

The Veeam logo, consisting of the word "veeam" in white lowercase letters inside a green rounded rectangle.The Open-E JovianVHR logo, featuring a red stylized infinity symbol followed by the text "open-e JovianVHR" in white and green.

# THE DUAL-LAYER IMMUTABILITY BACKUP FROM OPEN-E AND VEEAM®

**Open-E JovianVHR** combines the rock-solid, ZFS-based technology with Veeam's Linux Hardened Repository framework to deliver a purpose-built, single-node-based solution that makes truly immutable, high-performance backup storage effortless.

- ✓ **Double-layer immutability with Veeam + ZFS for unmatched data protection.**
- ✓ **High-performance data storage to streamline backup and restore operations.**
- ✓ **Flexible, hardware-agnostic deployment with advanced data storage features and simple licensing.**


## Double-Layer Immutability

### 1 Veeam Hardened Repository

Provides immutability using the immutable attribute in XFS. Once backup data is written, the system protects it from modification or deletion for a predefined period.

### 2 ZFS Immutable Snapshots

The ZFS snapshots are inherently read-only, making them impervious to alteration or deletion by ransomware or other malware attempting to encrypt files.

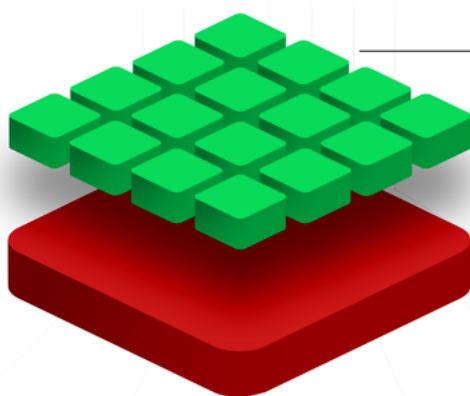
A large yellow graphic consisting of two parallel chevrons pointing to the right.

**TOGETHER, THESE TWO  
INDEPENDENT LAYERS  
CLOSE THE RANSOMWARE GAP  
AND ELIMINATE INSIDER-THREAT  
WORRIES.**

# Open-E JovianVHR Specifications



Specifications	Description
Base OS	Linux
File system	ZFS
Architecture	64-bit
Minimum hardware requirements	Quad-core CPU 2.6GHz 16GB RAM SATA controller
Connections	1Gbps, 10Gbps, 40Gbps, 100Gbps, 200Gbps Ethernet IPv4
Data integrity and availability	ZFS 256-bit block level checksums Mirror (eq. RAID 10), RAID-Z1, -Z2, (eq. RAID 5, 6), -Z3 Self-healing against silent data corruption Disk Multipathing Self Encrypted Drives (SED) Support SSD TRIM Support
Data optimization	RAM, SSD and HDD hybrid pool Tiered Caching Unlimited Snapshots Unlimited Clones (writable Snapshots) Thin Provisioning Over Provisioning Inline Data Deduplication Inline Compression ZFS Special Devices NVMe Partitions
Management	SNMP and REST API E-mail notification Roll-back to previous configuration
Supported environments	Veeam Hardened Repository
Licensing	Open-E JovianVHR license cost is determined by the total usable backup capacity, and the support plan tier and duration.



- **Veeam Hardened Repository**
  - ✓ Immutable Attribute
  - ✓ Single-use Credentials
  - ✓ Veeam Fast Clone
  - ✓ Zero Trust Design
  - ✓ No Persistent Root Access

- **Open-E JovianVHR**
  - ✓ Copy-on-Write
  - ✓ Read-only Snapshots
  - ✓ Self-Healing
  - ✓ Caching Mechanisms
  - ✓ Compression and Deduplication
  - ✓ Up to Triple Parity Array
  - ✓ Metadata Pinning
  - ✓ ZFS Special Devices



## About Open-E

Founded in 1998, Open-E is a developer of IP-based storage management software. Their flagship product, Open-E JovianDSS, is an award-winning software-defined system known for its exceptional stability, ease of use, and outstanding price-performance ratio. The company's product portfolio also includes Open-E JovianVHR, a high-performance backup and disaster recovery solution. With a reputation for reliability and compatibility, Open-E has become a trusted technology partner for leading IT companies, with over 40,000 installations worldwide. For more information about Open-E, its products, and partners, visit [www.open-e.com](http://www.open-e.com)

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