

CLK | CIQ Linux Kernel

Upstream kernel innovation, enterprise trust. CLK runs the latest longterm Linux kernel on your stable Rocky Linux from CIQ userspace, so hardware support and security fixes arrive in days, not after a multi-year backport cycle.

Enterprise Linux made a trade that no longer pays off. To promise a decade of stability, traditional distributions freeze the kernel at a major release and hold it there, backporting a narrow set of fixes by hand. The upstream kernel does not stand still. Thousands of developers across hundreds of organizations, including the cloud providers, silicon vendors, and research institutions building today's infrastructure, ship hardware enablement, performance work, and security fixes on a continuous cadence.

By the time a frozen kernel inherits those changes through selective backports, the features land six months to three years late, if they land at all. For teams deploying current GPUs, accelerators, and confidential computing, that gap is the distance between using hardware they already paid for and waiting on it. For security and compliance teams, it means running a kernel whose unaddressed "won't backport" list grows quietly over time.



Day-one hardware support

GPUs, NICs, and accelerators work the day they ship, with no wait on a backport that may never arrive.



A proactive security model

Fixes inherited from upstream as they are published, backed by the kernel.org CVE authority.



Annual innovation cycle

A new longterm kernel every year, signed and validated by CIQ against your Rocky Linux userspace.

A community kernel with a commercial backbone

CLK is CIQ's build of the upstream kernel.org longterm release. CIQ compiles it, signs it with our own keys including Secure Boot, and validates it against the full Rocky Linux from CIQ userspace. A new version ships every year, tracking the longterm kernel the community commits to maintain, with a minimum of two years of support per version and at least one year of overlap so teams transition on their own schedule.

The userspace does not move when the kernel does. Applications, libraries, and management tooling stay on the Rocky Linux release already in production while the kernel rotates underneath them on an annual cadence. That separation is what lets an organization adopt current kernel technology without re-qualifying its entire stack.

What a yearly upstream kernel actually delivers

Four properties define CLK, each a direct consequence of building on the upstream longterm kernel rather than a years-old fork.

Predictable annual releases

A new CLK version each year, built on the latest upstream longterm kernel. Minimum two years of support per version with at least one year of overlapping support, on the **Rocky Linux 9 or 10** userspace your teams already standardize on.

Day-one hardware enablement

Immediate support for the newest CPUs, GPUs, and accelerators, plus confidential computing for **AMD SEV-SNP, Intel TDX, and NVIDIA Confidential Computing**, and ARM64 Secure Boot for Grace Hopper and Blackwell systems. No delay between buying hardware and using it.

A proactive security model

CVEs are fixed upstream first. CLK inherits those fixes as they land rather than waiting on a backport queue, with vulnerability coverage through the **kernel.org CVE Numbering Authority** and signed, validated builds across a secure supply chain.

Enterprise-grade assurance

Built and tested by CIQ's kernel engineers and fully compatible with the Rocky Linux from CIQ userspace. The upstream community's pace, with a vendor accountable for it.

An honest trade, made deliberately

A current kernel is not free of tradeoffs, and pretending otherwise serves no one. CLK unlocks real capability and asks you to plan for a few things in return. Both sides belong in the decision.

WHAT CLK GIVES YOU	WHAT TO PLAN FOR
✓ Current hardware support. Day-one drivers for GPUs, NICs, and storage, with no six-to-thirty-six-month backport wait. ✓ Upstream security velocity. Fixes as they are published, not when a backport is finally scheduled. ✓ Confidential computing. Intel TDX, AMD SEV-SNP, and CXL memory tiering that exist only in newer kernels. ✓ Cloud-native features. io_uring, eBPF advances, and the EEVDF scheduler modern workloads depend on.	— A focused support window. CLK follows the upstream longterm lifecycle of two to four years. CIQ extends it under contract when you need a longer runway. — FIPS in progress. Certification is underway. Until it lands, the RLC Kernel carries FIPS-validated workloads on the same userspace. — Maturing certifications. IHV and ISV certifications are in progress and expanding release over release. — Module rebuilds across updates. Without a frozen kABI, third-party modules may need a rebuild. CIQ signs its own kernel modules so the base stays verified.

Two kernels, one userspace, the right tool per workload

CLK is an alternative to the RLC Kernel, not a replacement for it. Both run on the same Rocky Linux from CIQ userspace under a single management plane, so the choice is per workload: the RLC Kernel where certification and maximum stability govern, CLK where current hardware and performance govern.

	RLC Kernel	CLK
Basis	CIQ-modified Rocky Linux kernel	CIQ build of upstream kernel.org longterm
Support lifecycle	54-month LTS (.2/.6); 8 years on .10	Upstream longterm, 2–4 years; extendable
FIPS certification	Certified	In progress
Hardware cadence	Backported, selective	Day-one from upstream
Best fit	RHEL-compatible and ISV-certified workloads, compliance servers	AI/ML, HPC, cloud, new accelerators, confidential computing
Available on	RLC Pro, RLC Pro AI, RLC Pro Hardened	RLC Pro AI, RLC Pro

Regulated and federal teams commonly split the fleet: the RLC Kernel where FIPS and ISV support are mandatory, CLK on the GPU and AI nodes that need current accelerators and confidential computing. One userspace, one toolchain, one support relationship.

Why the kernel is now a production decision

AI and HPC programs are moving from experimentation into production, and the kernel decides whether a new GPU is usable on day one or in quarter three, whether a confidential-computing mandate can be met, and how fast a published CVE is actually closed. For commercial enterprises that is the line between realized and stranded hardware spend. For federal and regulated buyers the same questions carry compliance weight: provenance of the build, speed of remediation, and a vendor accountable for both. The gains below are the kernel's contribution, measured on RLC Pro AI running CLK.

30–50%

higher GPU utilization from kernel-level optimization, measured on RLC Pro AI

Day one

support for the latest GPUs and AI accelerators, the moment they ship

Built in

confidential computing (Intel TDX, AMD SEV-SNP, NVIDIA CC) for regulated and classified workloads

Source: CIQ. GPU-utilization gain attributed to kernel optimizations and measured on RLC Pro AI with CLK as the kernel. Results vary by workload and hardware. Hardware enablement and confidential-computing support are properties of the kernel itself.

"Many of our customers with the most demanding workloads need the performance, hardware compatibility and security of upstream kernels. CLK delivers this with the commercial backing enterprises require."

Gregory Kurtzer, CEO, CIQ

Available now, on an annual cadence

CLK is available today as an alternative to the RLC Kernel on RLC Pro AI and RLC Pro. A new longterm version follows each year, with overlapping support so transitions happen on your timeline rather than the kernel's.

Put CLK in front of your hardware

See current-kernel performance and confidential computing on the Rocky Linux from CIQ userspace you already run. CIQ's kernel engineers will help you scope where CLK and the RLC Kernel each fit across your fleet.

 ciq.com/products/rocky-linux/pro/ai

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CLK follows the upstream kernel.org longterm lifecycle; support windows vary by version and are subject to change. FIPS and IHV/ISV certifications for CLK are in progress and were not available at publication. All CLK enhancements are open sourced and contributed upstream.