k block size succeeds even though more than 8k is accessed. The process should also get a SIGSEGV since the MAP_EXTEND option to mmap was not used.

(PR-23136) - The MAP_DEBUG option to mmap causes mmap to print the message, "mmap: overlaps another region", even when regions don't overlap. In this case, mmap does not return -1.

Fixed Utilities Bugs

This section lists problems with the ConvexOS utilities that have been fixed in this release.

/usr/src/convex/nu.c

(PR-21057) - The file /usr/src/convex/nu.c does not compile.

Resolution: Fixed.

MAKEDEV

(PR-16640) - Permissions of /dev/MAKEDEV are 755. Although mknod's can be done only by root, these permissions should be more restrictive.

Resolution: Fixed for 10.0. MAKEDEV is distributed 744 now.

a2p

(PR-18090) - /usr/bin/a2p core dumps when attempting to convert an awk script.

Resolution: This problem has been fixed.

access.2

(PR-18880) - The declaration of access() is incorrect. It contains an extra parameter, "accessible", which is not documented correctly in the man page.

Resolution: Description of the arguments has been corrected.

accounting

(PR-14268) - The accounting files are padded with empty entries if a very high userid(65534) is present in the /etc/passwd file. This causes the accounting files to grow large when only one record should be added instead of many. It wastes disk space at no benefit.

Resolution: sa(8) still leaves empty records for unused user-ids, but now it leaves them as holes in the file rather than zeroed out records. This reduces the sizes of the summary files considerably.

(PR-14994, PR-20263) - /usr/adm/accounting cannot be run unless '.' is in path. Accounting does not use fully qualified path names for the scripts it calls.

Resolution: accounting has been changed to execute things like "daily" with "./daily".

(PR-19683) - The accounting script, /usr/adm/daily, makes four copies of acct, therefore producing reports for four different data files versus one.

Resolution: daily now uses the new "-p" option in sa which allows sa to preserve the contents of the accounting file while summarizing it. The copies are no longer needed, and the "-p" option is not used on the last run of sa which will cause it to truncate the accounting file at that point.

adb

(PR-19746) - The help file for adb (/usr/lib/adb/helpfile) contains the following two errors: (1) In the description for "[cnt]$n" the second line says "it's" where it should say "its" and (2) In the description for ":e" the word "disposition" is misspelled as "dispostion" (second "i" missing).

Resolution: These problems in the helpfile have been fixed.

adb.1

(PR-20819) - The adb.1 manual page has references to UNIX which need to be changed to ConvexOS.

Resolution: All references to UNIX have been replaced by ConvexOS.

aliases

(PR-19338) - The 9.0 version of ftpd contains the remote help message: 214 Direct comments to ftp-bugs@hostname. but there is no default ftp-bugs alias distributed in the /usr/lib/aliases file. Probably should be: "ftp-bugs: root" as a default.

Resolution: An alias for "ftp-bugs" has been added to the default aliases file.

ar

(PR-05888) - An archive can get munged when two operations are performed on it simultaneously.

Resolution: ar(1) now uses flock(3) file locking to coordinate accesses to library archives.

(PR-16457, PR-21533) - When using ar to replace an object in a library and the filename is truncated, the user gets what looks like an error message. The operation succeeds, but it is unclear what happened from the message printed.

Resolution: ar now tells the user that the truncated filename message is a warning, rather than an error.

avail

(PR-17071, PR-17072) - avail prints the following message when /usr/spool is more than 98% full: /usr/spool is at 98 capacity 1) 98 capacity should read 98% capacity 2) since /usr/spool is not usually a disk partition, it should report the actual partition that is full (ie /usr).

Resolution: avail now formats the partition full message properly.

awk

(PR-18002) - None of /bin/awk's size limitations are documented in its man page.

Resolution: Documented maximum line length, number of fields, and number of temp files in the INTERNAL LIMITS section.

binmail.1

(PR-20932) - The /bin/mail man page lists xsend(1) in its SEE ALSO section. xsend is a mail command which Convex doesn't support or ship.'

Resolution: All mention of xsend(1) has been removed.

boot

(PR-18996) - Since it is necessary to change "console" to "console -m 2" in the /mnt/os/boot file, the change should become standard in the production release.

Resolution: The change is now included.

catman

(PR-20226) - 'catman -p' does not behave as prescribed in the catman(8) man page.

Resolution: catman -p now functions according to the man page description and only prints what it would do without doing it.

(PR-21631) - The perl script "catman" creates a variable "$MAKEWHATIS" and assigns to it the value "/usr/local/lib/makewhatis". This file does not exist. Just above that assignment is a commented out assignment to the same variable of the value "/usr/lib/makewhatis". This file does exist.

Resolution: catman now knows that makewhatis lives in /usr/lib, not /usr/local/lib.

chfn

(PR-15297) - chfn only checks uid when making modifications; it should match both username and userid to avoid changing multiple entries.

Resolution: Chfn(1) is now more careful about checking and updating lines fetched from the password file so as to not confuse lines containing null entries (e.g. +:) with root.

chkpnt

(PR-15953) - chkpnt no longer seems to recognize one side of a piped process. When checkpointing a process hierarchy interactively which includes a pipe, chkpnt used to complain if you told it to chkpnt only one side of the pipe; it now no longer does this.

Resolution: Fixed in V10.0.

(PR-19731, PR-19741, PR-21014, PR-21460) - If a job is checkpointed and killed (-k HUP), then restarted and either allowed to run to completion or killed again, the accounting record for the time from the restart until the job stops will show a negative value for the memory field (k*sec).

Resolution: Fixed in V10.0.

chkpnt_gd

(PR-17654) - Request that man pages for checkpointing be included in the checkpoint/restart guide.

Resolution: The checkpoint/restart guide is now part of the ConvexOS Extensions User Guide. The man pages are in there too.

ckpnt_gd

(PR-17328) - In the Checkpoint Restart Guide, 1st Edition, Chapter 3, Checkpoint Restart Programming Interface, page 3-2, the paragraph describing the "checkpoint file name" says The maximum length of "name" is 16 characters, in addition to the null terminator. There is no restriction on the length of the name parameter. The sentence should be removed.

Resolution: Fixed in checkpoint section of ConvexOS Extensions User's Guide, 1st edition, published with ConvexOS V10.0.

(PR-17563) - In the Checkpoint Restart Guide (1st Edition, Nov 1990), the description of Uncheckpointable Processes on page 1-3 is incorrect. It says: o Have more that 58 memory segments. This should be corrected to "50 memory segments," or better still, reference CHKPNT_MAXREGIONS from <chkpnt.h>. Then CHKPNT_MAXOPENFDS should be used instead of the "250 open file descriptors" 2 lines above this one.

Resolution: Fixed in checkpoint restart section of ConvexOS Extensions User's Guide, 1st edition, released with ConvexOS V10.0.

(PR-18334) - The Checkpoint Restart Guide needs to discuss the ramifications of checkpointing applications that use random access data files and tell when the -C option must be given to chkpnt and restart.

Resolution: Added a paragraph to the "Files Used by Checkpointed Processes" in the first chapter.

cnxos_smg

(PR-06730) - The appendix which describes the submission of a contact report should reference the contactcap(5) man page, or should perhaps describe how to set up contact from scratch.

Resolution: There is now a chapter in Managing ConvexOS:Configuration Guide that describes how to configure contact.

(PR-14345) - contactcap needs a clear explanation and example of how to set-up contact via Internet.

Resolution: There is now a chapter in Managing ConvexOS:Configuration Guide that describes how to configure contact.

(PR-15350) - When running fsck you may get a message: HOLD BAD BLOCK? This is not documented in the System Managers Guide appd. A of Appendix B. It should be documented well enough so that the user knows whether they should answer yes or no.

Resolution: Added an explanation of this message to the "Checking the File System" chapter of the Operations Guide.

(PR-13962) - In the entry for /etc/syslog.conf (Appendix A, page 53 of the System Manager's Guide, 10th edition, Dec 89, No 710-001430-206), the list of available facilities is incomplete.

Resolution: Facilities list has been expanded to include the available options.

compact

(PR-12969) - In the V8.x - V9.0 releases with quotas turned on, if a user is over their BLOCK LIMIT and invokes 'compact' with a wildcard (*), compact will delete the file(s) the user is attempting to compact and will leave a zero length fname.C for each fname associated with the wildcard.

Resolution: compact now prints an error message and preserves the original file when the compacted file cannot be written for any reason.

contact

(PR-10180) - This is a request for contact to save its report if a SIGQUIT is received.

Resolution: contact now treats SIGQUIT the same as SIGINT - when received, it will ask the user if they really want to quit before exiting.

(PR-09636) - The contact utility generates mail messages which do not have a 'To:' line in its mail headers. While this does not violate the letter of RFC 822, it does not seem reasonable stylistically.

Resolution: contact now places a "To:" line in the header of the message.

(PR-17006) - "^D to terminate" is somewhat misleading. ^D actually takes the user to the next prompt.

Resolution: The message has been changed from "to terminate" to "when finished".

contactcap

(PR-10343) - To get contact working with a dialup UUCP conection, it is necessary to have the field :uu: in the contactcap or else the useless message "Mail/UUCP not available to Convex" is displayed and contact exits.

Resolution: There is now a chapter in Managing ConvexOS:Configuration Guide that describes how to configure contact.

cp/mv

(PR-09321) - It would be nice if Convex supported the -z option on the /bin/cp command. This option, taken from Research Version VIII, allows copying files with "holes" (long strings of null bytes) without losing those holes as normally occurs, because the program detects them and lseek()s appropriately.

Resolution: Both cp, and mv (which has its own internal cp fucntion) both understand the -z flag, and when it is specified, holes in files are preserved.

cpio

(PR-14950) - cpio is dumping core. It appears that it either got a pathname too long for it to handle or it got confused by a symlink that pointed nowhere.

Resolution: The max path size has been increased in the pcc mode. There was an array overflow condition when handling very large paths in pcc mode. The new PATH_MAX is 1024.

(PR-15871, PR-19824) - cpio -oacB doesn't correctly create an archive. When encountering a name on stdin that is a directory name, it includes all files within the directory into the archive before continuing with the files listed on stdin.

Resolution: cpio no longer recurses into directories just because they are in the input stream. If there is just a directory in the input stream, only a directory is added to the archive.

(PR-17774) - Null lines (ie, lines consisting of just <cr>) in the input stream causes /bin/cpio to jump to the default of loading everything in the directory tree. This is different from previous OS releases which allowed for null lines in the standard input.

Resolution: Fixed for 10.0.

cpio.1

(PR-15745, PR-16049, PR-19824) - The man page for cpio says: The owner and group of the files will be that of the current user unless the user has appropriate privileges, which causes cpio to retain the owner and group of the files of the previous cpio -o . cpio does not retain the owner and group of the files. The extracted files will be owned by root, not the user who created the tape/file.

Resolution: cpio now sets the owners on files if the user is uid 0 (aka, root).

(PR-21652) - cpio(1) man page recommends unsupported -depth option of find(1).

Resolution: The cpio.1 man page no longer references the (unknown to CONVEXen) -depth option to find.

cron

(PR-09094, PR-14610, PR-20806) - cron should mail back stdout and stdout of the command to the user if they exist, as well as any non-zero exit status of the command.

Resolution: This is now a configurable option in cron. Setting "CRONREPORT=1" in a user's .cronrc file will cause cron to do these things.

cron.1

(PR-16462) - Some of the examples on the cron man page can be cleared of duplicate and superfluous entries.

Resolution: Updated the example.

crontab.5

(PR-20456) - Manual page discrepancy between crontab(5) and cron(1) in how stderr and stdout is handled if not redirected by user.

Resolution: Clarified the description of the CRONREPORT option.

csh

(PR-07706) - If the "source" command in csh is used to execute a shell file and then an attempt is made to stop the shell command file (or command) with ctrl-Z (suspend), the process being executed will be stopped, but the shell will not wake up. The process must be killed from another line, since that line is effectively hung.

Resolution: The 10.0 csh no longer exhibits this problem. The source'd file is aborted at the point where suspend is entered, and the process that was running is suspended. That process can be resumed, but will only run to completion, and the rest of the sourced file will be ignored.

(PR-09926) - Request that Convex support the 4.3 csh's mechanism to set hard limits as well as soft ones via 'limit -h'.

Resolution: This functionallity is included as part of 10.0 csh, which is based upon tcsh 5.20.

(PR-09929) - Using colon modifiers on environment variables causes very strange output.

Resolution: The new 10.0 csh fixes this problem.

(PR-11029, PR-16922, PR-16976) - The csh does not do filename completion at all, although BSD 4.3's does. Request upgrading to 4.3 csh.

Resolution: File name completion (and command completion) is provided as part of the csh shipped with 10.0. This csh is based upon tcsh 5.20.

(PR-15594) - csh seems to have a problem with either the aliasing of tset or the output it produces. The "t" alias works fine under both tcsh and csh, but the "tset" alias bombs.

Resolution: csh no longer generates a core dump when expanding a recursive alias, such as the following: alias tset 'eval "'tset -s !*"' instead it returns the following error message: Fork nesting > 16; maybe '...' loop.

(PR-16665) - When reporting a bad history invocation, the csh uses printf where it should be using puts. This generates a coredump: "!?%f" and anything with a % in it comes out pretty wierd.

Resolution: csh no longer attempts to do percent subsitution on error texts.

(PR-17109) - When setting limits with the limit command, the csh "attempts" to round the limits to the next highest K. This results in 512 bytes being added to the requested limit for any of the file/memory limits.

Resolution: csh now does more proper rounding of values passed to limit.

(PR-17582) - Request for the limit command to accept the -h option to irreversibly lower hard limits.

Resolution: The V10.0 csh supports this functionality.

(PR-19266, PR-19811, PR-20077, PR-20435) - When history is piped into more under the csh, both processes suspend with a "Stopped (tty output)" message.

Resolution: This is no longer a problem in V10.0.

(PR-21045) - The command "!a%888888f " will cause csh to die and dump a core file.

Resolution: The new csh included with 10.0 no longer demonstrates this problem.

csh.1

(PR-22016) - Typo found on Page 6 of 'csh(1)' man page, second to last paragraph. Last line of paragraph. "...Within souble quota-" This word should be "double".

Resolution: Fixed the spelling error.

ctar.8

(PR-16959) - The man page for ctar.8 is confusing. The descriptions for the c and r options are opposed, yet it is stated that use of the c option implies the r option. r The named files are written on the end of the tape. The c function implies this. c Create a new tape; writing begins on the beginning of the tape instead of after the last file. This command implies r.

Resolution: Removed the confusing cross-references and improved the descriptions.

cvxstat.2

(PR-19384) - The cvxstat(2) man page says: [EINVAL]len is than or equal to zero. It's missing the word "less."

Resolution: The typo has been fixed.

(PR-20965) - The cvxstat(2) man page claims that the st_atime field of the cvxstat structure is modified by the truncate(2) system call. Actually, it is the st_mtime field that is updated.

Resolution: Fixed.

date.1

(PR-19111) - On the date.1 man page, 'affect' should be 'effect': Hence, specifying the time zone to be cdt in January will result in EST being displayed by date since daylight savings time is not in affect in January for the central time zone in the United States.

Resolution: Modified date.1 to use correct word "effect" rather than "affect".

df

(PR-19584) - df will exit with status == 1 when NFS servers don't respond, even if the filesystem being checked is not an NFS filesystem.

Resolution: df no longer returns a non-zero value from a down NFS server when looking only at a local file system.

(PR-20665) - ConvexOS 9.1 /bin/df appears to have been compiled with debugging information.

Resolution: The V9.1 version of df does appear to have been built with debugging enabled. The V10.0 version of df is built properly.

diff

(PR-17249, PR-20009) - When the -D option of the diff command is executed, code is generated that will choke an ansi C compiler. The preprocessor syntax should be changed from: #endif string to #endif /* scalar */

Resolution: diff now emits ANSI-compliant cpp directives when the "-D" option is used.

dir.5

(PR-18275) - In the man page for dir(5), the user is instructed to use <sys/dir.h>. However, the first comment in <sys/dir.h> is that the user shouldn't be using <sys/dir.h> but rather <dir.h>. The man page needs updating.

Resolution: Fixed for 10.0.

du

(PR-17673) - du should use strerror to display error messages when fork() fails.

Resolution: Fixed for 10.0.

dump

(PR-16907) - When dumping an active, mounted filesystem with the -a option, the operator sees messages like: DUMP: Inode number 12345 is not dumped, it is has been changed since the dump began. The word 'is' is unnecessary.

Resolution: This has been corrected in the 10.0 version of dump(8).

dump.5

(PR-16996, PR-18869) - The dump(5) man page refers to an include file of "<sys/inode.h>." The include file should be "<ufs/inode.h>" instead.

Resolution: dump(5) has been changed to reference <ufs/inode.h> instead of <sys/inode.h>.

emacs

(PR-11126) - Execution of (x-set-mouse-color "") or with a valid color string causes a core dump.

Resolution: Upgraded to emacs V18.57; problem no longer exists.

(PR-11494) - The emacs man page lists several default options that can be initialized via the .Xdefaults file. Some of these options, specifically, emacs*iconGeometry, have no effect.

Resolution: Corrected in the Updated Emacs V18.57. Much more X support.

(PR-16147) - Request that convex support version 18.55 of GNU Emacs.

Resolution: Upgraded to emacs Release 18.57.

(PR-16798) - If one uses emacs on large files (at about 90 MB), the user can not go to the bottom of the file.

Resolution: Upgraded to emacs V18.57, problem no longer exists.

execve.2

(PR-20216) - In the execve man page, the word "privilege" is misspelled.

Resolution: The spelling error has been corrected.

file

(PR-05988) - The file command takes up to 6-7 CPU seconds to check a single file. It probably could be sped up.

Resolution: The performance of file(1) has been significantly improved.

(PR-14905, PR-20330, PR-20544) - Files of the form: #!/<path>/<executable> Should report: <filename>: <executable> commands text

Resolution: file(1) is now smart enough to correctly identify scripts that begin with "#!".

(PR-18990) - The file command has an undocumented, fixed-length internal table for its magic numbers. The table should be allocated dynamically.

Resolution: file now dynamically allocates entries for the magic numbers.

find

(PR-18012) - There is no warning about using find on NFS. The dangers of using find over NFS should be placed in the man page.

Resolution: Warning added to the NOTE section.

(PR-18321) - /usr/bin/find will search an NFS partition even when it is told to prune the partition.

Resolution: The solution recommended in the problem report has been incorporated into the product.

(PR-19258) - When doing find . -inum on an inode which exists (and can be found), find exits with status == 101. Running the same find on a 9.0 system results in an exit code of 0. Find is also broken when -size is used, and quite possibly anything else which does not go through the file name globbing routine.

Resolution: find(1) will exit with a status of 0 if any match to its parameters is found.

(PR-19932, PR-20442) - Exit status for find is inconsistent with man page.

Resolution: Find(1) fixed to comply with exit status behavior documented in its man page.

(PR-21884) - find(1) strips off sign characters before doing name matches. As a result, files starting with a '+' will never be found (but a file with the same name without the leading + will be found).

Resolution: Name comparison, if specified, is now made before leading + signs are stripped.

finger

(PR-19903) - Line 1260 of finger.c contains putchar(c ^ 100); Obviously 0t100 was not what was intended.

Resolution: Bug reported on net and fixed accordingly. Leading zero of octal number was left off.

(PR-21001, PR-21428, PR-22794) - Finger dumps core if /etc/utmp is empty.

Resolution: Fixed bad code - structure pointer was not checked for validity.

(PR-20847) - finger(1) is not returning "office" information for users on dial-in lines.

Resolution: finger adjusts the short form output if a user is logged in on a dialup line. This behavior has been documented in the man page.

fsck

(PR-03882) - /etc/fsck should be modified to use a "dirty bit" in the filesystem. When a filesystem is properly unmounted the bit should be set to "clean." Thus, fsck/preen will only run on those filesystems which require it.

Resolution: The requested enhancement in functionality has been added.

(PR-12534, PR-15726) - Request that fsck handle pathnames longer than MAXPATHLEN.

Resolution: Function getpathname was modified to return a malloc()'ed string containing pathname which is free()'ed by calling functions. This replaces the character array parameter of previous versions. fsck will no longer abort when encountering a pathname of length greater then MAXPATHLEN.

(PR-18346) - fsck does not handle files 2^31-1 in size well. When rebooting fsck complained that it couldn't correct problems with a file which consisted of a 16k block at offset 0 and another 16k block at offset 2^31-16k. After running fsck manually, it removed the file and continued on correctly.

Resolution: Large file support and 10.0 rewrite of fsck eliminated this problem.

fstab.5

(PR-19975) - The fstab.5 man page incorrectly states: The final field, mnt_passno, is used by the consistency checking program fsck(8) or preen(8) to allow overlapped checking of filesystems during a reboot. All filesystems with mnt_passno of 1 are checked first simultaneously ....

Resolution: The man page has been changed to say that preen ignores the mnt_passno field.

fstat

(PR-18001, PR-19549) - /usr/etc/fstat is printing a 'C' flag where it really needs to print an 'r'.

Resolution: This problem has been fixed. The flags field is displayed properly now.

(PR-18341) - fstat(8) was not updated to do something intelligent when it finds an fd of the new DTYPE_KRPC.

Resolution: fstat now correctly identifies descriptors of type DTYPE_KRPC.

(PR-18978) - fstat uses nlist() instead of knlist(), which makes it unnecessarily slower.

Resolution: fstat now uses the faster knlist() routine.

getpattr.2

(PR-20696) - The symbolic constant ESRCH is spelled ERSCH in the ERRORS section of the getpattr man page.

Resolution: Fixed.

grep

(PR-19896, PR-21098) - grep(1) will always exit 0 when the '-v' option is used.

Resolution: grep -v was exiting with status 0 regardless of whether or not the pattern was in the file. grep -v now exits with 1 if the pattern was in every line of the file.

hypot.3m

(PR-18687) - The hypot(3m) man page doesn't say what happens when an error occurs. Is errno set? Also, it doesn't say which functions are available in what compatibility modes of the C compiler.

Resolution: The man page has been enhanced several times since this bug was reported.

in.comsat

(PR-13837, PR-18222) - A hole in comsat can be used to write to or clobber an arbitrary file on the system. It can also be used to gain superuser access by creating a Trojan Horse.

Resolution: in.comsat now checks that the owner of the tty device has not changed after operations which may block.

inline.8

(PR-19973) - Since the kernel is built with the new compiler, the old inline program is not shipped. The man page for it _is_ shipped, as man8/inline.8. It should be removed.

Resolution: The man page for inline(8) has been removed for the V10.0 release.

install

(PR-10534) - The installsw script for the utilities prints "Installation begun" for each product, but then asks the installer for a password. It should ask for a password first and then say "Installation has begun."

Resolution: This problem is fixed with the new GIP format install tapes.

(PR-15124, PR-17472) - Tapeless installation of ConvexOS will fail if the remote system has a bad /usr/lib/tape/config.db database or has /dev/lt devices.

Resolution: Remote installations are handled differently beginning with the V10.0 release. They are done using rsh(1C) and rcp(1C), rather than the tape system.

(PR-17469) - When a remote installation is complete, the directory, local:/tmp/rinstall, is automatically removed. This is annoying if the remote installation fails and the tape must be used again immediately (to try again, for example).

Resolution: Fixed for 10.0 with transition to GIP.

(PR-18682) - It would be nice if more than one optional product could be selected at one time at the menu prompt instead of selecting one at a time before doing the install.

Resolution: The V10.0 release of the ConvexOS Utilities tape uses the generic installation procedure, or GIP, for installation. With GIP you can specify multiple products on the same line.

(PR-18659, PR-20350) - During a 9.0 upgrade, /etc/lpc is not moved to /usr/etc/lpc with the symbolic link put in its place.

Resolution: Set up correct procedure to remove executables and establish new links for all files which have moved from /bin and /etc since release V8.1. This occurs during the V10.0 User Upgrade.

(PR-18755) - Step 5 of "Updating a Local System" instructs the user to remove tmp files that were created during installation. However, all file systems were unmounted in the previous step (as shown in the pictured screen).

Resolution: The install procedures have been rewritten. The V10.0 install notes instruct the installer to mount the correct file systems before accessing any files contained therein.

(PR-18249) - If / is created from scratch, the passwd entry for uucp has a blank passwd field. UUCP logins should be disabled by default for security reasons.

Resolution: The uucp account in the default passwd file now has a password of "*". This will prevent anyone from using it until the system manager has configured the system.

(PR-18846) - The Installation Procedures for ConvexOS 9.0 didn't work very well for several reasons: 1) The Installation procedure for tapeless machines uses the undocumented tpconfig add peer command. 2) The Installation Procedure deletes comments in /etc/inetd.conf 3) The Installation Procedure doesn't ignore ignore-lines in /etc/fstab when doing consistency checks. 4) It seems not to be necessary to have the system with the tape drive with the same software as the system without the tape drive.

Resolution: The installation procedures have been rewritten for the V10.0 release in GIP format. These kinds of problems have been taken into account in the new procedures.

(PR-19572) - The usage message of install is incomplete. The 'binary' and 'destination' arguments are not mentioned.

Resolution: Modified usage text to include "binary" and "destination" arguments.

(PR-19654) - rpc.statd and rpc.lockd are not part of the /usr upgrade. They are necessary for the tape system.

Resolution: rpc.lockd and rpc.statd are now treated as part of the base product, rather than the NFS product.

(PR-17129) - If a /.crontab file exists (a file, not a link) when a system is upgraded to V9.0 or V9.1, the file is not restored.

Resolution: Added /.crontab to the normal list of user files to save and restore during the V10.0 Root Upgrade.

(PR-19893) - If /tmp is a real file system and it is *not* mounted before running installsw, the utilities install script mounts the real /tmp, gets confused, and then manages to severely mangle / and /usr while moving files about. Currently the installation notes say to have /tmp mounted *before* running installsw. The install script checks for this error, but the check is somehow wrong and should be fixed.

Resolution: All utilities installations now use the GIP product for installs. GIP by default mounts all 4.2 files systems before actualizing the install.

(PR-19920) - The makefile, usr.bin/yppasswd/Makefile, when invoked with 'all' will overwrite the non-secure yppasswd with the secure yppasswd binary. usr.bin/Makefile is incorrectly invoking usr.bin/yppasswd/Makefile with the 'install' parameter when the target is 'secure_tape". The parameter should instead be 'secure_tape'.

Resolution: This problem has been fixed.

(PR-20957, PR-21221) - After upgrading ConvexOS from V9.0 to V9.1, autoseq malfunctioned. Typing 'q' to exit a notes file resulted in the message: lock n (<notesfile>) permanently locked The protection of /usr/spool/notes/.locks was wrong after the upgrade The mode had to be changed using "chmod g+w /usr/spool/notes/.locks" to get autoseq working again.

Resolution: The notes directories have the correct owner/group/mode in the V10.0 release.

installsw

(PR-17956, PR-18415) - Running /etc/installsw with a tape device that cannot be opened by the user terminates without an error.

Resolution: Fixed for 10.0. installsw now does a perror() when it can't open a tape drive.

(PR-17958) - If you enter "installsw" with no arguments it won't take SIGINT for an answer.

Resolution: Fixed in 10.0. Now ^C will abort installsw in interactive mode.

intro.2

(PR-17336) - The error descriptions on the intro.2 man page do not match those returned by strerror(3) with EISZERO, EAGAIN, ENOMEM, ENOPROTOOPT, or EHOSTUNREACH.

Resolution: Fixed for 10.0.

less

(PR-17773) - When less is invoked with the -t option, redirecting its output fails with the following errors: "Can't take input from a terminal" "read error"

Resolution: Fixed in 10.0

login

(PR-19485) - The interpretation of "uucp" in the /etc/ttys file should be changed such that users with the same primary GID as user 'uucp' can log into the port. Allowing uucp accounts to have individual UIDs will be consistent with the ConvexOS Configuration Guide which has instructed the user to use unique uids.

Resolution: The interpretation of the 'uucp' entry in the ttys file by login, as well as the validation of connects to the uucp port by uucpd, now demands that the user being validated have the same primary group id as the user uucp. Additionally, the group ownership of the uucp spool directories and binaries is changed from daemon or bin to uucp.

lpc

(PR-16696) - The help display in lpc lists a (null) entry.

Resolution: lpc no longer displays a "(null)" entry when the help command is used.

lpd

(PR-18761) - When passing arguments to filters, lpd will ignore the default values (defined in /etc/printcap) for width and indent. lpd will always pass -w0 and -i0 unless overridden by lpr command line options.

Resolution: lpd has been changed to correctly utilize the page width specified in /etc/printcap. Page indent is not supported in /etc/printcap, so this part of the problem report is in error.

(PR-20809, PR-21933) - lpd incorrectly calculates free space when determining whether to accept remote print jobs from other machines. This may lead lpd to improperly reject a print job thinking that it does not have the disk space to receive it.

Resolution: Fixed for 10.0.

mail.1

(PR-17323) - It is undocumented that lines of a .mailrc file starting with a "#" are taken as comments. Moreover, it should also be stated that a whitespace character must follow the '#' for mail to recognize the line as a comment.

Resolution: Fixed for 10.0.

make

(PR-07557) - SUN's make (and possibly Silicon Graphics') supports many features that Convex's make does not.

Resolution: This was resolved in 9.0; the man page was not updated appropriately.

(PR-13621, PR-19438) - Request that make implement null suffix rules, enabling one to set up suffix rules for executables without extension.

Resolution: The make utility now supports single-suffix rules.

(PR-17168, PR-17448) - make dependency rules seem to be broken.

Resolution: make(1) has been changed to more carefully check target and dependency modification times, especially with respect to non-existent targets.

(PR-21389) - Both gnumake and SunOS make diagnose circular dependencies. Convex make just performs unpredictable actions with no diagnostic.

Resolution: The make utility now detects and diagnoses circular dependency graphs.

makewhatis

(PR-17872) - If man pages are compressed when makewhatis is run, then man -k displays a 'Z' instead of the man page section number.

Resolution: This is fixed in the 10.0 version of makewhatis.

makewhatis.8

(PR-17306) - The synopsis secion for the makewhatis man page: /usr/lib/makewhatis [-v] [-n] [-y] [[-M] manpath] has a -M option, which is not described in the description section. It is also not used in the example section: % makewhatis -n $MANPATH # tell if any dbase in $MANPATH out of date

Resolution: Documented the -M flag for 10.0.

man

(PR-17896) - Many spelling errors can be found in the ConvexOS Programmer's Reference V9.0.

Resolution: Fixed spelling errors in man pages.

(PR-22537) - The command "man -k" no longer sends output to PAGER. The man page says it should.

Resolution: man(1) now sends the appropriate output through $PAGER.

man pages

(PR-11219) - A whatis entry should be added for 'errno' that points to the intro(2) man page.

Resolution: A man page for errno.h was distributed with the V8.1 release. This was modified to reference intro(2), where each of the errno's are explained.

(PR-20248) - The following manual pages refer to your Company's name as "Convex" instead of the correct name "CONVEX": fstat(8), hsend(8), installsw(8), makewhatis(8), sethhb(8), sticky(8)

Resolution: Changed Convex to CONVEX in all cases.

(PR-20251) - The following manual pages refer to "CONVEX UNIX" when they should be refering to "ConvexOS" in some form: lpd(8), lpf(8), ncp(8), nfaccess(8), nfdump(8), pstat(8), reboot(8), sa(8), spu(8), spucmd(8), syspic(8)

Resolution: The man pages no longer make reference to UNIX unless accompanied by the trademark note.

(PR-20241) - The following manual pages refer to the CONVEX System Manager's Guide which no longer exists. They should refer to either "Managing ConvexOS: Configuration Guide" or "Managing ConvexOS: Operations Guide". accounting.8, acctconv.8, connectime.8 edactwho.8, faillogon.8, lpd.8, op.8, pac.8, reboot.8, sumscripts.8.

Resolution: Changed reference to the System Managers Guide to the "Managing ConvexOS doumentation set".

(PR-21943) - There are a number of man pages in the standard release that pertain to special systems implementation of HASP. There are no commands normally loaded so these man pages should be eliminated.

Resolution: These man pages have been removed.

man.7

(PR-17354, PR-19666, PR-19678) - The man page for man.7 has some formatting problems having to do with indentation that make the page almost unreadable.

Resolution: Fixed for 10.0.

mkdir

(PR-10931, PR-15647) - It would be nice if mkdir had a -p flag so that a user could say 'mkdir -p foo/bar/glarch' even when foo doesn't exist so that it would recursively make all needed directories.

Resolution: The "-p" path creation functionality has been added to mkdir.

mkpasswd

(PR-13294, PR-15052) - mkpasswd fails to preserve ordinality. For example, if two users have the same uid, the insert routine doesn't check to see if the key already exists before overwriting it. This produces different results from non-hashed password files when searching for a uid. This causes programs like rexd to break if a uid is multiply defined.

Resolution: /etc/mkpasswd now prefers the first instance of a uid/login rather than the last instance.

mount

(PR-03882) - mount and umount should be modified to use a "dirty bit" in the filesystem. When properly unmounted, a filesystem's bit should be set to "clean" as a signal to /etc/fsck that it needn't run on that filesystem. When mounted, mount should set the filesystem's bit to "dirty."

Resolution: The requested enhancement in functionality has been added.

(PR-10917, PR-21191) - umount has a -h option to unmount everything NFS mounted from a specific host. It would be symmetrical (and nice) to have a similar switch to mount.

Resolution: The -h <host> flag has been added to mount, for symmetry with umount. The usage is 'mount -ah <host>', and it will mount all of the nfs filesystems from <host>.

(PR-17871) - /etc/mount does not return valid status.

Resolution: Fixed for 10.0. The mount.8 man page now describes the exit status for mount. Also, mount no longer counts a mount attempt on a currently mounted filesystem as an error.

(PR-17943) - Issuing a "mount /" removes the entry for "/" in /etc/mtab.

Resolution: Fixed for 10.0. Mount will now verify that the root filesystem is mounted but if a stat() on / fails, it will print an error message saying the stat failed.

mount.8

(PR-19089) - The mount program checks for files in the mount point directory and displays an appropriate message if files do exist. This is new in ConvexOS V9.1 but the V9.1 man page for mount does not mention the possible warning message.

Resolution: The mount.8 man page now mentions the warning message about non-empty mount points.

msgs

(PR-20968) - When msgs gets mail without a subject, it prints an error and exits status==1. It should use sysexits.h so sendmail doesn't complain about unknown error message. EX_UNAVILABLE would probably be fine.

Resolution: msgs now prints useful error messages and exits with status codes from /usr/include/sysexits.h

mt.1

(PR-18662) - The restrictions section of the mt man page should mention that the tape movement commands, (ie fsf, bsf etc) only work as expected with no-rewind tape devices.

Resolution: A paragraph has been added to the mt.1 man page describing the tape position once mt has run to completion, if a rewind-on-close tape device is used.

new_util

(PR-08060, PR-10533, PR-10610, PR-11492) - Request that tcsh become part of the supported utility set for CONVEX.

Resolution: Starting with ConvexOS & Utilities V10.0, csh will be tcsh 5.21.

newfs

(PR-20536) - When specifying an illegal argument to newfs, a bus error occurs.

Resolution: Corrected command line parsing. There was a coding error.

newfs.8

(PR-20956) - The man page for newfs(8) references "A Fast File System for UNIX" from UC Berkeley that we no longer provide in the CONVEX Tutorial Papers. This reference should be removed, and the man pages for the rest of the file system utilities should be checked for this too.

Resolution: The reference has been removed.

newfs/newst

(PR-04164, PR-13257) - newfs and newst should always check the following before they allow a new filesystem to be built: None of the component or target partition(s) are already mounted (this is mostly done already) None of the component or target partition(s) are already a part of a mounted stripe partition None of the component or target partition(s) overlap with a partition that is already in use (g versus d/e/f, etc.) None of the component or target partition(s) are in use as swap space

Resolution: The new release of the stripe utilities, known as the VVM (Virtual Volume Manager) utilities, correct all of the reported error checking problems.

newst

(PR-04943, PR-05030) - A mkfs command can be generated which causes the following error message: "cylinder groups must have a multiple of 8 cylinders."

Resolution: The algorithm which sets cpg (cylinders per group) has been dramatically enhanced. The operation is now eqivalent to that used by 'newfs' and should result in more accurate arguments to 'mkfs'.

(PR-05943) - The -m and -M switches for newst should be consistent with the newfs switches.

Resolution: In order to remain consistent with the previous release of 'newst', the "-m" switch is retained and means "maxcontig" for the 'mkfs' command. In order to be more consistent with 'newfs', the "-M" flag has been added to 'newst' and has the identical function of "-m".

(PR-06248) - The default values for rotdelay in newfs and newst need to be adjusted based on new performance data recently gathered.

Resolution: Setting of rotdelay has been changed to be sensitive to block size. If block size is less than 16k, then rotdelay is 8. Otherwise it will be 1.

(PR-03670, PR-05606, PR-09385, PR-12590) - newst does not allow the user to change the percentage of minimun free space threshhold (minfree), as does newfs. newst should allow the user to do this, as a great deal of space can be wasted with large stripes.

Resolution: Added the "-F" option to 'newst' to allow the user to specify the minfree argument to 'mkfs'. It would have been preferrable to use "-m", but that option already is used for 'maxcontig' and backwards compatibility must be assured.

(PR-17860) - The -m flag of newfs allows the modification of reserved space on a file system. This flag would be quite useful in the newst command.

Resolution: Added the "-F" option to 'newst' to allow the user to specify the minfree argument to 'mkfs'. It would have been preferrable to use "-m", but that option already is used for 'maxcontig' and backwards compatibility must be assured.

newst.8

(PR-21030) - The newst man page (probably newfs also) should discuss how to increase (or decrease) the number of inodes. It should mention that inodes are basically controlled by the number of cylinder groups (with the -c option), and that the -I option is really only good for maximizing the # of inodes per cylinder group to 2048.

Resolution: The new man page for the VVM version of newst contains text to this affect.

notes

(PR-07458) - The notes system allows one to enter non-printable characters into a note. It then displays these without translating them into a more printable form. This allows trojan horses because sometimes persons with su privilege read notes and one could sneak in characters to the terminal, creating a security hazard. It's also impossible to read things with ^L's in them.

Resolution: notes now checks for control characters, both in the title and text of a note. Most control characters get replaced by "?", and <control-L> is handled properly.

(PR-18144) - When writing a note in /tmp, the mode on the /tmp/nf$$ file is 0666, allowing anyone to read or even alter the posting, which may be going to a privileged notesfile. This should be mode 0600 instead.

Resolution: Temporary files used by the notes system now have their mode set to 600, rather than 666.

(PR-18477) - Notes has a limit of 35 entries in the access list. This is inadequate for certain projects notesfiles with restricted access, yet a large readership.

Resolution: The number of allowable entries is now 256.

nu

(PR-12648) - The nu command will fail doing edquota if the new user's home directory is a symbolic link.

Resolution: nu used a string match against the mounted file system entries to find the home file system setting up quotas. This algorithm could not follow symbolic links properly. The algorithm was rewritten to match device numbers instead, as per "df".

(PR-18470) - Supplying an illegal uid of >65535 in nu leads to an abort with bus error and the error message "The uid must be >0 and <Bus error". The lock files, /etc/ptmp and /etc/rtmp, are not removed.

Resolution: nu now correctly handles uids which exceed the maximum.

(PR-18468) - nu only acknowledges an uppercase "Y" as signifying a positive response to the question, "New scheduling group?". It should also accept a lower case "y".

Resolution: nu now accepts lower case 'y' for the "new share group?" question.

nu.c

(PR-21056) - When compiling nu.c, the compiler generates an error message on line 1238, "expression statement has no effect", for the following C code in convert_param: if (pch) *pch == ' 0'; return(1); This should be an assignment statement rather than a logical comparison.

Resolution: Fixed code typo. Replaced comparison with assignment.

op

(PR-20959) - For security reasons, the file /etc/op.access should never be world writable. If it is world writable, op(8) should report an error and refuse to function.

Resolution: op(8) now aborts with an error message if the /etc/op.access file is world writeable.

os_cfg_smg

(PR-16903) - In the Managing Convex OS Configuration Guide 1.0, the "swap on" entry has disappeared in the index, and the syntax is not documented in the chapter related to Boottime parameters (Chapter 15).

Resolution: Information on "swap on" now appears where it is used - in the Setting Up the Disk System chapter of Managing ConvexOS: Configuration.

(PR-17604) - On page 4-14 of Managing ConvexOS: Config Guide 1st ed, the line: Figure 4-11 illustrates the configuration shown in the above example. should be Figure 4-11 illustrates the disk configuration shown in the above example.

Resolution: Fixed in Managing ConvexOS: Configuration Guide, 2nd edition, released with ConvexOS V10.0.

(PR-17634) - In the manual "Managing ConvexOS: Configuration Guide" on page 7-4, in the footnote it states: "ConvexOS allows host names up to 256 characters;". In the system include file /usr/include/sys/param.h, the parameter MAXHOSTNAMELEN is defined as 64.

Resolution: The referenced paragraph does not exist in the V10.0 version of Chapter 7.

(PR-17653) - In the Configuration Guide (doc 710-001430-209), on pg 4-21, "nont-striped" should be "non-striped."

Resolution: Fixed in Managing ConvexOS: Configuration Guide, 2nd edition, released with ConvexOS V10.0.

(PR-19314) - The Managing ConvexOS: Configuration Guide does not include information on how to configure a system with swap space not on the default partition. There is no mention of the "miniroot on" and "swap on" boot-time parameters.

Resolution: The swap space information is in the "Setting Up the Disk System" chapter of the Configuration Guide. "swap on" was explained in the "Customizing Kernel Boot-Time Parameters" chapter of the Configuration Guide. "miniroot on" has been added to that same chapter.

(PR-20275) - The Configuration Guide gives incomplete instructions on how to disable a user's account.

Resolution: The purpose of the field in question was to explain adding new users, not removing old ones. Clarified the technical ramifications of placing an asterisk in the password field. Did not add further preventative steps, as they are explained in the Removing User Accounts section further on in the chapter.

(PR-20602) - The Managing ConvexOS: Configuration Guide, Table 5-1 does not include the 'if' option for printcap. Futhermore, this chapter does not clearly explain the differences between Input Filters and Output Filters and how they are used.

Resolution: Table 5-1 now includes the if option. The input/output amplification will be included at a later date.

(PR-20882) - Within the Configuration Guide Disk System section, additional information regarding increasing the number of inodes in filesystems should be added; specifically, use of the -i option. Also a table listing default values pro- duced by newfs for default / etc/disktab entries would be welcome.

Resolution: The disk system chapter explains the -i option, and offers some guidelines for determining the number of inodes needed for a file system.

(PR-21214) - Chapter 3 of the Managing ConvexOS: Configuration Guide should include the Sabre disk drives in table 3-2.

Resolution: Added info on the Sabre drives to the table.

(PR-20985) - The "Managing ConvexOS Configuration Guide" erroneously advises not to change the MAXMEMSIZE parameter on page 16-8 in the System Generation chapter.

Resolution: Changing maxmemsize will have no effect for customers without a source license. Therefore, most customers should not change this parameter. A note was added to advise source customers that they can change maxmemsize.

os_conf_smg

(PR-12851) - The ConvexOS Tape System Guide, doc. no. 710-003130-000, should be modified to include the unambiguous abbreviations for "SEt Alloc_drive", "SEt Bypass_labels", "SEt Default DRive", and "SEt Default DEnsity."

Resolution: Fixed in Managing ConvexOS: Configuration Guide, released with ConvexOS V10.0.

os_oper_smg

(PR-16244) - Tape accounting is not mentioned at all in this guide. There should be a description of what tape accounting features are available.

Resolution: Fixed in Managing ConvexOS: Operations Guide, released with ConvexOS V10.0.

(PR-19954) - The operations guide regarding accounting reports on page 9-8 is incorrect.

Resolution: Removed reference to -f as a way to access alternate file. Changed example to reflect the command structure shown in sa(8).

(PR-20433, PR-20458) - Chapter 4, Performing Backups and Restoring Files, needs to address the use of labeled tapes.

Resolution: Dumping and restoring file systems will be addressed in ConvexOS 10.0 documentation as follows: Managing ConvexOS: Operations Guide, part no. 710-011830-002 Dumping and Restoring File Systems (quick reference), part no. 710-017030-000

(PR-20748) - The Managing ConvexOS: Operations Guide, Chapter 10, entitled "Checking the File System," on pages 10-20 through the end of the chapter (10-32), discusses the error messages in the Initialization phase and phases 1, 1b, and 2 of fsck. The error messages and discussion of their meaning for phases 3 through 6 would be appreciated.

Resolution: Error messages for phases 3 through 6 were omitted due to production error. Fixed in 2nd edition of book, released with ConvexOS V10.0.

(PR-20986) - Page 5-2, Figure 5-1 displays an incorrect load average.

Resolution: Changed the colon in the load average figure to a period.

(PR-20987) - Page 5-4 Figure 5-3 the TIME and COMMAND fields run together.

Resolution: Incorporated corrected figure from the ConvexOS V9.5 version of Managing ConvexOS: Operation.

(PR-20988) - Page 5-6, Figure 5-4 first line of headers not lined up correctly.

Resolution: Incorporated corrected figure from the V9.5 version of Managing ConvexOS: Operation Guide.

os_pr

(PR-21293) - The last line of the ld88(1) man page (page 2) says: ld88 is an unreleased product and is available for CONVEX internal use only. Looks like one of the internal-use-only man pages slipped through the crack. Associated man pages that also got published are: as88, cc88, cpp88, nm88, size88, strip88.

Resolution: Fixed in 2nd edition of ConvexOS Man Pages, released with ConvexOS V10.0

os_smg

(PR-20788) - Chapter 10, "Setting Quotas on Disk Space Use", needs to be updated with more information (warnings) when using quotas with NFS. In this configuration, no warning or error messages are printed when the user exceeds soft or hard limits. Furthermore, the paragraph should clarify that users run quota(1) on the remote system to determine quota allocation.

Resolution: Added paragraph to the Setting Quotas on Disk Space Use chapter of the Configuration Guide.

os_tutor

(PR-20043) - Missing flow lines in Figure 1 of "Typing Documents on the UNIX System: Using the -ms Macros with Troff and Nroff".

Resolution: Fixed in ConvexOS Tutorial Papers, 8th ed., released with CovnexOS V10.0. 1 - eqn tutorial paper now included 2 - flowchart for paper on -ms macros fixed 3 - document on -ms macros not included; no longer part of BSD because obsolete 4 - closed; will keep in alpha order 5 - curses paper has been included 6 - lint paper has been removed (obsolete); is discussed in C books

(PR-20073) - Table needs fixed in Tutorial Papers, page USD:7-14 in "Mail Reference Manual".

Resolution: Fixed in 8th edition, released with ConvexOS V10.0.

(PR-20074) - The table in the Tutorial Papers, "The Answer to All Man's Problems", contains a misaligned table. (Figure 3 on page 6).

Resolution: Fixed in ConvexOS Tutorial Papers, 8th edition, released with convexOS V10.0.

(PR-20840) - The tutorial paper on lex seems to have been incorrectly formatted. There are TBL directives in the final output. In specific, you will find many instances of "center; l." spread throughout the document.

Resolution: Fixed in ConvexOS Tutorial Papers, 7th ed, released with ConvexOS V10.0.

pac.8

(PR-19459) - The pac man page refers to /etc/pac. There is no /etc/pac; it is /usr/etc/pac these days.

Resolution: All references to /etc/pac have been changed to /usr/etc/pac.

perl

(PR-14945) - perl dumps core if the user accidentally uses @x[$i] when $x[$i] is meant, and there is no i-th element of the @x array.

Resolution: The 4.010 perl release handles incorrect @x[$i] references without coredumps.

(PR-15387) - perl doesn't appear to handle the regular expression {n,m} correctly in the case that n or m is two digits.

Resolution: The 4.010 release of perl now correctly handles a regexp modifier of {xx,yy}.

(PR-15825) - perl will dump core in do_split() when given a null element to split.

Resolution: perl no longer dumps core in this situation.

(PR-16682) - Using perl -i to edit a file in place fails when the directory is not writable. The file is zeroed, and no warning is given.

Resolution: Fixed in 4.010 release of perl. An error message: Can't rename file to file.bak: Permission denied, skipping file. is now provided.

(PR-18780) - Please add support for alarm to standard release.

Resolution: alarm() is now a supported function in the 4.010 release of perl.

(PR-20594) - In perl, tr is not converting characters that have bit 7 set.

Resolution: Perl release 4.010 now correctly handles high-bit characters when performing translations.

preen

(PR-14511) - Request that /etc/preen be changed so that it can pass on arguments given to it to /etc/fsck.

Resolution: preen checks the flags passed to it. If the flag is not a valid preen flag, then preen checks to see if it is a valid fsck flag; if so, preen passes it to each fsck forked.

(PR-19974, PR-20600) - Request that there be an option to preen that will limit how many disks it will attempt to fsck at one time.

Resolution: preen supports a "-L <num>" option. This option limits preen to running, at most, <num> fsck's concurrently. <num> may be any positive integer. Note: preen still limits the number of concurrently running fsck's to be no more then the number of disk drives.

ps

(PR-19843) - On a system with a large number of I/O devices, ps will fail: ps: too many character devices in /dev

Resolution: ps(1) no longer searches /dev for tty's - it now searches /etc/ttys. The limit is now 1024 tty's, rather than 1024 character devices.

pstat

(PR-17898, PR-21449) - pstat -i shows many TYPE fields of ????. This type is not documented.

Resolution: "pstat -i" now correctly identifies items in the TYPE field.

putst

(PR-06004) - It would be useful if the putst utility had an option to zero out a kernel stripe table entry.

Resolution: The new utility, rmst, allows stripe tables to be deleted at will from the kernel tables or the stripecap file.

pwrestrict

(PR-18070) - After doing an initial installation of X9.1.0.5, nu failed with the message: mkpasswd: /etc/pwrestrict: no such file or directory nu failed (or some such messages) There was no /etc/pwrestrict, but the new user was added to /etc/passwd.

Resolution: nu(8) has been changed to check for the existence of /etc/pwrestrict, and invoke mkpasswd only on the passwd file if pwrestrict doesn't exist. This eliminates the warning messages.

ranlib

(PR-15470) - An incorrect unresolved symbol error message is generated and no executable is created when loading a program with libraries.

Resolution: This problem is fixed by ranlib in ConvexOS 10.0.

sa

(PR-14143) - The file usracct, (created by sa) contains 1 record for each possible uid, up to the current maximum uid in the password file. For unallocated uid's, /etc/sa WRITES an empty record (containing 0's). This allows huge files to be created (up to 2 Meg) if there are holes in the uid sequence.

Resolution: sa now truncates the savacct file before writing it, then uses fseek to skip over unused records.

sed

(PR-18000) - sed has limits both to its total number of commands as well as the total length of all the commands. This is not documented as a bug or restriction.

Resolution: Fixed for 10.0.

seestat.8

(PR-17125) - seestat only works on Printronix style printers. This restriction should be documented in the man page.

Resolution: This is now documented in the man page.

sendmail.8

(PR-11499) - The documentation for sendmail doesn't give the default values for the "x" or "X" options, nor many of the other options.

Resolution: All options that have default values are documented in Managing ConvexOS: Configuration Guide and Managing ConvexOS: Operations Guide, released with ConvexOS V10.0.

(PR-14140) - The description of the -dX switch in the sendmail man page does not give the values for X.

Resolution: The debugging flags are only useful if you have source. They are quite cryptic and are supposed to be used for debugging the sendmail program itself. There has never been a guarantee as to what they are supposed to print, if anything. However, they are now documented on the sendmailcf.5 man page.

setpgrp.2

(PR-21109) - The setpgrp man page needs to have the RETURN VALUE section fixed.

Resolution: Fixed.

sh

(PR-13269) - /bin/sh dies when attempting to execute a double-quoted single-quoted filename.

Resolution: This is fixed in V10.0.

(PR-16144, PR-18172, PR-18442) - Scripts written in the Bourne shell are designed to be maximally portable. However, the version from Convex is so very old that many scripts that work on other machines won't run here. For example, "unset" is not recognized, and arguments to the shift operator are not handled properly. Functions are also unsupported. Convex sh should be upgraded to a version that is more compatible with newer versions of sh.

Resolution: Starting with ConvexOS 10.0, /bin/sh is based upon System V, release 2 bourne shell.

(PR-20440) - The sh continue command does not work as documented. Continue followed by a number seems to work the same as continue not followed by a number.

Resolution: continue <n> works as documented, ie, continuing the <n>th outer loop.

(PR-20811) - When submitting a batch job with qsub -l, the Bourne shell will only execute $HOME/.profile if the job was submitted from the user's home directory. The shell attempts to execute ./.profile instead of $HOME/.profile.

Resolution: The 10.0 sh now looks for .profile in $HOME.

(PR-21271) - The CONVEX version of /bin/sh does not support "unset".

Resolution: With V10.0, /bin/sh has been replaced by an sh based upon System V, release 2, which supports the unset functionallity.

(PR-21272) - /bin/sh does not support parameter substitution of the form ${parameter:-value} . The colon is not supported in any form.

Resolution: The ${var:-value} parameter substitution is supported as part of the 10.0 sh.

(PR-21273) - CONVEX version of /bin/sh does not support -x option of "test" (testing for executable file.

Resolution: With the 10.0 sh, test and [are builtins, and they do support the -x flag. /bin/test continues not to support this flag.

sh.1

(PR-18010) - The man page for /bin/sh does not document the maximum file descriptor value that can be used by the user.

Resolution: The sh.1 man page documents that the valid file descriptors are single digit numbers, by using the word 'digit' throughout.

siloquery

(PR-21399) - PR-22574) - When attempting a 'siloquery volume' command with more than 500 tapes in the SUN data base (silo) errors occur : segmentation fault; core dumped.

Resolution: siloquery volume no longer aborts when displaying more than 500 tapes.

sort.1

(PR-17331) - The man page for sort requires a more thorough explanation of the -t option. This option can be used to sort only certain column ranges of a file; however, this is not documented.

Resolution: Fixed for 10.0. Added an example on how to sort by column contents.

stat

(PR-17788) - The 9.0 version of stat produces "empty" reports for report numbers 3, 4, 18, 25, and 29.

Resolution: The man page was partially incorrect and has been fixed. Report number is now report 30. All other reports are now supported.

(PR-17858) - stat data collection reports zero for disk mbytes/sec.

Resolution: Fixed for 10.0.

stat.5

(PR-16710) - Network collisions/sec is effectively 2 bytes long, so the next offset in the man page should be 17 rather than 16, and the rest of the list should be incremented. Total # processes is 1 byte long instead of 2.

Resolution: Fixed for 10.0. The offsets in stat.5 are now correct.

statfs.2

(PR-18395) - The man page for statfs lists sys/{types,vfs,mount}.h as the necessary #include files. At compile-time, nfs/nfs.h and errno.h are also required. The man page should be updated to show this.

Resolution: The 10.0 man page is appropriate for compiling a program referencing statfs.

stty

(PR-19359) - stty always exits with status of zero. It should exit non-zero when an error occurs.

Resolution: stty now exits with status of 1 if an unknown mode is given or if an ioctl fails.

sysgen

(PR-19130) - For the next release of ConvexOS, the device MTD-011 needs to be included in /sys/sysgen/units, and an entry point included in the kernel so that the OS will support a Telex drive.

Resolution: The telex tape drive has been added to /sys/sysgen/units for V10.0.

(PR-19006) - The /sys/sysgen/[un]convert.awk scripts do not understand the IDC or TLI or other new CCU devices.

Resolution: Fixed. It should be noted that the convert scripts will become unsupported in a future release of ConvexOS.

syslogd

(PR-20438) - If name server is not working, syslogd can dump core.

Resolution: syslogd now properly reports name service error conditions rather than dumping core.

tar

(PR-17843) - If one tries to tar into a directory he/she can't write to, tar yields error messages, but exits with a status of zero.

Resolution: Fixed in 10.0.

(PR-17955, PR-18599) - /bin/tar exits with a value of 0 when given an invalid input file name.

Resolution: Fixed for 10.0. tar now exits with status 1 when it can't open an archive.

tpconfig

(PR-17721) - Once in tpconfig, entering help lists the command (among others) for granting users and groups allocate permission for a tape drive. The command as shown by the output of the "help" command is: Add/Del/SEt Alloc_drive User_set <user_list...> <type_unit> This does not work. The man pages shows: Add Allocate_drive User_set user_list type:unit This command does work. It appears that the help printed is incorrect.

Resolution: The Help output now shows the proper syntax for the "Add/Del/SEt Alloc" commands.

tpconfig.8

(PR-14367) - There is no documented way out of "tpconfig". <CTRL>-D works, but none of (bye, close, dot (.), eof, $EOF, exit, leave, quit, stop) work. Convex should document ^D as the way out.

Resolution: The tpconfig man page mentions that <CTRL-D> causes it to exit.

tpdaemon

(PR-18865) - tpmount fails with the -q and a symbolic-link name and vsn. The documentation doesn't list this as a restriction. The mount is successful if no vsn is included in the command.

Resolution: This problem has been repaired.

tutorial papers

(PR-21298) - Documentation for eqn was omitted from the Document Preparation chapter.

Resolution: Fixed in ConvexOS Tutorial Papers, 8th edition, released with ConvexOS V10.0. (This bug is also reported in X-19697.)

unexpand

(PR-14887) - Unexpand fails to convert spaces to tabs where two or more tabs would occur at the beginning of a line. Unexpand -a fails to convert spaces to tabs under a number of circumstances.

Resolution: This has been fixed.

uptime.1

(PR-17792) - The uptime command prints the number of users logged in in addition to other information. The uptime man page should say that the number of users logged in is printed.

Resolution: Fixed for 10.0

uuq

(PR-17674) - If the user gives uuq command line options incorrectly, it will not complain. Also, one cannot combine options or use a space between the option and its argument, as with standard unix commands. Please use getopt to parse command line options.

Resolution: Fixed for V10.0

uusend.1c

(PR-09189) - The usage statement for uusend has options which are not documented in the man page. In particular the -r option is not documented.

Resolution: A description of the -r option to uusend(1C) has been added.

vdump

(PR-18313) - The /etc/vdump script does not use full pathnames for "dump" and "filter."

Resolution: vdump now uses fully-qualified pathnames.

verify

(PR-10152) - All flags of verify should be fully documented.

Resolution: The verify(8) man page has been updated to reflect all options.

(PR-10153, PR-21632) - The verify databases should be distributed with all fields fully qualified, including size, version, checksum, and date.

Resolution: Fixed for 10.0.

(PR-16143) - When verify encounters an unexpected symbolic link, it no longer processes the file, losing the opportunity to spot mode and owner problems. It should issue a warning and continue.

Resolution: verify(8) supports a new option, "-k", that when specified will cause it to follow unexpected symbolic links and verify the file that it points to.

(PR-17895) - The V9.0 verify database says that the GID for the directory /usr/lib/uucppublic should be "bin". However, the First Edition of the ConvexOS Configuration Guide on page 7-7 shows that the GID for directory /usr/lib/uucppublic should be "daemon".

Resolution: Fixed for 10.0. The user upgrade will now chmod /usr/lib/uucppublic to group daemon if it exists.

(PR-20230) - The V9.1 verify database shows the mode for /tmp as 755. It should be 777.

Resolution: The mode of /tmp is specified correctly in the V10.0 verify database.

(PR-20231) - The V9.1 verify database shows the modes for /dev/kmem and /dev/mem as 644. They should be 640.

Resolution: The modes of /dev/mem and /dev/kmem are specified correctly in the V10.0 verify database.

(PR-21837) - It looks as if verify does not follow symbolic links to locate files. Verify encounters the symlink & then apparently gives up on processing the files.

Resolution: This has been fixed. The default operation of verify(8) is still the same, that is, it will complain about unexpected symbolic links. A new option, -k, is supported in V10.0 that tells verify to follow unexpected symbolic links and apply the database entry to the file it points to.

(PR-22510) - /usr/lib/verify/system_V9.1 indicates the mode for directory /usr/spool/notes/.locks should be 755. It should indicate the directory should be 775.

Resolution: /usr/spool/notes/.locks now has the correct mode of 0775.

verify.5

(PR-20326) - The verify(5) man page does not document the checksum field (s=#).

Resolution: The verify man page has been updated to reflect all fields.

verify.8

(PR-18862) - The man page for verify does not document the -m option for creating a verify database.

Resolution: Instructions are now included in the verify(8) man page for creating verify databases.

vi

(PR-16441) - vi may not create a unique temporary file name when it starts.

Resolution: vi now creates temporary files using filenames generated by mktemp(3).

vipw

(PR-11220) - When using vipw to add a line like +john::::::/bin/sh to the password file to override the shell set with Yellow Pages, one gets the warning: Warning: extra fields removed: +john::::::/bin/sh

Resolution: vipw(8) now handles YP entries in /etc/passwd correctly.

(PR-13824) - In the passwd file, entries such as: +sca:::::/usr/sca:/usr/local/bin/csh +@scagp:no-login: are truncated by vipw to just: +sca: +scagp:

Resolution: Fixed handling of YP entries that begin with "+" and "-".

(PR-20615) - The /etc/vipw utility does not handle NIS(YP) entries in the /etc/passwd file properly. If a username is prefaced with a plus sign (+), it prints an error message, "Removing extraneous data +user::::::", and deletes these entries from /etc/passwd. This forces the system administrator to edit /etc/passwd without proper locking, and to manually run mkpasswd.

Resolution: vipw(8) now properly handles YP entries, both those that begin with "+" and those that begin with "-", in the password file.

vmstat

(PR-08282) - The CPU percentages shown by the vmstat command do not add up to 100% like they normally do. The problem appears after several days of up-time when the CPU percentages appear to wrap around to 0. The percentages did add up to 100% for the first week or so of uptime.

Resolution: vmstat has been changed to use the more accurate cpu averaging scheme used by syspic.

wall

(PR-20613) - wall uses the constant "#define USERS 128" to read the first 128 entries in /etc/utmp. If a user is the 129th or past entry, the user won't get a message from wall.

Resolution: wall now dynamically determines the space required for the utmp table.

yacc

(PR-19230, PR-19760) - The check for yacc parser stack overflow in /usr/lib/yaccpar is off by one. With declaration short yys[YYMAXDEPTH]; it checks for overflow by saying if(++yyps> &yys[YYMAXDEPTH]) { yyerror("yacc stack overflow")..... *yyps = yystate; Clearly if yyps == &yys[YYMAXDEPTH] it is outside the array so the check should use >=, not >

Resolution: yaccpar has been changed to make the correct array bounds check.

(PR-19214) - The file /usr/lib/yaccpar needs to do something like this #if !defined(lint) && !defined(__lint) static char yaccpar_sccsid[] = "@(#)yaccpar 4.1 (Berkeley) 2/11/83 "; static char convex_yaccpar_rcsid[] = "$CHeader: yaccpar 90/02/08 11:09:39 $"; #endif /*not lint*/ to correctly hide these objects from lint.

Resolution: The suggested fix was applied to /usr/lib/yaccpar.

Utilities Restrictions

This section lists problem reports against the ConvexOS Utilities that point out inherent restrictions in the software, or that were not reproducible.

cpio

(PR-13065, PR-19573, PR-13065, PR-19573) - cpio in pass-through mode is truncating a file under certain conditions.

Workaround: cpio will now create directories listed in pass thru mode if the -d option is given. This indirectly fixes the bug referenced by this report.

du

(PR-10004) - du /filename doesn't work when filename is a link. du /filename/ does work.

Resolution: This behaviour is documented in the man page.

emacs

(PR-02103) - When using "goto-tag" (or "visit-function") to find a function, emacs quits looking as soon as it finds a name that matches the minimum character match, regardless of whether the identifier found has a longer (and therefore different) name than what was specified.

Resolution: This is proper operation for 'find-tag' according to "Info" within emacs. The argument to 'find-tag' need not be the whole tag name; it can be a substring of a tag name. However, there can be many tag names containing the substring you specify. Since 'find-tag' works by searching the text of the tag table, it finds the first tag in the table that the specified substring appears in. The way to find other tags that match the substring is to give 'find-tag' a numeric argument.

(PR-14754) - /usr/convex/emacs seems not to like a private termcap file, set with 'setenv TERMCAP pathname'.

Resolution: The old version of emacs, V18.51, was not reading locally defined termcap files (defined by a TERMCAP environment variable). The new version, V18.57 correctly reads the locally defined termcap.

lpq

(PR-17749) - The precedence of -f over +[n] needs to be documented.

Resolution: Clarified the precedence of -f and +[n] in the man page.

make

(PR-11397) - When ALONE and/or SERIAL macros are defined and the objects that need to be built use interactive commands, the output from these commands are not flushed, causing the user to believe that his process is hung. This only happens when using make with the -j option where j >= 2 or when MAKELIM is >= 2.

Resolution: This restriction is documented in the 'BUGS' section of the make.1 man page. A workaround would be to have any targets which are really useful to run in parallel as separate submakes. Invoke the top-level makefile with '-j 1'; then the top-level makefile can invoke sub-makefiles with -j greater than 1 to achieve parallelism.

newst

(PR-16653) - newst does not allow the user to vary from the default 2048 inodes per cylinder group.

Resolution: The 'newst' utility does not have direct control over the number of inodes created. In general, the number of inodes can be increased by increasing the number of cylinder groups. This can be controlled by decreasing the number of cylinders per group (-c option).

os_cfg_smg

(PR-16676) - In the new ConvexOS 9.0 "Managing ConvexOS: Configuration Guide", the tab for the section on disk quotas is spelled "Quotes". It needs to be changed to' "Quotas".

Resolution: With release of ConvexOS V10.0, these books will be published as paperbacks, and tabs will no longer be used. Bug will not be fixed.

tar

(PR-18106) - tar off a file that already exists on the disk; the mode on the file is not reset to correspond to the mode of the file on the tape.

Resolution: This is not a bug. tar normally extracts files using the umask of the current user. To extract a file and preserve it's mode, use the p option as described in the tar.1 man page.

txt_ed_ug

(PR-07358) - On page 4-5 of the CONVEX Text Editor User's Guide, near the bottom of the page, there is an example of a sed command: sed -e "s/Con.*rp/Convex Computer Corporation/g" At the end of the line there should be a file name such as 01.s used in the previous examples.

Resolution: Book is obsolete with release of ConvexOS V10.0

verify

(PR-17090) - The 'system' verify database that Convex ships contains the following entry for /usr/lib/crontab: system_X9.0.0.4:crontab:644:root:bin: Having world read access to root's .crontab can be a security risk. The mode should be set to 600.

Resolution: The advantages of a publicly readable crontab outweigh the disadvantages, so the default mode will be left as it is. Individual system managers may decide to change this, however, and cron will run properly with a mode of 600.

adbccu.8

(PR-08927) - The description of the "i" format specifier in the adbccu(8) man page is i n Print as PDP11 instructions "PDP11" should be replaced by "680x0" and a modifier should be inserted indicating that "'680x0' is actually '68000' for IOP and HSP type CCU's and '68020' for VIOP type CCU's."

Resolution: Fixed as part of cleaver project which included restructuring of the adbccu tool.

(PR-13959) - The -C switch is not documented. -C is used for controller core files. The register display for controller core files is incorrect if this switch is not used.

Resolution: Fixed in ConvexOS V10.0. Many more command line options are documented therein as well.

Known Utilities Bugs

This section lists problems with the ConvexOS Utilities that are known at the time of release.

L.sys

(PR-05163) - The distributed /usr/lib/uucp/L.sys could use a good prototype for hosts that are polled.

MAKEDEV.8

(PR-20250, PR-21453) - The MAKEDEV(8) man page lists the valid arguments. The following are also valid arguments but are not listed in the man page: dat*, hy*, st*, lt*, nc*, covue, uv*, unet*

accounting

(PR-22299) - Negative values are still appearing in accounting records.

(PR-22802) - Restarted jobs after the system had been down for one reason or another have sometimes have negative values in the system CPU time field.

acm

(PR-13642) - The initial "welcome" message for SOME modems ALWAYS has trash in it. The calling modem may disconnect before the user has a chance to log in. The message has the appearance: Convxxxxxxx(simulated trash)xxxxxhelix.nih.gov) login: The start and end of the trash varies by a few characters.

activities.5

(PR-21395) - The activities(5) man page should indicate that if /etc/activities exists, there must also exist the file /etc/actwho. Otherwise, utilities such as at(1) produce an error message while attempting to call bill(1).

adb

(PR-09290) - adb displays incorrect instruction parameters with the ?i format.

(PR-15329) - When making changes to a core file (and probably an object file as well), adb displays the change confirmation in hex regardless of the current default radix. It should honor the default output radix setting.

(PR-22185) - adb should check for read/write failures and call perror if there was an error.

(PR-23138) - The current version of adb does not understand the core image of an executable which has mapped more than 64 memory regions. It ignores all regions after the 64th, which unfortunately normally includes the stack.

adjtime.2

(PR-22375) - The adjtime(2) man page incorrectly refers to tv_sec as an unsign long. u_long tv_sec; /* seconds since Jan. 1, 1970 */ It should be a signed long; long tv_sec; /* seconds */ Also the correct comment should be seconds.

ansidaemon

(PR-12261) - ASIO doesn't work with ANSI labeled tapes. The problem is related to the use of RPC between the kernel and ansidaemon. The ncwrite_1() calls are initially sent to ansidaemon in the correct order, but RPC retries can cause: 1. extra records on the tape (if the RPC reply is dropped) 2. records out of order (if the RPC call is dropped) Remote tape has the same problems if ASIO is used.

(PR-12690) - The pattach() sequences (used to extract the user's data to write to tape and to write tape data into the user's buffer) in ansidaemon are inadequate. pattach() will likely break if the buffer being read/written is in thread memory, because the thread ID to use (the one that made the I/O syscall) is not passed along to ansidaemon to use in the pattach. This bug fix will also require changes to the kernel's "nc" device code that sends out the I/O requests to the ansidaemon (to pass tid along).

ansitar

(PR-14120) - Use of the D option and a line length greater than 255 (man page says length 255) causes ansitar to abort with a core dump. Also, Ansi* files are not always cleaned up in /tmp. ansitar shouldn't core dump and should clean up on all aborts.

ansitar.1

(PR-20662) - The ansitar man page should document that, when creating a new archive, if the -V option (specify VSN for tape) is not used, the default value of ANSTAR ("ansitar" without the "i," in all-caps) is used.

ar

(PR-22150) - ar should check for read/write failures and call perror if there was an error.

ar.1

(PR-21500) - The example in the ar(1) WARNINGS section is supposed to show that when using file names greater than 15 chars, you might find duplicate entries in the archive. This example does not work.

at

(PR-15946) - When scheduling a job with at using the day option and a time that has already passed, at will schedule it for next year without notification to the user.

(PR-22133) - at should check for read/write failures and call perror if there was an error.

(PR-22786) - The 'at' command incorrectly calculates the julian date. The dayofyear is calculated to be one day less than the real julian date.

autoseq

(PR-11648) - autoseq has a static limit on the length of the sequence list.

avail

(PR-18460, PR-18537) - /usr/spool/convex/avail occasionally will not record the average load and average users in the availlog file even though the system is up and running.

(PR-21951) - After the 10.0 upgrade, the following messages from avail appear: spu file / mnt/usr/scn/cop.mem: No such file or directory spu file /mnt/usr/lib/softlog: No such file or directory

awk

(PR-17132) - awk gives a bus error when the * option of printf is used.

(PR-18277) - PR-20616) - The /bin/awk printf ignores field width.

(PR-18428) - Referencing an array with a negative index causes awk to coredump.

(PR-20619) - The builtin function substr(s, p, n) does not always return the correct expression when "s" is a string expression of two concatenated strings totaling more than 12 characters.

(PR-22151) - awk should check for read/write failures and call perror if there was an error.

awk.1

(PR-18269) - The var=value filename syntax for presetting variables is not documented in the man page.

bc

(PR-07640) - A ^B sometimes gives the wrong answer.

(PR-10022) - Division by 2 fails for non-integer dividend, scale > 30.

(PR-10064) - bc will sometimes output a backslash, newline, newline, digits, which results in a blank line.

(PR-22134) - bc should check for read/write failures and call perror if there was an error.

biff

(PR-12567) - biff and mesg fail when run on a pty.

bill

(PR-07755) - There are problems with the way su interracts with bill in setting up the current activity id.

cat

(PR-21866) - cat is very quiet about things when a read fails - it doesn't even return nonzero. It should call perror and return -1 or something similar.

catman

(PR-21948) - catman -p prints to stderr instead of stdout.

ccrypt

(PR-13109) - ccrypt affects terminal setup if encrypted output goes to standard output. Terminal setup is only affected if the key must be prompted for. If the key is supplied on the command line, there is no problem.

checkeq

(PR-22095) - checkeq should check for read/write failures and call perror if there was an error.

checknr

(PR-22117) - checknr should check for read/write failures and call perror if there was an error.

chfn

(PR-20243) - chfn allows an entry in the password file that is too long, thus causing problems for mkpasswd and vipw.

chkpnt

(PR-19686) - Performing a 'chkpnt -nFv' on a process that holds a non-checkpointable resource (e.g. a socket) will produce output to the effect that the process is checkpointable. This can be confusing, because the process is not checkpointable.

(PR-19912) - chkpnt(1) will occassionally hang while checkpointing a process.

(PR-17235) - The restart command hangs when attempting to restart checkpointed jobs.

(PR-22473) - chkpnt returns with an errno of 4(EINTR) when attempting to checkpoint a process with a record lock(an unsupported feature). chkpnt did, and should return 78(Feature not supported).

chkpnt.1

(PR-16823) - The man page states that processes using raw tape devices are uncheckpointable. This should say processes using block tape devices are uncheckpointable (raw tape devices are ok). Also, processes using /dev/null are checkpointable contrary to what the man page states.

chmagic

(PR-22084) - chmagic coredumps upon read error; should check for read/write failures and call perror if there was an error.

chown

(PR-22426) - chown -R does not correctly process files when ../* is given as the leading part of the path and there is a directory in the parent.

ci

(PR-14391) - If a file is ci'ed which does not have a newline on the last line then co is unable to retrieve any earlier versions of the file. However, the current version is available.

(PR-19845) - The quiet flag ('q') on ci does not suppress the warning message. ci warning: checkin aborted since prog.c was not changed; prog.c deleted.

(PR-22149) - ci should check for read/write failures and call perror if there was an error.

cmp

(PR-22152) - cmp should check for read/write failures and call perror if there was an error.

colcrt

(PR-22140) - colcrt should check for read/write failures and call perror if there was an error.

comm

(PR-22135, PR-22136) - comm should check for read/write failures and call perror if there was an error.

compact

(PR-22169) - compact should check for read/write failures and call perror if there was an error.

convst

(PR-23046) - If one attempts to run convst on a stripecap file that is already in VVM format, the user receives an error and nothing is written to the file.

cp

(PR-18350) - With a symbolic link in the current directory that points to the current directory (newname -> .) a cp -r fails. A cp -pr produced ./newname/newname/... in the new directory structure.

cpio

(PR-14112) - The cpio -it option prints a table of contents of the input. However, it writes this output to stderr not stdout. This action is undocumented and inconsistent with the commonly accepted usages of stdout and stderr.

(PR-22153) - cpio should check for read/write failures and call perror if there was an error.

cpio.1

(PR-15830) - The cpio man page says to use the '-depth' option of the find command. find doesn't have a -depth option available.

cpr

(PR-13339) - 'cpr -f [function]' should not print out extra formfeeds for functions that it does not print.

(PR-13466) - cpr can get confused about what constitutes a function, causing it to print things that are not functions in the table of contents.

cpuconf

(PR-14726) - On one occasion, 'cpuconf -d all' disabled both cpu's on a C220; cpuconf should never allow you to disable all cpu's.

cron

(PR-06627, PR-08460, PR-15741, PR-19180) - When a user's home directory is mounted via NFS on another machine, if there is a ~/.crontab file present, cron will sometimes spin forever, at other times dump core.

(PR-16485, PR-19180) - If two users (or more) share a common home directory, they cannot have independent crontabs, rather they must share a common one. System V and SunOS allow all users to have an individual crontab. POSIX.2 will require it. Also, if two (or more) users share a home directory, and there is a .crontab file, the commands in the .crontab will be executed two (or more) times, usually not what is wanted.

(PR-21550) - cron's default path is: PATH=:/usr/local/bin:/usr/ucb:/bin:/usr/bin:/usr/convex which means that the current directory is searched first (BOURNE-Shell !!). Setting a new path (not starting with a colon) in /.cronrc causes the script not to be excuted. Setting a path in ~/.cronrc works fine for normal users.

csh

(PR-04068) - In certain circumstances, csh will not free dynamically allocated internal memory. This results in the process size of some csh processes to grow over time.

(PR-06150) - Command substitution does not work if the substituted command contains an escaped newline.

(PR-06527) - The csh program returns a bad exit status if the reading process on a pipe terminates before the writing process. It would be useful if the exit status of the last command were returned instead.

(PR-07353) - It is not possible to inhibit pattern matching in csh switch statements.

(PR-08727) - csh considers its $status variable to be a signed integer, but exit statuses are really unsigned chars, as detailed in <sys/wait.h>.

(PR-09945) - Using "nice" within the csh gives unexpected results.

(PR-11683) - csh does not update the 'set' variable cwd correctly in cases with symbolic links.

(PR-12550) - csh and sh do not disassociate themselves from the controlling tty or ignore interrupts when invoked with the "-c" option (e.g. csh -cf emacs). This causes a problem when the child process is interactive and is interrupted by the user. The shell also receives the signal and exits (after waiting appropriately for the child process) with a bogus status that has nothing to with the exit status of the child process. ksh gets around this problem entirely by exec'ing the specified command without forking.

(PR-10235) - If a foreach loop is embedded in a case block inside a switch statement, the "breaksw" statement is treated like a "break" statement and only breaks the current loop of the foreach statement, not the case.

(PR-14620) - Variable names created with "set" are distinct only in the first 18 characters. Names longer than 18 characters are effectively truncated when referenced (or cause a "Variable syntax" error).

(PR-15202) - The csh variable "time" is not always respected. When executing a backquoted command the internal timing gets confused.

(PR-15390) - In a csh or sh script, an illegal option passed to a shell builtin causes the whole script to be aborted.

(PR-13321) - Builtin command "repeat" doesn't recognize aliases.

(PR-15673) - csh does not handle escaped quotes, causing a "variable syntax" error.

(PR-14209) - When stopping a job with a kill -STOP both 'ps' and 'jobs' report it as being stopped. A kill -CONT to the stopped process causes ps to report it as running, which is correct. 'jobs' will report the state of the process is still "stopped".

(PR-16517, PR-16517) - When using the "if-then-else-endif" construct, and nesting them, if the first conditional fails the else of the second conditional is evaluated.

Workaround: Make sure you delimit the keywords with spaces and the script will work. That is, use "if (" instead of "if(" and ") then" instead of ")then".

(PR-20199) - Cannot use pipes with csh builtins.

(PR-20175) - Cannot use job control within a csh shell script to terminate a background job.

(PR-20703) - In resolving a ~user syntax in a .cshrc, the csh may leave an open file descriptor (socket). Specifically, if the current machine is a YP client, the socket is left open to the YP server. The shell and its children may then be uncheckpointable.

(PR-20910) - If you invoke a c-shell as a subshell, then the ps command will show that process command as -sh, rather than csh.

(PR-21547) - Using the csh from X10.0.0.1 causes problems with tip. A .tiprc file that contains the following lines will not work with this csh. record=~/tip/install$$ beautify script=true verbose This file works just fine with V9.1 csh. The problem is with the record file. It seems that the "$$" are not being expanded to the PID.

(PR-21576, PR-21576) - When editing a line that contains a real tab character, insertions before the location of the tab character in the line will corrupt the display.

Workaround: Use the replot key (usually ^R in emacs mode) to redisplay the command line. It will be correct.

(PR-21863) - When you add a new file (with execute permission) to the search path (i.e., $PATH), the builtin command "whence" will show the new file. Attempting to execute this new file will be unsuccessful. It will not execute until the builtin command "rehash" is executed. The "whence" command should show exactly what command would be executed. It should use the same hash table algorithm used to fork and exec commands.

(PR-21968) - csh, when running large, long running shell scripts, will occasionally fail with a core dump in the internal malloc.

(PR-22086) - csh should check for read/write failures and call perror if there was an error.

(PR-22455) - If the environmental variable path is unset, a ^D for filename completion will cause a Bus error(coredump).

(PR-21862) - tcsh does not follow documentation concerning history references given without an event specification following a previous history reference on same line.

(PR-22601) - csh does not know about the erase2 stty control. It is possible to set erase2 while another process is running on the tty, but once control returns to csh (e.g. ^Z) erase2 is cleared. It seems that csh is clearing erase2 as part of restoring the tty mode after a command finishes.

(PR-22909) - Observations regarding tcsh vs. csh V9.1: 1. Many tcsh vi key bindings do not work, notably <Esc>, which evidently fails to invoke vi-cmd-mode at all. 2. Under emacs key bindings only, tcsh fumbles the werase character, ^W, generally erasing the full command line instead of the last word. Although the binding of ^W to kill-region is documented in tcsh(1) and is compatible with emacs in some sense, the effect is not

(PR-22790) - The elapsed time and the usage percentage figures are wrong in the output of the csh time command under ConvexOS V10.0. The percentage is always 100% on a 1 headed machine, 33.3% on a 3 headed machine, etc.

(PR-23075) - csh doesn't allow the user to set terminal modes. Apparently it has a saved set of modes which it restores frequently, perhaps before every prompt.

csh.1

(PR-19205) - In the time section of the csh.1 man page, it should be documented that the 'time' subcommand is only meant to be used as a rough indication of how long a command executes. The time reported will be less than the actual time when the command being timed is prematurely terminated.

(PR-19728) - The csh.1 man page should document that the valid values for the "status" variable is -128 to 127.

ctags

(PR-22083) - ctags should check for read/write failures and call perror if there was an error.

ctar

(PR-16801) - The r option of ctar does not work.

(PR-22183) - ctar should check for read/write failures and call perror if there was an error.

cvxftruncate.2

(PR-17818) - The man page for cvxftruncate indicates that EISSOCK should be returned. The actual return appears to be EINVAL.

date

(PR-20223) - Output from 'date -z <zone>' is erroneous.

(PR-20236) - When setting the timezone with the "date -z -hour[,rule]" syntax, the rule must be specified, or else date will save an unitialized variable as the daylight savings rule. Furthermore, the supported rules need to be updated to reflect all those supported in /usr/include/sys/time.h (specifically, DST_CAN is missing).

(PR-21038) - The "-z" argument to the date utility is not correctly setting the time offset from GMT.

(PR-22891) - The current version of date was apparently updated to reflect the POSIX 1003.2 Draft 10 standards. The new Draft 11 standard is out and has some changes. date should be updated to reflect the new functionality.

date.1

(PR-20358, PR-22418) - The formatting option, '+', which allows output format specification, is not documented. This option allows formatting the date output by calling strftime(3).

dc

(PR-22137) - dc should check for read/write failures and call perror if there was an error.

dd

(PR-10569) - In previous versions of ConvexOS, if a tape had a bad spot, dd could be used to get past it. Now, dd aborts on the error rather than continuing.

dd.1

(PR-13743, PR-14394) - It should be noted on the man page for dd(1) that the option "conv=ebcdic" does blocking by default, and that "conv=block,ebcdic" is redundant. It should also state that with "conv=ebcdic,block", the block overrides the ebcdic and all you get is block conversion.

deroff

(PR-22096) - deroff should check for read/write failures and call perror if there was an error.

deroff.1

(PR-19334) - The deroff man page references "troff(1)" as an "(optional product)" in the SEE ALSO section. While troff is available from a third party software vendor, it is not a CONVEX optional product (like NFS, etc.).

df

(PR-15618) - df is looking at file systems which are not asked about when doing a df of a particular file system.

(PR-21857) - A non-root user can use the df utility to test whether a file exists in a directory hierarchy which is unreadable by that user.

diction

(PR-22097) - diction should check for read/write failures and call perror if there was an error.

diff

(PR-15045) - When running diff on two files which differ in length by one byte and in content by the lack of a single newline character on the final line of the shorter file, diff output will report a difference in the two files (as it should), but will tack a 0x255 (-1) character to the end of the shorter file's output.

(PR-22087, PR-22088) - diff should check for read/write failures and call perror if there was an error.

diff3

(PR-22098) - diff3 should check for read/write failures and call perror if there was an error.

diskuse

(PR-07534, PR-15491) - When diskuse -d / is executed on a machine with NFS, the following error occurs: diskuse: cannot opendir "." If the same command is issued on a system that is not running NFS, diskuse -d / will run to completion.

doc

(PR-13505) - The following error message was reported 16 times: [CCU00@HH:MM:SS] ta0: tape controller chassis 0 ccu 0 csr 0xffc0c0 is not responding. This message is not listed in the ConvexOS Programmer's Reference ta(4), the ConvexOS Tape System Guide or the ConvexOS System Manager's Guide. There's no way to tell if this message indicates a serious problem or not.

dump

(PR-10136, PR-11938) - Convex's dump program does not return the same exit status as BSD's dump. The manual page for dump(8) notes that dump is unusual in this respect, but gives no justification.

(PR-11940) - Dump should not allow you to execute the command if it is not actually creating a valid dump tape.

(PR-14245) - The backup utilities (tar, dump) do not have the facilities to verify that data written to the tape was written correctly.

(PR-16835) - If dump is used with the "G" flag, it gives a count of the number of blocks written to tape when it completes: DUMP: DUMP: 54874 tape blocks on 1 tape(s) This is off by a factor of two from df. Traditionally tape sizes are given in 0.5KB blocks. The dump man page thinks a tape block is 1KB. (Or maybe 5KB default and 50KB with the "G" flag).

dump.8

(PR-20431) - The following warning message needs to be explained with respect to doing dumps with labeled tapes : DUMP: Warning... Can't set async. i/o flags on tape.

dv_driv_gd

(PR-10159) - On page 1-4 of the GWDD doc (third revision, April '88), under the description of xxopen(), the "flags" arg is claimed to be the same as the flag argument passed to the open() syscall. This is not entirely true. The flags have been converted from the O_RDONLY type of value into the FREAD type of value...

e

(PR-16451) - /bin/e is installed as a hardlink to /bin/ed. /usr/ucb/e is installed as a hardlink to /usr/ucb/ex. This is a problematic name clash. Both should be removed, and the man pages updated.

(PR-22143, PR-22144) - e should check for read/write failures and call perror if there was an error.

edquota.8

(PR-10145) - The man page edquota(8) makes no mention of the fact that it does not work on an NFS mounted filesystem.

egrep

(PR-22099) - egrep should check for read/write failures and call perror if there was an error.

emacs

(PR-12488) - When you use emacs to do a FORTRAN compilation, it will not position the cursor on the next-error in the *compilation* buffer.

(PR-13966) - When editing a file emacs creates temporary copies of the file called auto-save files. When creating these files emacs uses the users umask instead of the permissions of the file being edited.

(PR-17543) - The emacs screen in "info" refers to Unipress emacs rather than GNU emacs.

emacs.1

(PR-12678) - The emacs(1) manual page describes various files which are listed as being under /usr/local/emacs; these files in fact appear to be under /usr/lib/gemacs. Also several of the files listed in the man page do not exist.

eqn

(PR-22100) - eqn should check for read/write failures and call perror if there was an error.

error

(PR-12446) - The error utility gets a segmentation fault when output from fc is large. If the output is reduced, the command works correctly.

(PR-22170) - error should check for read/write failures and call perror if there was an error.

ex

(PR-09601) - If an entry for a terminal of type "dumb" does not exist in your termcap file, then ex scripts don't seem to do anything.

(PR-22146) - ex should check for read/write failures and call perror if there was an error.

ex3.7preserve

(PR-16442) - /usr/lib/ex3.7preserve appears to be ignoring zero length temporary files.

ex3.7preserve.8

(PR-16443) - There is no man page for /usr/lib/ex3.7preserve.

expand

(PR-22118) - expand should check for read/write failures and call perror if there was an error.

explain

(PR-10915) - The diction program complains about many things that explain has nothing to say about.

expr

(PR-16759) - The expr command can give incorrect answers when the result is a large number. When this happens, expr still gives a return code of zero and does not produce any error message.

(PR-23012) - If the user types a bad expr line, it responds with "syntax error" rather than "expr: syntax error". This makes it difficult to know what went wrong in a script.

expr.1

(PR-19261) - The man page for expr does not document the keywords: "match", "substr", "length", and "index". These keyword operators are for string manipulation.

faillog

(PR-15321, PR-17304) - It seems that to execute an executable, the file also needs read permission; otherwise, an EACCES R error will be logged by faillog.

faillogpr

(PR-20245) - If faillogpr is executed on an empty file, it issues an error message: /usr/adm/faillogpr: filename: invalid input file and exits with a code of 1. An empty input file is not an invalid input file. faillogpr should handle an empty input file without giving an error message and it should terminate with an exit code of 0.

false

(PR-13916) - /bin/false cannot be run using 'execve'. /bin/false should be written as #!/bin/csh -f exit 1

fgrep

(PR-22101) - fgrep should check for read/write failures and call perror if there was an error.

file

(PR-21702) - file gives inconsistent results when wildcarding is used.

(PR-22102) - file should check for read/write failures and call perror if there was an error.

find

(PR-11118, PR-11549) - Find does not parse its arguments well.

(PR-20518) - Find exits with status == 0 when it doens't find what it's looking for. This is at least true when -inum is used and may also apply to -user, -name, etc. It used to virtually always exit with status == 101 regardless of whether it found anything. It should exit with status == 101 iff it doesn't find anything and exit with status == 0 if it does.

(PR-22345) - find can end up in endless loop if /etc/mtab is incorrect.

(PR-22388) - The find command returns a status of 101 even when it succeeds with a simple find command.

flpf.8

(PR-23170) - No man page for /usr/lib/flpf (FORTRAN Line Printer Filter).

fmt

(PR-22119) - fmt should check for read/write failures and call perror if there was an error.

fold

(PR-22120) - fold should check for read/write failures and call perror if there was an error.

fsck

(PR-20258) - There are cases in which fsck will declare a filesystem clean, but when fsck is rerun, the filesystem comes up dirty.

fstat

(PR-18332) - fstat can find files in an undefined state due to the dynamic nature of the open file table. This means that a user can occasionally get peculiar things like "unk" in the TYPE field.

getty

(PR-20480) - The /etc/gettytab file specifies that backspace (^H) is to be used as the erase character in the default entry (which is supposed to propagate to the other entries that don't specify an erase character). However a backspace is just treated as a normal character when typed at the login or password prompts.

gnumacs

(PR-17227) - When using a gnumacs server, "cntrl-X #" generates the question "Save file <filename>? (y or n)" An answer of "n" used to generate a second question on the order of "do you really want to exit? (yes or no)". With 9.0+, an answer of "n" will exit gnumacs.

grep

(PR-16519) - When using grep with the -c and -s options together, the -c option breaks.

(PR-20556, PR-20570, PR-20622, PR-20816, PR-21231, PR-21498, PR-22338) - 'grep "*" file' dumps core with segmentation fault.

Workaround: Use three backslashes to precede the * instead of "*".

(PR-22089) - grep should check for read/write failures and call perror if there was an error.

head

(PR-18397) - Request that artificial line length limits be eliminated in head.

(PR-22121) - head should check for read/write failures and call perror if there was an error.

help

(PR-08018) - There are many utilities that don't react well to EOF. All should be tested by running them with /dev/null as stdin. Two with problems are help and ftp.

ibmdaemon, nldaemon

(PR-22819) - There is a problem with using C programs to write a file to a multivolume tape set (either IBM-labeled or unlabeled, under nldaemon). If the device is closed and then opened again (read-only), then rewound, then closed again, an error will occur with the first read performed on the file (errno 76: can't understand label). A second read (eg, in a silo) will advance to the second tape and the read will succeed.

ident

(PR-22173) - ident should check for read/write failures and call perror if there was an error.

indent

(PR-09190) - indent -npsl corrupts the indention level of the next line.

(PR-10664) - 'indent' fails to properly format certain files.

((PR-16649) - PR-20747) - indent appears to have a maximum input line length of 600 characters, and without warning will truncate lines longer than that limit. It should issue a warning/error message that it is truncating the line.

(PR-22122) - indent should check for read/write failures and call perror if there was an error.

inetd

(PR-20249) - Erroneous example in man page for inetd.

init.8, getty.8

(PR-20948) - The manual pages for getty.8 and init.8 need to be updated.

install

(PR-17470) - If a sysgen file already exists and the install attempts to use it for output (upon installing the SECURE NFS product), the install script does not remove or rename the existing file, and if the sysgen file is already damaged or corrupt it will stay that way.

(PR-20340) - Appendix F of the "ConvexOS and Utilities V9.1" installation notes say that the jptest directory, if there, can cause a shortage of SPU disk space. The crashdump (hwdump) utility can malfunction if this directory is deleted. If only a few files are needed, a more specific Appendix F would be appropriate.

(PR-21819) - When attempting to install software from a 35-product DAT, stacked GIP tape, the following error msg (repeated several times) is produced: *** Warning: malformed header line at line 8 of /tmp/Ins_H000401 text of bad line is !<installsw>

(PR-21818) - Given a DAT tape with 35 GIP'd products on it, when the part numbers & descriptions are displayed, several are too long for the field & cause the release & files information to be misaligned. This makes the table look very sloppy. Either the name should be truncated, a max description length decreed & enforced, or the display modified to be able to handle multiple line descriptions.

(PR-22847) - When running a remote install, the installation reports, "Bad free() ignored at /tmp/Ins_S028527 line 338." The script is the GIP master install script running on the remote (ie, the target) host. It looks as if the specific statement causing the problem is "open(STDOUT, '>&SAVEOUT');"

installsw

(PR-17382) - installsw will read past the end-of-file of the Header file on a tape if the Header file does not end with a newline. Installsw uses the fgets() libc function to read the Header file. fgets() reads past the EOF of a file on tape if the file's last character is NOT newline.

installsw.8

(PR-20915, PR-20916, PR-21755) - The man page for installsw makes no mention of the '-G' option for GIP installs.

(PR-21190) - The man page for installsw describes the usage of the cipher SPU tape drive only. It completely ignores the qic tape drive, and even suggests that the cipher tape drive is the only option available for SPU installsw usage.

intro.2

(PR-22483) - There are only 78 errno values defined in the intro.2 man page, whereas there are 116 in /usr/include/errno.h. The ones that are missing are 78-113 and 115-116.

intro.5

(PR-20682) - ConvexOS Man Pages for Programmers is missing the introduction page for section 5 (intro(5)), file formats.

lastcomm

(PR-13858) - lastcomm sometimes reports a user as "Unknown User" when previous reports have correctly identified the user. YP is running.

(PR-20545) - Most of the time, lastcomm(1) is used in search for suspicious situations. lastcomm should include at least the uid when it can't attach a username to a uid.

learn

(PR-10631) - When using learn to learn vi, learn puts you into the editor and only uses 24 lines, even if more than 24 have been set with term type.

(PR-11277) - learn files 10.1a is not exiting properly when using the "ready" response at the "%" prompt. It gives a shell error: sh: syntax error at line 1: '(' unexpected.

(PR-10632, PR-11891) - learn editor will not let you exit after selecting 2.2a.

(PR-13682, PR-19298) - Upon entering "learn editor 7.1a" and after typing a "q" as input, one gets a message like: "Extra characters at end of command" Learn fails to recognize the edit commands and the user is unable to complete the exercise as directed.

leave

(PR-08630) - leave does not know when you have logged off from an xterm session and will stay around forever unless killed with a 'kill -9'.

less

(PR-12551) - The 8.0 verson of less has the nice feature of not clearing your screen if it receives no input. It does however move to the top of your screen, then back to the bottom when it sees no input. This is not only a waste of time, but if there is an error message sent to stderr, it gets placed at the top of your screen, where you may not see it.

(PR-13318) - In the less prompt string, ?n should be set to true if it is the first prompt in a new input file. It is never true.

(PR-13658) - When the goto function ("}") command is used, less forgets marks ("m") that have been set.

(PR-18333) - If less is invoked with very long pathnames and it is at the bottom line waiting to go to the next file, the line wrap makes the screen jump and you never can see the top line of the page.

(PR-20565) - If less is called with no argument, and standard output is redirected to a file, the terminal is left in a confused state.

(PR-21137) - less(1) can not always find tags (-t option) in the tag file.

(PR-22174) - less should check for read/write failures and call perror if there was an error.

lex

(PR-22162) - lex should check for read/write failures and call perror if there was an error.

lint

(PR-14530) - lint complains about the include file, /usr/include/math.h, saying that the static variable __HUGE_VAL is defined but never used.

logger

(PR-22123) - logger should check for read/write failures and call perror if there was an error.

(PR-22852) - When given the -f option, logger should print its usage statement rather than take input from stdin if the file part of the argument is missing.

login

(PR-17923) - /bin/login should not allow logins through telnet and rlogin to accounts that do not have passwords.

login.1

(PR-18107) - The man page for /bin/login needs to document all possible error messages that can be seen by the user or logged.

login/sendmail

(PR-22853) - We (in japan -09:00) set "JST-09:00" in TZ environment variable to print correct date as follows. % date Wed Nov 13 21:15:52 JST 1991 Because standard UNIX timezone including ConvexOS does not support Japanese standard time (GMT+09:00). The only correct way for us to use is with TZ variable.(TZ=JST-09:00) Because tzset() reads TZ variable, however some utilities cannot use TZ variable. /bin/login and /usr/lib/sendmail for example. /usr/lib/sendmail unsets TZ variable and /bni/login cannot set TZ.

look

(PR-22104) - look should check for read/write failures and call perror if there was an error.

lorder

(PR-22163) - lorder should check for read/write failures and call perror if there was an error.

lpc

(PR-20476) - Using the line printer control program, lpc, to redirect print jobs fails.

(PR-22367) - The 'lpc topq printername' command returns with an inaccurate usage message.

(PR-22430) - The command, 'lpc enable someprinter', prints the following messages: someprinter: queuing enabled daemon started In reality, no daemon is started, even if there is stuff in the queue.

lpd

(PR-12008, PR-12029) - If one submits a print job to the line printer, the lpd queue child starts printing the header on the printer and then dies strangely. lpq -Pprintername will then show entry(ies) in the queue, but "no daemon present".

(PR-16740, PR-17689, PR-17813, PR-17929, PR-19697, PR-19820) - When accessing a remote printer queue, lpr, lpq, and lprm ask the lpd daemon to query the remote site as to whether the job has been redirected. This particular query is not supported by older lpd daemons. Any such requests to an older remote printer daemon either hang or result in "lost connection" message.

(PR-19136) - Starting in ConvexOS V9.0, standard error from an input filter is sent to a temporary error file which is later deleted. This error output is never written to the log file (as specified with lo in printcap).

lpd.8

(PR-20379) - Support for syslogd has made the -L logfile option for lpd(8) obsolete. This option is now silently ignored. This option should be removed from the SYNOPSIS.

lpmv

(PR-15599) - lpmv does not start the print daemon on the destination queue after a move. Therefore, a job moved into a new queue will not print until the daemon is manually started (lpc start) or another job is submitted to the queue.

lpq

(PR-21333) - Specifying the -l option (long display) on lpq more than once for remote printers results in misleading error messages.

lpr

(PR-22171) - lpr should check for read/write failures and call perror if there was an error.

(PR-22688) - 'lpr' does not parse command line arguments in accordance with the synopsis in the manual page.

lprew-daemon

(PR-15363) - Print jobs are queued but never make it to the printer. Printer works fine when lprew-daemon is not running.

ls

(PR-13702) - ls -l does not properly display users with negative uids. If a user's uid is negative, the negative uid is displayed in the user field.

(PR-20573) - ls doesn't format it's output sometimes (i.e. files don't appear in columns).

m4

(PR-22105) - m4 should check for read/write failures and call perror if there was an error.

mail

(PR-07909, PR-08033, PR-14550) - /usr/ucb/mail does not correctly parse RFC-822 addresses. In particular, it thinks space is a delimiter on incoming addresses, which is incorrect.

(PR-09274) - It is easy to accidentally delete mail unintentionally. The user typed 'd i' instead of 'd 8' and all messages from anyone with an 'i' in their name were deleted. This should either be changed to 'd *i*' or else documented.

(PR-10582, PR-14921, PR-14956) - A "." in a CC line will cause mail to coredump.

(PR-11972) - /bin/mail cannot handle null characters.

(PR-13517) - An alias with a long list of names causes mail to take a memory fault and core dump. The mail(1) man page does not specify any size limitations for an alias. If this is a software limitation, it should be documented.

(PR-13750) - There needs to be a standard mailbox (/usr/spool/mail/XXX) locking scheme that works when that directory is NFS-mounted. The current scheme(s) do not.

(PR-12978) - The /bin/mail (and /bin/rmail) programs use flock(2) for locking the user's mailbox. Since flock(2) and fcntl(2) styles of locking do not cooperate, this presents a couple of problems. Also, /bin/mail does not seem to lock the folder when in use. So two /bin/mail programs could corrupt the mail folder.

(PR-17032) - Embedded blanks in .mailrc fields enclosed within double quotes are not parsed properly. Parsing stops at the blanks instead of the closing quotes. This makes it impossible to define, among other things, a value for the "cmd" variable, and it is therefore impossible to print messages from within mail. It also means options cannot be defined to the PAGER.

(PR-18142) - /usr/ucb/mail displays a negative line count for messages greater than 32767 lines long.

(PR-19867) - mail ignores a reply-to field.

(PR-22145) - mail should check for read/write failures and call perror if there was an error.

make

(PR-15781) - make will regenerate a target even if the prereq has not been modified.

(PR-17073) - The make utility does not recognize the && shell syntax; the companion syntax (\| \|) is recognized.

(PR-18314) - When a pound sign (#) is escaped in a macro definition, make treats it as the start of a comment.

(PR-22155, PR-22156) - make should check for read/write failures and call perror if there was an error.

makewhatis

(PR-19336) - makewhatis should not be case sensitive concerning the NAME field. It should accept ".SH Name" as well as ".SH NAME".

(PR-21315) - Makewhatis returns: "can't store intro.8 -- would break DBM"

man

(PR-18844) - man cannot handle man pages that have '$' in the name.

(PR-20271) - Subsection indexing is not implemented strongly enough.

(PR-20324) - There are spelling errors in different man page entries.

(PR-20787) - After system installation, the man system has world writable directories /usr/man/cat* . On the first use of 'man <subject>' the appropriate page gets formatted and placed in /usr/man/cat* owned by the user doing the man command. This user can then edit that man page, or even worse create spurious man page entries in the cat sub-directories.

(PR-22124) - man should check for read/write failures and call perror if there was an error.

(PR-21923) - man -i ignores the .ig man page macro as evidenced by an erroneous number of lines being reported for tset.1 BUGS section for example.

(PR-22619) - Man doesn't find .so aliases when those aliases are cross sections.

man.1

(PR-22793) - man(1) contains: If at least non-switch two arguments are supplied, should probably be: If at least two non-switch arguments are supplied,

mkdep

(PR-22138) - mkdep should check for read/write failures and call perror if there was an error.

mknod.8

(PR-22528) - The assignments of major device numbers, as documented in the manual pages MKNOD(8), refer to ConvexOS V8.0.

mkstr

(PR-22180) - PR-22181) - mkstr should check for read/write failures and call perror if there was an error.

mmap.2

(PR-23011) - The 'prot' parameter to the mmap(2) call is described as the logical OR of PROT_READ, PROT_WRITE, and PROT_EXEC. It is really the bitwise OR of these values.

more

(PR-22125) - more should check for read/write failures and call perror if there was an error.

mount

(PR-19088) - When /tmp is already mounted and a mount -a performed, the error messages "No such device", "mount: giving up on:", "/tmp" appears. Mount did not complain about other file systems that were already mounted.

(PR-21121, PR-21128) - The function addtomtab() in mount does not lock the file /etc/mtablock prior to making changes to /etc/mtab. This can lead to inconsistency between /etc/mtab and the kernel's internal mount table when multiple instances of mount and umount are concurrent.

(PR-21867) - mount(8) is silent when it should be reporting errors if an invalid numeric value is given for blkpre, blkhi, or blklo.

(PR-21984) - When attempting to mount a file system over nfs to a file, rather than a directory, the global errno is set to 2, ENOENT (No such file or directory). It seems more accurate to return 20, ENOTDIR (Not a directory).

mount.8

(PR-21913) - The event daemon additions to mount are not in the ConvexOS 9.1 man page.

mpa

(PR-19685) - When mpa is used to execute a command and the command name is not fully-qualified, mpa truncates the PATH environment variable inherited by the child process.

(PR-22228) - mpa does not send its output to stdout or stderr.

msgs

(PR-21152) - The man page for 'msgs' states that the '-p' option uses the 'more' pager, when in fact the PAGER environment variable is checked first.

mt

(PR-15623) - The mt(1) utility's fsr command does not properly handle labeled tapes. If one specifies any count, it prints a message: mt: fsr <count>: invalid command This command seems to work fine for unlabeled tapes.

(PR-18769) - It is often useful to put multiple entries in the /ioconfig file for the same device. Unfortunately, the mt command will allow you to access the same physical device by any logical name.

(PR-22177) - mt should check for read/write failures and call perror if there was an error.

netstat.1c

(PR-19706) - The man page for netstat references iostat(1) in the SEE ALSO section. Neither the iostat command nor the iostat man page seems to exist.

newaliases.1

(PR-20654) - newaliases(1) states: NOTE: It no longer needs be run each time /usr/lib/aliases is changed in order for the change to take effect. This is now handled automatically by sendmail. This is true ONLY if the "D" option has been set in "/usr/lib/sendmail.cf" (which isn't always the case).

newfs

(PR-22721) - newfs will allow you to specify the block disk device (without a complete path name) to create new file systems. However, the resulting file system will have a grossly inaccurate size. If the raw device is required, newfs should complain when you specify the block device.

(PR-22969) - When installing the root partition on a DKD-504 disk (Seagate ST83050K 3.05GB IPI-2 disk) you need to use the 'boot mini' method from SPU to install the operating system under /dev/du0b (swap space). At this step, the newfs command doesn't recognize disk type 'DKD-504' (because there's no entry in the /etc/disktab file).

newsyslog

(PR-18173) - /usr/adm/newsyslog does not parse /etc/syslog.conf to determine which syslog files to manage.

nfaccess

(PR-17529) - nfaccess doesn't recognize group 'Other'.

nfmail

(PR-07824) - If nfmail is reading non-mail text, and is interrupted with ^C, nfmail stops (as it should) but the notesfile lock is not removed.

(PR-07829) - If the output of MH's show command is piped into nfmail, the note appears in the notesfile without an author name.

(PR-16295) - nfmail does not check the return value of fclose() on its temporary file. It needs to do this in case /tmp fills up, at the very least. Should this occur, it should exit with EX_TEMPFAIL so the mailer does the right thing, i.e. queues it until later and reports are not lost.

nfxmit

(PR-10487) - The -p option on nfxmit is supposed to propogate notes title changes and director message changes. The original version used -p to transmit ONLY title changes and director message changes. The problem occurs when you specify a -p and there is a new note in the file. In this case the note is transmitted without text.

(PR-13936) - nfxmit fails using the default control string. When there is no entry in the file "net.how" for a specific site, no transmission to that site is taking place and the following message is displayed: nfrcv: Event not found. notesfile-name : Fail send (15, 33) to site-name since 10:00 am May 21, 1990

nldaemon

(PR-22272) - Can't write to nl tape device when the device is opened in O_RDWR mode.

nlist.3

(PR-21233) - The nlist.h header file says: /* FILE_MOD_FAIL is returned by libc routine nlist() to signify that */ /* the file being read has been changed in the time it took to do a */ /* symbol name lookup. */ #define FILE_MOD_FAIL -2 But the nlist(3) man page does not say anything about this return value of the nlist() function.

nm

(PR-22157) - nm should check for read/write failures and call perror if there was an error.

notes

(PR-05658) - notes doesn't always put responses with corresponding base notes.

((PR-09045) - PR-10186) - When notes is used in an NFS environment with /usr/spool/notes cross-mounted on various machines, nearly simultaneous postings to the same group from different machines can at best confuse and at worse corrupt the notes system. This is due to the inherent unreliablilty of creat()s under NFS, which notes uses for locking purposes. It needs to use lockf() instead.

(PR-14340) - notes regularly merges notes or responses, corrupting the notesfile.

(PR-18493) - When nfload is used to create a notesfile, the new notesfile starts with sys:Other and grp:Other in the access list. If the list being loaded has 35 entries (max allowed), the access list will overflow, and nfload will drop all entries after the first 33.

nroff

(PR-07649) - nroff -T37 flag (default) does not work properly.

(PR-11356) - The nroff command, "dot-tl", produces incorrect output when there are an even number of characters on the command line.

(PR-16621) - Some man pages, which format correctly under troff, do _not_ format correctly under nroff -- thus leading to incorrect and very misleading man pages.

(PR-22106) - nroff should check for read/write failures and call perror if there was an error.

nu

(PR-14377) - When yp is being used and new users are added with nu, they are appended after the +::0:0::: in /etc/passwd instead of before.

(PR-22836) - Nu should add a user to the shares database and the passwd file at the same time. Currently, the shares files is updated, some more questions are asked and then the /etc/passwd file is updated. This can result in inconsistencies if nu is aborted after the /etc/shares file is updated.

(PR-22771) - nu(8) as distributed on tape, does not recognize the 'newsgroup' keyword. Re-compilation of /usr/src/convex/nu.c solves this.

nu.8

(PR-22662, PR-22783) - The man page for nu says the source (nu.c) lives in /usr/convex. This is not correct. The source lives in /usr/src/convex (provided you installed the "Optional Sources".)

(PR-22693) - The nu man page warns about the reserved value for share but does not mention that CONVEX has "reserved" uids 0 through 99 for system use.

od

(PR-11269) - od displays different values depending if the -v switch is used or not. Without -v, the output may be incorrect.

(PR-22090) - od should check for read/write failures and call perror if there was an error.

op

(PR-17758) - The op command gives an error message if there are any '.'s in an argument to the command to be executed, as described in the op.access file.

(PR-22385) - op is incorrectly printing the default "current directory" to stdout.

opreq

(PR-22333) - opreq should give an error message when it fails to reserve a drive.

(PR-22335) - The "configure-drives" command in opreq always results in the error message "tpconfig failed!" even when the tpconfig command was successful.

opreq_daemon

(PR-21478) - opreq may show a drive as available even though tpdaemon has the drive allocated to another user. This is the result of an "extra" AVR message in opreq_daemon for the drive.

Workaround: In opreq, "configure-status" to display Waiting messages. Also, "configure-type" to show Auto-Vol-Rec messages. When the problem manifests itself, there will be an Auto-Vol-Rec message for the specific drive. To correct the situation, "select-cancel" on the Auto-Vol-Rec message.

os_archref

(PR-16217) - Chaining is described as a vector processing mechanism that uses the output of one vector instruction as the input to another (page 8-28). It is not clear whether or not the "output" includes the VM register, and whether or not the VM register is built and used one bit at a time. Thus, questions like "Will an operation under mask chain onto a vector comparison?" are not resolved.

os_cfg_smg

(PR-17765) - The System Manager's Guide ought to document how to use dump(8) or xdump(8) on ANSI labeled tapes.

(PR-20607) - The documentation for disk quotas, man pages and The Configuration Guide, fail to state the size of a block.

passwd

(PR-16440) - The following entry should be added to the /etc/passwd file to be able to serve SunOS 4.1. nobody:*:65534:65534::/:

(PR-22091) - passwd should check for read/write failures and call perror if there was an error.

pattach.2

(PR-21230) - The man page for pattach.2 is confusing in regards to group ID.

(PR-21284) - The man page for pattach.2 states that group 'daemon' is allowed access to all processes via pattach. This is incorrect. The actual group that is allowed access to all processes via pattach is 'kmem'.

pax

(PR-19296) - tar (pax) incorrectly reports "tar: Write error: EOT seen" when a non-recoverable tape error occurs while the tape is not at EOT.

(PR-22158) - pax should check for read/write failures and call perror if there was an error.

perl

(PR-15624) - The -s flag when used in conjunction with the -w flag can cause unwarranted complaints regarding ENV being a possible typo.

(PR-17804) - perl contains CONVEX copyright notices even though it is a copylefted source. It needs to be undone for CONVEX to be in good legal standing.

(PR-22107) - perl should check for read/write failures and call perror if there was an error.

(PR-21614) - When a program sets a signal mask (via syscall(&SYS_sigblock, $mask)) and then executes a goto, the signal mask is reset to the original state it was in when perl compiled the program. It would appear that perl is using setjmp at compile time and longjmp at runtime to do it's goto's. This "feature" should either be noted in the man page, or perl should use _setjmp/_longjmp (assuming that is what it is doing).

(PR-22522) - The #!<pathname> method of invoking an interpreter (shell or perl) on the first line of an executable file breaks if there is a comment on the same line. Instead of running it with the program declared, it runs the file with the user's shell.

perl.1

(PR-17234) - The perl man page says that the -u option creates a core file which can be turned into an executable with an undump program. Instead, it created the executable file directly.

(PR-23040) - The perl man page has some comments slipping through.

pr

(PR-22092) - pr should check for read/write failures and call perror if there was an error.

pr.1

(PR-20410) - The man page for pr states that "a date" is printed as part of the page header. The date printed is the last modification time of the file.

ps

(PR-09615) - 'ps aux' will generate a floating exception if the load average is zero.

(PR-15015, PR-15184, PR-15625) - 'ps ux' sometimes passes a negative length argument to mmap.

(PR-19784) - 'ps v' shows some processes with bogus, negative values in the RE column.

(PR-21929) - ps will occasionally output bogus values for CPU% and MEM%. CPU percentages have been seen at several hundred percent for non-parallel jobs.

ptx

(PR-22108) - ptx should check for read/write failures and call perror if there was an error.

pty.4

(PR-20901) - The pty(4) man page references the vhangup(2), and suggests that attempts to write to a pty where the master has been closed results in an error (errno = EIO). A test program indicates that the write does not fail. The output, however, is not printed through the master either.

quot.8

(PR-20382) - In the quot man page, the line -a Generate are report ... should be -a Generate a report ...

quotactl.2

(PR-21093) - The quotactl.2 man page and the quotacheck.8 man page differ.

(PR-21095) - The quotactl man page lists the efault error condition twice.

ranlib

(PR-20614) - Trying to create an executable generates the following error message from the loader: ld: can't load file of type 'unknown' ld: ERROR - Invalid archive member: mylib.bug.a(tf) ld: No executable produced.

(PR-22164) - ranlib should check for read/write failures and call perror if there was an error.

rcs.1

(PR-18220) - The man page for rcs should explain that command line options cannot be combined.

rcsdiff

(PR-15194) - rcsdiff defines its own version of the fprintf function. It contains a circular recursive call to faterror, which calls fprintf, which calls faterror, etc.

rcsfile.5

(PR-12936) - The man page for rcsfile(5) cannot be printed with nroff. It complains of zero width fields.

rcsmerge

(PR-15754) - When an attempt is made to merge a sufficiently large source file with rcsmerge, the user gets the message "File size limit exceeded" in the output file. This apparently is a result of passing final diff output through ed, which has a 128 kilobyte file size limitation.

readlink.2

(PR-22637) - The DESCRIPTION section for readlink(2) uses "name" to refer to an argument identified as "path" in the declaration of readlink(). "Path" should be used instead of "name". Also, the declaration of "cc" in the SYNOPSIS is unnecessary, and does not conform to the standard used in other man pages like unlink(2).

restart

(PR-18331) - restart will abort with a core dump when restarting a multithreaded checkpoint if the concurrency limit is less than the number of threads in the checkpointed application.

(PR-19983) - A process that checkpointed with no error messages restarted with a messed up process name.

(PR-20962) - When trying to restart a checkpoint file that was inadvertantly truncated, restart complained about a "bad file number". The error message should point you in the right direction.

restore

(PR-13770) - After verifying a multi-volume EXABYTE cartridge set, restore will sometimes dump core when it is given a "1" in response to the next volume to verify. This answer "1" is given when there are no more volumes to verify.

restore.8

(PR-20343) - The error message "Tape read error while trying to set up tape" is not in the restore (8) man page.

(PR-20878) - The restore man page needs to have a better explanation of multi-volume dumps. In particular, a section detailing volume ordering (why to start at last volume for a few files) would be helpful.

rev

(PR-22165) - rev should check for read/write failures and call perror if there was an error.

rlog.1

(PR-19518) - The man page does not document the -R and -L options of rlog.

rm

(PR-16878) - rm uses the access(2) system call to determine file permissions; thus, real-uid is used rather than effective-uid. It should use effective-uid.

rmail

(PR-17015) - Only outgoing uucp mail should be queued. All incoming mail from uucp should not be queued.

sa

(PR-12315) - The kernel writes accounting records containing an average concurrency field that is not equal to 1.0 on a C1.

(PR-13090, PR-17502) - Running sa on an NFS system can produce: preposterous user id, 65534: ignored This is because user "nobody" (root = -2 on NFS) doesn't have an entry in the passwd file, and for that matter, even if it did there would be problems fetching it properly due to disparities in uid types between the kernel and the libraries. /usr/etc/in.tftpd does a setuid(-2), which is how these records make it into the acct file.

(PR-17500) - With the '-m' option of /etc/sa the first column (username) and the second column (number of processes) will not always stay separated by at least one space. Especially when summarizing over longer periods, a username of 8 characters can be accompanied by a number of processes >= 10,000,000. The printf should include one extra (fixed) space!

(PR-18872) - sa -m outputs bogus information for the k*sec field. The results seem to be off by an order of magnitude or worse.

(PR-18836) - The sa command can die with a floating point exception. This happens because sa's internal function 'bcmp' (not the libc version) does not check two arguments for zero before using them as divisors. These values should be checked for zero.

sa.8

(PR-10937) - There's no description of the "total I/O" statistic generated by "sa". Description should include how it can be used to do I/O accounting charge-backs on a per-byte basis.

scnhdr.5

(PR-21003) - The scnhdr.5 manual page refers to obsolete #defines.

sed

(PR-22132) - sed should check for read/write failures and call perror if there was an error.

seestat

(PR-13900) - seestat does not check the validity of the -y argument. Anything >= than 400 will dump core or mess up the output.

sendmail

(PR-13602, PR-19412) - Queued local mail no longer has the original recipient's uid associated with it. Control files only store a list of exploded recipients (i.e. users, files and programs) -- one per line – each prefaced with an 'R'. So, after an address resolves to the local machine and has undergone alias and ".forward" expansion, if the letter happens to get queued, on the succeeding queue run, sendmail doesn't know for whom to run the final delivery.

(PR-18326) - Some modification has been made to sendmail under 9.0 such that site configuration files that worked under 8.x no longer work with the 9.0 sendmail executable. The changes that must be made to the configuration file entail making recipient names fully qualified before exiting the configuration rulesets. In particular, the relay host must be changed to be a fully qualified domain name, and the ruleset 0 must be changed to add domain names to known local hosts.

(PR-18879) - The date in mail headers is not correct for systems in JST (Japan Standard Time).

(PR-19290) - mail does not immediately process mail with local recipients.

sendmail.cf

(PR-14266) - The sendmail.cf file contains the following error: # 9) If your site is using domain names of the form 'hostname.subdomain. # domain', then you need to do the following: # #A) only define macros D and U and not macro U as specified in # step 2 from above. Item 9A is confusing. It should read 'D and U and not T' since $T is to be deleted based on 9B.

setgroups.2

(PR-21985) - The setgroups() function call is missing a manual page in the ConvexOS V9.1 Man Pages.

setitimer.2

(PR-21290) - Remove or change the reference to "CONVEX-1" in the setitimer man page.

setlimits.3

(PR-16079) - The man page for setlimits states the following: If the details for any group encountered cannot be found in the limits data-base, then the group is set to root. However, the setlimits call simply leaves the user in the current group (i.e., if they start in primaryg, they end up in primaryg)

sh

(PR-08807, PR-19658) - The bourne shell uses file descriptor 11 to print the prompt and output from the shell to the screen. If this descriptor is already in use, the shell does not print the prompt or any output from built-in commands to the screen.

(PR-11836, PR-11837) - If sh is passed a pathname to glob that contains a directory name with quoted characters (using either backslash, single, or double quotes), sh will not glob the pathname, but pass it verbatim.

(PR-13309) - Wildcard characters in directory names cause /bin/sh to dump core.

(PR-13400) - When a program executed in sh forks a process and writes to a pipe which the parent reads, both processes terminate as expected. However, when the program is run "nohup" in the background, a process is left behind in an idle state.

(PR-18200) - /bin/sh does not redirect stderr correctly when using "2>&1 > /dev/null". The output still is written to the screen.

(PR-18200) - /bin/sh should be able to reconize that /dev/null/. is not a directory and not just give an error that it cannot execute the file.

(PR-21807) - sh provides the wait command which optionally takes a pid, but when a pid is given, sh may reap some children it shouldn't. It should use waitpid in the case where a pid is specified.

(PR-21808) - When sh is invoked with the -r flag, the restriction is only supposed to take place after execution of .profile. Currently, it happens immediately.

shutdown

(PR-20428) - shutdown hangs when trying to send the shutdown message to remote machines.

(PR-22968) - When the CONVEX is an NIS client (for example), then if you issue the '/etc/shutdown -h' command, you'll see the broadcast messages that keep you informed about what's going on. The problem comes when the shutdown time has arrived, some processes (ypserv or ypbind) won't be killed automatically.

size

(PR-22159) - size should check for read/write failures and call perror if there was an error.

sod

(PR-22160) - sod should check for read/write failures and call perror if there was an error.

sort

(PR-16526) - If sort is run when /tmp is full, the exit status is zero and the results are incorrect.

(PR-22109, PR-22110) - sort should check for read/write failures and call perror if there was an error.

(PR-22723) - The -b option of sort does not appear to ignore leading whitespace.

spell

(PR-07509, PR-11337) - spell/look doesn't work on large dictionaries.

(PR-22111) - spell should check for read/write failures and call perror if there was an error.

split

(PR-22112) - split should check for read/write failures and call perror if there was an error.

spucmd

(PR-12750) - spu and spucmd live in /usr/convex. They should be located on the root partition so they can be used when the kernel is in single user mode.

(PR-23057) - The spucmd command causes spuio to die.

spucmd.8

(PR-10334) - If there is a spucmd running and someone tries to run another one, the second one will fail with "mount device busy" (which should be documented). Worse yet, the first process reports "spucmd read: Not owner", finishes the command it was running, and then exits -1.

strings

(PR-22142) - strings should check for read/write failures and call perror if there was an error.

strip

(PR-22161) - strip should check for read/write failures and call perror if there was an error.

stty

(PR-09955) - If an stty command is used in a script and "time source script", then the stty command will stop itself and control of the tty is not returned.

stty.1

(PR-19277) - The stty man page does not document the -g option output. Colon deliminated lists should have the ordering of the fields documented.

style

(PR-22113) - style should check for read/write failures and call perror if there was an error.

su

(PR-22148) - su should check for read/write failures and call perror if there was an error.

su.1

(PR-20311, PR-21882) - Man page for su shows incorrect usage of the "-f" flag.

sum

(PR-22166) - sum should check for read/write failures and call perror if there was an error.

swapon

(PR-18763, PR-19985) - A site with limited memory and/or large amounts of disks (including stripes) may have difficulty running any of preen, fsck, or clrinodefld without turning swapping on first with /etc/swapon. The Install and/or Release Notes should mention this explicitly.

sysgen

(PR-21747) - Currently, one can not enter a file.o in /sys/sysgen/files.SYSTEM or /sys/sysgen/files.ccu.SYSTEM. sysgen aborts and complains about a bad suffix. This was once allowed in the files file and files.ccu. Please reinstate previous functionality.

syslog

(PR-12503) - The file /usr/adm/log/tapelog is referenced in /etc/syslog.conf, but ConvexOS 8.0 does not come with this file already created. There should be an empty file there, after a new OS install.

syslog.conf

(PR-15485) - There should be a man page for /etc/syslog.conf. The info is currently in the syslogd man page. It would be nice to have a sub-section for FORMAT of the syslog.conf file.

syslogd

(PR-10261) - If host A forwards a message to host B, which in turn forwards it to host C which logs it, then the log message claims to have originated at host B, not host A.

syspic

(PR-08094) - Under certain circumstances, the syspic display becomes ambiguous, due to insufficient field width.

(PR-15236) - When running the network picture the user will occasionally see bogus values in the "if" field.

(PR-17061) - Looking at the tty totals as displayed in 'syspic' and in 'syspic -p tty' one sees that in 'syspic -p tty' the number of sent and received characters is about ten times the number displayed in the 'normal' syspic display.

(PR-18710, PR-20651, PR-21403) - syspic does not include disk stripes in calculating total Mb/sec for all disks. This exclusion is acceptable only if it does add in all the component disks of the stripe. This doesn't happen in all cases.

(PR-21681) - Syspic will report a user (null) when the user is after line 2163 in the /etc/passwd file.

tail

(PR-20268) - 'tail -r <file>' duplicates lines that are followed by blank lines.

(PR-20211) - 'tail -f <file>' gets stuck on certain files.

(PR-22127) - tail should check for read/write failures and call perror if there was an error.

tail.1

(PR-18322) - The man page for tail should state that the +N parameter is the N'th line number and not an offset from the start of the file.

talk

(PR-20899) - If talk is executed from an xterm window started with the -ut option, the message written on the receiving party's screen from the talk daemon leaves off the user's name.

tape

(PR-13481) - If a cartridge unit has a tape loaded (online) and opreq is being used to service mount requests, AVR fails to display a message that the unit has been allocated and is in use.

(PR-13482) - 'tpmount -s xxx xxx' causes a 3480 tape to be ejected. Problem occurs if opreq is used, mt is configured as the default drive, and the 3480 is on line with a labeled tape.

(PR-13661) - If several tapes are being labeled (going through opreq) and one of the tapes is bad (can't be written), the user gets an error message and is not allowed to continue the labeling process. The operator is not aware that the tape is bad and the labeling has failed. The user must send a tpunmount request and send a new tpmount and start labeling at the point where the failure occurred.

(PR-20567) - All utilities that are used for writing tape files (eg, tar/cpio/pax, dump, dd, cp, cat, etc.) must check the status of close(2). Several existing tape devices have buffers and some of the data doesn't get flushed to tape until the tape marks are written in close(2). If there is a media error, the error is reported during close.

(PR-21141) - When a tape is deallocated it is set to owner root, group 0, mode 666. It should be set to owner root, group bin, mode 600.

tar

(PR-12769) - If the tar parameter keys are clumped as follows, tar does not process them properly: % tar -cvbf 100 tape0 file_or_dir_name It complains of an illegal block size. This worked in previous versions of tar. With the V8.0 tar, one has to break up the parameters and have their values follow directly as below: % tar -cv -b 100 -f tape0 file_name This causes user's scripts to fail.

(PR-15050) - tar doesn't keep GID bit set in archives.

(PR-16475) - When tar is used in labeled mode for extracting or reading the contents, the error message: tar: tape forward error is displayed. This message is displayed after the files have been extracted or after tar is used to list the names of all of the files in the archive.

(PR-17185) - tar was used to write a directory to tape and then tar could neither read the tape nor the directory off of the tape.

(PR-17028) - When accessing a Cipher tape or tape image on disk, tar will read all the data available even though the real tar data is a small subset of the data. At most the tar program should only read MAX_BLOCK more data.

(PR-18108) - tar fails to issue an error message when it is asked to extract a file that doesn't exist in the tarchive.

((PR-19517) - PR-20286) - tar will hang when attempting to access the second tape when attempting to read or do a table of contents of a multi-volume ANSI-labeled tape set.

(PR-20235) - /bin/tar does not follow some cases of relative symbolic links correctly.

(PR-20225) - /bin/tar does not extract set gid files correctly. If the file does not exist and the group of the target directory is not the same group as root's primary group, the file is extracted without the sgid bit set.

(PR-21054) - When run with the -h option, tar(1) does not properly follow symbolic links. Relative paths are interpretted with respect to the current directory from which tar is executed, rather than with respect to the directory containing the symlink.

(PR-21321) - tar erroneously exited with status 5 after no apparent failure. It should have exited with status 0.

(PR-22178) - tar should check for read/write failures and call perror if there was an error.

tar.1

(PR-13336) - The X8.1 tar man page doesn't document a return value for tar. It appears to have a standard return value system (0 meaning OK), just as the V7.1 tar had.

(PR-16301) - The man page for tar states: "except that the set-user-id and get-group-id modes are not set unless the user has appropriate privileges." In reality, tar will only retain setuid and setgid bits if the extractor is root. The man page should reflect this restriction.

tbl

(PR-14537) - tbl occasionally hangs.

(PR-13586) - Vertical lines dividing boxes do not always extend completely.

(PR-22114) - tbl should check for read/write failures and call perror if there was an error.

tee

(PR-20094) - tee does not check to see if it was successful in writing to it's output files. Also, if an output file doesn't exist and tee cannot create it, the returned status is zero. It should be non-zero.

(PR-22093) - tee should check for read/write failures and call perror if there was an error.

test

(PR-17232, PR-20126) - The -w option of test is not compatible with the de facto standard: -w on a CONVEX means, "file and not a directory and writable", and -w on a Sun, HP, ... means, "file and writable."

(PR-22008) - The Bourne shell's test command does not seem to work properly on newly mounted file systems.

time.3c

(PR-22789) - The times(3c) has the following: Previous versions of times() filled the struct tms members with units measured in 60ths of a second. CLK_TCK ths are not necessarily the same. Where it is unclear what this sentence means: "CLK_TCK ths are not necessarily the same."

tip

(PR-07404, PR-08159) - If a device spec with a missing comma is given to tip, it will become very confused.

(PR-15199) - tip exits with a core dump. No connection is made.

(PR-15510) - The default and hard-coded auto dial type for tip is tone. Many other countries need the capability of tip using auto dial "pulse" rather than tone.

touch.1

(PR-20640) - The touch(1) man page is inadequate. It needs examples.

(PR-20834) - The touch man page needs to describe the restriction of only being able to use the current time when the -s option is used to update a symbolic link.

tpattr

(PR-18328) - When writing to an IBM labeled tape, if you set the tape format to 'D' and attempt to write to the tape, your writing process will hang. It must be killed off. The write should fail and return an error message.

tpdaemon

(PR-18774) - The tape daemon(tpdaemon) appears to hang if multiple tape drives are being used by a process and the process is killed and the drives unmounted.

(PR-20414) - The memory allocated by tpdaemon steadily increases each time a tape mount is performed but is not decreased as unmounts are done.

(PR-21164) - If the tpconfig database is used heavily (with add, delete, or even show commands issued as root), it is possible for the tpdaemon to "forget" about one of the drives on the system.

(PR-21029) - With queueing enabled, a user performs a multivolume operation on ANSI labeled tapes. If a timeout occurs while waiting for the operator to replace tapes (between volumes), the Replace_Tape message is not canceled in opreq.

(PR-21852) - tpdaemon dumps core.

(PR-22226) - At times, tape commands to the silo are not completed. It appears that status information from the SUN is not picked up by the tape daemon. If a tpmount is executed, the tape is mounted in the drive, but tpqueue doesn't show that a drive has been allocated. At times, everything completes correctly.

(PR-22782) - tpdaemon dies with a Bus Error core dump in timeoutpoll(). It happens when an idle drive gets reclaimed by the tape system and there are other mount requests that can be started using the reclaimed drive.

(PR-23041) - The tape system does not delete AVR messages for tapes that have physically been removed from the tape drive.

(PR-23035) - The tape daemon loses Message Id's when mounting tapes from a silo.

(PR-23069) - Tpmount successfully completes mount even though it forgot to tell the silo to load a tape.

tpinit.1

(PR-21886) - The tpinit man page description, paragraph four (unlabeled tapes), is missing several words. It reads "A tape that is requested to be unlabeled will have three 80 byte records of". This is not an English sentence. -a option, second line, "ibm labelled" should be "IBM labeled" (two, not three, ELs in LABELED). (This comment applies to the -v option description as well.)

tplabel

(PR-19005) - tplabel -a on an ibm tape doesn't set the restriction field.

tplist

(PR-21883) - tplist will not list the labels on a labeled tape if the tape is mounted as a block-special device. tplist works as advertised if the tape is mounted as a character-special device.

tpmount

(PR-16091) - On every signal (except INT) tpmount should issue an unmount. As it is now, tpmount will wait till a tape is mounted (queueing enabled). On a INT signal tpmount will go to background. What is wanted is that tpmount will cancel its request on every other signal (TERM, HUP, etc), by doing an unmount.

(PR-16369) - When opreq is running and a tpmount is executed with a VSN that doesn't match the VSN of the mounted tape, an incorrect error message is returned.

(PR-16380) - If a block type device is specified in conjunction with requesting a labeled tape on an unlabeled tape, then if one executes tplabel on this tape, tplabel will tell the user that it failed, but it will actually place a label on the tape.

(PR-17055) - tpmount and tplabel functionality should be separated. A tpmount -m label with an unlabeled tape results in an incomplete mount that is finished when the tplabel command is issued. This can cause problems with a system that uses scripts for backups and operators to load the tapes. The script can't operate correctly w/o parsing the messages returned from tpmount.

(PR-17811) - If a labeled tape is mounted in response to a request for an unlabeled tape (a "tpmount" without "-m label"), the system should indicate as much and disallow the mount request. The system catches this error only when the tape label matches the reel number requested. If a labeled tape with a different reel number, i.e., a wrong tape, is mounted, there is no indication of any error. This leaves the tape unprotected and anyone could write to it.

(PR-22327) - Assuming that there are two (or more) mt-format drives on your machine, try to mount two labeled tapes on two different drives in bypass mode. Note how the second will not work if the tape-drives are online and ready at mount-time.

tpmount.1

(PR-22767) - The man pages state that "There is no default value for labeled tapes..." under the -l option. If a labeled tape is used and "-m label" is in the command line, the tape will default to the correct label type. If a non-labeled tape is used and "-m label" is in the command line, the label type will default to ansi. Also, the correct spelling is labeled not labelled.

tpswitchvol

(PR-22297) - Using 'tpswitchvol' under 9.1 OS and 1.0 of the stacker/loader release, tpswitchvol -p does not work. tpswitchvol -p should cause the loader to backup one cartridge as opposed to it's current behavior which is to only move forward.

tset

(PR-07380) - If hard tabs are turned off with stty, tset will undo it.

(PR-11818) - tset ignores any command line terminal type settings, as well as $TERM, if a mapping argument would apply to the default term type as specified in /etc/ttys.

tsort

(PR-22115) - tsort should check for read/write failures and call perror if there was an error.

tty

(PR-21140) - When a login session is ended, the tty line is reset to owner root, group zero, mode 666. It should be set to group bin. Everything else is okay.

ttys

(PR-13519) - /etc/ttys comes with terminals set to type "vt100n". vt100n is non-standard so there are a lot of situations where termcap stuff doesn't work, because csh (for example) can't find vt100n.

ttys.5

(PR-15375) - The man page for the /etc/ttys file implies that the "on" flag is a prerequisite for "secure". This is not the case for pseudo-terminals (where "secure" works just fine even though they are (and should be) "off"). The documentation should be updated to reflect this.

umask.2

(PR-16646) - The umask(2) man page claims: The value is initially (S_IWGRP | S_IWOTH), allowing write access for the file's owner only. The mask is inherited by child processes. This is not necessarily true. Unlike the old CMASK from <sys/param.h>, V9.0 has the "sys_umask" kernel tunable for the default system-wide umask.

umount

(PR-08220) - umount needs to be smarter about the order of unmounting filesystems. What it really needs is some dependency heuristics to unmount the top-most filesystems first.

uncompact

(PR-22182) - uncompact should check for read/write failures and call perror if there was an error.

unexpand

(PR-22128) - unexpand should check for read/write failures and call perror if there was an error.

uniq

(PR-22116) - uniq should check for read/write failures and call perror if there was an error.

units

(PR-22179) - units should check for read/write failures and call perror if there was an error.

utilities

(PR-08212) - Many utilities say "Cannot open", when they should use perror() on the filename that caused the problem. This often obscures the real bug.

(PR-09876) - All daemons should chdir to the root directory upon startup. A problem occurs when running a daemon from an NFS mounted directory. The filesystem cannot be unmounted.

uucico

(PR-10500) - In ConvexOS V7.0, sometimes many uucico processes show up in ps output, even though no uucp conversations are currently taking place.

(PR-15797) - uucico ignores the alternate spool directory specified with the -d option.

(PR-15996) - uucico -ssystem should produce an error message when the system is not in L.sys(5). Currently, it fails silently and exits with a status of zero.

(PR-12708) - If uucico has had a successful session with a trailblazer modem, it tries to gather statistics from the modem. This is done in a rather clumsy way; every successfull session is logged as LOST LINE (LOGIN), and it takes a long time.

(PR-20731) - Sometimes the whole window is repeated without a prior transmission error, and thus without getting a retransmission request from the remote side.

uucp.1c

(PR-15972) - The uucp(1c) man page indicates that a file must have "other" read access to be copied. Currently, uucp will copy a remote file if access is permitted by USERFILE(5) and the uucp login has read access (i.e. file owned by uucp or group daemon).

uudecode

(PR-22167) - uudecode should check for read/write failures and call perror if there was an error.

uudecode.1c

(PR-20766) - The uudecode manual page needs to be enhanced to include an explanation of the action of setuid/setgid when uudecode is run as root.

uuencode

(PR-22141) - uuencode should check for read/write failures and call perror if there was an error.

uuq

(PR-15799) - uuq ignores the alternate spool directory specified by the -r option.

uuxqt

(PR-09313, PR-09314) - uuxqt takes a pipe symbol and the following commands as an argument to the first command to execute, rather than piping the commands together. This makes it impossible to do uux commands like "uncompress | nfrcv file host".

vdump

(PR-16310, PR-18316) - vdump does not enter the 'verify' step if the dump runs more than 1 tape.

(PR-20287, PR-20446) - The system utility vdump fails when working with a single volume dump.

verify

(PR-10525) - Files in the directory /lib/kernsyms have world write permission. This is a security hole. Malicious or incompetent users could fill up the root partition.

(PR-11025, PR-12581, PR-12583, PR-12707) - verify does not allow pathnames that contain the character ":" to appear in the database.

vers

(PR-12292, PR-22506) - When file 'foo' is in an NFS mounted filesystem owned by root, and its mode is 4755, the following command does nothing: % vers -v 1.2.3.4 foo

(PR-22175) - vers should check for read/write failures and call perror if there was an error.

vi

(PR-12218) - When 'vi' starts up in the background while another invocation of 'vi' is running in the foreground, the backgrounded process scrambles TTY modes and is unusable.

(PR-14413) - Setting or unsetting the noerrorbells option has no effect.

(PR-16748) - vi sometimes gets confused on how the screen should appear.

(PR-17076, PR-18363) - When a filter is invoked using the syntax !<motion><cmd>, the command works fine, but the command remains a zombie (i.e., defunct). The problem doesn't occur with the :!<cmd> syntax.

(PR-17316) - While using X windows and running vi, after running a command with :!, vi prints [Hit return to continue] on the bottom of the screen. If the user reshapes the window at this time, strange things happen. vi seems to be confused as to whether it is in raw or cooked mode, but more importantly, the string "[Hit return to continue]" actually replaces the current text line in the file being edited. That is, the file gets corrupted.

(PR-17924) - If modelines is set in vi, the first "/* vi:set command:*/" must be an invalid command or all but the last command is ignored.

(PR-18193) - While doing a long operation, e.g. search and replace or reading in a huge file, and the xterm window is resized, vi longjmps back to the top of its command loop after the resize instead of completing the current operations.

(PR-19379) - vi will dump core while manipulating a long line.

(PR-19842) - If vi is invoked from ex after yanking some lines and putting them at the end of the file, it will abort with a core dump if the user hits <CTRL>B.

(PR-20598) - When trying to jump to another tag with :ta or ^} within vi, the tag is not found if the function name is > 30 characters in length, since it is truncated.

(PR-20526) - A ^D (backtap, unindent) in insert mode is taken as a ^A.

(PR-20852) - When the ignorecase option is set, regular expressions of the form [<uppercase character(s)>] no longer work.

(PR-21897) - The "+command" option to vi seems to work only for the first file to be edited. Typing "vi + file1 file2" causes vi to position to the end of file1 as expected, but will position to the start of file2.

(PR-22147) - vi should check for read/write failures and call perror if there was an error.

(PR-22814) - If you try to access a file and fail, the alternate file (#) is not set.

(PR-22764) - Attempting to edit a file larger than 8+ megabytes returns a Bus Error. There is no mention in the man page of the MAXIMUM file size vi can process.

(PR-22861) - If your filter a region through a pipe, you accumulate zombies until you run out of processes or exit the editor.

vipw

(PR-14133) - vipw does not protest when a syntax error is made in the fields for password aging, e.g., the comma-separator is replaced by a 'dot' . Additionally, login dumps core when the user with wrong separator in these fields tries to login.

vmstat

(PR-09654) - 'vmstat -z' doesn't always behave as expected with respect to what it actually zeroes out.

((PR-12868) - PR-20310) - vmstat never shows vector context switches.

w

(PR-09062) - The "w" command lists only the login time and not the date. This may mislead the user into believing that a terminal has only been idle "today".

wait.2

(PR-20490) - The man page for wait(2) describes macros WTERMSIG, WEXITSTATUS, and WSTOPSIG as if they exist in both POSIX and traditional CONVEX (BSD) modes. In fact, the include file does not define these macros in non-POSIX mode.

wall

(PR-17279) - wall only writes to some ttys, not all of them.

(PR-22094) - wall should check for read/write failures and call perror if there was an error.

wc

(PR-22129) - wc should check for read/write failures and call perror if there was an error.

what

(PR-22130) - what should check for read/write failures and call perror if there was an error.

window

(PR-10312, PR-10737) - window does not write an entry to utmp for the ptys it uses. Therefore, getlogin() fails.

(PR-12594) - The window command changes several tty settings.

words

(PR-17687) - /usr/dict/words thinks that "[un]formatted" is really spelled with one "t."

write

(PR-19498) - write doesn't complain if too many arguments are passed to it.

xdump

(PR-16466) - At the end of tape xdump very often gets a write error, whereas dump succeeds.

(PR-17288) - xdump does not accept the -a option of dump.

(PR-22270) - It is really quite annoying that xdump, unlike the rest of Unix, has decided that an exit status of 1 indicates successful completion.

yacc

(PR-03581) - Error recovery can take place "too late" in some cases.

(PR-22168) - yacc should check for read/write failures and call perror if there was an error.

yesterday

(PR-19293) - yesterday should check if it is backing over a daylight savings time change. yesterday subtracts 24 hours off the current time to find out yesterday's day. This breaks if the US just went on/off daylight savings time.

68k-tools

(PR-08511) - The directory structure implied in the nested "#include" statements in files related to user and system device drivers, has gotten out of step with the .h files themselves. The result is that the "good programming practice" of using standard definitions contained in the .h files must yield to practical concerns of being able to compile without errors from the compiler.

a68

(PR-05056) - The assembler (a68) does not detect an undefined symbol.

(PR-07528) - The 'jra' instruction will cause a core dump if the target is a symbol defined previously (an absolute symbol assigned a constant value).

cc20v

(PR-19028) - When building the kernel, the following errors occur intermittently: cc20v -Dviop -D_viop -DVIOP -D_VIOP -DCCU -D_CCU -DEGOS -D_EGOS -D_KERNEL -DNO_INLINE -I. -I.. -I../h -c ../dev_ccu/ccu_if_hy.c "cc68tm3_007150.a20", line 4050: Invalid op-code These occur about half the time.

cc68

(PR-05189) - The compiler (cc68) aborts with the following error: "bug1.c", line 13: compiler error: no table entry for op REG

Workaround: Removing a "register" declaration, or simplifying the expression makes the error go away.

(PR-05316) - ccom aborts with the error messages when a type definition is omitted from the declaration of a variable: filename.c, line 3: syntax error filename.c, line 3: warning:old fashioned initialization: use = Fatal error in /usr/68k/X/lib/ccom This syntax error should not be a fatal compiler error and no core dump should occur.

(PR-05662) - cc68 produces an error when the result of comparing a (char *) pointer == NULL is used as an integer.

(PR-06329) - The compiler rejects a valid source program.

(PR-17412) - Certain code sequences cause the compiler to generate bad instructions.

ioctl.h

(PR-08957) - Incompatibilities between <sys/param.h> and <sys/ioctl.h> cause spurious error messages to occur when processing these header files.

ld68

(PR-08943) - The 68k loader can create object files that are too big to actually load.

nlist

(PR-04177) - nlist searches for a match between two strings that must be identical for a length of SYMLENGTH. However, in /usr/68k/include/b.out.h, the name field can only have 8 characters.

wndw.h

(PR-03081) - The variables used in the macros defined in wndw.h are only declared as "extern" and should be defined in the include file.

Fixed Library Bugs

This section lists bugs in the runtime libraries that have been fixed in this release.

access.2

(PR-17432) - The man page of access (2) shows the following: int access(path, mode) int acccessible; char *path; int mode; the 'int accessible' parameter does not exist

Resolution: The fictional argument 'accessible' has been removed from the access.2 man page.

cfree

(PR-17309) - Since the source for cfree only calls free to deallocate memory, it should be made available as a macro.

Resolution: cfree(3) will now expand to free(3) when you include <stdlib.h>.

directory.3

(PR-18750) - The SYNOPSIS section for the directory(3) man page declares rewinddir as returning an int, but the SYNOPSIS for rewinddir shows it returning type void.

Resolution: directory.3 now specifies that rewinddir(3) is of type void.

erf.3m

(PR-10743) - Man page ERF(3M) refers to man page math(3M) which does not exist.

Resolution: The reference to math(3) was replaced with intro(3m).

execlp/execvp

(PR-20189) - execlp() and execvp() set errno to EACCESS when passed an empty string to exec. According to POSIX the errno should be set to ENOENT.

Resolution: errno is now set to ENOENT if the underlying exec ever generates an ENOENT. If both ENOENT and EACCESS are generated during the path search, errno is set to EACCESS.

fclose

(PR-18105) - Performing an fgets after a file has been closed causes the process to wait for the string to be input via stdin.

Resolution: fclose has been fixed, so that if you try to do I/O on a closed FILE pointer, the I/O operation will fail with an I/O error.

fclose.3s

(PR-20953) - The man page for fclose() indicates that the function returns EOF in case of error. It does not say that it returns 0 if the operation completes successfully.

Resolution: A "Return Values" section was added to the fclose(3) man page.

fopen.3s

(PR-17037) - Right side quotation marks on the fopen.3s man page are messed up. ie: "r" open for reading "w" create (or truncate to zero length) for writing

Resolution: The fopen.3s man page now has correct right side quotation marks.

(PR-18335) - The fopen.3s, setlocale.3 and vhangup.2 man pages have bad "quoting" [sic].

Resolution: Bad quoting has been fixed in the fopen.3s, vhangup.2, and setlocale.3 man pages.

free

(PR-08245, PR-20174) - free() actually does not release the memory dynamically allocated by a process to make it available to other processes. At best this should be fixed. At worst it should be more clearly documented in the man page.

Resolution: This bug has been documented in the malloc.3 man page.

getacwent.3

(PR-05951) - The return codes for setacwent and endacwent are not explained in the man page. It is unclear which function the man page is describing return codes for.

Resolution: The setacwent() and endacwent() functions are now declared as type void and the man page (getacwent.3) has been updated to reflect this.

getpeername.2

(PR-18742) - The man page for getpeername.2 in the synopsis section should include the following:

#include <sys/types.h>

#include <sys/socket.h>

Resolution: #include <sys/types.h> and #include <sys/socket.h> have been added to the SYNOPSIS section of getpeername.2

getpriority

(PR-07947) - If a process group is reniced to the lowest priority +64, then doing a getpriority call on that process group erroneously returns with a "no such process" error. This bug only occurs for nice value +64.

Resolution: Getpriority(2) new returns +64 for process groups with priority +64.

getpwrestent.3

(PR-18725) - The man page for getpwrestent miss-spells "fgetpwrestent" as "fgetpwent" in the SYNOPSIS section.

Resolution: The getpwrestent(3) man page now correctly refers to the fgetpwrestent() function rather than the fgetpwent() function.

getwd

(PR-07191) - The getwd() C Library function calls closedir(D), which calls free() on both one of the fields of *D as well as on D itself. It then proceeds to dereference D to copy out the name. Under certain circumstances, free() may coalesce freed space into larger chunks, potentially altering *D and thus causing getwd() to fail.

Resolution: Revised the order in which the closedir and the access to the memory block were coded. Now the data is copied out of the data memory block, and then the closedir issued.

hypot.3m

(PR-18716) - The man page for hypot.3m needs to discuss the hypotf entry and which functions are available in which modes of the libraries (ie only in -pcc and -ext).

Resolution: The hypot.3m man page has been updated to document the above.

killpg.2

(PR-07314) - The killpg(2) man page ERRORS section needs updating so that [ESRCH] concerns pgrp, not pid.

Resolution: killpg.2 now correctly refers to pgrp rather that pid in the ESRCH error description.

libc.a

(PR-06809) - An inconsistency exists in the descriptions of the sys_nerr variable in the /lib/libc.a library.

Resolution: sys_nerr and sys_errlist are declared as external in perror.c and initialized in errlst.c

libtape.a

(PR-17195) - tpunmount does not recognize UNIX pathnames with multiple "/"'s placed consecutively in it.

Resolution: The problem has been corrected. The handling of symbolic links in the root directory will now work as expected.

libwinlib.a

(PR-12679) - Request that libwinlib be made aware of XTERM. Both syspic and opreq use libwinlib for cursor addressing and other screen features. Both don't look as 'graphical' as they could on an Xterminal with TERM=xterm[s].

Resolution: syspic(8) and opreq(1) will now have contiguous rather than dashed lines around test windows when run in an xterm.

lockf.3

(PR-11378) - The man page for lockf should be changed to state that EACCESS is returned if the command F_TLOCK or F_TEST is used and the section is already locked by another process.

Resolution: The lockf man page now states that the F_TLOCK command can cause the return of EACCESS.

longjmp.3

(PR-20373) - The longjmp(3) man page fails to mention that a zero value can't be used.

Resolution: Clarified the man page to indicate what happens when longjmp(x,0) is called.

malloc.3

(PR-17307) - From the man page of malloc(3): void *calloc(size_t nelem, size_t elsize); int cfree(int *ptr, unsigned int nelem, unsigned int elsize); In calloc, the function parameters are of the type size_t, but in cfree they are unsigned int. They should be the same. Also the pointer in cfree should be void * instead of int *.

Resolution: The malloc.3 man page now uses the (void *) and size_t types where appropriate.

(PR-17307) - The man page for malloc should document that cfree is only available in -pcc and -ext modes of the libraries. In -ext mode it should note that it is available as an extension.

Resolution: The malloc.3 man page now notes that cfree() is only available in the backward compatible and extended modes of the compiler.

(PR-17308) - The man page for malloc does not describe the 'int' return value from the cfree function call.

Resolution: The malloc.3 man page has been updated to reflect the fact that cfree() is of type void.

(PR-17308) - The man page for malloc should document that calloc uses free to deallocate the memory aquired by calloc calls and that cfree is available in -ext mode as an extension.

Resolution: The malloc.3 man page now documents that both free and cfree can release memory allocated by calloc. The man page has also been changed to document that cfree is only available in -pcc and -ext modes of the C compiler.

math.h

(PR-17393) - Please add the declarations for erf and erfc to /usr/include/math.h as a CONVEX extension in both -pcc and _CONVEX_SOURCE parts of this include.

Resolution: The declarations for erf and erfc have been added to math.h for both backward-compatible and extended modes of the CONVEX C compiler.

(PR-20527) - The arguments for functions ircvtr and rcvtir in math.h are declared as double where they should be declared as float.

Resolution: The declarations for ircvtr and rcvtir have been corrected in math.h.

nlist.3

(PR-05882) - The code for nlist returns a value. The nlist man page says that it does not and that all entries will be zero if nlist fails.

Resolution: The nlist.3 man page now notes that nlist(3) returns -1 on error.

scandir

(PR-19708, PR-19891) - The man page for scandir() needs to be updated to reflect how to use it in the different C compiler modes since it is not the same for all. Also, the definition of "namelist" needs to be corrected.

Resolution: Implemented the following changes: 1. corrected the synopsis for the POSIX conforming modes of the C compiler. 2. Noted the header file and data structure used by the backward compatible mode of the C compiler.

scanf

(PR-20930) - Scanf and sscanf used to return the number of items assigned when EOF was encountered early. It no longer does this in -pcc mode; instead, it returns EOF (-1).

Resolution: The above problem has been fixed in -pcc mode of libc.

shypot

(PR-21391) - Under ConvexOS V9.1, function shypot() returns wrong answers in -ext and correct answers in -pcc modes using cc4.1.

Resolution: Fixed in ConvexOS V10.0

sigsuspend.3

(PR-16753) - The man page for sigsuspend(3) should document in which modes one can use this function (e.g., it is only available in -ext or -std modes).

Resolution: sigsuspend.3 now contains a note that sigsuspend() is only available in the extended and strict POSIX modes of CONVEX C.

sleep

(PR-18674, PR-19047, PR-19358, PR-19882) - Sleep(3) should unblock SIGALRM before it sets the alarm. This will prevent applications from hanging if they call sleep(3) with SIGALRM blocked.

Resolution: sleep(3) now temporarily unblocks SIGALRM to prevent it from never returning. Previously, programs built in anything other than -pcc mode would never return from a sleep(3) call if SIGALRM was blocked.

stdio.h

(PR-15616) - In stdio.h, fileno is prototyped as follows: extern int fileno(const FILE *); According to P1003.1a / D4 10/23/89 the prototype should be: extern int fileno(FILE *);

Resolution: The above change has been made to stdio.h.

strdup

(PR-14181, PR-19097) - The V9.1 libc.a includes strdup (which is a good thing), but strdup is not documented in the man pages.

Resolution: strdup(3) has been added to the stringcpy.3 man page and definitions for strdup(3) have been added to /usr/include/string.h

strtod.3

(PR-19380) - The man page for strtod(3) has several typos in discussing the return values and ranges for strtol and stroul.

Resolution: Man page fixed.

system

(PR-18270, PR-19924) - The system(3) library call can reap the wrong children because it uses a raw wait() instead of a waitpid().

Resolution: system(3) now uses waitpid(2) rather than wait(2) so that it won't reap the wrong children.

system.3

(PR-14542) - The man page for system(3) should have more information on its return value. Currently it has nothing, which is unacceptable.

Resolution: The system(3) man page now contains a pointer to the wait(2) man page to describe its return value.

(PR-21988) - In extended/ANSI complient mode, system(3) returns the exit value of the command run, not the status returned by wait(2) as the man page indicates. Also, the man page should include a warning that if a SIGCHLD signal handler is installed, system(3) will always return 255 (in ANSI mode).

Resolution: Man page fixed.

ttyslot.3

(PR-15352, PR-16182, PR-17383, PR-20457) - ttyslot() appears in the NAME line of the man page, but there is no synopsis nor description.

Resolution: The ttyname(3) man page now contains a SYNOPSIS and DECRIPTION for ttyslot. Previously, ttyslot(3) appeared only in the NAME section.

vfprintf

(PR-15984) - When vfprintf() is writing to a fifo and the fifo is opened O_NONBLOCK; the fifo buffer is full (ie the reader is not reading the fifo); and a SIGALRM is sent to the process performing the vfprintf(), the process remains hung in the vfprintf() instead of being interrupted.

Resolution: The above problem is fixed.

Library Restrictions

This section describes restrictions for the runtime libraries

libc.a

(PR-05178) - System V compatible routines are not documented anywhere easy to find.

Resolution: Since these routines are only available for internal use, CONVEX will not document them. The only exception is tmpnam, which is a part of ANSI C. tmpnam does have a man page.

malloc.3

(PR-17310) - The malloc(3) man page does not describe very well what the cfree() function and it's parameters do. It should describe what the difference between free() and cfree() is. It should also describe what the nelem and elsize parameters do.

Resolution: Since cfree is obsolete and is documented in the new man page as such, there is no need to document the arguments to it.

mset.3

(PR-06970) - MAP_HASSEMAPHORE exists in /usr/include/sys/mman.h, not /usr/include/sys/types.has implied in mset(3).

Resolution: The mset.3 man page points the user to both the mmap(2) function and the mmap.2 man page. This should be sufficient to let the user know that the definitions mentioned are explained there.

Known Library Bugs

This section describes known bugs for runtime libraries.

MP

(PR-22671) - The man pages for the following functions: memcpy, memmove, memchr, strchr, strpbrk, strrchr, strspn, strtok, memset, strerror indicate that these functions are not available in the backward-compatible mode. This is incorrect since they are found in libc_old.a.

(PR-18218) - When the attached file is compiled with cc V4.0 and linked with CXWindows V2.1, the linker generates an unresolved symbol error for

adjtime.o

(PR-21216) - adjtime() ignores the (struct timeval *)otp parameter when it shouldn't.

curses

(PR-15791) - On terminals that don't have cm (cursor motion) capability, curses displays each string passed to 'addch' on a separate line.

cxpa inst libs

(PR-16587) - The CXpa instrumented ANSI libraries are not properly compiled or instrumented for CXpa.

dir.5

(PR-21922) - The dir(5) man page should shift the current description of <sys/dir.h> into a Backward Compatible section, and include the <dirent.h> description in the first part of the dir(5) man page.

exect

(PR-13044) - When exect is called with a non-executable program as an argument, the program stops and prints the message "Trace/BPT trap". It shoud fail since the program is not executable and return -1 (according to the man page).

fclose

(PR-22642) - If fclose() is called twice with the same FILE *, it will return 0 on the second call. It should return EOF.

formpwent.3

(PR-15333) - There is no man page for the formpwent function.

getgrent

(PR-07570) - The getgr* calls return only the first line for a given group. This is not good enough, because if the number of members makes the line exceed the max line length in vi, then you can't edit it. Note that initgroups(2) does INDEED do the right thing (effectively scanning for multiple lines). This causes programs like bill(1) to fail.

getgrent.o

(PR-20928) - Getgrent arbitrarily limits the number of group members to 200. This limit should be removed or documented.

getopt

(PR-22572) - If the libc routine getopt is called with the argument string "program -opt arg", a second call to getopt to process another set of arguments starts its processing at "arg" in the first command line. Before returning EOF, it should set its static variable getopt$place so that it restarts correctly the next time, e.g. to EMSG.

getpwnam

(PR-09389, PR-18855) - There is no way to put user "nobody", which is uid=-2, into the passwd file, because getpw*() on it always fails. Entering it as an unsigned long (as in <pwd.h>) or as an unsigned short (as in <sys/types.h>) doesn't work either. This makes files written across NFS by root always come out saying they're user -2, not nobody.

getpwuid

(PR-08167) - Under the man page for getpwent(3), it reads: BUGS All information is contained in a static area, so it must be copied if it is to be saved. It is not obvious and should really be documented here that not only must the structure whose pointer is returned be copied, but also all internal pointers (such as, but not limited to, pw_name) need to have their contents copied. Merely copying the structure is insufficient.

getpwuid.3

(PR-22669) - According to the getpwuid() man page, it is suppose to take uid_t as an argument, yet the actual library code takes an 'int' for an argument and coverts it to a 'short'. This causes uids greater then 32767 to not be found in the passwd file. Note: uid_t is defined as an 'unsigned short'.

ioctl.2

(PR-08206) - The ioctl() system call is poorly documented. The various possible calls should be detailed in the man page. For example, to use the FIONBIO call, you must pass a 3rd argument which is a pointer to an integer whose value is one. However, the sole way of learning this is by perusing the source.

ioctl.h

(PR-20417) - The #define for MS_ENABLE_LOG in <sys/ioctl.h> is incorrect. It is currently: #define MS_ENABLE_LOG IOD_ENALBLE_LOG but should be #define MS_ENABLE_LOG IOD_ENABLE_LOG

lib4014.a

(PR-05721, PR-05758) - Circle works with some radii but not others. The circle routine in /usr/lib/lib4014.a produces a call to the square root function with a negative argument when given certain values for the radius. With some values it works just fine.

libc

(PR-22575) - If argv[0] is set to NULL and getopt is used to parse command lines, if an invalid option or other error is encountered, getopt attempts to print argv[0] as the name of the program and dumps core. This doesn't seem to happen with System V.

libc_old_p.a

(PR-19556) - The following object files in libc_old_p.a were compiled in native mode on the V9.1 beta OS, preventing loading of programs compiled with -pcc -fi -p: back_close.o back_creat.o back_filbuf.o back_flsbuf.o back_getpid.o back_kill.o back_lprofil.o back_mmap.o back_mremap.o back_sbrk.o back_setsid.o back_write.o

libcurses.a

(PR-05329) - Libcurses doesn't handle the expansion of tabs properly.

(PR-22893) - A call to initscr() in libcurses.a results in the re-setting of the stty flag '-istrip'.

libraries

(PR-12318) - Some libraries such as libcurses and libplot, rob the user of new POSIX tty functionality. They use the old TIOCGETP/TIOCSETP interface to serial device ioctl's, or the even older stty()/gtty() functions.

libvm.a

(PR-06088, PR-08500) - Bad data in /lib/kernsyms/symdata_0.0. causes utilities such as ps to produce garbage answers and/or core dump. It would be useful if these utilities would rebuild this file if it is corrupted.

(PR-07357, PR-10091) - libvm is useful enough that it deserves man pages.

limits.h

(PR-18824) - Page 2-3 of the CONVEX POSIX Conformance document shows some variable names and values which are defined in <limits.h> for ConvexOS V8.0. This table is incorrect for ConvexOS V9.0. In particular, MAX_INPUT, MAX_CANON and NAME_MAX are undefined in <limits.h> and are available only at runtime using pathconf(). Also NGROUPS_MAX is shown as 8, but it has a value of 16 in ConvexOS V9.0.

nlist

(PR-16286) - nlist can't handle duplicate symbols in a list. It fills the second and/or greater occurrence of a symbol with the address of zero. This should either be fixed or documented.

pclose

(PR-18194) - pclose can reap a child process that it should not touch.

popen

(PR-05428) - The popen man page says that popen returns NULL if the process or psuedo ttys files cannot be opened or if the shell cannot be found. This doesn't seem to be the case.

(PR-05972) - Under certain conditions, programs which use the popen() system call can gain root access.

realpath

(PR-18632) - realpath(3) fails given a realative path with a link.

restart.3

(PR-19564) - The synopsis section for restart has a typo. It is: pid_t restart(path, flags, signo) char *path; int options; int signo; Where 'options' should be 'flags' or visa-versa.

rt

(PR-22874) - strftime exists only in ANSI mode libraries and doesn't exist in the pcc mode library. The man page for strftime does not take this into account.

(PR-22875) - Man page of 'setjmp' says ... signal mask sigmask(2), while _setjmp and ... The word "sigmask" should be "sigsetmask".

sbrk

(PR-14154) - sbrk() and brk() fail to release the lock around curbrk if the sbrk system call fails. When this happens, all threads except for the one that failed will hang attempting to acquire a lock.

sleep

(PR-20585, PR-20626) - If the caller to sleep(3) has a SIGALRM signal handler and an alarm set to expire before the sleep() would finish, then it is possible that the sleep() will never return.

(PR-20586) - While waiting in sleep(3), if a non-SIGALRM signal arrives which is to be caught, and the SIGALRM signal happens to arrive while handling the first signal, then the program never returns to the original signal handler.

stat.2

(PR-16200) - The struct stat definition in the man page for stat(2) is not the same as the actual structure defined in /usr/include/sys/stat.h, as it should be. This is particularly important for utilities that try to distinguish between old dev_t and new dev_t (after 8.0).

stat.3f

(PR-06898) - Stat(3f) only returns 12 items.

termcap

(PR-07997) - There is a bug in termcap(3) that breaks some COVUE stuff because a static variable is not being properly reset.

time.h

(PR-05209) - The data structure for timeout (in /usr/include/sys/time.h) represents time to be in seconds and microseconds. In actuality, timeout is controlled by the software timer mechanism, which currently has a granularity of 10 milliseconds.

truncate

(PR-11278) - The truncate function does not return an error when it is attempted on a socket.

ttyslot.3

(PR-05797) - ttyslot(3) should indicate that it reads the /etc/ttys file trying to match entries with the file name for devices in /dev. If the user has accidentally misnamed the two, ttyslot will fail.

uname

(PR-15207) - The uname system call always reports that a system is running in default native mode. This has been tested on a C2 running 8.1 and a C1 running 9.0.

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