



VSI Technical Update October 2019

Jim Janetos – VMS Software
Engineering

Notice

This information contains forward looking statements and is provided solely for your convenience.

While the information herein is based on our current best estimates, such information is subject to change without notice.

OpenVMS Technical Update

VSI Today

Technical Update

- Operating system
- Hardware
- Network Stack
- Roadmap

VSI Today

What a journey it has been...

OpenVMS was withering away and dying

Now moving forward

- From being marooned on the Alpha/Itanium island to new server platforms of the future
- Embracing virtualization - Vbox, KVM, working on Vmware
- Modernizing the software
- Support expertise with an actual engineering team backing it up

Technical Update

Operating System and Tools

- Execute all code in 64 bit space

- Updated UEFI and ACPI

- Redesigned boot path for x86 – always boot from Memory Disk

- Operate as a VM guest with non-proprietary hypervisors

- More code in C, targeted rewrites of memory management modules

- Adding an Open Source file system – GFS2

- LLVM code generator for x86

Technical Update

Hardware

Ongoing activity with HPE and other storage partners on OS/hardware certification

Tape drives and libraries

16 Gb Fibre

Integrity i6

3PAR/Primera

P441/Smart Array 12 Gb SAS

Technical Update

Open Source / applications

A very active area!

Goal is to stay up to date with community versions of OpenSSL, Samba, Apache

And new stuff –

IDE

PERFDAT

OpenJDK

vGit

WEB UI

OpenLDAP
















Technical Update

A snapshot of our Jira home page

	Availability Manager	AM	Classic software		OpenSSL	SSL	Classic software
	Base OS	BO	Classic software		Perf_Dat	PERF	Classic software
	Clusters	CLUS	Classic software		QTV	QTV	Classic software
	Commands and Utilities	UT	Classic software				
	DECnet V	DV	Classic software				
	Developer Tools	DEV	Classic software				
	Documentation	DOC	Classic software				
	File Systems	FS	Classic software				
	GNV	GNV	Classic software				
	IT Projects	IT	Classic software				
	Kernel Tools	KT	Classic software				
	Layered Products	LPS	Classic software				
	NetSuite Support Implement...	NSI	Classic software				
	Network I/O	ND	Classic software				
	Open Source Applications	OSA	Classic software				
	OpenJDK	JDK	Classic software				
	OpenLDAP	LDAP	Classic software				

Based on current, best estimates. Subject to change without notice.



☆	 RTLs	RTLS	Classic software
☆	 Samba	SMB	Classic software
☆	 Service Control	SC	Classic software
☆	 Storage I/O	SD	Classic software
☆	 Terminal I/O	TI	Classic software
	 Test Project	TP	Classic software
☆	 Training	TRN	Classic software
☆	 USB	USB	Classic software
★	 V9.0 x86 EAK	V90	Classic software
☆	 VFS/GFS port to VMS	VFSVMS	Classic software
☆	 VGit	VGIT	Classic software
☆	 VMS IDE	IDE	Classic software
☆	 VSI TCPIP	TCPIP	Classic software
☆	 WebUI	UI	Classic software
☆	 WSIT	WSIT	Classic software

Based on current, best estimates. Subject to change without notice.

Technical Update

Network Stack – VSI TCPIP

VSI TCPIP V10.6 for I64 – updated ciphers, key exchanges, SSH Suite B, BIND9, NTP installation scripts, updated example programs

Network team focus is now enabling the network device drivers and TCPIP stack on x86

In the queue –

- VSI TCPIP V10.6 for Alpha

- Checksum offload

- Precision Time Protocol

- Failsafe IP features

Technical Update

FIPS 140-2 – investigating

Requires OpenSSL 3.x.x

OpenSSL.org developing FIPS module for OpenSSL 3.x.3

Operating system must supply a source of entropy – we are working on SYS\$ENTROPY, prototype provided to OpenSSL team

Once we have OpenSSL 3.x.x, entropy source and FIPS module, then fix OS/apps to use these new components for encryption functions

Then pursue FIPS 140-2 certification

Technical Update - roadmap

H2 2019

OpenVMS V9.0 for x86
limited audience
cross build tools
Vbox, KVM
VSI TCPIP 10.6 for I64
3PAR/Primera
Smart Array 12 Gb
Samba 4.6-5D for I64,
Alpha
CRTL/C99
x86 cross tools kit

H1 2020

OpenSSL 3.x.x with
OS entropy source
VSI TCPIP 10.7 for
Alpha
VSI TCPIP 10.7 for I64
CKO – investigating
PTP – investigating
Samba with cluster
support

H2 2020

OpenVMS V9.1 for x86
Generally available
Full OpenVM system
Native sw build tools
C++ for x86
DL380, DL580

VSI TCPIP 10.8
features tbd

2021

OpenVMS V9.2
Production release
x86, I64
Additional server and
platform support
Dell, Vmware (tbd)
OpenJDK
GFS2 file system
(optional)

OpenVMS V9.2 Alpha

