



VMS Software

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

## Release Notes

**Publication Date:** June 2025

**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.

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## 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.

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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:

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