

Vinchin x ZStack: Integrated Backup and Disaster Recovery for ZStack Cloud/ZSphere

Vinchin and ZStack have partnered to deliver a joint backup and disaster recovery solution optimized for ZStack Cloud/ZSphere. This collaboration integrates ZStack's cloud infrastructure with Vinchin's powerful, agentless backup technology to ensure efficient, reliable data protection. Together, they provide fast virtual machine (VM) backup and recovery, immutable backup storage against ransomware, and simplified, centralized management for diverse virtualized workloads in data center environments.

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About Vinchin

Vinchin was founded in 2015 and began with a focus on virtual machine backup. Over time we have developed into a backup expert for various types of enterprise workloads — including VMs, databases, cloud and physical servers — with a focus on reliable protection, fast recovery, and easy management.

50+

Industries

170+

Countries

30K+

Clients

6M+

Protected Workloads

Gartner
Peer Insights™

VINCHIN Recognized Higher Performer in Gartner® Peer Insights™ "Voice of the Customer" Report for Enterprise Backup and Recovery Solutions

4.9/5



Willingness to Recommend

4.9/5



Product Capabilities

4.9/5



Deployment Experience

4.9/5



Support Experience



All-in-One Backup Solutions

vmware openstack Red Hat H3C FUSION citrix inspur oVirt	Microsoft Hyper-V KAYTUS ORACLE Linux HUAWEI SANGFOR ADP-NG ZStack SuSE CentOS Stream Linux	Arcfra ORACLE Linux Virtualization Manager HUAWEI ZStack ORACLE Linux	Windows CentOS Red Hat debian ubuntu Rocky SUSE CentOS Stream Linux ORACLE Linux	TiDB ORACLE DATABASE SQL Server MySQL PostgreSQL MariaDB Postgres	File/NAS/Hadoop aws Azure ceph Tencent Cloud HUAWEI Alibaba Cloud wasabi MINIO	Public Cloud aws HUAWEI CLOUD Exchange App & Container
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Backup Verification ↓ ↓ Copy Archive ↑ ↑ Recovery Migration

Data Encryption (transit & storage)
Vinchin Backup & Recovery
Ransomware Protection

Local Disk	DAS	FC-SAN	IP-SAN	NAS	Object Storage	Cloud Storage	Tape Library
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| About ZStack

ZStack, founded in 2015, is a leading independent cloud vendor in China's enterprise cloud market. It serves over 5,000 enterprise customers across more than 30 countries and regions.



Its product portfolio covers data center software infrastructure, including enterprise cloud platforms, virtualization, containers, distributed storage, hyper-converged infrastructure, multicloud management platform (CMP), and AI infrastructure (AIOS).

ZStack ranks first among independent vendors in the IDC China Cloud System Software Market Report, is a representative provider in Gartner® Innovation Insight: AI Infrastructure in China, and is a Representative Vendor in the 2025 Gartner® Market Guide for Server Virtualization Platforms.

Why data protection is essential for ZStack environments?

As IT systems grow more complex, enterprises are turning to virtualization and hyperconverged infrastructures like ZStack Cloud/ZSphere to improve resource efficiency, scalability, and IT management. This shift greatly enhances flexibility and reduces TCO—but also concentrates workloads and data, increasing the potential impact of hardware failures and cyberattacks.

Backup remains the last line of defense for data security, helping businesses recover from data loss or service interruption. Traditional methods such as manual copying or client-based backups are often complex, error-prone, and difficult to scale in virtualized environments.

ZStack Cloud/ZSphere provides native backup capabilities and standard CBT (Changed Block Tracking) interfaces for efficient data protection. Integrating with Vinchin further enhances data resilience by delivering advanced enterprise-grade features such as cross-platform recovery, ransomware resilience, backup verification, enabling organizations to strengthen disaster recovery preparedness, enhance operational flexibility, and ensure business continuity.



Vinchin and ZStack: Strategic Partnership for Cloud Data Protection

Vinchin and ZStack have established an official technology partnership to provide a seamless, high-performance backup and disaster recovery solution for enterprises running workloads on ZStack Cloud/ZSphere. This collaboration brings together ZStack's open, scalable, and cloud native infrastructure with Vinchin's intelligent, agentless backup technology, delivering unified data protection that guards business-critical systems against data loss, corruption, and ransomware threats.



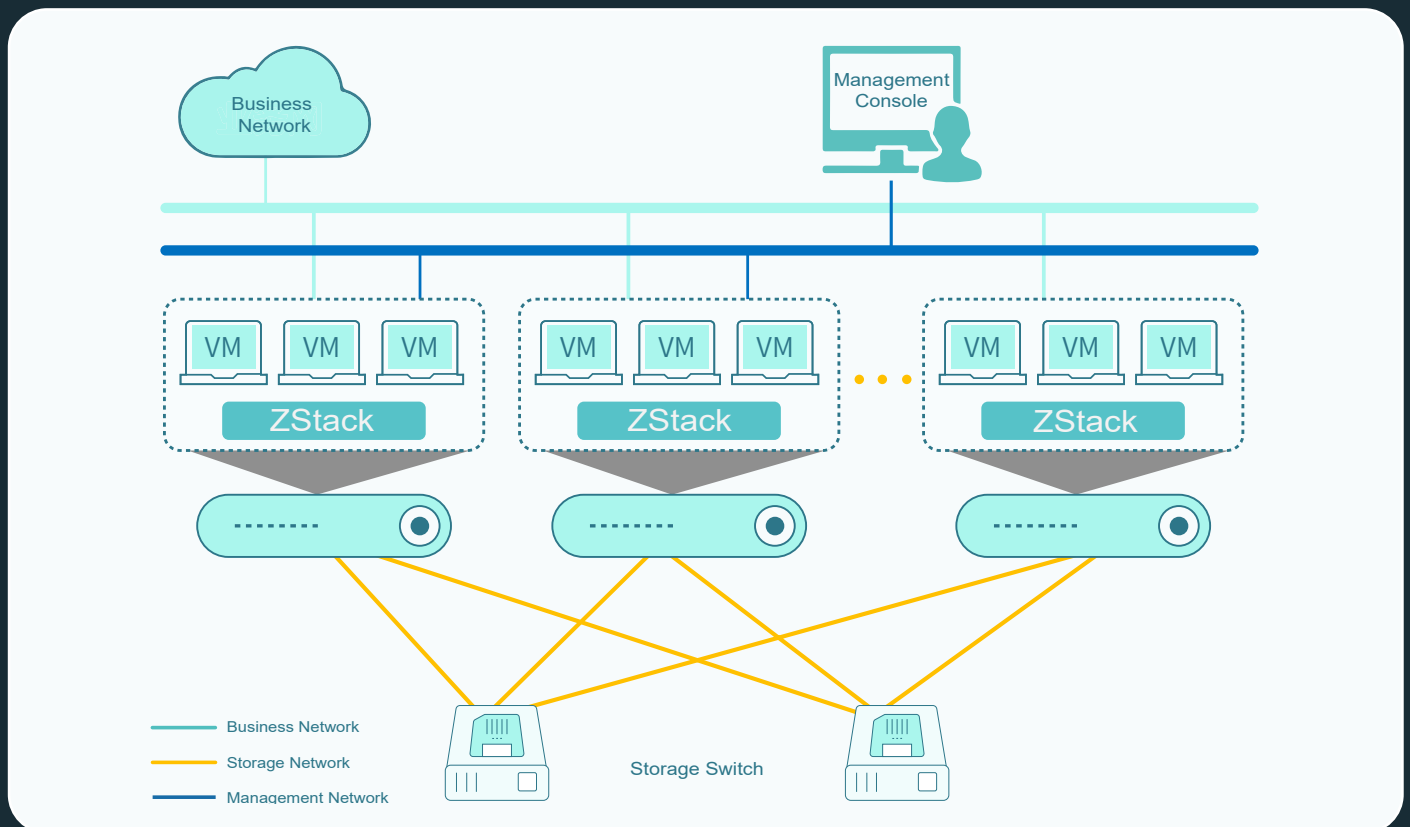
Vinchin Backup & Recovery

— Reliable Backup for ZStack Cloud/Sphere

Virtual machines carry critical business workloads, making reliable data protection essential. Vinchin connects to the ZStack virtualized host or hyperconverged platform without requiring agents on individual VMs, eliminating complex client deployment and reducing operational overhead while ensuring secure and seamless backup coverage.

The solution supports full, incremental, differential, and forever-incremental backups with flexible scheduling options, advanced features such as encryption, compression, deduplication, and GFS retention policies. Backed-up VMs can be restored to the original ZStack platform or other virtualization environments, providing flexible disaster recovery and cross-platform migration capabilities.

Vinchin also provides comprehensive disaster recovery features, including instant VM restoration, fine-grained file recovery, ransomware detection, and backup integrity verification, helping enterprises maintain business continuity, minimize downtime, and ensure that backup data is always reliable and recoverable.



Vinchin's VM Backup and Recovery Features for ZStack Cloud/ZSphere

Vinchin Backup & Recovery provides clean, reliable, and efficient protection for ZStack virtual machines, featuring agentless backup, incremental strategies, fast instant recovery, and unified management designed for everyday operations.

Agentless VM Backup & Discovery

Agentless VM Backup

Leverages ZStack's CBT interface for agentless backup without installing agents on VMs, helping reduce system overhead and simplify ongoing maintenance.

Policy-Based VM Grouping

Organize ZStack VMs across folders, so policies can be applied more efficiently across large or dynamic infrastructures.

Auto-Discovery of New VMs

Automatically detect and register new ZStack VMs in the environment, ensuring they are continually added into existing protection policies.

Incremental Backup & Storage Optimization

Forever Incremental Backup

Continuously capture small incremental changes to minimize backup windows and improve performance in busy environments.

BitDetector Optimization

Skip non-essential data such as partition gap or swap files to further reduce backup size and speed up data transfer processes.

Data Deduplication & Compression

Reduce storage usage with built-in deduplication and compression that optimize capacity without affecting restore efficiency.

SpeedKit Acceleration

Use SpeedKit, a CBT alternative, to track VM data changes efficiently, accelerating incremental backups.

Scheduling & Execution Control

Flexible Scheduling Rules

Customize job schedules with daily, weekly, or monthly cycles and apply retention policies aligned with business requirements.

LAN-Free Backup Mode

Bypass production networks using direct storage paths to maintain service stability while reducing workload on primary systems.

Core Restore Options

Instant VM Recovery

Launch VMs directly from backup storage within seconds to keep machines online while full recovery runs in the background.

Disk-Level Restore

Restore single virtual disks independently, providing flexible repair options for corrupted or damaged VM components.

File-Level Restore

Recover individual files instantly from VM backups without performing a complete VM or disk-level restoration process.

VM-Level Protection

Comprehensive VM Image Protection

Safeguard full virtual machine images, including OS, applications, and data, ensuring rapid recovery within virtual environments.

Cross-Platform Compatibility

Cross-Hypervisor Restore (V2V)

Restore VM backups between different virtualization platforms seamlessly, allowing migrations or recoveries across heterogeneous systems.

Cross-Platform Instant Restore

Quickly restore ZStack VMs to another supported hypervisor, enabling flexible failover and fast system availability.

Hybrid & Multi-Environment Support

Unified Protection for Mixed Environments

Manage physical, virtual, and cloud workloads in one unified console, simplifying operations for complex IT infrastructures.

Hybrid Cloud Archive

Store long-term backup data in AWS, Azure, or S3-compatible clouds to balance cost, scalability, compliance, and retention needs.

Advanced Capabilities for Enterprise Data Protection

Advanced features include multi-threading, automated verification, ransomware-proof storage, DR orchestration, cloud integration and scalable HA deployment, supporting demanding enterprise and cross-region workloads.

<p>Performance & Transmission Engine</p>	<p>Multi-Threaded Transmission Engine Parallelized data streams accelerate backup and restore processes for large-scale virtual infrastructures.</p> <p>Optimized Backup Chain Management Maintain lightweight and efficient backup chains to improve storage performance.</p>	<p>Smart I/O Throttling Dynamically adjusts bandwidth usage to prevent backups from overloading production networks and affecting business workloads.</p>
<p>Backup Verification & DR Lab</p>	<p>Automated Backup Verification Boot test VMs in an isolated environment to validate recoverability and meet recovery point objectives consistently.</p>	<p>Integrity Check & Sandbox Testing Confirm data consistency and test workloads safely without impacting production systems, ensuring reliable restoration.</p>
<p>Security & Ransomware Protection</p>	<p>Immutable Backup Storage (WORM) Protect backup files from deletion or tampering during retention periods to mitigate ransomware and malicious attacks.</p> <p>Built-in Antivirus Scanning Use integrated antivirus engine to scan backup data for malware, ensuring all stored VM backups remain secure and tamper-free.</p>	<p>Encrypted Transfer & Storage Apply enterprise-grade encryption to protect backups both in transit and at rest, meeting compliance requirements.</p>
<p>Replication & DR Orchestration</p>	<p>Real-Time VM Replication (agent required) Maintain warm standby replicas for rapid failover and minimal disruption to critical services</p> <p>Continuous Data Protection (agent required) Continuously capture VM data changes in real time, allowing near-zero data loss and rapid recovery to any point.</p>	<p>DR Orchestration Flow Automate backup, verification, replication, and archive tasks into seamless workflows for predictable disaster recovery execution.</p> <p>Remote Copy to Secondary Sites Create offsite copies to meet geographic redundancy and disaster recovery requirements efficiently.</p>
<p>Rapid VM Provisioning</p>	<p>Comprehensive VM Image Protection Safeguard full virtual machine images, including OS, applications, and data, ensuring rapid recovery within virtual environments.</p>	
<p>High Availability & Scalability</p>	<p>Backup Server Clustering (HA Deployment) Deploy multiple backup servers with automatic failover for continuous service availability.</p> <p>Distributed Data Path Optimization Balance multi-node workloads efficiently to ensure optimal performance and reliability across the backup infrastructure.</p>	<p>Scale-Out Backup Storage Expand storage capacity and throughput horizontally to meet the needs of large enterprise environments.</p>

| Customer Benefits



Strengthen IT Security

Enhance overall IT security by providing reliable recovery for critical business data and systems. Even if other security measures fail, Vinchin ensures that lost or corrupted data can be restored quickly, minimizing operational disruptions and maintaining the integrity of business processes.



Enhance Emergency Response

Leverage flexible backup and recovery options and automated data verification to strengthen incident response capabilities. Organizations can quickly identify issues, restore data, and resume operations under diverse failure scenarios, improving business continuity.



Minimize Financial Impact

Protect against the financial consequences of data loss or system downtime through high-efficiency backup and disaster recovery for ZStack environments. Rapid recovery of business-critical data and systems helps preserve information assets.



Streamline Operations

Simplify deployment, monitoring, and management with agentless integration, centralized control, and automated backup/recovery workflows. Administrators can efficiently manage all VMs on the ZStack platform, reduce manual effort and human error.

Customer Story



Hong Kong Police Force

The Hong Kong Police Force is the official law enforcement agency of Hong Kong, responsible for maintaining public order, preventing and investigating crimes, and ensuring community safety.

Customer Needs

- Achieve fast backup performance for critical ZStack VMs
- Restore specific files or data from VM backups to another workload
- Automatically copies backup to offsite data center for redundancy
- Monitor backup system operations to ensure task stability

Vinchin's Solution

- Perform LAN-free backup through the storage network to achieve high-speed VM data transfer without affecting production workloads or performance.
- Enable multi-threaded data transfer to accelerate backup and restore throughput, improving performance and shortening overall protection windows.
- Restore individual files or folders from VM backups through various granular recovery methods for precise and flexible data restoration.
- Automate backup workflows with job orchestration to create custom schedules, streamline management, and improve operational efficiency.
- Send automatic email notifications for job results, including completion, failure, or warnings, to keep administrators promptly informed.

Customer Story



MTR Corporation Limited

MTR Corporation is the major public transport operator in Hong Kong, responsible for operating rail services, property development, and related infrastructure, serving millions of passengers daily and managing extensive IT systems.

Customer Needs

- Perform fast backup to shorten backup window and minimize impact
- Deduplicate and compress backup data to reduce storage usage
- Encrypt data during backup and transmission to ensure security and compliance
- Verify backup recoverability to ensure VM data can be reliably restored when needed

Vinchin's Solution

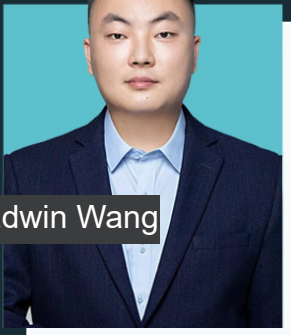
- Perform fast backups using LAN-free transmission and the self-developed SpeedKit to accelerate data movement and reduce backup windows.
- Apply efficient deduplication and multi-level compression to shrink backup data volume and optimize storage utilization with minimal overhead.
- Protect all backup traffic with encrypted transmission to secure sensitive information and maintain compliance across critical systems.
- Validate backup metadata to confirm data completeness and ensure the backup remains trustworthy for future recovery.
- Run automated recovery verification in an isolated environment to confirm backed-up VMs can boot correctly and ensure DR reliability.

Summary

ZStack is an open, modular cloud platform designed to support scalable virtualization management across diverse enterprise environments. With its lightweight architecture, fast deployment, and flexible resource scheduling, it enables organizations to build unified, automated, and cost efficient private cloud systems that adapt easily to evolving business demands.

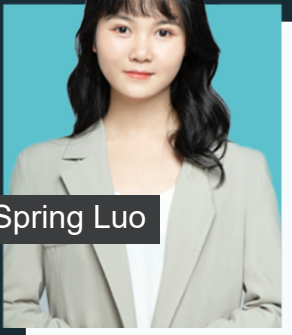
Vinchin provides ZStack users with a secure and high-performance data protection solution that ensures critical workloads remain safe and recoverable at all times. Through agentless integration, streamlined operations, and a rich set of backup and recovery features, Vinchin helps organizations enhance IT resilience, strengthen data security, and maintain smooth business operations with reduced management overhead.

Authors



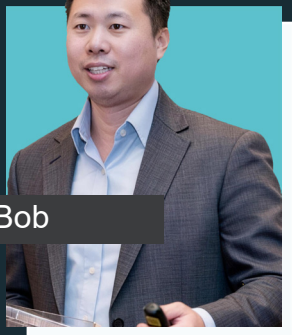
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Find more Features of Vinchin Backup & Recovery:
<https://www.vinchin.com/zstack-backup.html>

Find more features of ZStack:
<https://www.zstack-cloud.com/product/private-cloud-platform/product-cloud/>

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