



VMS Software

GNV Version 3.0-2E for VSI OpenVMS x86-64

Release Notes

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Operating System: VSI OpenVMS x86-64 Version 9.2-3 or higher

Software Version: GNV Version 3.0-2E for VSI OpenVMS x86-64

Kit Name: VSI-X86VMS-GNV-V0300-2E-1.PCSI\$COMPRESSED

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1. Introduction

Thank you for your interest in GNV for VSI OpenVMS x86-64. The first release of GNV for VSI OpenVMS on x86-64 systems is V3.0-2E.

Note

GNV V3.0-2E is not a full version and not all features are complete yet. VSI welcomes reports of any bugs that you might find, as well as general feedback regarding how the GNV product might be improved and enhanced.

GNV is an open-source, GNU-based environment for OpenVMS that provides a UNIX-style environment on OpenVMS for application developers, system managers, and users.

GNV includes the following:

- Bash – a command processor alternative to DCL.
- GNU Core Utilities – basic file, shell, and text manipulation utilities, such as `sort`, `md5sum`, `ls`, `printf`, etc.
- GNU AWK – a special-purpose programming language for data reformatting.
- GNU `grep` – a tool that searches a file for lines containing a match to a specified pattern.
- GNU `sed` – a non-interactive command-line text editor.
- GNU LD – a linker that combines a number of object and archive files, relocates their data, and ties up symbol references.
- GNU AR – a program that creates, modifies, and extracts from archives.
- Make – a building tool.

2. What's New in This Release

- This GNV kit contains two instances of the `make` utility. They are as follows:
 - MAKE.EXE (default), for use with UNIX-style makefiles (version 3.78.1).
 - VMS_MAKE.EXE for use with VMS-like makefiles to run DCL scripts (version 4.4.90).

To work with VMS_MAKE.EXE (instead of the default MAKE.EXE), execute the following command:

```
MAKE ::= $ GNU:[BIN]VMS_MAKE.EXE
```

- LD tools now support usage of CLANG.
- DCL utility was added to execute DCL commands from bash. The DCL utility can now be used in the interactive mode. Execute `dcl -i` to start the DCL utility in the interactive mode and `logout` to return to bash.
- Some corrections of behavior for the `gcc` wrapper have been implemented. The `-x` switch, names, and pointer size options have been fixed.

- `which` and `patch` utilities have been added.
- Links for `egrep`, `fgrep`, `bunzip2`, and `cxx` have been added.
- The `stty` utility used to fail when it received a command with unsupported options for OpenVMS. Now it will successfully execute processing the valid options and ignoring the unsupported ones.
- The `libstdbuf.so` library has been added for the `stdbuf` utility to work correctly.

The `gnu/bin` utilities included in this kit are as follows:

<code>ar.exe</code>	<code>arch.exe</code>	<code>awk.exe</code>	<code>base64.exe</code>
<code>basename.exe</code>	<code>bash.exe</code>	<code>bashdebug.exe</code>	<code>bigram.exe</code>
<code>bison.exe</code>	<code>bunzip2.exe</code>	<code>bzip2.exe</code>	<code>cat.exe</code>
<code>cc.exe</code>	<code>chcon.exe</code>	<code>chgrp.exe</code>	<code>chmod.exe</code>
<code>chown.exe</code>	<code>chroot.exe</code>	<code>cksum.exe</code>	<code>clang.exe</code>
<code>cmp.exe</code>	<code>code.exe</code>	<code>comm.exe</code>	<code>cp.exe</code>
<code>csplit.exe</code>	<code>cut.exe</code>	<code>cxx.exe</code>	<code>date.exe</code>
<code>dcl.exe</code>	<code>dd.exe</code>	<code>df.exe</code>	<code>diff.exe</code>
<code>diff3.exe</code>	<code>dir.exe</code>	<code>dircolors.exe</code>	<code>dirname.exe</code>
<code>du.exe</code>	<code>echo.exe</code>	<code>egrep.exe</code>	<code>env.exe</code>
<code>execv_symbol.exe</code>	<code>expand.exe</code>	<code>expr.exe</code>	<code>factor.exe</code>
<code>false.exe</code>	<code>fgrep.exe</code>	<code>find.exe</code>	<code>flex.exe</code>
<code>fmt.exe</code>	<code>fold.exe</code>	<code>frcode.exe</code>	<code>gawk.exe</code>
<code>gcc.exe</code>	<code>gnv\$ar.exe</code>	<code>gnv\$bash.exe</code>	<code>gnv\$bzip2.exe</code>
<code>gnv\$bzip2recover.exe</code>	<code>gnv\$debug-ar.exe</code>	<code>gnv\$debug-ld.exe</code>	<code>gnv\$grep.exe</code>
<code>gnv\$ld.exe</code>	<code>gnv\$libbz2_32.exe</code>	<code>gnv\$libbz2_64.exe</code>	<code>gnv\$make.exe</code>
<code>gnv\$sed.exe</code>	<code>grep.exe</code>	<code>groups.exe</code>	<code>head.exe</code>
<code>hostid.exe</code>	<code>hostname.exe</code>	<code>id.exe</code>	<code>install.exe</code>
<code>join.exe</code>	<code>kill.exe</code>	<code>lbracket.exe</code>	<code>ld.exe</code>
<code>less.exe</code>	<code>link.exe</code>	<code>ln.exe</code>	<code>locate.exe</code>
<code>logname.exe</code>	<code>ls.exe</code>	<code>m4.exe</code>	<code>make.exe</code>
<code>md5sum.exe</code>	<code>mkbuiltins.exe</code>	<code>mkdir.exe</code>	<code>mkfifo.exe</code>
<code>mknod.exe</code>	<code>mksignames.exe</code>	<code>mksyntax.exe</code>	<code>mktemp.exe</code>
<code>mv.exe</code>	<code>nice.exe</code>	<code>nl.exe</code>	<code>nohup.exe</code>
<code>nproc.exe</code>	<code>numfmt.exe</code>	<code>od.exe</code>	<code>paste.exe</code>
<code>patch.exe</code>	<code>pathchk.exe</code>	<code>pinky.exe</code>	<code>pr.exe</code>
<code>printenv.exe</code>	<code>printf.exe</code>	<code>ptx.exe</code>	<code>pwd.exe</code>
<code>readlink.exe</code>	<code>realpath.exe</code>	<code>recho.exe</code>	<code>regexprops.exe</code>
<code>rm.exe</code>	<code>rmdir.exe</code>	<code>runcon.exe</code>	<code>sdiff.exe</code>

sed.exe	sed_debug.exe	sed_hack.exe	sed_hack_debug.exe
seq.exe	sh.exe	sha1sum.exe	sha224sum.exe
sha256sum.exe	sha384sum.exe	sha512sum.exe	shred.exe
shuf.exe	sleep.exe	sort.exe	split.exe
stat.exe	stdbuf.exe	stty.exe	sum.exe
sync.exe	tac.exe	tail.exe	tar.exe
tee.exe	test.exe	timeout.exe	touch.exe
tr.exe	true.exe	truncate.exe	tsort.exe
tty.exe	uname.exe	unexpand.exe	uniq.exe
unlink.exe	unzip.exe	uptime.exe	users.exe
vdir.exe	vms_make.exe	wc.exe	which.exe
who.exe	whoami.exe	xargs.exe	xcase.exe
yes.exe	zecho.exe	zip.exe	^[.exe

The gnu/lib utilities included in this kit are as follows:

- GNV_SETUP.COM
- libstdbuf.so

The gnu/etc utilities included in this kit are as follows:

- bison.hairy
- bison.simple

3. Requirements

This kit requires VSI OpenVMS x86-64 Version 9.2-3 or higher. Note that while you probably will not have any problems installing and using this kit on systems running higher versions of the operating system, older versions are unsupported and will likely cause problems.

4. Recommended Reading

Users may find it helpful to refer to the following documentation in order to better understand how to configure and use the GNV software:

- Installing GNV Packages (<https://sourceforge.net/p/gnv/wiki/InstallingGNVPackages/>)
- Niel Rieck's OpenVMS Notes (https://neilrieck.net/docs/openvms_notes_gnv.html)

For more information about using GNU, users should refer to documentation available via the GNU website (<https://www.gnu.org/>), as well as other resources available online.

5. Installing the Kit

The kit is provided as an OpenVMS PCSI kit (VSI-X86VMS-GNV-V0300-2E-1.PCSI \$COMPRESSED) that can be installed by a suitably privileged user using the following command:

```
$ PRODUCT INSTALL GNV
```

The installation will then proceed as follows (output may differ slightly from that shown depending on various factors):

```
The following product has been selected:
  VSI X86VMS GNV V3.0-2E                Layered Product

Do you want to continue? [YES]

Configuration phase starting ...

You will be asked to choose options, if any, for each selected product and for
any products that may be installed to satisfy software dependency requirements.

Configuring VSI X86VMS GNV V3.0-2E: GNV for VSI OpenVMS x86-64

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* This product does not have any configuration options.

Execution phase starting ...

The following product will be installed to destination:
  VSI X86VMS GNV V3.0-2E                DISK$X86SYS:[VMS$COMMON.]

Portion done: 0%...10%...20%...30%...40%...50%...60%...70%...80%...90%...100%

The following product has been installed:
  VSI X86VMS GNV V3.0-2E                Layered Product

VSI X86VMS GNV V3.0-2E: GNV for VSI OpenVMS x86-64

  Post-installation tasks are required.

  To use GNV, users must execute the following command:

    $ @SYS$STARTUP:GNV$SETUP.COM
```

6. Known Issues and Limitations

The following known issues and limitations may be resolved in a future release.

Please note that GNV V3.0-2E is not a full version and not all features are complete yet. VSI welcomes reports of any bugs that you might find, as well as general feedback regarding how the GNV product might be improved and enhanced.

- The `sed` utility does not currently work with the `-i` flag unless the user has the `SYSPRV` privilege.
- The `AR` tool does not currently support the `delete` and `move` options. Using either of these options will return a warning but produce no result.
- The `AR` tool incorrectly ignores the `extract` and `print` options. Using either of these options will produce no result.
- `Binutils` aren't included in this version.
- There are some issues with redirections of `stdout/stderr`.

- The DCL utility has the following issues when producing output:
 - DCL wrapper outputs multiple lines on error.
 - Some commands output one character per line.
 - Enabling the `DECC$STREAM_PIPE` logical name causes the `bash dcl git` commands to hang.
- `Make` hangs if the command was not recognized.
- Using the `tar` options may cause issues.
- `VMS_MAKE` does not support shell commands.
- When a command is executed via the DCL utility, system messages are duplicated in the output.