Hypervisor vs Harvester

1. Hypervisor
A hypervisor is the low-level software layer that creates and runs virtual machines.
Common hypervisors on Linux: KVM, Xen, VMware ESXi, Hyper-V.
It provides CPU, memory, and device virtualization for running guest OS instances.

2. Harvester
Harvester is an open-source Hyper-Converged Infrastructure (HCI) platform.
It is built on Kubernetes and uses KVM under the hood to run VMs.
Harvester manages VMs, containers, storage, and networking across clusters.

3. Comparison Table
- Layer: Hypervisor is low-level; Harvester is higher-level orchestration.
- Main Role: Hypervisor runs VMs; Harvester orchestrates VMs and containers.
- Technology Base: Hypervisor runs on hardware; Harvester runs on Kubernetes.
- Storage/Networking: Hypervisor provides basic device emulation; Harvester integrates storage (Longhorn) and CNI plugins.
- Workload Types: Hypervisor supports VMs; Harvester supports VMs and containers.

4. Analogy
The hypervisor is like the engine of a car – it powers the VM.
Harvester is like the fleet-management system – it coordinates and manages multiple VMs and containers across a cluster.

5. Architecture Diagram

~~Harvester on top of KVM~~

Containers (K8s Pods)

VMs (Linux, Windows, etc.)

Harvester Platform (K8s-based HCI, Networking, Storage)

Hypervisor (KVM / QEMU)

Hardware (Servers, CPUs, Memory, NICs, Storage)