

Azul dials up high-performance Java platform capabilities

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Introduction

Azul is dialing up high-performance Java platform capabilities in its Platform Prime offering, seeking to win over high-spending cloud infrastructure customers that require faster and more predictable execution, greater consistency, and improved resource efficiency.

The Take

The Java platform has been a fixture in enterprise computing for almost 30 years (its first public release was in 1995) and it remains one of the most widely deployed programming languages, especially for mission-critical applications. The broad-based OpenJDK developer community has helped the platform adapt to fast-changing IT conditions; however, it is primarily Azul that has been focused on enhanced performance, with so-called high-performance Java platforms — enhanced JDKs — needed to meet the demands of enterprises challenged to deliver increased expectations for Java application performance and customer experience. Enterprises typically over-allocate compute resources in the cloud and on-premises environments as they seek to increase application performance and responsiveness, as well as improve stability and availability. Azul notes such cloud cost overruns are especially acute in high-performance sectors like trading, payments, fraud, SaaS, retail/e-commerce, gaming and advertising technology. High-performance Java platforms specifically deliver faster and more predictable execution, greater consistency, and improved resource efficiency to address these challenges.

Products

Azul Platform Core

Lowering the Oracle Java licensing cost remains the foundation of Azul's business — it says the OSS Azul Platform Core offering is typically 70% less expensive than Oracle Java SE and generates a significant amount of its revenue. It includes Azul Zulu Builds of OpenJDK, the company's Oracle JDK replacement. Azul says concerns surrounding Oracle Corp.'s Java pricing and licensing regime continue to create market opportunities. It believes Oracle's licensing and employee-based pricing

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model leave customers facing increasing bills, given the way it counts license users. Moreover, lack of support for older versions like Java 6 and 7 leave customers with increased compliance, security and vulnerability risks. Azul says that, among companies it surveyed, 75% of organizations completed migrations to OpenJDK with 12 months, and 23% within three months. Those seeking to migrate from Oracle Java are doing so first and foremost due to cost.

Azul Platform Prime — a high-performance Java platform

Azul Platform Prime for optimizing cloud costs (reducing/containing public, on-premises and hybrid cloud spending by over 20%) and improving application efficiency, resiliency and performance (improving throughput by up to 2x and code speed by 20% to 50%) is experiencing substantial growth. The company says that Prime, its high-performance Java platform, outperforms other OpenJDK distributions by an average of 37%. Azul takes advantage of Java's prowess in handling transactions and business logic at the runtime layer, where it has built a fast compiler — Falcon JIT — into Azul Zing JVM, its enhanced build of OpenJDK, to manage the most demanding workloads. It also has a C4 pause-less garbage collector and ReadyNow Warm-up acceleration for newly added instances. It is designed to provide immediate performance gains versus other OpenJDK distributions with no code changes or recompilation required. Customers can use Prime to eliminate cloud compute waste by reducing pod counts for workloads (and therefore cloud infrastructure costs).

The company also introduced its Java Performance Engineering Lab for Prime, which collaborates with global Java developers and customers' technical teams to deliver enhanced Java performance through continuous benchmarking, code modernization recommendations and in-depth analysis of performance impacts from new OpenJDK releases. Recent Prime customer achievements include Travelport Worldwide, which reduced a query application's response time by 80%, lowered its error rate, and eliminated slower and stalled transactions. Azul says Workday improved its SaaS operational efficiency by 95%, eliminating over 42,000 person hours across an 18-month period. Jagex eliminated ticks over 600 ms, erasing pauses that a gamer can detect while playing, improving the platform's gaming performance by 20%.

Azul Intelligence Cloud

The newest portfolio addition is the SaaS Azul Intelligence Cloud analytics offering, which is designed to save time and increase the productivity of DevOps teams — on any JVM — by surfacing actionable intelligence from production Java runtime data. Its pinpoints what code is actually in use to provide unused code visibility and detection of vulnerable code. Intelligence Cloud includes Azul Vulnerability Detection to eliminate false positives by identifying and prioritizing known security vulnerabilities, while Code Inventory helps identify unused and dead code by detailing what custom and third-party code is actually run. It provides continuous detection for Java applications in production, enabling DevOps teams to triage new vulnerabilities during events such as Log4j. Azul notes that development teams have often added features but not retired old code, making maintenance more difficult and increasing the risk of unexpected behavior or exposure to vulnerabilities — for example, as a result of M&A.

Java and AI

While Java is currently somewhat behind the game when it comes to use for AI programming — where Python leads among languages — Azul expects Java will catch up in time. It believes addressing improved programmer ease of use and library integration will recover ground, and Java's advantages such as scalability and performance will come into play. Azul says the core focus of Java development has been on the Java 21, Java 22 and Java 23 releases, and that it continues to be an order of magnitude faster than Python. Moreover, the company believes big AI jobs will always be customized in any case. Azul says it currently employs AI internally to curate its

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own knowledge base of Java-specific CVEs and anticipates that as AI, including large language models, begins to be deployed in Java frameworks, it will have a role to play.

Business model

More than four years after landing a \$340 million private equity infusion, Azul says that in its last half year, channel sales accounted for 30% of its business driven by Azul Platform Core — it wants this to rise to 50%. It has more than 100 PartnerConnect partners. Azul Platform Prime is mostly a direct sale, whereas Azul Intelligence Cloud is expected to perform well as a channel play, helping with code modernization and maintenance. Most new customers are rotating off of Oracle Java SE or other non-Oracle JDK distributions.

The vendor offers an Azul migration methodology guide for these customers and migration services certification for partners. Its products are now available on AWS and Google Cloud marketplaces, enabling customers to leverage their committed cloud spending, consolidate software costs and simplify procurement. Azul builds over 2,000 binaries per quarter, including equivalent versions for every version of Java that Oracle releases (both Oracle JDK and Azul Platform Core are based on OpenJDK), and supports a wide range of older Java versions.

Competition

Azul both competes and cooperates with Oracle — some of its large cloud- and software-provider customers feel more comfortable dealing with an independent company than directly with Oracle. Oracle's Java SE Universal Subscription charges per employee (including temps and contractors) rather than by Java instance. Many other distributions of OpenJDK are available, including versions from Alibaba Group Holding Ltd., Amazon.com Inc., BellSoft, IBM Corp., Red Hat, Microsoft Corp., SAP SE and Tencent Holdings Inc., many of them at no extra cost for users of the vendors' programs/platforms.

SWOT Analysis

Strengths	Weaknesses
Azul has recognized the need for more performant Java applications and tools to support cloud infrastructure customers struggling with performance, over-provisioning and increased costs. It has migrated hundreds of enterprises off of Oracle successfully with Azul Platform Core, and has expertise as an innovator and leader in the OpenJDK ecosystem.	Azul's key challenge is to demonstrate that the alternative and high-performance Java opportunity is translating into growth — and revenue for its PE owners. More generally, there is still work to do to in the community to ensure that Java can compete for the opportunity AI is presenting, which is currently mostly being landed on Python.
Opportunities	Threats
Azul's focus on Java's large enterprise user base, long-term incumbency in high-profile applications and platform independence remain advantages. It has begun to position its Intelligence Cloud analytics SaaS as a tool to increase DevOps productivity. Azul is increasing its delivery of high-performance Java platform features to help lower cloud compute costs, and continues to target Oracle Java migrations with Azul Platform Core.	Hyperscale cloud suppliers, ISVs and software providers (e.g., Oracle, Amazon, Microsoft, Red Hat) are targeting the same opportunity as Azul, in many cases providing JVM distros at no extra cost to customers of their underlying products, although they support a limited set of Java versions (even Oracle does not support Java 6 and 7, which are still commonly in use), do not provide security-only updates and have narrower performance capabilities.

Source: 451 Research.