

Vinchin Backup & Recovery High-Efficiency Agentless Backup Designed for Proxmox VE

Vinchin Backup & Recovery offers a backup and disaster recovery solution designed to work with Proxmox VE, an open-source virtualization platform. Vinchin's agentless backup technology is engineered to help protect virtual machines running on Proxmox VE, offering configurable recovery options, such as full VM recovery, granular file-level recovery, and instant VM recovery to help reduce downtime in the event of data loss. Vinchin also supports immutable backup storage as an additional safeguard against ransomware and unauthorized data modification, and offers scalable backup strategies (including scheduled, incremental, and CBT-based backups) that can be adapted to Proxmox VE environments of varying sizes and workloads.

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About Vinchin

Vinchin is a backup and recovery vendor founded in 2015. The company's product line originated with virtual machine backup and has since expanded to cover a broader range of enterprise workloads, including virtual machines, databases, cloud platforms, and physical servers. Vinchin's backup solutions are designed around three core priorities: data protection reliability, recovery speed, and operational simplicity.

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



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



Why Proxmox VE Protection Matters?

As technologies such as cloud computing, IoT, artificial intelligence, and big data continue to evolve, modern IT environments are growing more complex, along with the risks faced by business systems. Proxmox VE provides an integrated, highly available platform that streamlines IT management and supports stable workload operations. Backup options include the built-in backup functionality of Proxmox VE as well as Proxmox Backup Server, which is offered as a dedicated backup solution for Proxmox VE environments.



Proxmox VE together with Proxmox Backup Server provides a solid foundation for data protection. Depending on an organization's specific requirements, a third-party backup solution such as Vinchin Backup & Recovery may offer additional options, for example, in heterogeneous environments spanning several hypervisors, for cross-platform recovery, in migration scenarios, or for specific backup workflows. Today, protecting only files or databases no longer meets enterprise requirements. Business systems consist of hardware, operating systems, applications, and data, all of which are exposed to potential failures caused by hardware faults, software issues, human error, cyber threats, or unexpected disasters, often resulting in data loss or prolonged service disruption.

For these reasons, organizations running Proxmox VE may wish to evaluate whether their current backup approach, whether based on Proxmox Backup Server, a third-party solution such as Vinchin Backup & Recovery, or a combination of both, meets their data protection, RTO and RPO, and business continuity requirements.

Vinchin Backup & Recovery — Robust Backup for Proxmox VE

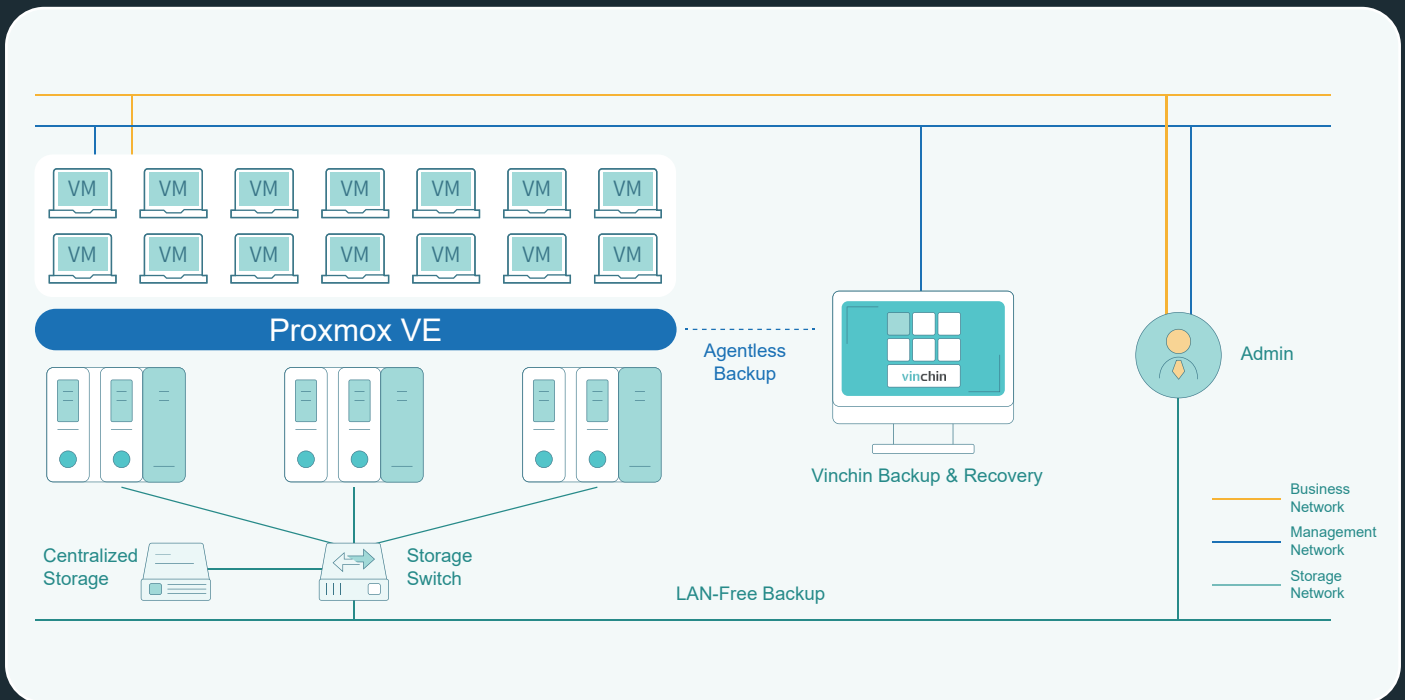
Proxmox VE combines virtualization, storage, and networking into a unified open-source platform, providing a streamlined and high-performance virtual data center environment. Featuring an intuitive web-based interface, clustering support, and built-in support for KVM for virtual machines and LXC for containers, Proxmox VE allows organizations to build IT infrastructure that is efficient, reliable, and scalable.

As virtualization technologies continue to mature, Proxmox VE has become one of the most widely adopted open-source virtualization platforms.

Vinchin Backup & Recovery supports Proxmox VE 7.2, 7.4, 8.0, 8.1, 8.2, 8.3, 8.4, 9.0, and 9.1. Protection covers KVM-based virtual machines running on Proxmox VE, connected via a lightweight backup plugin installed on each Proxmox VE host. Supported capabilities include full, incremental, and forever-incremental backup; Changed Block Tracking for faster incremental jobs; LAN-based and LAN-Free (direct SAN) data transport; and three restore modes, full VM restore, instant VM restore, and file-level granular restore. Backup copies can be archived to nearly 10 public cloud storage targets, including Amazon S3, Azure Blob, Ceph S3, and Wasabi, supporting 3-2-1 backup strategies for Proxmox VE environments.

Vinchin Backup & Recovery has been deployed by organizations across multiple industries to protect systems running on Proxmox VE and other virtualization platforms, supporting continuous and stable business operations.

Vinchin Backup & Recovery — Robust Backup for Proxmox VE



- **LAN-Free backup:**

Implemented via a storage network; requires support from centralized storage and the storage network itself.

- **Centralized storage:**

Supports Ceph, iSCSI, NFS, etc.

Management network: Used for management and monitoring; connects all Proxmox VE nodes and the backup system.

- **Storage network:**

Used for data transmission; isolated from the management and production networks.

- **Supported storage backend:**

Includes local storage, NFS, Ceph, ZFS, iSCSI, etc.; select the appropriate storage type based on specific requirements.

Core Capabilities of Vinchin Backup & Recovery

Vinchin Backup & Recovery provides comprehensive and streamlined protection for Proxmox VE environments, featuring agentless VM backup, flexible scheduling, forever-incremental strategies with automated merge, multiple restore options, cross-scenario recovery, and centralized hybrid-cloud management to enhance efficiency and ensure rapid, dependable recovery.

Agentless Backup & Scheduling	Agentless VM Backup	Back up VMs without installing agents inside the guest OS, minimizing resource consumption and easing administrative effort.	Guest-agent-free. LAN-based transport uses a lightweight host-side plugin; LAN-Free transport requires no plugin.
	LAN-Free Data Transfer	Support backup traffic offloaded through SAN or dedicated storage networks, accelerating data movement and avoiding congestion on production networks.	Native support via FC, iSCSI, or NFS storage networks.
	Flexible Policy-Based Scheduling	Runs scheduled, automatic backup verification and delivers email notifications for proactive oversight.	Fully supported
Forever Incremental Backup & Incremental Merge	Forever Incremental Backup	Continuous Incremental Backups: Start with a single full backup, then perform only incremental backups to reduce full-backup frequency and save storage and bandwidth.	Powered by Changed Block Tracking (CBT) for high-speed incremental capture.
	Automatic Incremental Merge	Merge older incremental backups automatically, keeping only valid and usable data while removing obsolete blocks.	Fully supported
Multiple Backup Modes	Full Backup	Capture the entire VM or file system for complete protection.	Fully supported
	Incremental Backup	Back up only changes since the last backup, reducing storage usage and backup time.	Fully supported
	Differential Backup	Back up changes since the last vfull backup, balancing speed and storage efficiency.	Fully supported

Vinchin & Proxmox VE: Agentless Backup and Seamless Recovery Solution for Proxmox VE

Flexible VM Restore Options	File-Level Restore	Recover individual files quickly without restoring the entire VM or disk.	Fully supported.
	Disk-Level Restore	Restore only affected virtual disks for targeted repair without impacting other resources.	Supported across Proxmox VE storage backends (ZFS, LVM-thin, Ceph).
	Full VM Restore	Restore the entire virtual machine with a single action, ensuring system integrity.	Fully supported
	Instant VM Restore	Power on VMs directly from backup storage within seconds while the full restore continues in the background.	Fully supported
Unified Multi-Scenario Recovery	Cross-Platform Recovery (V2V)	Restore workloads seamlessly across physical machines and different virtualization platforms using Vinchin's versatile migration engine.	Applies to validated source/target combinations on the current platform compatibility matrix; OS and driver compatibility apply. Vinchin enables cross-platform recovery across all the platforms it supports.
	Cross-Site/Offsite Recovery	Perform recovery in secondary or remote locations to achieve geographic redundancy and strengthen disaster resilience.	Fully supported via Offsite Copy.
	Cross-Node Recovery	Restore virtual machines to any available node, enabling flexible resource allocation and improving overall availability.	Applies within the target Proxmox VE cluster.
Centralized Data Protection Operations	Unified Control Plane	Manage physical, virtual, and cloud workloads through a consolidated interface, simplifying protection operations and improving administrative efficiency.	Fully supported
	Hybrid Cloud Archive	Cloud-Based Long-Term Storage Offload archival data to AWS, Azure, or any S3-compatible storage to boost durability and support extended retention requirements.	Fully supported

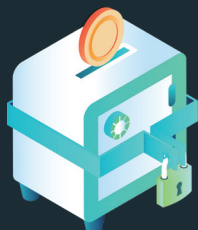
Advanced Capabilities for Enterprise Data Protection

Vinchin offers automated verification, deduplication and compression, encryption, distributed backup, point-in-time recovery, ransomware protection, real-time replication, cloud-based protection, continuous data protection, and automated failover for enterprise-scale virtual environments.

Verification & Integrity Testing	Automated Integrity Reports	Launches VMs in an isolated lab network to confirm backup recoverability without affecting production.	Requires an isolated network segment or dedicated sandbox host with sufficient compute/storage to run test recoveries.
	Automated Integrity Reports	Runs scheduled, automatic backup verification and delivers email notifications for proactive oversight.	Fully supported
Data Reduction & Optimization	Deduplication	Automatically removes duplicate data blocks to reduce backup storage usage.	Fully supported
	Compression	Compresses backup data to shrink storage size and improve transfer efficiency.	Fully supported
	BitDetector Intelligent Filtering	Filters swap files, unallocated space, and deleted/invalid blocks to optimize backup performance.	Fully supported
Scalability & Distributed Architecture	Horizontal Node Expansion	Expands system capacity by adding backup nodes to scale overall backup performance.	Fully supported
	Distributed Backup Capability	Runs backup jobs concurrently across multiple backup nodes to balance workload and improve throughput.	Requires a multi-node backup server deployment with shared/accessible storage; performance gain scales with node count and network bandwidth.
Recovery Capabilities	Point-in-Time/Instant VM Restore	Restores VMs or files to a specific backup point, including running the VM directly from backup storage for fast recovery.	Vinchin publishes an RTO as low as 15 seconds for Instant VM Restore on Proxmox VE by running the VM directly from backup storage. This is a vendor-measured figure — actual RTO depends on the customer's backup storage performance and network conditions and should be validated in a POC before quoting to a specific customer.
	Ransomware Protection/Immutable Backup	Applies WORM-based immutable backup storage so backup data cannot be modified or deleted for a configured retention period, protecting against ransomware and malicious deletion.	Requires the retention/lock period to be explicitly configured on the backup repository. Protects backup copies for the duration of that window; it does not scan for or remove ransomware on production Proxmox VE hosts or VMs.

High Availability & Replication	Real-Time Replication & High Availability	Continuously replicates a protected machine's volumes to a standby machine to reduce downtime.	Delivered as an optional "Server Replication" setting inside a Vinchin CDP job for Proxmox VE VMs — it is not a separate always-on feature. Requires the Vinchin agent installed in the guest OS and a pre-configured standby machine/target with adequate storage. Replication currency depends on the guest's data change rate and available network bandwidth.
	Disaster Recovery (DR)	Recovers protected workloads at a secondary site or node after a major incident.	For Proxmox VE, Vinchin's DR approach combines agentless offsite backup copy and cloud archive (3-2-1 architecture) with Proxmox VE's own native HA cluster feature for node-level failover. Proxmox VE's HA requires its own prerequisites (a minimum 3-node cluster, shared storage, redundant hardware, a working watchdog) — these are Proxmox VE requirements, not something Vinchin provides. Full site-level DR additionally depends on whether offsite/cloud copies, and where used, the agent-based CDP replication/failover below, have been configured in advance.
Cloud-Based Protection	Cloud-Based Replica	Sends backup copies to cloud storage as an additional protection layer.	Requires a configured, supported cloud storage target with valid credentials and sufficient egress bandwidth.
	Triple-Layer Protection	Combines local backup, offsite replication, and cloud archiving for layered disaster recovery, per Vinchin's 3-2-1 backup architecture.	Requires all three targets (local repository, offsite target, cloud target) to be configured; each carries its own prerequisites as above.
Business Continuity & Rapid Recovery	Continuous Data Protection (CDP)	Volume-level continuous capture of data changes on a protected machine, enabling recovery to a recent point in time with minimal backup window.	Requires the Vinchin agent installed on the target Proxmox VE VM. Vinchin markets the resulting RPO/ RTO as "near zero," but the actual figure depends on the volume's data change rate and available network bandwidth to the backup/standby target — treat as a configuration-dependent outcome to validate per workload, not a fixed guaranteed number.
	Automated Failover & Recovery	Automatically restarts protected workloads on a standby machine or node after a failure is detected.	Two distinct mechanisms exist: (1) Vinchin's "Automatic Failover" is an optional setting inside a CDP job that uses heartbeat monitoring to detect an unresponsive protected machine and fail over to a pre-configured standby — this requires the agent and a standby target set up in advance. (2) Node-level automatic failover within a cluster can instead be handled by Proxmox VE's own native HA manager, which is agentless from Vinchin's side but requires Proxmox VE's own HA cluster prerequisites. Neither path is automatic on a default, single-node deployment without one of these being configured.
Scalability & Deployment Flexibility	Cluster-Friendly Architecture	Scales protection across growing virtual environments through modular backup server deployment.	Fully supported
	Multi-Platform Extensibility	Supports multiple virtualization platforms and storage backends, enabling gradual expansion without re-architecting.	Fully supported

Customer Benefits



Budget-Friendly, Long-Term Data Protection

Vinchin's permanent licensing model enables long-term use with no recurring fees, making it a cost-effective choice for protecting Proxmox VE environments. By integrating backup, DR, replication, and archiving within a scalable architecture, Vinchin Backup & Recovery helps reduce both infrastructure and operational expenses.



Effortless Management and Quick Adoption

With quick deployment, an intuitive UI, and guided workflows, the platform simplifies daily backup and recovery tasks. Even non-expert operators can easily protect Proxmox VE workloads, lowering training requirements and overall administrative overhead.



Always-On Support for Peace of Mind

Vinchin provides 24/7/365 professional support, covering troubleshooting, configuration guidance, and emergency assistance for its backup and recovery software. This support is delivered by Vinchin as part of its service offering and is separate from any support available for Proxmox VE itself; customers can rely on responsive assistance from Vinchin whenever issues arise with the backup solution.



Comprehensive Backup & Recovery for Proxmox VE

The solution offers full, incremental, and differential backups, along with instant VM recovery and file-level restore, supporting rapid recovery from disruptions. Actual recovery time and recovery point results depend on factors such as system architecture, configuration, workload type, data volume, storage performance, and network conditions, as well as an organization's operational processes. When properly planned and configured, these capabilities can help organizations work toward demanding RTO/RPO targets and maintain business continuity across Proxmox VE environments.

Customer Story: NOVIPRO INC.



NOVIPRO is a North American IT solutions provider that has been guiding organizations through digital transformation since 1993, offering comprehensive technical support and helping business enhance their operations with reliable and scalable technology.

Customer Needs

As a managed IT solutions provider, NOVIPRO operates infrastructure that reflects the realities of its diverse client base, much of it now standardized on Proxmox VE, alongside an established VMware vSphere footprint acquired through years of client engagement and past deployments. This mixed-hypervisor reality created three concrete requirements:

- **A resilient, dual-site architecture.**

NOVIPRO's Proxmox VE deployment spans an 8-socket production cluster and an 8-socket disaster recovery (DR) site, requiring a backup and recovery platform that could protect and replicate workloads consistently across both locations and scale with the environment.

- **True bidirectional cross-hypervisor mobility.**

With VMware and Proxmox VE coexisting in the environment, NOVIPRO needed the ability to move virtual machines in either direction, VMware to Proxmox VE and Proxmox VE to VMware, to support ongoing platform consolidation, client migration projects, and workload rebalancing, without relying on manual conversion processes or extended downtime windows.

- **Dependable disaster recovery.**

Given NOVIPRO's role as a trusted IT partner responsible for its clients' operational continuity, any backup solution had to deliver a proven path to recovery at the DR site, not just backup completion, with minimal recovery time in the event of a production outage.

Point solutions built around a single hypervisor were not a fit: NOVIPRO needed one platform capable of protecting and migrating workloads across both environments as its infrastructure continued to evolve.

| Customer Story: NOVIPRO INC.

Vinchin's Solution

Vinchin Backup & Recovery was deployed to protect NOVIPRO's Proxmox VE clusters end-to-end:

- **Production site:**

An 8-socket Proxmox VE cluster is backed up on a scheduled basis, with incremental backups minimizing the impact on production workloads and storage consumption.

- **DR site:**

Backup data is copied/replicated to a matching 8-socket Proxmox VE cluster at the DR location, giving NOVIPRO a ready recovery target in the event the production site becomes unavailable.

- **Cross-platform migration path:**

Where workloads need to move between hypervisors, whether consolidating legacy VMware virtual machines onto Proxmox VE, or moving a workload back to VMware for a specific client requirement, Vinchin's V2V recovery is used to bring the VM up on the target platform directly from an existing backup, without a separate conversion or export/import step.

The Results

With Vinchin Backup & Recovery in place, NOVIPRO gained:

- **Unified protection across a mixed-hypervisor estate**, replacing the need for separate backup tools for VMware and Proxmox VE.
- **Reliable dual-site coverage** across its 8-socket production and 8-socket DR clusters, with a clear, tested path to recovery rather than backups that simply complete on schedule.
- **Flexibility to migrate workloads in either direction** between VMware and Proxmox VE, supporting NOVIPRO's ongoing infrastructure consolidation and its clients' individual migration timelines without downtime-heavy manual conversions.
- **Simplified operations, with backup**, DR replication, and cross-platform recovery all managed from a single Vinchin console instead of multiple disconnected tools.

Customer Story: SixManager



SixManager is a Chilean technology partner providing professional IT services, digital infrastructure, and cloud computing support, with the stated mission of guaranteeing its client's business continuity.

Customer Needs

As a managed IT services company, SixManager's business model depends on its infrastructure being available around the clock so its clients can, in turn, receive uninterrupted service. Having previously run its virtualization on oVirt (itself a migration from VMware), SixManager moved its core infrastructure to Proxmox VE, now running a 3-node cluster hosting 80+ virtual machines and roughly 20TB of client-facing data. That platform shift brought its own requirements:

- **A backup and recovery solution that could scale across all three nodes** without adding management complexity, keeping backup windows short enough to avoid impacting the performance of 80+ production VMs.
- **A smooth transition off the previous oVirt-based protection setup**, so moving to Proxmox VE didn't mean re-architecting backup and DR from a blank page.
- **Dependable disaster recovery across two sites**, so a failure at the primary location would not translate into extended service disruption for SixManager's own clients.
- **An aggressive recovery time objective, within 15 minutes**, reflecting how directly SixManager's uptime commitments to its own customers depend on how fast its own infrastructure can come back online.
- **Fast, granular recovery**, the ability to restore individual files or specific VMs quickly, rather than always performing full-VM restore, to minimize the operational impact of any single incident.
- **A manageable, low-overhead operation**, given SixManager's IT team also supports client-facing work, backup administration needed to run reliably in the background with minimal daily hands-on time.

| Customer Story: SixManager

Vinchin's Solution

- **Production site:**

A 3-node Proxmox VE cluster hosting 80+ virtual machines, totaling approximately 20TB of protected data.

- **DR site:**

Backup data is replicated across 2 DR sites, giving SixManager a redundant recovery path independent of any single location.

- **Recovery capability:**

VM-level and file-level recovery supporting a Recovery Time Objective (RTO) of within 15 minutes for critical workloads.

- **Operations:**

All backup, replication, and recovery jobs are managed from Vinchin's centralized console, with automated daily status notifications to SixManager's IT team.

The Results

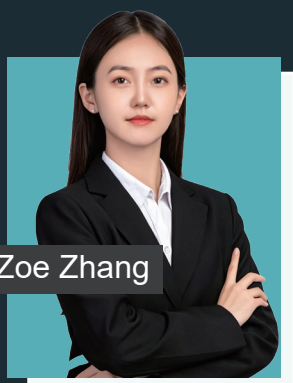
- **24/7 infrastructure availability** for SixManager's own operations, supporting the always-on service commitment the company makes to its clients.
- **Recovery within 15 minutes**, keeping incidents from turning into extended outages for SixManager's client-facing systems.
- **Resilience across 2 DR sites**, removing single-site dependency for SixManager's 80+ VM/20TB Proxmox VE environment.
- **Faster, more targeted recovery**, with file-level granular recovery removing the need to restore an entire VM for a single lost or corrupted file.
- **Reduce backup administration overhead**, freeing SixManager's IT team to spend more time on client-facing infrastructure work rather than managing backup jobs.

Summary

Proxmox VE is a widely adopted virtualization platform that integrates compute, storage, and networking resources to deliver high availability, efficient resource utilization, and scalable data-center operations. Designed for enterprise environments, it ensures reliable workload performance while simplifying IT infrastructure management.

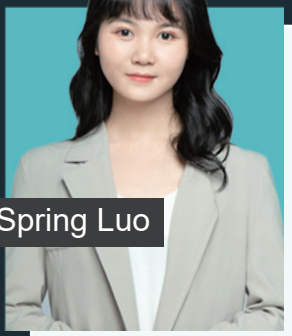
Vinchin can complement Proxmox VE with a simple, reliable, and easy-to-manage backup and disaster recovery solution in certain customer scenarios and requirements. Built for performance and security, it is designed to help protect critical workloads against data loss and downtime. With streamlined deployment, centralized management, and flexible backup strategies, Vinchin offers organizations a way to secure their virtual infrastructure, maintain operational efficiency, and control overall costs.

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

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