# Oracle Linux Virtualization Manager Backup and Recovery

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Oracle Linux Virtualization Manager is a server virtualization management platform that can be easily deployed to configure, monitor, and manage an Oracle Linux Kernel-based Virtual Machine (KVM) environment. Oracle Linux KVM and Oracle Linux Virtualization Manager provide a modern, open source, high performance alternative to proprietary server virtualization solutions with zero licensing costs.

Storware Backup and Recovery is an Oracle-certified data protection solution, providing backup and recovery for virtual machines and all application data. The core functionality is agentless backups, snapshot management, and recovery plans. Both full and incremental backups are supported, and Storware provides multiple strategies to address different customer needs. It is worth noting that OLVM 4.4 delivers a technical preview of CBT APIs - already supported by Storware. Storware is a cost-effective and competitive platform for small to enterprise businesses.

## Benefits

**HTML 5 Web Console** – with an intuitive and modern UI, you can quickly set up protection and store backups in several different backup providers. Manage and monitor backup processes from a single pane of glass.

**Easy Configuration** – Configuration Wizard makes the launch and setup of Storware fast and easy. Start to protect your VMs within minutes!

**Transparent Licensing** – The easiest licensing without hidden costs: per VM, per Host, per TB, and 24/7 support team at your disposal.

**Set and Forget Automation** – automate VM protection with custom or predefined backup policies. Test backup automatically to ensure recoverability – use Disaster Recovery Plans to verify that your backed-up VM is bootable and was not damaged before the backup was performed.

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## Support for migration from Oracle VM to OLVM

OLVM users often migrate their environments from Oracle VM (as it is perceived as a replacement), so I would start with better scalability and more comprehensive backup strategy options, including automatic backup import in the restore process, recovery plans, and snapshot management. As a bonus, the OLVM console can be extended with our addon to allow administrators to control backup operations directly from the OLVM console.

## OLVM UI integration plugin

Integration with the OLVM Virtualization interface allows administrators to perform most of the basic operations without logging into the vProtect dashboard. After installation (which is described at the end of this article) you will see a new tab "VM Backups" in the OLVM menu. It gives you insight into the crucial information from vProtect admin console: protection stats, task success rate, available resources. It consists of three primary tabs: dashboard, virtual machines, and task console.

### What are the advantages of integrating Storware with the native Oracle Linux VM UI?

- The ability to manage all data protection processes directly from the user interface
- Streamlining and simplifying backup and recovery processes, which saves the administrator's time.
- The integration gives administrators a better user experience.
- Instant insight into backup/restore tasks and stats.

# Oracle Linux Virtualization Manager Backup and Recovery

**Features**

- incremental backup
- file-level restore
- VM disk exclusion
- snapshot management
- quiesced snapshot
- pre/post snapshot command execution
- backup disks sharable over iSCSI
- name-based policy assignment
- tag-based policy assignment
- available space for snapshot check
- power-on VM after restore

## Advantages

Official APIs exposed by OLVM and backup strategies that scale in larger environments. We also continually support the most recent releases so that customers can quickly notice our reaction to constantly evolving OLVM solutions.

Users can choose from a wide range of supported backup targets - from the plain file system, on-prem and off-prem object storage, and what is unique - to other legacy backup solutions (IBM, Dell, Veritas, or Micro Focus).

Installation is pretty straightforward. Even though it is a Linux-based deployment and you need some basic Linux skills, the general all-in-one installation is a single command. Later, you set up most of the things using a single wizard in the graphical web interface.

Storware Backup and Recovery 5.1 delivers instant restore capability for OLVM, allowing quick VM recovery without waiting until data is completely copied back to the hypervisor.

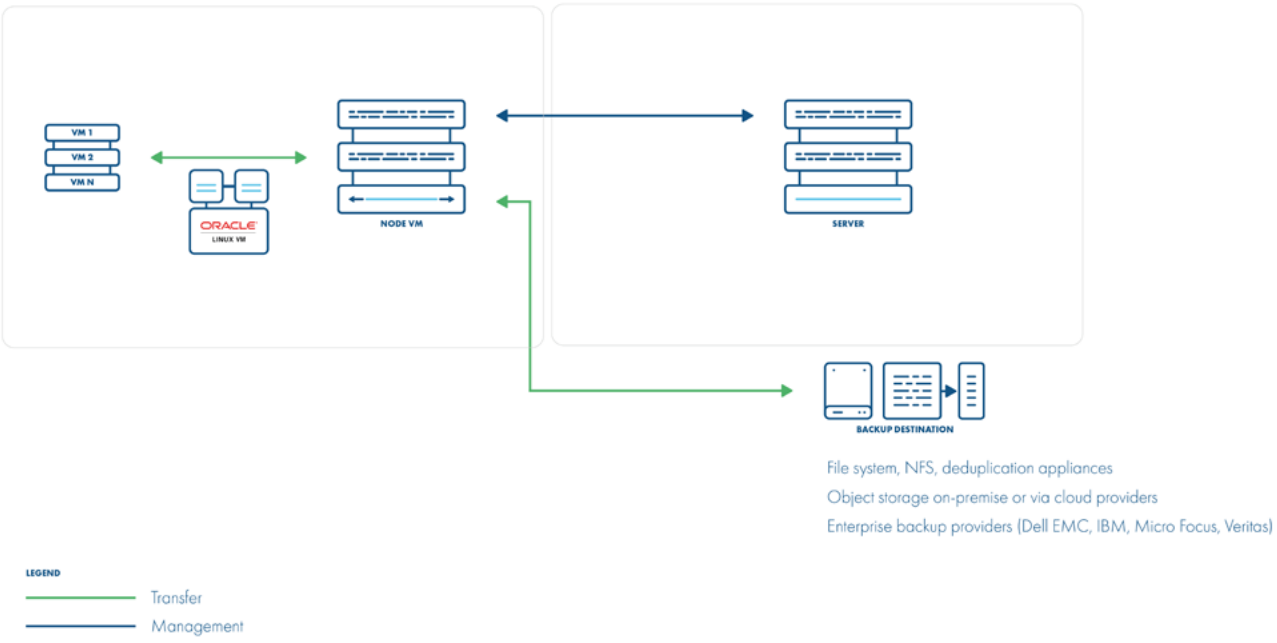
# How it works

For Oracle Linux Virtualization Manager (OLVM) 4+ environments you can use API v4 for invoking all backup-related tasks. Import/export mode defines the way the backups and restores are done. OLVM (with API v4) supports 3 modes:

## 1. Disk attachment,

which exports VM metadata (in OVF format) with separate disk files (in RAW format) via Proxy VM with the Node installed. The proxy VM is able to read the data from the attached disk snapshots and forward them to the backup provider.

- supports OLVM 4.0+
- no incremental backup
- proxy VM required in each cluster - used for the disk attachment process




*Disk attachment with Proxy VM*

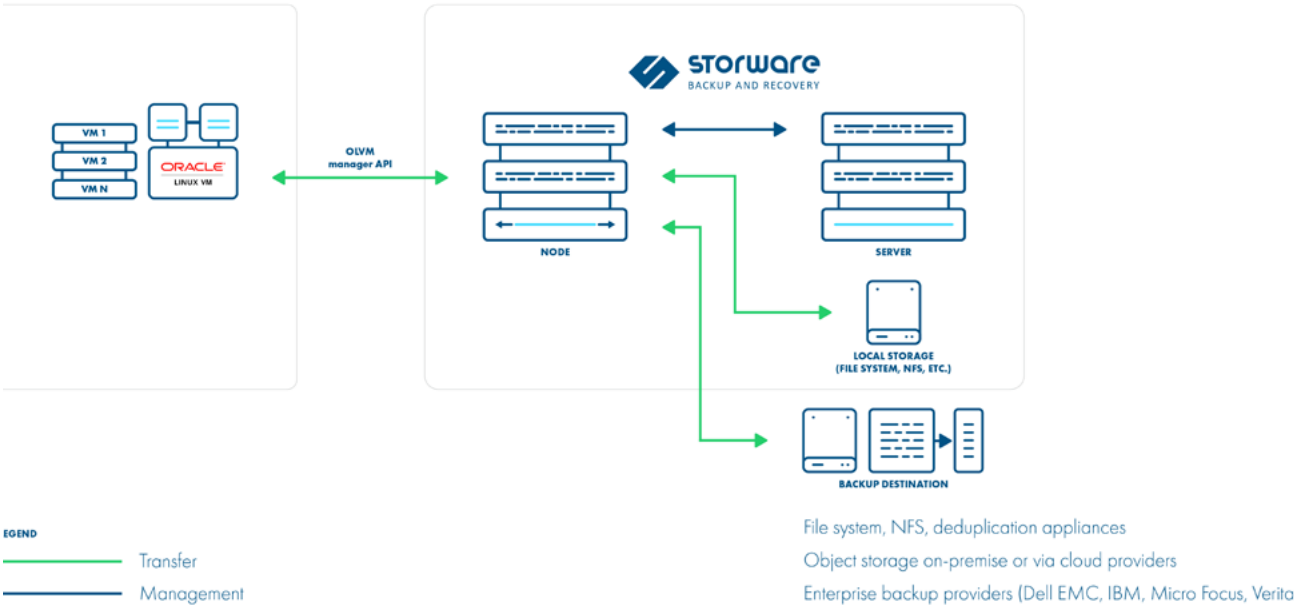
# How it works

## 2. Disk image transfer API,

which exports VM metadata (in OVF format) with disk snapshot chains as separate files (QCOW2 format). This API appeared in OLVM 4.2 and allowed the export of individual snapshots directly from the OLVM manager. So instead of having to install multiple Proxy VMs, you can have a single external Node installation, which just invokes APIs via the OLVM manager.

This strategy supports incremental backups. Assuming you have OLVM 4.2 or newer – just add your manager to Storware Backup & Recovery and setup is done. From a network perspective, it requires two additional ports to be opened - 54322 and 54323 - and your data to be pulled from the hypervisor manager.

- supports OLVM 4.2+/oVirt 4.2.3+
- supports incremental backup
- disk images are transferred directly from the API (no Proxy VM required)

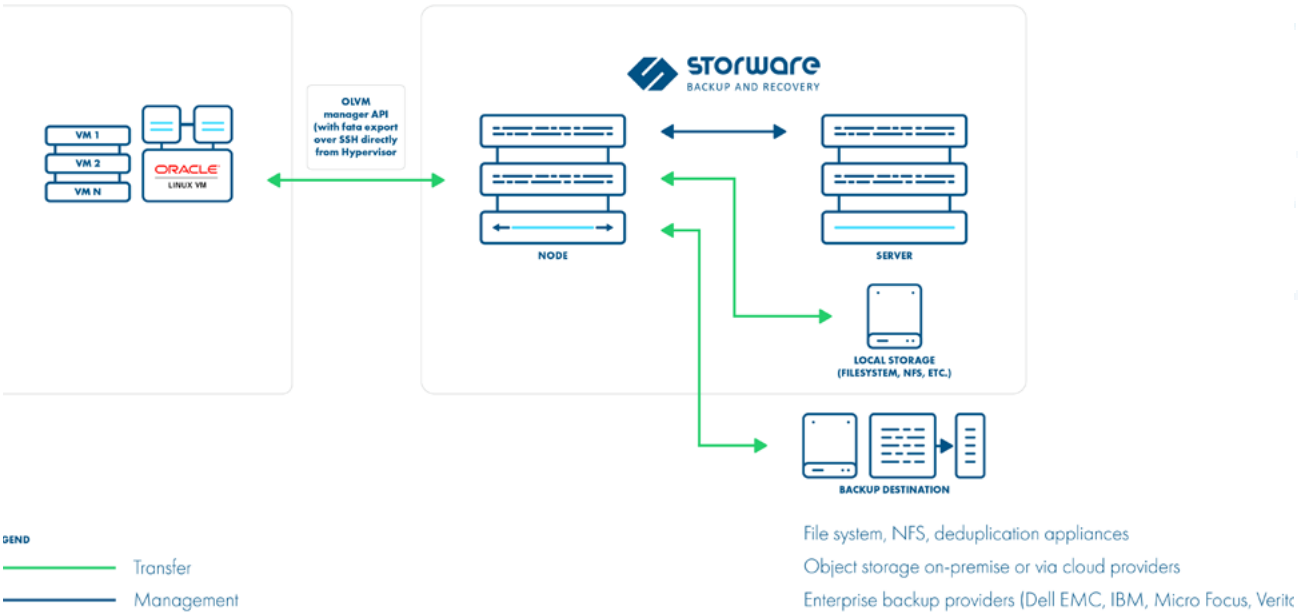



*Disk image transfer API*

# How it works

## 3. SSH Transfer,

this method assumes that all data transfers are directly from the hypervisor over SSH. This is an enhancement to the disk image transfer API strategy. It allows Storware Backup & Recovery to use OLVM API v4.2+ (HTTPS connection to OLVM manager) only to collect metadata. Backup is done over SSH directly from the hypervisor (optionally using netcat for transfer), import is also using SSH (without the netcat option). There is no need to install a node on the OLVM environment. This method can significantly boost backup transfers and supports incremental backups.




*Disk image transfer API*