Case Study

TuxCare

Keeping Global Trading Systems Secure Without Breaking Uptime

How a five-person Linux team secured 10,000 critical servers – without a single mandatory reboot – and doubled their maintenance window intervals while meeting PCI DSS requirements.



Summary

A global financial services provider operating high-availability trading platforms faced growing friction between strict security compliance requirements and the operational realities of managing thousands of Linux servers.

After adopting TuxCare's KernelCare rebootless patching solution, the organization eliminated mandatory reboot cycles for patching, extended maintenance intervals, and significantly reduced the coordination overhead that had previously made continuous patching impractical at scale.

INDUSTRY
Financial Services & Trading

REGION
Global

INFRASTRUCTURE
Thousands of virtual and physical servers across multiple data centers

TEAM
5-person Linux Engineering Team

OS ENVIRONMENT
Primarily RHEL-based (AlmaLinux)

COMPLIANCE
PCI DSS + Additional Security & Audit Standards

"It's stable, support is stable and fast to react. Overall, it's a super useful thing, especially where you can't reboot constantly, and there are strong security requirements. It's a must-have."

-Linux Infrastructure Team Lead

Key Results

0
Mandatory Patching Reboots

2×
Longer Maintenance Intervals

~0
Cross-Dept. Coordination Overhead

10,000
Critical Systems Covered

The Challenge

The organization operates a global trading platform where uptime is directly tied to revenue and client trust. Even minor disruption to order execution can have immediate financial consequences.

At the same time, the company must meet strict regulatory standards, including PCI DSS, requiring timely remediation of known vulnerabilities across its infrastructure.

This created a fundamental tension.

A five-person Linux Engineering Team was responsible for maintaining thousands of systems distributed across multiple data centers. Traditional kernel patching – requiring scheduled reboots – introduced significant operational friction. Each patching cycle required extensive coordination across teams, environments, and stakeholders.

Maintenance windows were both limited and difficult to align globally. **Planning a single patching cycle could take days of effort from the team lead alone,** not including the broader coordination required across the business.

As a result, patching occurred roughly every six months – a cadence that:

- Increased exposure to known vulnerabilities
- Created operational strain even at that frequency
- Failed to meet the expectations of security and compliance teams

The process was not just inefficient – it was fundamentally unsustainable at scale.

The Solution



After evaluating multiple options, the organization selected TuxCare's KernelCare to implement a rebootless patching strategy.

Key decision factors included:

Proven reliability during testing	Consistent patch delivery without errors	Confidence in TuxCare's engineering quality compared to alternatives

KernelCare was deployed across approximately 10,000 of the organization's most critical systems.

Implementation was straightforward. The team integrated KernelCare into their existing workflows and managed deployments through the centralized ePortal interface, giving them visibility and control across all covered systems.

Support responsiveness also stood out. When assistance was required, TuxCare delivered fast, effective resolutions – reinforcing confidence in the solution.

The Results

The impact was immediate and measurable.



Elimination of mandatory patching reboots

KernelCare removed the need to schedule reboot-driven patch cycles, eliminating one of the most complex and disruptive operational processes.



Extended maintenance intervals

The time between scheduled reboots increased from roughly six months to approximately one year – and those reboots became optional maintenance events rather than security requirements.



Near-zero coordination overhead

Cross-team coordination for kernel patching was effectively eliminated, freeing the engineering team from a major recurring operational burden.



Continuous compliance coverage

The team could maintain ongoing vulnerability remediation without waiting for maintenance windows, aligning more closely with regulatory expectations.



Improved system stability

Patches are now applied continuously rather than in large batches, reducing risk accumulation on long-running systems.

For a small team managing a large global footprint, this represented a fundamental shift – from reactive, coordination-heavy patching to a continuous, scalable security model.

"These systems are critical; you can't stop them. If you stop them, only during certain maintenance windows. Those windows were practically impossible to hit because they're too short, and you'd need like 100 people to reboot everything. So those were the triggers, you could say."

-Linux Infrastructure Team Lead

About TuxCare

TuxCare secures the open-source software the world builds on. Our mission is to take the risk out of innovation by keeping open-source systems continuously protected, compliant, and running without the disruptions, headaches, or gaps that often come with conventional open-source security and support.

We provide enterprise-optimized security, compliance, and support across your organization's open-source technology stack. Our rebootless patching technology ensures systems stay up to date without disruptions or downtime. Our enterprise-ready support for community Linux distributions, including AlmaLinux and Rocky Linux, gives organizations the reliability of commercial support without the lock-in. For end-of-life operating systems, runtimes, libraries, and applications, our Endless Lifecycle Support delivers long-term security updates that keep critical workloads safe well beyond community support windows.

Learn more about
KernelCare

Certifications

OpenJS Foundation · OpenSSF · OASIS OPEN · CoSAI

Authorized CVE Numbering Authority (CNA)

Awards

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