

SUSE Virtualization & Huawei OceanStor Storage

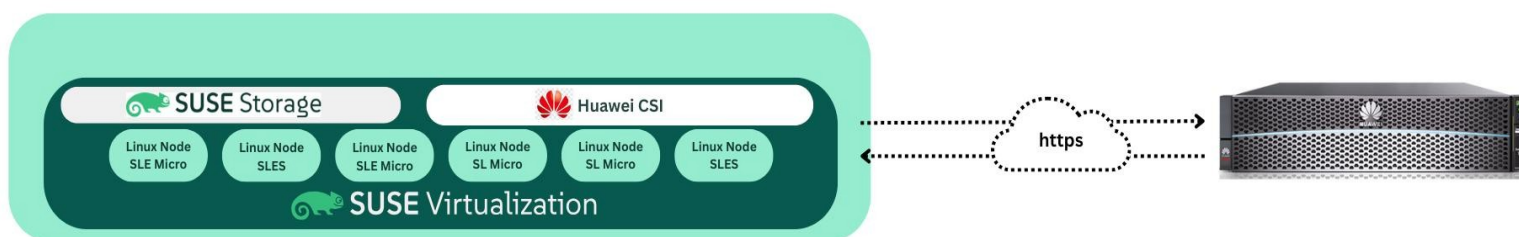
Modern VM-Focused HCI with SUSE Virtualization & Huawei CSI

Organizations modernizing their virtualization stacks require storage that is fast, resilient, and easy to operate.

Huawei OceanStor Storage is a market leading enterprise-grade, all-flash and hybrid storage platform that delivers high performance, unified block/file/object services, built-in data protection, and AI-driven management for mission-critical workloads.

Combining SUSE Virtualization with Huawei OceanStor storage using the Huawei CSI driver delivers a unified platform for enterprises modernizing their virtualization, container, and edge workloads.

This joint offering brings together SUSE's open, cloud-native virtualization architecture with Huawei's high-performance, highly reliable enterprise storage, enabling customers to seamlessly operate VMs and containers with consistent data services and simplified lifecycle operations.



Unified Virtualization & Container Platform

- Run and manage **VMs and Kubernetes workloads** natively on Harvester with high-performance block storage from OceanStor.
- Standardized data services across virtualized and cloud-native applications.
- Simplified infrastructure stack reduces operational complexity and licensing overhead.

High Performance & Enterprise-Grade Data Protection

- Huawei OceanStor's next-generation storage architecture provides **low-latency, high-throughput** storage ideal for VM disks, container volumes, and stateful workloads.
- Advanced data protection—**snapshots, replication, data reduction**, and RAID technologies—ensure performance and resilience.

Seamless Integration via Huawei CSI Driver

- Full compatibility with Harvester via CSI enables **dynamic provisioning, expansion, and lifecycle management** of persistent volumes.
- Consistent storage classes for Kubernetes and Harvester VM disks simplify application deployment and scaling.
- Zero-touch provisioning reduces manual configuration and human error.

Scalable, Cloud-Native Infrastructure

- Both platforms scale independently or together to support edge sites, core data centers, and hybrid clouds.
- Harvester's lightweight footprint pairs effectively with OceanStor's scalable arrays—ideal for multi-cluster, multi-site deployments.
- Native multi-tenant and multi-cluster capabilities improve resource utilization and cost efficiency.

Why SUSE Virtualization and Huawei

Powering Enterprise Virtualization with
Intelligent Storage

OceanStor



SUSE Virtualization

Enterprise-grade, open, and cloud-native

- **Cloud-native virtualization**
Built on KVM and Kubernetes, with seamless Rancher integration for modern and traditional workloads.
- **Centralized lifecycle management**
Unified control of virtual machines, containers, clusters, and storage from a single management plane.
- **High availability and resilience**
Live migration, automated failover, and self-healing clusters ensure continuous service availability.
- **Built-in automation**
Simplified cluster upgrades, VM provisioning, and day-2 operations through policy-driven automation.



OceanStor Storage Systems

Intelligent, secure, and high-performance storage

- **Huawei OceanStor block storage**
providing high reliability and performance for VM disks and container workloads.
- **Huawei CSI driver**
enabling dynamic volume provisioning, snapshot/restore, cloning, and expansion.
- **Enhanced security**
via isolation, encrypted volumes, role-based access control, and validated data protection features.
- **Unified storage management**
Centralized control of storage resources with simplified operations and automation.
- **High availability and data protection**
Active-active architecture, snapshots, and replication ensure continuous data availability.



Learn more



<https://www.suse.com/pcsc/viewVersionPage?versionID=26237>

SUSE is a global leader in innovative, reliable, secure enterprise-grade open source solutions, relied upon by more than 60% of the Fortune 500 to power mission-critical workloads. We specialize in business-critical Linux, enterprise container management and edge solutions, and collaborate with partners and communities to empower our customers to innovate everywhere – from the data center, to the cloud, to the edge and beyond. SUSE gives customers the agility to tackle innovation challenges today and the freedom to evolve their strategy and solutions tomorrow.

Huawei is a global leader in technology, offering innovative and secure solutions across telecommunications, cloud, and enterprise IT. Trusted by customers worldwide, Huawei drives digital transformation with cutting-edge technologies like 5G, AI, and cloud computing. By collaborating with partners and ecosystems, Huawei helps businesses optimize operations, enhance agility, and scale their strategies for the future.

Key Value Proposition

1. Enterprise-Class Storage for SUSE Virtualization

Huawei OceanStor delivers high performance, multi-protocol support, and advanced data services. Combined with SUSE's robust virtualization stack, customers gain:

- High-performance block storage for virtual machines
- Consistent low latency and high throughput for high demanding workloads
- Unified management with automated provisioning

2. Fully Certified & Supported

This integration has been validated across:

- SUSE Virtualization principles
- Huawei CSI driver functionality
- VM lifecycle ops (attach/detach, snapshot, resize)
- Persistent storage behaviors under production conditions

Customers get joint support assurance from both SUSE and Huawei.

3. Simplified Provisioning Through CSI

Using Huawei's CSI driver streamlines storage consumption:

- Automated persistent volume creation
- Dynamic provisioning aligned with VM workloads
- Improved reliability through standardized CSI interfaces

This reduces administrative overhead and accelerates deployment cycles.

4. Scalable Architecture for Growth

OceanStor's scale-up and scale-out capabilities pair well with SUSE Virtualization, enabling:

- On-demand expansion without disruption
- Multi-tenant isolation for diverse workload environments
- Consistent performance even as data volumes grow

5. Enhanced Data Services

OceanStor enriches SUSE environments with:

- Inline deduplication & compression
- Snapshot and clone capabilities
- Multi-level data protection

These features enable operational efficiency and safeguard critical data.

Use Cases

- Enterprise VM Workloads (SAP landscapes, databases, ERP systems)
- Private Cloud Deployments using SUSE virtualization frameworks
- Edge/Branch Environments requiring reliable, easy-to-manage storage
- Backup/DR Scenarios leveraging OceanStor replication technologies

Business Impact

Benefit	Impact
Faster VM deployment	Accelerates project timelines
Automated storage ops	Reduces admin workload & human error
Enterprise reliability	Improves uptime and service continuity
Certified interoperability	Lowers risk for customers adopting Huawei storage
Scalable performance	Supports modern workloads and future growth

Conclusion

SUSE Virtualization and Huawei OceanStor storage create a powerful, future-ready infrastructure foundation, simplifying the management of large virtualized estates while ensuring strong, consistent protection for enterprise workloads.

This collaboration combines SUSE's open, resilient virtualization stack with Huawei's intelligent OceanStor storage architecture, delivering a unified solution that raises confidence through its end-to-end approach to data reliability and workload continuity. Organizations gain a cost-efficient and scalable protection model capable of supporting mixed workloads and diverse deployment scenarios. The platform accelerates backup operations, streamlines data mobility, and significantly reduces operational complexity. In the event of host outages, storage faults, or platform disruptions, Huawei's architecture ensures rapid service restoration with minimal downtime, forming a solid backbone for business resilience. OceanStor Dorado further strengthens the ecosystem with high-performance storage optimized for persistent virtual machine data, delivering exceptional throughput, simplified lifecycle management, and trusted security capabilities for demanding enterprise applications. Enhanced NFS and protocol optimizations elevate performance even more, making the combined solution an ideal fit for modern virtualization environments requiring speed, efficiency, and robust protection. Altogether, this integration offers a comprehensive and scalable choice for organizations seeking dependable data management across SUSE-based virtual infrastructures.