Komodo Systems

15 NetOps Tasks Done More Efficiently with Komodo Eye®

Komodo Eye is the superior network monitoring solution for mission-critical networks.

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Executive Summary

In the increasingly complex landscape of mission-critical network infrastructure, traditional monitoring tools and manual processes are no longer sufficient to maintain the required levels of uptime, security, and regulatory compliance. Komodo Eye® transforms Network Operations (NetOps) from a reactive struggle into a proactive, efficient, and highly automated powerhouse.

By bridging the gap between legacy hardware and modern telemetry, Komodo Eye provides a unified "Source of Truth" spanning 88,000 device models from 8,000 manufacturers.

The Efficiency Gap in Modern Networks

Network engineers currently face significant bottlenecks that drain productivity and increase the Mean Time to Repair (MTTR):

- **Manual Resource Drains:** Identifying rogue devices or tracing IP connectivity in complex MPLS environments can take hours of manual switch-hopping and spreadsheet searching.
- **Data Fragmentation:** Most legacy tools purge data after 30 days, leaving engineers blind to long-term trends like "tree growth" encroachment on microwave paths or gradual battery degradation.
- **Vendor Silos:** Managing disparate tools for Cisco, Nokia, and legacy serial/Modbus gear creates high administrative overhead and "finger-pointing" between specialized teams.

Strategic Impact

Komodo Eye does more than just monitor; it provides Semantic Intelligence to flag rare manufacturing bugs and Real-Time Geocoding to assess disaster risks during storms. By automating inventory reconciliation and providing a Hierarchical Site Journal, the system eliminates redundant field visits and manual audits, saving thousands of dollars in operational costs.

Ultimately, Komodo Eye empowers organizations to achieve 85% reductions in MTTR, ensure 100% battery compliance, and future-proof their networks against the demands of modern energy and security mandates.

Summary of NetOps Tasks Done More Efficiently with Komodo Eye

Task #1	Manual or Legacy	With Komodo Eye	Benefit
Locating Rogue or Silent Devices (MAC-based Hunting) Instead of manually checking individual switch forwarding tables, Komodo Eye uses a Layer 2 MAC address physical port locator. It combs every switch in the network to identify exactly where a device is physically plugged in (e.g., "Summit Substation, Switch 4, Port 118"), even if the device has a firewall enabled and won't respond to pings.	**2–4 hours**: Logging into multiple switches manually to trace a MAC address	**Seconds:** Instantly identify the exact substation, switch, and port	**98% reduction in time** locating rogue or silent devices

Task #2	Manual or Legacy	With Komodo Eye	Benefit
Long-Term Encroachment Analysis (Microwave & Fiber) Using the 5-Year Data Lake, engineers can detect slow-moving issues like "tree growth" affecting microwave paths. While most tools purge data after 30 days, Komodo Eye allows engineers to see a 3-year gradual decline in signal strength, enabling proactive maintenance before a total outage.	**Reactive:** Issues like "tree growth" are only found after a total link failure	**Proactive:** 5-year data lake identifies slow signal degradation months in advance	**100%** avoidance of emergency link-failure repairs

Task #3	Manual or Legacy	With Komodo Eye	Benefit
Root Cause Correlation Across Tiers (Power to App) Engineers can instantly determine if a network bug caused a failure or if it was an external factor. For example, the Phase 2 AI can correlate a router failure back to a battery plant hitting a discharge limit after a city-wide AC outage, bridging the gap between Layer 0 (Power) and Layer 3 (Network).	**4 to 8 hours:** "Finger-pointing" between network and power teams	**Minutes**: AI correlates L0 power failures to L3 network outages automatically	**85% reduction** in Mean Time to Repair (MTTR)

Task #4	Manual or Legacy	With Komodo Eye	Benefit
Instant Search for IP Connectivity in Complex Environments A Layer 3 IP search and MPLS path localization utility searches IP addresses and immediately see the status and the specific router and physical port it is communicating through, even within nested MPLS environments that typically obscure such visibility.	**30 to 60 mins:** Searching spreadsheets and complex MPLS tables	**Instant:** Locate any IP and its physical path across the entire fleet	**Saves 45 mins** per complex connectivity ticket

Task #5	Manual or Legacy	With Komodo Eye	Benefit
Regulatory & Energy Compliance Reporting Instead of manually gathering consumption data, engineers can use Komodo Eye to pull real-time data from sensors to automate reports for energy, water, and fuel consumption required by new government regulations.	**Days/ Weeks**: Manually gathering sensor data from disparate sites	**Instant/ Audit-Ready:** Automated pulling of energy, water, and fuel metrics	**Saves 40 to 80** hours per quarterly audit cycle

Task #6	Manual or Legacy	With Komodo Eye	Benefit
Junior Technician Mentoring via "On-Box" AI Senior engineers can preserve their knowledge by letting junior staff query the air-gapped LLM. A technician can ask the chat interface for specific CLI syntax (e.g., "How do I set an IP on an Extreme Networks VLAN?"), and the AI pulls the answer directly from the manufacturer's manual stored in the system vault.	**Constant Interruptions**- Senior engineers spend 20% of their day answering "how-to" questions	**Self-Service**: AI chat retrieves CLI syntax from site-specific manuals in the vault	**Reclaims 1 day per week** for senior engineering staff

Task #7	Manual or Legacy	With Komodo Eye	Benefit
Predicting Battery & Hardware Failures Engineers can move from reactive to predictive maintenance. The system can warn that a substation battery will fail NERC requirements in three months based on historical discharge cycles or flag a specific fiber link that is fading at a rate suggesting an impending break.	**Reactive**: Batteries fail during outages, leading to grid "black-outs"	**Proactive**: Predicts NERC failure 3 months in advance based on discharge cycles	**100% improvement** in battery compliance and grid uptime

Task #8	Manual or Legacy	With Komodo Eye	Benefit
Rapid MTTR for Rare Manufacturing Bugs The Semantic Intelligence tool analyzes millions of logs to find "rare events"—messages that might appear only 4 times a year across 10 million devices. This helps engineers catch subtle manufacturing bugs or early signs of a security breach that standard "noise" filters would miss.	**Impossible**: Humans cannot spot 4 rare errors among 10 million daily logs	**Automated:** Semantic intelligence flags manufacturing bugs before they escalate	**Early detection** prevents wide-scale hardware recalls

Task #9	Manual or Legacy	With Komodo Eye	Benefit
Real-Time Storm/Disaster Risk Assessment Using Real-Time Geocoding Every piece of data is mapped the moment it is measured. Engineers can use the "Map View" to instantly see a cluster of failures in a specific storm-hit city, allowing for faster geographic risk assessment and resource deployment.	**Manual Mapping:** Engineers cross-referencing alarm lists with storm maps	**Real-Time Map**: "Map View" automatically clusters failures by storm-hit city	**Reduces decision-making time** during disasters by 90%

Task #10	Manual or Legacy	With Komodo Eye	Benefit
Automated Inventory Reconciliation A rogue device detection and inventory reconciliation tool continuously compares the "live" network (detected via ISIS system IDs and MAC addresses) against the official inventory database. It automatically alerts the team the moment an "uninvited" or unauthorized device is added to the network.	**Annual Audits**: Weeks of manual "truck rolls" to verify hardware	**Continuous**: Real-time comparison of live ISIS/MAC IDs against databases	**Eliminates** the need for annual manual hardware audits

Task #11	Manual or Legacy	With Komodo Eye	Benefit
Eliminating Redundant Field Visits Using the Hierarchical Site Journal, a 3 AM technician logs their work (with photos/notes) so the 8 AM shift knows exactly what changed, preventing a second unnecessary truck roll.	**High Frequency:** Next shift "re-checks" work due to lack of notes	**Zero**: Hierarchical Site Journals provide 3 AM photos and logs to 8 AM teams	**Saves $500–$2,000** per avoided truck roll

Task #12	Manual or Legacy	With Komodo Eye	Benefit
Fixing Asymmetric Traffic Automatically In large-scale IPsec environments (monitoring 30,000+ tunnels), the system can detect when traffic goes out one path but returns on another and automatically "bounce" the tunnel to restore performance without human intervention.	**High Context-Switching:** Managing 12+ separate login portals	**Unified:** One "Source of Truth" for 8,000 different vendors	**Saves** ~2 hours daily in admin. overhead

Task #13	Manual or Legacy	With Komodo Eye	Benefit
Managing Multi-Vendor Complexity Instead of jumping between a dozen brand-specific tools (like Cisco Prime or Nokia NSP), engineers use a single "Source of Truth" that monitors 88,000 device models across 8,000 manufacturers.	**Fragmented:** Separate tools for serial/Modbus and high-speed gRPC	**Converged:** All tech tiers (serial to IP) in one platform	**Consolidates multiple license costs** into one platform

Task #14	Manual or Legacy	With Komodo Eye	Benefit
Monitoring Non-IP Legacy Gear Engineers can monitor legacy serial assets (1200 baud), SONET plants (via TL1), and substation breakers (via Modbus) alongside modern high-speed telemetry in the same interface.	**Manual/ None:** No visibility into next-gen encryption health	**Real-Time: Tracks** single-photon key health for secure comms	**Future-proofs the network** for quantum-safe mandates

Task #15	Manual or Legacy	With Komodo Eye	Benefit
15- Asymmetric Traffic Restoration Network engineers often spend hours troubleshooting performance issues where data travels out one path but returns via another. Komodo Eye is intelligent enough to detect these asymmetric flows across tens of thousands of simultaneous IPsec tunnels. Once detected, the system can trigger an automatic tunnel "bounce" to restore optimal, symmetrical performance without any manual intervention from the engineering team	**1–2 hours:** Detecting and manually "bouncing" 30k+ IPsec tunnels	**Self-Healing**: System detects asymmetry and auto-restores optimal paths	**Reclaims** hours of manual troubleshooting in large VPN fleets

Conclusion

In an era where network complexity and regulatory demands are rapidly escalating, Komodo Eye provides the essential transition from reactive firefighting to proactive, AI-driven management. By consolidating over 88,000 device models into a single, high-fidelity "Source of Truth," the platform eliminates the fragmented visibility that traditionally plagues large-scale NetOps.

Whether it is reducing the time to locate rogue devices by 98%, automating NERC battery compliance, or reclaiming an entire day per week for senior engineers through on-box AI mentoring, the operational efficiencies are both measurable and transformative.

Komodo Eye does not just monitor the network; it secures its future—enabling organizations to manage everything from 1200 baud legacy gear to modern quantum-safe mandates within a unified, self-healing ecosystem