

# CACHE MOBILIZATION APPLICATION FROM HIGH PERFORMANCE NETWORKS ENABLED BY THE JUNOS SDK

## Summary

**Challenges:** Rapid growth in the use of mobile platforms and cloud computing has increased demand on server resources like web caches

**Solution:** Cache mobilization application extending and running on the Junos OS platform

**Results:**

- Provided transparent redirection of HTTP traffic even to off-path acceleration/cache engines
- Optimized resources
- Improved response time
- Improved user experience

High Performance Networks, Inc. ([www.highperformancenet.com](http://www.highperformancenet.com)), an emerging provider of software applications on network platforms, uses Junos SDK to deliver a CMA that optimizes customer resource utilization and response time while delivering a positive end user experience.

## Challenges

Customers look to benefit from savings in their network infrastructure and at the same time provide a better user experience and further adopt newer technologies such as cloud computing and mobile platforms. This drives an increasing need to bring additional intelligence into the network that today is either missing or running outside the network, resulting in a bottleneck for network and business productivity. The charter at High Performance Networks is to solve these issues by developing solutions that will allow customers to use their infrastructure and bring additional functionality into existing network platforms, enabling a richer experience for the customer.

Users of Juniper Networks routers in their infrastructure needed a better way to deploy a group of HTTP protocol accelerators. They needed a solution that would also be transparent to end users, particularly in “off-path” mode. To address these needs, High Performance Networks developed the Cache Mobilization Application (CMA).

## Selection Criteria

“As an early entrant into the world of applications on network platforms, High Performance Networks was looking to partner with a company that provided a standard approach to all its platforms, was easy to work with, and provided a strong benefit to customers with its partner solution strategy,” said Pradeep Aswani, president and CEO, High Performance Networks. “The inherent security and stability of Juniper Networks® Junos® OS software combined with its modular architecture, single-source code, and a commitment to building an extensible platform, provided us with a foundation for delivering applications on Junos OS platforms and the potential to bring significant savings to customers.”

Having recognized challenges that customers face when deploying and managing transparent HTTP acceleration in load balancing and high availability mode and evaluating various options in designing a solution, High Performance Networks came across Juniper Networks Junos SDK.

The Junos SDK allows partners to build custom applications that natively run on Juniper routing platforms. This approach offers integration of custom applications with the core network infrastructure in terms of deploying, managing and monitoring the applications and leveraging the core platform for standard user interface, high performance, and redundancy support.

## Solution

The Cache Mobilization Application, running on Junos OS and built using the Junos SDK, delivers transparent HTTP acceleration by dynamically forwarding relevant traffic to one or more off-path web-cache instances. Results include optimized resource utilization, reduced response time, improved user experience, and increased productivity. The CMA for Junos OS is easy to deploy, monitor, manage and designed to interoperate with 3rd party web-cache products that support WCCP protocol.

## Results

With the ease of implementation of cache mobilization on Junos OS platforms along with HTTP protocol accelerators, customers can achieve optimal use of WAN bandwidth, better response time, improved user experience and profit from higher return on investment.

## Next Steps and Lessons Learned

"We found that Juniper offers an extensible platform and solutions approach combined with a friendly partner innovation strategy and supportive go-to-market plans," Aswani adds. "Juniper has provided our business the opportunity to solve challenges that enterprises and service providers face with evolving borderless networks and bring these solutions directly to them."

The Junos SDK provides the structure and features required to rapidly build modular applications. Parts of the application can run separately in the control plane (built using the Routing Engine SDK) and in the fast-path (built using the Services SDK). This unique approach enables architects and designers to make the most of Juniper's state-of-the-art router architecture and platform capabilities. The Services SDK provides a great deal of flexibility by way of supporting daemon applications for maximum control or plug-ins for specific fast-path packet processing needs. The security policy enforced on the partner applications provides flexibility. It affords developing partners and operators the ability to maintain control without stifling the implementation of novel functionality. In addition, this mature framework allows extensibility in mission-critical core Junos OS areas while protecting the operation of core Junos OS features.

"The Junos SDK combined with responsive support made it possible for us to focus on our core competency and quickly deliver this innovative application to Juniper customers, adding value to their investment," said Pradeep Aswani. "High Performance Networks plans to build additional applications on Junos OS platforms using the Junos SDK and the Juniper Networks Junos Space SDK."

## For More Information

To find out more about the CMA application, please request a demo at [www.highperformancenet.com/CMADEMO](http://www.highperformancenet.com/CMADEMO)

## About High Performance Networks:

High Performance Networks is an emerging provider of software applications on Network Platforms. The company offers products and services that help customers optimize their investment in network infrastructure by adding intelligence with customized or pre-built applications on extensible network platforms.

With this customers benefit by a better ROI and faster adoption of new initiatives like cloud computing and mobile platforms

## About Juniper Networks

Juniper Networks is in the business of network innovation. From devices to data centers, from consumers to cloud providers, Juniper Networks delivers the software, silicon and systems that transform the experience and economics of networking. The company serves customers and partners worldwide. Additional information can be found at [www.juniper.net](http://www.juniper.net).

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