

NetKera HCI

Hyper-Converged Infrastructure (HCI) Solution with Multiple Nodes



Overview

This HCI solution integrates compute, storage, and networking into a single platform, delivering a scalable, high-performance infrastructure. Designed for flexibility and simplified management, this HCI solution allows seamless scaling by adding multiple server nodes to handle various workloads, including virtualization, databases, and cloud services.

Key Features

1. Integrated Compute, Storage, and Networking

Each server node contributes CPU, memory, storage, and networking resources to the HCI cluster, allowing for easy scaling and balanced workloads across nodes.

2. High Availability and Redundancy

- **Node Failover:** In case of a hardware failure, the system automatically redistributes the virtual machines (VMs) to other nodes within the cluster, ensuring zero downtime.
- **Data Replication:** Storage is replicated across multiple nodes, ensuring that no single point of failure affects the overall infrastructure.

3. Scalable Architecture

- Easily scale from a small deployment to a large multi-node cluster by adding additional servers (nodes) without disrupting ongoing operations.
- **Cluster Expansion:** Each new node increases both compute power and storage capacity, ensuring consistent performance growth.

4. Unified Management and Automation

- **Centralized Management:** A single dashboard for managing all nodes, VMs, storage, and networking, providing a unified view of the entire infrastructure.
- **Automation and Orchestration:** Automated provisioning of VMs, resource allocation, and failover processes, reducing administrative overhead.

5. Networking and Security



- **Advanced Networking:** Supports VLANs, network bonding, and SDN features for efficient network management and traffic isolation.
- **Enhanced Security:** Integration with Active Directory and LDAP for centralized authentication. Secure communication between nodes ensures data integrity and security.

Technical Specification for each node

Form Factor	Per Node 1U
Processor	Dual Intel® Xeon Platinum, Gold, Silver, Bronze scalable processors
Chipset	Intel C741
Memory	32 DDR5 slots, maximum 5,600 MT/s memory speed
Storage	Front: 10x 2.5" slots (SAS/SATA, NVMe SSD optional, hot-swappable). Rear: 2x 2.5" slots (SAS/SATA, NVMe SSD optional, hot-swappable).
RAID Support	RAID 0/1/5/6/10/50/60 with power-off protection
Node Connectivity	Fibre Channel (FC) support for high-speed SAN connectivity
Networking	Dual OCP 3.0 interfaces (PCIe 5.0 x16 + x8), supports up to 6 PCIe slots
External Ports	5 USB ports, 2 VGA ports, 1 Serial port
Power Supply	1+1 hot-swappable redundant power supplies. Options: 550W, 800W, 1200W, 1600W, 2000W (80PLUS Platinum or Titanium).
Cooling	Eight high-efficiency fans with N+1 redundancy and intelligent cooling system
Operating Temperature	+5°C to +45°C (depends on configuration).
Storage Temperature	-40°C to +65°C
Humidity	8% to 90% RH (no condensation).
Altitude	Operable up to 3,000m (performance degradation at higher altitudes).
Dimensions	432mm (W) x 43mm (H) x 780mm (D), excluding flanges and rails
Weight	Maximum configuration: About 27kg (excluding rails)
Certifications	