

OpenVMS V9.2-4 and Beyond

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Agenda

▶ **Current: V9.2-3**

▶ **Next: V9.2-4**

▶ **Beyond: V9.2-5**

Current: V9.2-3

V9.2-3

NOV-2024

Update 1 APR-2025

Update 2 JUL-2025

Update 3 JAN-2026



Fibre Channel



ACME Agent



Paravirtualized I/O



**Availability Manager
Data Collector**



Guest Console



Bugfixes



**Automatic TCP/IP +
OpenSSH Configuration**



Performance Improvements

Next: V9.2-4

V9.2-4



iSCSI



PVSCSI Driver



TCP/IP V7



VirtIO-RNG



Fibre Channel CCSD



VM Tools



Signed Execlets



Integrated OpenLDAP

V9.2-4 iSCSI

iSCSI:

- TCP/IP Based Storage Network
- Hardware agnostic
- Commonly available in Cloud environments

V9.2-4:

- Shared data disk in a cluster
- Multi-pathing
- Static configuration
- CHAP Authentication

Future:

- Boot support (+ CCSD)
- Dynamic configuration

**Working
Prototype**

V9.2-4 TCP/IP V7

V9.2-4

- Refreshed TCP/IP Kernel (from FreeBSD)
- BSD environment “cradle”
- Existing interfaces (QIO, sockets, KVICI, BG devices)
- New configuration mechanism: sysctl (replaces sysconfig)
- Support for existing protocols, with some exceptions
 - TCP, UDP, SCTP
 - libpcap, tcpdump, netstat, snmp
 - routed, dhcp, bind, ndp, ntp, whois
 - smtp, pop, imap
 - NFSv3 (lockd, statd), ftp
 - telnet *server client only*
 - *Dropped Berkeley r-protocols*
- Support for current OpenSSH and Samba packages, existing user code
- Foundation for future improvements

In Progress

V9.2-4 TCP/IP V7

Future

- Performance improvements (e.g. 64-bit network buffers, more direct interfaces)
- Updated protocols
 - NFSv4
 - Samba as part of TCP/IP kernel
 - IPSec
 - ...
- RDMA for iSCSI ?

V9.2-4 CCSD

- Cluster-Common System Disk
- Boot from Fibre Channel
- One system disk for multiple x86 nodes
- Just like on Alpha and Itanium
- Recommended to keep dump files off the system disk

Finalizing

V9.2-4

Signed Executables

V9.2-4:

- Signed executive components and drivers
- Signature verified during boot-time or later loading
- Choice of no action / warning / refuse to load/boot if a signature is invalid

Future:

- Signed SYSBOOT.EXE, verified by boot manager
- Signed boot manager, verified by UEFI firmware SecureBoot feature

In Progress

V9.2-4 PVSCSI Driver

- Driver for VMware's PVSCSI (Para-virtualized SCSI)
- VMware equivalent of KVM's virtio-scsi
- Performance advantage over emulated SCSI or SATA

Working
Prototype

V9.2-4 Virtio-RNG

- KVM
- Ability to use the host system's hardware random number generator
- Feeds into the entropy pool, providing a steady source of entropy
- No application changes needed to benefit from this

Finalizing

V9.2-4

VM Tools

- KVM & ESXi
- Ability to keep OpenVMS clock in sync with host
- Only one clock sync method should be active, do not enable this if you're already using NTP or DTSS
- Graceful shutdown operations

Finalizing

V9.2-4 Integrated OpenLDAP

- OpenLDAP as a SIP
- Includes OpenLDAP ACME Agent

Finalizing

V9.2-4 Timeline



Beyond: V9.2-5



V9.2-5



Native Build

Thanks!

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