Red Hat Enterprise Linux (RHEL) Risk & Optimization Report

Client: [Sample Client] | **Date:** January 15, 2026 | **Generated by:** NEO

CRITICAL INFRASTRUCTURE

42

End of Maintenance Support

Servers operating on legacy RHEL versions (8 RHEL 6 + 34 RHEL 7) requiring immediate Extended Life Cycle Support (ELS).

UNMANAGED DISTRIBUTIONS

15

Non-RHEL Estate

Workloads running on community-supported OS versions (Ubuntu, CentOS) lacking standard enterprise SLAs.

VALIDATION REQUIRED

215

Unreconciled Instances

Workloads where OS install date predates confirmed subscription start. Requires reconciliation to rule out gap in coverage.

POTENTIAL LIABILITY

$385,400

Estimated Historical Exposure

Projected cost if historical "High Water Marks" (2022-2025) were not covered by valid subscriptions at that time.

HARDWARE WASTE

8

Low Density Hypervisors

Physical hosts running fewer than 3 VMs. Prime candidates for consolidation to reduce physical hardware costs.

VIRTUALIZATION RATIO

2.8

Average Density

Current consolidation ratio is significantly below industry standards (10:1), indicating underutilized hardware.

1. LIFECYCLE RISKS (THE "RED LIST")

HOSTNAME	OS VERSION	STATUS	RISK LEVEL
srv-legacy-app-01	RHEL 6	END OF LIFE	Critical
db-oracle-old	RHEL 6	END OF LIFE	Critical
mail-gateway-04	RHEL 6	END OF LIFE	Critical
srv-file-archive	RHEL 6	END OF LIFE	Critical
srv-web-int-02	RHEL 6	END OF LIFE	Critical
(34 Additional Hosts)	RHEL 7	MAINTENANCE SUPPORT	High

SECURITY IMPLICATIONS

Eight specific instances are currently running RHEL 6, which has passed its End of Life (EOL) date. These systems are no longer receiving standard security patches, making them vulnerable entry points for cyber threats. Additionally, 34 instances are on RHEL 7, which requires immediate attention to ensure continued support coverage.

STRATEGIC RECOMMENDATION

- **IMMEDIATE ACTION:**
  Isolate RHEL 6 hosts from the public network immediately.
- **PROCUREMENT:**
  Purchase Extended Life Cycle Support (ELS) for the 34 RHEL 7 instances to cover the migration window.
- **MIGRATION:**
  Prioritize the "Red List" servers above for immediate in-place upgrade or migration to RHEL 9.

2. OS STANDARDIZATION (THE MIGRATION PATH)

HOSTNAME	DETECTED OS	MIGRATION PATH
app-shadow-dev-01	CentOS	Convert2RHEL
app-shadow-dev-02	CentOS	Convert2RHEL
srv-util-05	CentOS	Convert2RHEL
(12 Additional Hosts)	Ubuntu	Re-platform

OPERATIONAL OVERHEAD ANALYSIS

Managing mixed distributions (CentOS, Ubuntu) alongside RHEL creates "Shadow IT" pockets that lack enterprise SLAs. This increases operational overhead as administrators must maintain multiple patch cycles, security baselines, and toolchains. The CentOS instances represent a direct opportunity for standardization.

STRATEGIC RECOMMENDATION

- **PILOT PROGRAM:**
  Initiate a "Convert2RHEL" pilot for the identified CentOS servers in the `app-shadow` cluster.
- **STANDARDIZATION:**
  Enforce a policy to block new deployments of non-standard OS versions to prevent further drift.

3. INFRASTRUCTURE EFFICIENCY (HARDWARE WASTE)

PHYSICAL HOSTNAME	VM DENSITY RATIO	EFFICIENCY STATUS
hypervisor-04	1.2	INEFFICIENT
esxi-host-09	2.0	INEFFICIENT
hypervisor-02	1.0	INEFFICIENT
srv-phys-01	1.0	INEFFICIENT
esxi-host-03	1.0	INEFFICIENT
(3 Additional Hosts)	1.0	INEFFICIENT

LOW DENSITY ANALYSIS

A "Low Density Host" is defined as a physical hypervisor running fewer than 3 Virtual Machines. Currently, 8 hosts fall into this category, with many running only a single VM. Paying per-socket software licensing costs for hardware that is barely utilized is financially inefficient and inflates the total cost of ownership.

STRATEGIC RECOMMENDATION

- **CONSOLIDATION:**

  Target the hosts listed above for immediate decommissioning. Move their workloads to the higher density clusters.

- **LICENSING OPTIMIZATION:**

  By consolidating these VMs, we can retire the physical socket licenses associated with these 8 hosts, significantly reducing renewal costs.

4. COMPLIANCE & FINANCIALS (HISTORICAL ANALYSIS)

Requirement High Water Marks (By Year)

The table below isolates the "Peak" subscription requirement for each year. To avoid backdating liability, Global Logistics Corp must verify that valid subscriptions were held to cover these peaks during the specific timeframes.

YEAR	VDC REQUIREMENT (MAX SOCKETS NEEDED)	INSTANCE REQUIREMENT (MAX VMS NEEDED)	TREND ANALYSIS
2020	8	15	**INITIAL DEPLOYMENT**
2021	10	35	**STEADY GROWTH**
2022	10	42	**STABLE**
2023	12	**55**	**RAPID EXPANSION** (M&A Activity)
2024	15	58	**STABLE**
2025	22	70	**INCREASED DEMAND**
2026 (Jan)	**28**	**115**	**CRITICAL SPIKE** (Unverified Usage)

FINANCIAL INTERPRETATION

The "Potential Liability" of $385,400 is an investigative figure derived from the peaks listed above. For example, in 2023, the environment required 55 Instance subscriptions. If the company only owned 25 subscriptions during 2023, the difference (30) would be subject to backdating fees.

IMMEDIATE ALERT:

The data for January 2026 shows a massive spike to **115 INSTANCE REQUIREMENTS**. This suggests a new environment has been discovered or a major deployment has just occurred.

COMPLIANCE ROADMAP

- **STEP 1 (HISTORICAL):**
  Locate entitlement records (invoices/contracts) for 2023 through 2025. Map the quantity owned against the "High Water Marks" in the table above.
- **STEP 2 (CURRENT):**
  Immediately investigate the January 2026 spike (115 Instances). Ensure current procurement plans account for this new volume to remain compliant for the current year.
- **STEP 3 (RECONCILIATION):**
  Provide proof of historical ownership to the vendor to negate the estimated backdating costs.