VMS Software

OpenVMS

Rolling Roadmap

June 5, 2018

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.**

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VSI OpenVMS Rolling Roadmap

2018	2019	2020

2018

Q1
- LTO-8 Tape

Q2
VSI TCP/IP V10.5
OMNI
OSAP
GKS
DQS

Q3
12Gb SAS
SAMBA
JAVA 8 Update
CRTL/C99
Pre-OpenVMS V8.5 Patch Kit
- Enhanced Password Management : Alpha & Integrity

2019

Q1
OpenVMS V9.0 x86-64 Early Adopters Kit
- Selected ISVs, Partners & Customers
- New Licensing
- Selected HPE Servers
- Graphical Boot Manager
- Virtual Machine guest option
- VSI TCP/IP
- Compilers
- Select Layered Products
- Cross-build tools

OpenVMS V8.5 Itanium
- VSI TCP/IP 10.6
- Up to date ACPI
- SSL 1.1.x

Q2
OpenVMS V8.5 Alpha
- Includes TCPIP V10.6

Q4
OpenVMS V9.1 (x86-64 General Early Adopters Kit)
- Available to All ISVs, Partners & Customers
- Additional HPE & Dell Servers
  - Additional I/O Devices
- Additional Layered Products
- Additional Compilers
- Additional Open Source Applications
- Additional Virtual Machine guest options
- Native build tools

2020

OpenVMS V9.2
Production Release – X86-64, Itanium*
- Full Production Release
- Security
  - Signed Images
  - Encrypted Crash Dumps
  - Stronger Password Encryption
- Additional HPE & Dell Servers & I/O Devices
- Enhanced Application Isolation and Management
- Increased Network Performance
- OpenJDK (X86-64 only)
- Same compilers supported on Itanium plus standards updates for:
  - C
  - C++
  - FORTRAN

* OpenVMS V9.2 will be released on Itanium after the x86-64 release followed by Alpha in 2021.

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

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x86 Server Roadmap

	2018	2019	2020
	OpenVMS V9.0 x86-64 Early Adopters Kit	**OpenVMS V9.1** x86-64 General EAK	**OpenVMS V9.2** X86-64 Production Release
HPE			
Rackmount			
• Gen 9, 10	√	√	√
Blade			
• Gen 9, 10			√
DELL			
Rackmount			
• Gen 12, 13, 14		√	√
Blade			
• Gen 12, 13, 14			√

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x86 HBA & USB Roadmap

	2018	2019	2020
	OpenVMS V9.0 x86-64 Early Adopters Kit	**OpenVMS V9.1** x86-64 General EAK	**OpenVMS V9.2** X86-64 Production Release
SCSI	**Nemonix** Ultra 320 SCSI disk & tape ; boot & data		
SAS	**HPE** H221 (12Gbs)	**DELL** HBA 330 (12Gbs)	**HPE** 24Gbs **DELL** 24Gbs
RAID	**HPE** SA Series		**DELL** Perc Series
FIBRE	**QLOGIC** 26601/2	**QLOGIC** 27401/2	**EMULEX** LPe16001/2 **EMULEX** LPe32001/2
USB*	**USB 3.1**		**USB 4.0**

- *Will support built-in USB on HPE and DELL servers.*
- *Support restricted to server-oriented devices.*

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

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x86 NIC Roadmap

	OpenVMS V9.0 x86-64 Early Adopters Kit	OpenVMS V9.1 x86-64 General EAK	OpenVMS V9.2 X86-64 Production Release
2018		**2019**	**2020**
1Gb	Intel		
10Gb	BROADCOM		
20/40Gb		EMULEX (BE3)	Intel XL710 (New)
100Gb			Intel Mellanox

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Research Areas

- **Virtual Machine Guest**
  - VirtualBox
  - kvm
  - Hyper-V
  - xen
  - VMware
- **Containers / Sand Boxes**
- **Hadoop**
- **Cloud**
  - OpenStack
  - Rackspace
  - Apache jclouds

- **RoCEv2**
- **UTF-8**
- **Security**
  - Encrypted Communications
  - Volume encryption
- **Additional Scripting Language**
- **Open Source Databases**
  - Ingres
  - MariaDB
  - PostgreSQL
- **Infiniband**
- **Blockchain Technology**
- **iSCSI**

OpenVMS Integrity Operating Environment

Released			Planned
BOE Components:		**HAOE Components**	**BOE Components**
- V8.4-2L1 operating system - ANT V1.7-1B - AXIS2 VB1.0-1 - CDSA V2.4-322A - CIFS V1.2ECO1A - CSWS V2.4-3G - CSWS_JAVA V8.5-4 - CSWS_PHP V5.2-17A - DCPS V2.8 - DECnet Phase IV V8.4-2L1 - DECnet Phase V V8.4I - DECram V8.4-2L1 - DECwindows Motif V1.7E - DCE (runtime) V3.2A - ENCRYPT V8.4-2L1 - Enterprise Directory V5.8 - Kerberos V3.2-260 - GNV V3.0-2	- NOTARY V1.0 - OpenSSL V1.02k - PERL V5.20-2A - TCP/IP V5.7-13ECO5F - The Data Collector V2.3-1220A - UDDI V1.0B - VSI Binary Checker V1.2 - WBEM/CIM V3.0-B151019 - WBEM providers V2.2-5D - WSIT 3.4-1 - XML C++ 3.0-1-1 - XML_JAVA V4.0-1	- Availability Manager Base V8.4-2L1 - RMS Journaling V8.4-2L1 - Volume Shadowing V8.4-2L1 - OpenVMS Cluster Client V8.4-2L1 - OpenVMS Cluster Software V8.4-2L1 - RTR V5.3	- CSWS additional modules - GNV Updates

OpenVMS Integrity Layered Products

Released		Planned

• ABS / MDMS V4.6
• ACMS dev, remote, runtime V5.2
• BASIC V1.8-4
• C V7.4-1
• C++ V7.4-6
• COBOL V3.1-7
• Datatrieve V7.4-1
• DECforms dev, runtime V4.2
• DECset V12.9-1
  (CMS, DTM, MMS, SCA, LSE, PCA)
• DFO V3.3
• DEC DFS V2.5
• FMS dev, runtime V2.6
• FORTRAN V8.3-3
	• Japanese VMS
	  - DECforms V4.2
	  - DCPS V2.8
	  - FMS V2.6
	  - DECwindows Motif V1.7E
	• MRU V1.9
	• PASCAL V6.2
	• SSM V1.9-1
	• TDMS dev, runtime V2.1-1
	• T4 V4.4D
	• OMNI / OSAP
	• DQS V1.4
	• GKS V7.3
		• X.25

OpenVMS Alpha – OS & Layered Products

Released			Planned
• V8.4-2L1/V8.4-2L2 OS • CDSA V2.4-320A • DCPS V2.8-1 • DECnet Phase IV V8.4-2L1 • DECnet Phase V V8.4D • DECram V8.4-2L1 • DECwindows Motif V1.7F • DCE (runtime) V3.2B • ENCRYPT V8.4-2L1 • Enterprise Directory V5.8-2 • Kerberos V3.2-152B • DQS V1.4 • NOTARY V1.0 • OpenSSL V1.02KA • TCP/IP V5.7-13ECO5F • The Data Collector V2.3-1220 • VSI Binary Checker V1.1A • AM Base V8.4-2L1	• RMS Journaling V8.4-2L2 • Volume Shadowing V8.4-2L2 • OpenVMS Cluster Client V8.4-2L2 • OpenVMS Cluster Software V8.4-2L2 • RTR V5.4-1 • T4 V4.4D • ABS / MDMS V4.6-1 • ACMS dev, remote, runtime V5.3 • BASIC V1.8-5 • C V7.4-1 • C++ V7.4-8 • COBOL V3.1-7 • Datatrieve V7.4-1 • DECforms dev, runtime V4.2-1 • DECset V12.9-3 (CMS, DTM, MMS, SCA, LSE, PCA) • DFO V3.3-1 • DEC DFS V2.5-1	• FMS dev, runtime V2.6-1 • FORTRAN V8.3-3 • MRU V1.9-1 • PASCAL V6.2-125 • SSM V1.9-1-2 • TDMS dev, runtime V2.1-2 • AM Base V8.4-2L1 • AM Data Analyzer V3.2 • GKS V7.3	• X.25

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OpenVMS Integrity Open Source Products

Available	Investigating
• ActiveMQ V5.10.0 • cURL & libcURL V7.49.0A (OpenSSL 1.0.2h support) • Lua V5.2.3 • Mosquitto V1.3.5 (MQTT broker) • Paho-C V1.0.3 (MQTT client) • PHP V5.6-10J • Ruby V2.2.2I • SCALA V2.11.8 • Subversion V1.8-13 • SWIG V3.0.5 • Vgit2 V0.8 • ZeroMQ V4.1.2 • gSOAP V2.8.32 • GNUplot V5.0-2 • Maven V3.3-9 • GEARMAN V1.1-17	• Erlang • Precision Time Protocol (PTP) • Python • R

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OpenVMS Alpha Open Source Products

Available	Investigating
• CIFS V1.2ECO1C • CSWS V2.4-3C • CSWS_JAVA V6.0-47A	• Mosquitto 1.3.5 (MQTT broker) • Paho-C 1.0.3 (MQTT client) • ZeroMQ 4.1-2

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Prior VSI OpenVMS Releases

May 2015	March 2016	August 2016

OpenVMS V8.4-1H1

Itanium® Processor 9500 series
- New CPU architecture
- Vastly improved performance

HP Integrity System Support
- rx2800
- HP Integrity Server Blades
  - BL860c
  - BL870c
  - BL890c
- Blades FlexFabric LAN support
- 9300 series blades and rx2800

Software
- Quality Enhancements
  - Operating System
  - Layered Products
- Product Rebranding

OpenVMS V8.4-2

HPE Integrity System Support
- Full BL890c Support
  - 64 Cores (hyperthreads off)
  - 1.5 TB Memory
- AUTOGEN (large memory)
- UEFI 2.3
- Network Boot for i4 Blades
- WBEM for i4
- rx7640 / rx8640

Performance
- More alignment faults eliminated
- Tunable BACKUP Compression

Software Component Updates
- Enterprise Directory 5.7
- CSWS (based on Apache 2.4.12)
- LDDRIVER 9.7
- Latest Time Zone Definitions
- I18N (for localized language support)
- Digital Signing 2.0
- Rebranding 2.0

OpenVMS V8.4-2L1

Limited Software Release
- Updated SSL to 1.0.2h
- Updated key exchanges
- 0.9.8/1.0.2 coexistence mechanism
- VSI and HPE libraries and shareable images are compatible
- 0.9.8 no longer supported

SSL-Related Capabilities
- Updated for compatibility with 1.0.2: TCP/IP, ENCRYPT, NOTARY, LDAP, ACMELDAP, Enterprise Directory, WBEM services, WBEM providers, CSWS

Patch Kits
- Includes contents of patch kits issued through June 15, 2016

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Prior VSI OpenVMS Releases

2017

Q1

- Alpha V8.4-2L1 Operating System
- Itanium
  - JAVA 1.8
  - Digital Signing for ISVs
  - OpenSSL 1.0.2j

Q2

- Alpha Layered Products
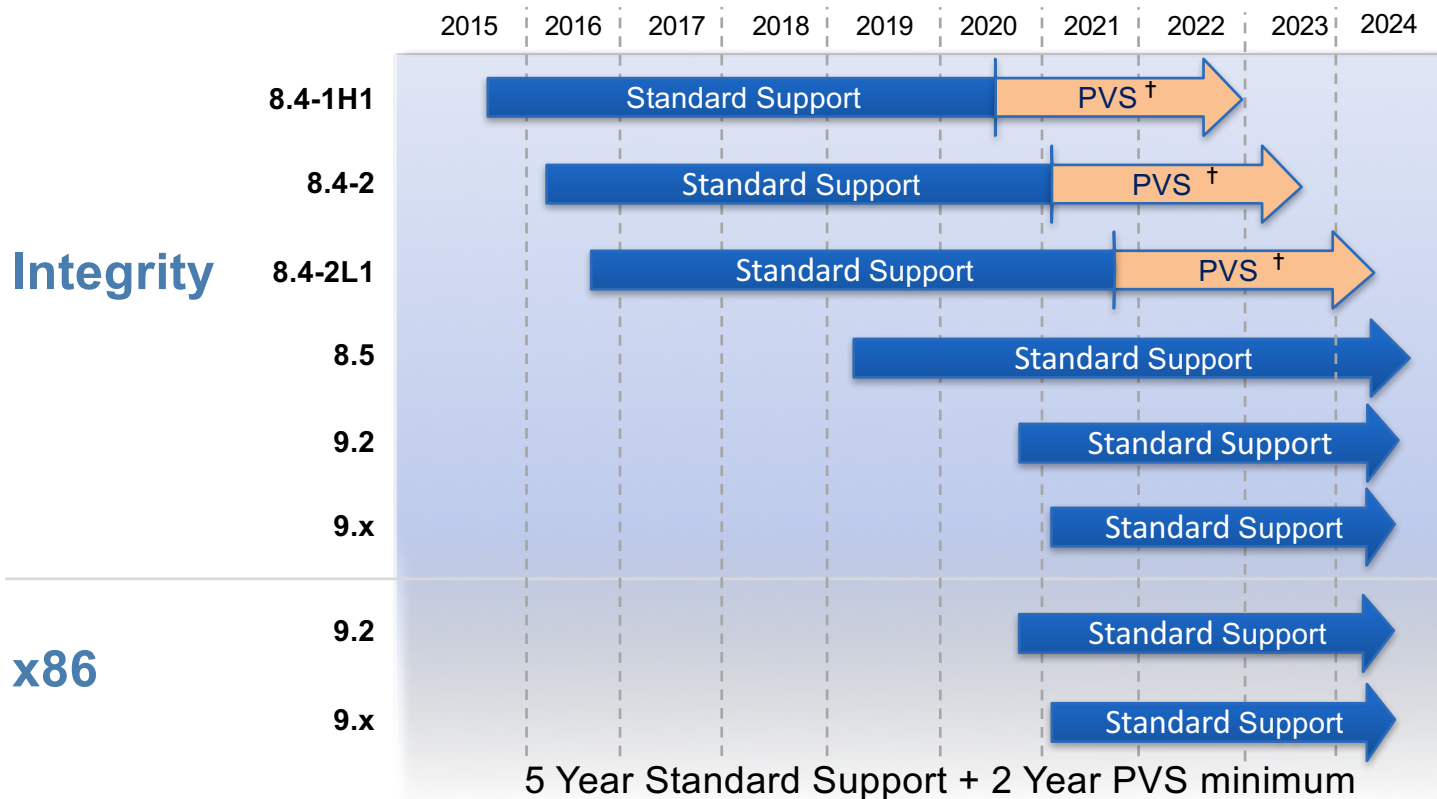- Alpha V8.4-2L2 Operating System
- OpenSSL 1.0.2k

Q4

- 16Gb Fibre Channel for rx2800
- Itanium i6 Support Announced

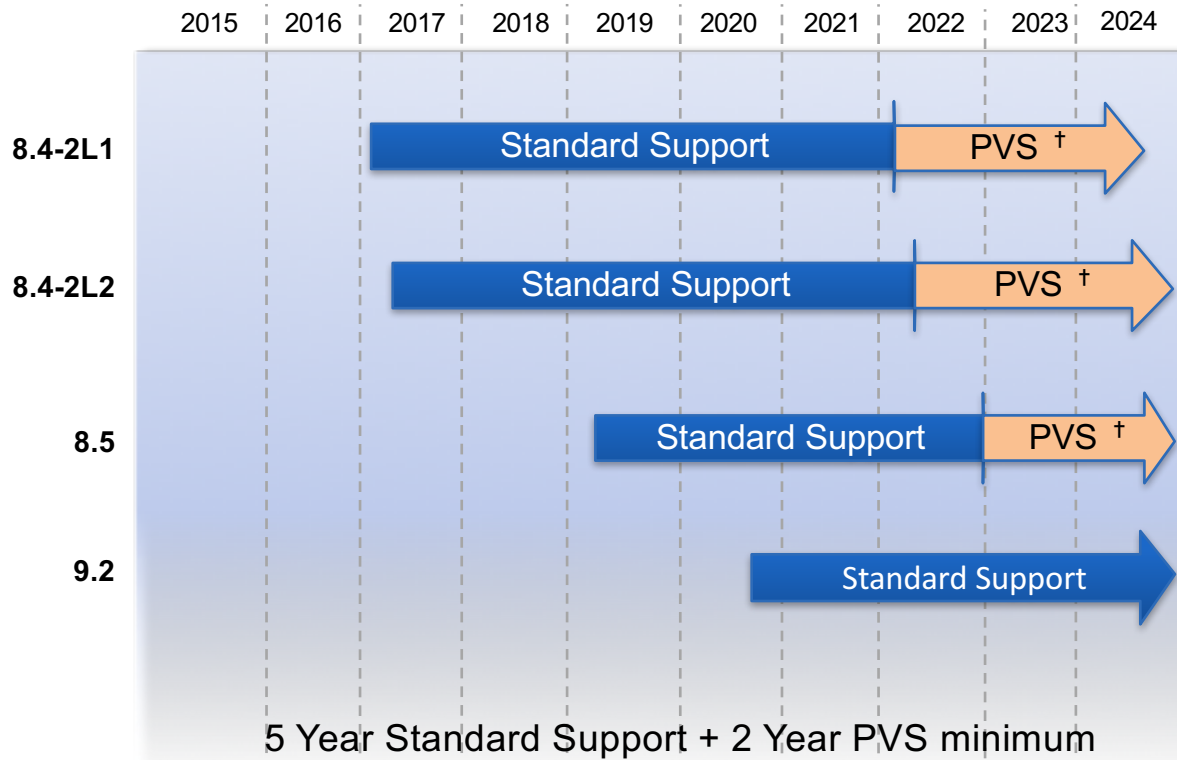Based on current, best estimates. Subject to change without notice.

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VSI OpenVMS Support

Roadmap

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VSI OpenVMS Integrity & x86 Support Roadmap

5 Year Standard Support + 2 Year PVS minimum

† PVS – Prior Version Support without Sustaining Engineering
24 Month notice will be provided before support is ended
Extended Engineering Support (EES) contract is available

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

VSI OpenVMS Alpha Support Roadmap

Alpha

| | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |

8.4-2L1 — Standard Support — PVS †

8.4-2L2 — Standard Support — PVS †

8.5 — Standard Support — PVS †

9.2 — Standard Support

5 Year Standard Support + 2 Year PVS minimum

† PVS – Prior Version Support without Sustaining Engineering
24 Month notice will be provided before support is ended
Extended Engineering Support (EES) contract is available

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Thank You

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