Ensuring Mission-Critical Uptime for Red Leaf's Clean Energy Innovation

CLIENT: Red Leaf – Developer of zero-emission shale oil extraction (HCCO process), rare earth element recovery, and infrastructure planning.

REDLEAF
RESOURCES, INC.

INDUSTRY: Clean Energy & Oil Shale Technology

Technology Partner

Protek – IT solutions provider specializing in high-availability systems, secure IT infrastructure, and resilience planning. With deep expertise in cybersecurity and infrastructure design, Protek delivers isolated environments, redundant systems, and robust failover mechanisms to ensure operational continuity and data protection. Their solutions are tailored for mission-critical applications, especially in industries like clean energy where uptime and safety are non-negotiable.

Red Leaf is at the forefront of sustainable energy innovation, pioneering the HCCO process for zero-emission shale oil extraction and rare earth element recovery. During a critical phase of live testing, Red Leaf's operations were disrupted by server failures and system interruptions, threatening the integrity and safety of their testing environment. Maintaining 100% uptime was not just a performance goal—it was a safety imperative.

Challenge:

- Unstable server environment during active oil shale testing.
- Frequent interruptions jeopardizing data integrity and operational safety.
- Need for isolated, redundant infrastructure to support continuous testing and monitoring.

Protek's Solution

Protek was brought in to stabilize and secure Red Leaf's IT environment.
Their approach included:

- Server Replacement: Replaced outdated and unreliable servers with high-performance, fault-tolerant systems.
- Isolated Environment Setup: Created a dedicated, isolated network to prevent external interference and ensure secure data flow.
- Redundancy & Failover Systems: Implemented redundant systems and automated failover protocols to guarantee uninterrupted operations.
- Monitoring & Support: Provided real-time monitoring and 24/7 support to ensure rapid response to any anomalies.

The Results:

- Achieved 100% uptime during critical testing phases.

- Eliminated server-related interruptions, ensuring safe and accurate data collection.

- Enhanced operational confidence for Red Leaf's engineering and safety teams.

- Strengthened partnership between Red Leaf and Protek for future infrastructure planning.

Impact

This collaboration enabled Red Leaf to continue its groundbreaking work in clean energy without compromise. Protek's infrastructure support ensured that Red Leaf's testing environment remained stable, secure, and fully operational—laying the foundation for future scalability and innovation.

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Reach Out Today