



Azul Java Platform Delivers Solutions for NFV and SDN

Deploy NFV/SDN solutions on Azul Zing 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. Java-based control layer, virtual network functions, and ultimately the business applications are critical for many operators.

Using standard virtualization technologies that run on common off the shelf hardware, 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 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' errors if load increases too quickly. They were also never designed for use with hypervisors that control memory and CPU availability. Services and deployments in virtualized environment need a Java infrastructure that can grow and shrink the resources available to an application instance elastically hand-in-hand with the hypervisor, provide ease of deployment for new virtual machine instances and increased utilization.

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 infrastructure that provides guaranteed predictability, even under unpredictable load.

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 more than just another JVM. It also includes Zing Vision, a zero-overhead production monitoring platform. The Zing Vision tool reduces production issue resolution time by utilizing the existing instrumentation built into Zing and used during normal operation. Zing resource elasticity and instance management tools allow Java applications to leverage the benefits of the NFV/SDN and enable new business strategies.



BENEFITS OF ZING FOR NFV/SDN DEPLOYMENTS

- Flexible resource allocation takes advantage of NFV/SDN elasticity
- Eliminate GC pauses even while using large heaps
- Deliver stable and consistent response times under load without constant tuning
- Proven scalability and performance proven success in virtualized environments
- Ease of management simplified instance deployment
- Speed time to market with minimal tuning needs and a hypervisor-friendly JVM
- Utilize cost-effective x86 commodity hardware for your NFV/SDN with no porting



Zing: The Best JVM for the NFV/SDN

The 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. Each Java instance can grow and shrink resource usage on demand, “borrowing” and returning memory as needed.

Use Case | Delivering on Service Level Agreements

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

Use Case | Enabling critical network functions on-demand

Equipment and service providers can use the Azul Zing and Java-based NFV/SDN services to scale network functions to meet the changing demands of customers. Azul Zing can be deployed in the virtualized environments, providing customers with flexible and scalable platform. As a result, service providers can offer their customers highly customized, differentiated services without any additional 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 operate 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 large heap, service providers can offer customers additional services, with minim investments on additional infrastructure to capitalize on market opportunities. They can maximize services on a per-tenant basis to increase their service portfolio and add revenue streams.

Get Started Today

Consistently fast response times and unshakable reliability create a great NFV/SDN solution that increases revenue and lowers costs. With a robust, scalable Java platform based on Zing, you’ll be able to support new business models and NFV/SDN strategies other JVMs just can’t handle.

CUSTOMER SUCCESS

Tier 1 Communication Service Provider

Problem:

Current JVM was not able to support the requirements of new services in the virtualized environment.

Solution:

Azul Zing

- Portable and flexible resource allocation
- Elimination of long garbage collection pauses that impacted system operation
- Meet strict SLA
- Handle increased load with higher throughput
- Ease of instance administration
- Improved overall performance

Contact an Azul Java Performance specialist today:

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