VSI OpenVMS

Software Roadmap

A guide to the strategy and roadmap for the OpenVMS Operating System
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Disclaimer

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 Software Product Roadmap Highlights

VMS Software is enabling the OpenVMS ecosystem on industry standard x86 servers to enable customers to deploy applications on industry standard hypervisors, on bare metal servers and in the cloud. VMS Software provides services and support to keep mission critical environments operational and available as well as migration services to seamlessly move customers forward.

**CY 2021**

**OpenVMS V9.0 EAK releases for x86 (x86-64 Limited Early Adopters Kit)**

Starting in May of 2020, V9.0 releases were provided to select ISVs, partners, and customers so they can compile and link x86 applications using cross tools available for IA64 and test their applications on x86. V9.0-H, released in April 2021, was the final release of the V9.0 EAK series.

**OpenVMS V9.1 Field Test releases for x86 (x86-64 General Early Adopters Kit)**

V9.1 Field Test releases will be available to all VSI ISVs, partners, and customers. While still intended for early adoption testing purposes, V9.1 Field Test releases will provide full OpenVMS operating system functionality, additional hardware support and it will include most layered and Open Source products.

**OpenVMS Integrity V8.4-2L3**

This release introduces support for the 12Gb Smart Array (P441) and consolidates defect repair.

**VSI TCP/IP Services V6.0 for Integrity with updated SSH, BIND, and DHCP**

**CY 2022**

**OpenVMS V9.2 (Production Release – x86-64)**

V9.2 will be the first production release of OpenVMS for x86. In addition to supporting additional platforms, this will be the basis for new security features, and more improvements for OpenVMS on x86.

**CY 2023**

**OpenVMS V9.2-X (Production Releases – x86-64)**

Support for additional platforms, features, and enhancements will be provided in releases following V9.2.
VSI OpenVMS Software
Rolling Roadmap

February/June
OpenVMS V9.0 EAK releases, V9.0-G and V9.0-H for x86 (x86-64 Limited Early Adopters Kit)
- VMware hypervisor support was added in V9.0-G
- Additional Layered Products and Open Source Applications
- Additional OpenVMS features support on x86

OpenVMS V9.1 EAK for x86 (x86-64 General Early Adopters Kits)
OpenVMS V9.1 for x86 Field Test releases available to all VSI customers – The first V9.1 Field Test was released in June 2021 is a complete OpenVMS operating system. This will be followed by periodic 9.1 updates to rollout additional products and features:
- Available to all ISVs, Partners & Customers
- Additional Layered Products and Open Source Applications
- Native build tools will be added over time – compile/link/run on x86
- OpenVMS as a virtual machine guest – VirtualBox, KVM, VMware
- VSI TCP/IP v6.0 for x86 (FTP and Telnet)
- OpenSSH Beta

September
OpenVMS V9.1-A EAK for x86 (x86-64 Limited Early Adopters Kit)
OpenVMS V9.1-A for x86 Field Test releases available to all VSI customers – The next V9.1-A Field Test released in September 2021 is a complete OpenVMS operating system. This will be followed by periodic 9.1 updates to rollout additional products and features:
- Available to all ISVs, Partners & Customers
- Additional Layered Products and Open Source Applications
- Native build tools will be added over time – compile/link/run on x86
- OpenVMS as a virtual machine guest – VirtualBox, KVM, VMware
- VSI TCP/IP v6.0 for x86 (FTP, Telnet, BIND and NTP4)
- OpenSSH Beta
- Debugger (limited language support)
- DECnet-Plus

Applications and Tools:
- Python 3.10 (Itanium)
September-December

- Hardware support for the HPE DL380 (Intel) server
- Shared Stream I/O Beta (SSIO) (Non-clustered)
- PostgreSQL Database Beta (Itanium – SSIO is required)
- VSI TCP/IP Services V6.0 Beta w/updates to BIND and NTP4
  - Integrity
  - Alpha
- OpenSSH Beta
  - Integrity
  - Alpha
April

OpenVMS V9.2 (Limited Production Release)

- Additional hypervisors – OpenVMS as a guest for Microsoft Hyper-V
- Additional Layered Products and Open Source Applications
- New Security Feature – Entropy Engine
- Native compilers with LLVM backend code generator:
  - BLISS, XMACRO, C++ (Phase 1)

May-November

- Additional Layered Products and Open Source Applications
- Additional native compilers
  - C, COBOL, and C++ (Phase 2 – VMS Extensions)
- VSI TCP/IP Services enhancements and bugfixes
  - GATED

November/December

OpenVMS V9.2-1 (Production Release – x86-64)

- HPE DL380 (Intel) server
- Additional hypervisors – OpenVMS as a guest for Microsoft Hyper-V
- Additional Layered Products and Open Source Applications
- Cloud Platforms – Amazon Web Services, Microsoft Azure (researching, customer input requested)
- FIPS 140-2 features on V9.2 or later and V8.4-2L3
- VSI TCP/IP Services enhancements and bugfixes
  - PTP (Precision Time Protocol)
- Additional Server Platforms based on customer demand
- OpenJDK for x86
- Native compilers with LLVM backend code generator:
  - Fortran, BASIC, and Pascal

Applications and Tools:
- Availability Manager V3.2-1 for Windows 10/11 and OpenVMS
OpenVMS V9.2-2 for x86

- Additional hypervisor and cloud platform support driven by customer requirements
- Additional bare metal server support driven by customer demand
- Cluster security features
- VSI expects to release new operating system versions on a yearly basis after 2023, with release content determined by customer requirements and industry trends.
# OpenVMS x86 Server/IO Roadmap

<table>
<thead>
<tr>
<th></th>
<th>V9.0 EAK</th>
<th>V9.1 Field Test EAK</th>
<th>V9.2</th>
<th>V9.2-x</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Server Model</strong></td>
<td>N/A</td>
<td>Limited support for HPE DL380 (Intel)</td>
<td>Limited support for HPE DL380 (Intel)</td>
<td>Full Support for HPE DL380 (Intel) Other two socket model hardware</td>
</tr>
<tr>
<td><strong>VM HyperVisor</strong></td>
<td>Oracle VM VirtualBox; KVM; VMware</td>
<td>Oracle VM VirtualBox; KVM; VMware</td>
<td>Oracle VM VirtualBox; KVM; VMware; Microsoft Hyper-V</td>
<td>Oracle VM VirtualBox; KVM; VMware; Microsoft Hyper-V</td>
</tr>
<tr>
<td><strong>Cloud Platform</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>Amazon Web Services (customer input requested) Microsoft Azure (customer input requested)</td>
</tr>
<tr>
<td><strong>SmartArray / RAID / HBA</strong></td>
<td>N/A</td>
<td>P440ar (Gen 9)</td>
<td>P408i (Gen 10) P440ar (Gen 9)</td>
<td>P408i (Gen 10) P440ar (Gen 9)</td>
</tr>
<tr>
<td><strong>Fibre Channel</strong></td>
<td>N/A</td>
<td>QLogic 26601/2 – 16Gb single/dual port</td>
<td>QLogic 26601/2 – 16Gb single/dual port</td>
<td>QLogic 26601/2 – 16Gb single/dual port 32Gb Fibre researching</td>
</tr>
<tr>
<td><strong>USB</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>USB 3.1</td>
<td>USB 2.0/3.x</td>
</tr>
</tbody>
</table>

1 VSI will test specific models in a server product line and will support architecturally equivalent server models (same CPU/chipset family).
2 i/O card support will be a subset of what is available on x86 Windows/Linux servers.
3 USB device support will be for server oriented memory devices such as memory sticks and mass storage devices.
## Prior VSI OpenVMS Releases

<table>
<thead>
<tr>
<th>Month</th>
<th>Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 2021</td>
<td>V9.1-A Field Test for x86</td>
</tr>
<tr>
<td>July/August 2021</td>
<td>V9.1 Update Kits 1 &amp; 2</td>
</tr>
<tr>
<td>June 2021</td>
<td>V9.1 Field Test for x86</td>
</tr>
<tr>
<td>April 2021</td>
<td>V8.4-2L3 for Integrity</td>
</tr>
<tr>
<td>April 2021</td>
<td>V9.0-H Limited EAK for x86</td>
</tr>
<tr>
<td>February 2021</td>
<td>V9.0-G Limited EAK for x86</td>
</tr>
<tr>
<td>December 2020</td>
<td>V9.0-F Limited EAK for x86</td>
</tr>
<tr>
<td>October 2020</td>
<td>V9.0-E Limited EAK for x86</td>
</tr>
<tr>
<td>August 2020</td>
<td>V9.0-D Limited EAK for x86</td>
</tr>
<tr>
<td>July 2020</td>
<td>V9.0-C Limited EAK for x86</td>
</tr>
<tr>
<td>June 2020</td>
<td>V9.0-B Limited EAK for x86</td>
</tr>
<tr>
<td>May 2020</td>
<td>V9.0-A Limited EAK for x86</td>
</tr>
<tr>
<td>May 2020</td>
<td>V9.0 Limited EAK for x86</td>
</tr>
<tr>
<td>June 2017</td>
<td>V8.4-2L2 for Alpha</td>
</tr>
<tr>
<td>January 2017</td>
<td>V8.4-2L1 for Alpha</td>
</tr>
<tr>
<td>September 2016</td>
<td>V8.4-2L1 for Integrity</td>
</tr>
<tr>
<td>March 2016</td>
<td>V8.4-2 for Integrity</td>
</tr>
<tr>
<td>May 2015</td>
<td>V8.4-1H1 for Integrity</td>
</tr>
</tbody>
</table>
VSI OpenVMS Support Roadmap

VSI OpenVMS Integrity & x86 Support Roadmap

- **HPE OpenVMS** V8.4, V8.3*, V.8.2
  - 8.4-1H1
  - 8.4-2
  - 8.4-2L1
  - 8.4-2L3
  - 9.2
  - 9.2-1
  - Future x86 releases

VSI OpenVMS Alpha & VAX Support Roadmap

- **HPE OpenVMS** V8.*, V7.*, V.6.*
  - 8.4-2L1
  - 8.4-2L2
  - All versions

- **EES**: Extended Engineering Support contract is available
- **PVS**: Prior Version Support without Sustaining Engineering
- **Standard Support**

- 24 Month notice will be provided before support is ended