

A licensing change turned the Java runtime under mission-critical federal applications into a financial exposure — retired by migrating the entire estate from Oracle JDK to OpenJDK across every environment, with no disruption to always-on public services.

A risk-driven enterprise migration: move always-on government applications off commercially licensed Oracle JDK onto OpenJDK across DEV, STE, STG, and PROD — phased, tested, and governed so the licensing liability disappeared without a single service interruption.

<p>CLIENT</p> <p>A federal department (anonymized)</p>	<p>ROLE</p> <p>Senior Project / Technical Lead — release planning and enterprise migration</p>	<p>ENGAGEMENT MODEL</p> <p>One accountable lead directing migration with the federal shared-services IT provider</p>
<p>DURATION</p> <p>Delivered within the federal eServices modernization portfolio</p>	<p>SCOPE / PLATFORMS</p> <p>Oracle JDK → OpenJDK (Red Hat) · DEV, STE, STG, PROD · mission-critical applications</p>	<p>PROGRAM SCALE</p> <p>Enterprise-wide runtime migration · four controlled environments · always-on services</p>

01 The mandate

Mission-critical federal applications ran on commercially licensed Oracle JDK across every environment. A change in Java licensing turned that runtime into an ongoing financial and compliance exposure — the software still worked, but the basis on which it was licensed no longer made sense to carry. The mandate was to remove the exposure by migrating the entire estate to OpenJDK without disrupting services that cannot go down.

The difficulty was not the swap itself but doing it under always-on conditions: runtime and library compatibility had to be proven across a portfolio of legacy applications, regression risk contained, and cutover phased across four controlled environments and a shared-services partner — all before a licensing deadline, with zero tolerance for an outage to live federal services.

02 The delivery context

A licensing problem with an availability constraint

The driver was commercial — eliminate Oracle JDK licensing liability — but the constraint was operational: the applications are always-on, so the migration could not borrow downtime to de-risk itself. Every environment had to be moved while service continued, which made disciplined sequencing and compatibility proof the core of the work rather than the runtime change itself.

Compatibility proven across a legacy portfolio

Mission-critical applications of differing ages and dependencies all had to run correctly on the new runtime. Runtime and library compatibility and regression coverage had to be established application by application, across DEV, STE, STG, and PROD, with the federal shared-services IT provider, so that no application reached production on an unverified runtime.

03 How the engagement was run

End-to-end release planning, phased cutover

The migration was planned and sequenced across DEV, STE, STG, and PROD so each application was validated before promotion and cut over in controlled phases. Risk and change were managed so the estate moved to OpenJDK incrementally — never a big-bang switch on always-on services — with the shared-services provider aligned to the same plan.

Risk, testing, and compatibility held tightly

Compatibility testing and regression coverage gated every promotion; risks were registered and mitigated before cutover rather than discovered in production. The licensing deadline set the schedule, but verified compatibility — not the calendar — gated each application's move.

Governed and audit-documented throughout

The migration carried full governance and audit documentation across every environment, so the change to a mission-critical runtime was traceable and defensible — the same governance discipline applied to a back-end runtime swap as to a citizen-facing release.

04 Outcome

Mission-critical federal applications were migrated from commercially licensed Oracle JDK to OpenJDK across DEV, STE, STG, and PROD, eliminating the Oracle JDK licensing exposure and improving performance on the affected applications — delivered with full governance and audit documentation and without disruption to always-on services. Department, application, and commercial specifics are withheld; the directional result is a licensing liability retired and an enterprise runtime modernized under continuous availability.

MIGRATED ACROSS THE ESTATE	RESULT
Runtime change	Oracle JDK → OpenJDK (Red Hat)
Environments cut over	DEV · STE · STG · PROD
Applications	Mission-critical, always-on portfolio
Licensing exposure	Eliminated
Service impact	No disruption to always-on services

OUTCOME POSTURE

Oracle JDK licensing exposure retired across a mission-critical federal estate — phased to OpenJDK with no service interruption.

A risk-driven enterprise migration delivered under always-on conditions, gated on verified compatibility and carried with full governance and audit documentation.

05 What this demonstrates

Risk-driven enterprise migration.

Removed a software-licensing liability on a mission-critical estate by migrating the runtime across every environment under a deadline.

OFFERED TODAY AS: PROGRAM LEADERSHIP

Change under always-on conditions.

Phased the cutover across DEV, STE, STG, and PROD so live federal services were never disrupted.

OFFERED TODAY AS: GO-LIVE READINESS LEADERSHIP

Compatibility and regression discipline.

Gated every promotion on proven runtime and library compatibility across a portfolio of legacy applications with the shared-services provider.

OFFERED TODAY AS: DELIVERY ASSURANCE

Governed, audit-ready delivery.

Carried full governance and audit documentation on a back-end runtime change, keeping it traceable and defensible.

OFFERED TODAY AS: PMO LEADERSHIP

SOURCE ARTIFACTS AND DISCLOSURE

Anonymized for the public-sector nature of the engagement: the department, the specific applications, and commercial figures are withheld. Technology names are the practice's own delivery stack, not client identifiers. Drawn from the engagement as recorded in the practice's delivery documentation.

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