Azul Java Platform Delivers Solutions for NFV and SDN

Deploy NFV/SDN solutions on the Zing JVM to deliver superior throughput and consistent performance.

NFV and SDN go mainstream

Software Defined Network (SDN) and Network Functions Virtualization (NFV) provide the potential for both enhancing service delivery and reducing overall costs. Control layer, virtual network functions, and core business applications are critical for many operators who have standardized on Java and other JVM-based languages.

Using standard virtualization technologies that run on common off the shelf hardware or the Cloud, NFV and SDN solutions make it easier to deploy network services to meet shifting needs, as well as reduce the total cost of ownership of the infrastructure. But for service providers to reap the full benefits of fully virtualized infrastructure, they need a platform they can rely on to deliver the performance and consistency their customers have come to expect from them as they extend and roll out new services.

As Java provides portability across various platforms, many NFV/SDN applications and technology components are written in Java. Java provides lots of advantages for equipment and service providers -- but Java can be the cause of performance issues. Sometimes extensive Java Virtual Machine (JVM) tuning can help the system reach acceptable performance, and sometimes even that isn't enough.

Infrastructure Elasticity & Agility

The benefits of NFV/SDN include the ability to grow and shrink resources available to an application based on demand and to launch standardized virtual machines for rapid scale-out.

Conventional JVMs rigidly limit resource usage and can suffer 'out of memory' or other runtime errors if load increases too quickly. Essential services running in Cloud or virtualized environments need a Java runtime that can keep up with the allocation rates supported by modern servers without application-level stalls, pauses or jitter.

Zing removes barriers to deploying NFV/SDN services based on Java

Zing is the only commercial JVM that provides the resource elasticity and high utilization efficiency needed in NFV/SDN deployments. It is a highly innovative Java development and runtime platform that ensures predictable operation even when demand spikes.

Zing complies with the Java SE specification, is easy to deploy and requires no code changes to your application. With Zing, NFV/SDN deployments and services enjoy resource elasticity and consistently fast response times.

Zing is differentiated from legacy Java runtimes through three separate technologies. The C4 collector replaces the parallel, CMS or G1 collectors with memory management technology that enables truly pauseless operation for all Java workloads. Zing's Falcon compiler leverages LLVM technology to deliver higher levels of optimization and support for new server processors, without requiring re-compilation. Finally, Zing's ReadyNow! technology solves Java's warm-up problem -- Zing starts up fast and stays fast.

BENEFITS OF ZING FOR NFV/SDN DEPLOYMENTS

- Flexible resource allocation enables NFV/SDN flexibility
- Eliminate operational issues caused by Java GC pauses and other legacy JVM artifacts
- Deliver stable and consistent response times under load without constant tuning
- Proven scalability and performance proven success in public, private and hybrid Clouds
- Ease of management simplified instance deployment
- Speed time to market with minimal tuning needs and deliver predictable Java performance
- Utilize cost-effective x86 commodity hardware or choose your preferred Cloud

Zing: The Best JVM for NFV/SDN Deployments

Zing allows your Java apps to take advantage of NFV/SDN flexibility and efficiencies. Your applications will run better – with more consistent performance, improved scalability and increased reliability. With Zing, you can deploy and offer NFV/SDN services with confidence.

Use Case | Delivering on Service Level Agreements

Service providers can deploy Zing to run Java-based SDN and NFV services to achieve end-customer-specified Service Level Agreements (SLAs). Running on Zing, low latency JVM, SDN control layer and NFV services deliver consistent performance that is superior to that of legacy JVMs. Service Providers can monitor and enforce the performance and service level objectives in NFV deployment. Service providers can use Zing to deploy and orchestrate SDN control layer and virtualized network functions (VNFs) and increase the overall agility, level of automation and efficiency of their network -- and with substantially lower cost.

Use Case | Enabling critical network functions on-demand

Equipment and service providers can use Zing to power Java-based NFV/SDN services to scale network functions to meet the changing demands of customers. Zing can be deployed in any Linux/X86-64 server configuration. forming the core of a flexible and scalable platform. As a result, service providers and internal network operations teams can offer their customers highly customized, differentiated services with minimal capital expenditures.

Use Case | Orchestrating virtualized network services

Azul Zing enable service providers to simplify integration and management of network service functions across multiple technology domains with Java-based NFV/SDN controllers. The solution allows service providers to implement and support network functions based on multiple platforms with minimal impact, and automate virtualized network services using best of the breed components.

Use Case | Increasing Service Density

With Zing's capability to handle a wide range of Java-based infrastructure software like Cassandra, Kafka, Elastic and Netty, service providers can meet their SLA requirements using fewer Cloud instances, allowing them to maximize services on a per-tenant basis while reducing capex and opex.

Get Started Today

Consistently fast response times and unshakable reliability create a great NFV/SDN solution that helps increases revenue while lowering costs. With a robust, scalable Java platform based on Zing, you'll be able to better support new business models, new services and new capabilities.

CUSTOMER SUCCESS

Tier 1 Communication Service Provider

Problem:

Legacy JVM was not able to meet SLA despite years of tuning. CSP expected they would need to re-architect.

Solution:

Azul Zing

· Complete elimination of operational issues caused by Java garbage collection pauses

· Met strict next-generation SLA

· Ensured capacity to handle increased load

· Greatly reduced the need for third-party JVM tuning and performance specialists

· Improved overall network operation

Contact an Azul Java performance specialist today:

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