

## Solana Validates New Virtualized SmartHawk Monitoring Solution for Large-Scale Deployments

Solana Networks provides a suite of intelligent network monitoring tools and services to major enterprises and service providers. In their most recent project at CENGN, Solana Networks was able to validate the scalability performance of their flagship SmartHawk product as a lightweight virtual appliance. The virtualized solution eliminates the need for dedicated hardware appliances to achieve high performance monitoring of very large networks, such as those managed by Tier 1 cloud service providers (CSPs).

Solana Networks is an Ottawa-based company that has been developing networking products and services for over a decade. The company provides intelligent network solutions for service providers and enterprises to improve network performance, reduce downtime, and lower operating costs. Products from Solana have been integrated into critical enterprise networks around the globe leading to their established reputation of building scalable and robust networking solutions.

Solana Networks is a returning customer to CENGN, having completed network application projects prior to this one, and was a participant in the Canadian Network Innovator Pitch at the 2018 CENGN Summit. Their most recent project focused on the performance testing of their newly developed virtualized monitoring solution for large scale deployments.

### HIGHLY EFFICIENT VIRTUALIZED SOLUTION

A key benefit of SmartHawk is its patented Route Analytics technology that can monitor all network routing events in real-time, the basis for its intelligent reporting and analytics. A very 'chatty' large scale network, especially one that is misconfigured or is undergoing faults, can generate an immense number of updates that are 'funneled' back to SmartHawk for capture and analysis. Solana developed a virtualized version of the solution, with a highly efficient architecture to maintain their performance requirements.

Virtualizing SmartHawk has made Solana's solution more adaptable and lightweight, opening up their potential market. But before launching their new version of SmartHawk, Solana needed to carry out thorough testing to ensure their virtualized network monitoring product was ready to scale with any network deployment.

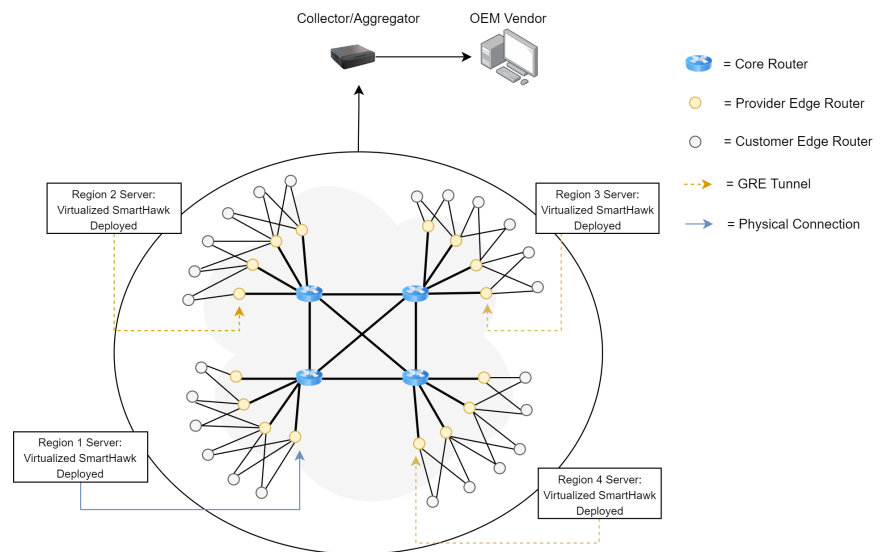


Figure 1: Deployment of SmartHawk on Typical Tier 1 CSP network

#### CENGN MEMBERS



## THE CENGN ADVANTAGE

A major barrier for the commercial growth of Canadian technology small and medium enterprises (SMEs) is the cost and setup of a testing facility to develop and validate technology. The Solana Networks project to scale SmartHawk in a virtual environment needed the resources of a testing facility with substantial router emulation capabilities. The setup of a test facility with the ability to emulate a Tier 1 CSP network is cost-prohibitive for most SMEs and in this case imprudent as scalability testing would only be undertaken sporadically. Validating technology with CENGN removes a major hurdle and allows SMEs to focus their attention on other critical activities for a successful product delivery.

## PROJECT SETUP

For their CENGN project, Solana Networks received technical support, exposure to CENGN's member companies, and infrastructure services including a dedicated project slice. Within the project slice there were two UCS bare metal servers with GNS-3 deployed on them, while SmartHawk was deployed in a cloud tenancy. Two CENGN students played a key role in the project, building an environment that could scale up to meet a very large number of routed network requirements. By imitating the routers using the open source technology, GNS3, CENGN was able to provide the same testing environment of a large routed network topology without the expense of physical routers.

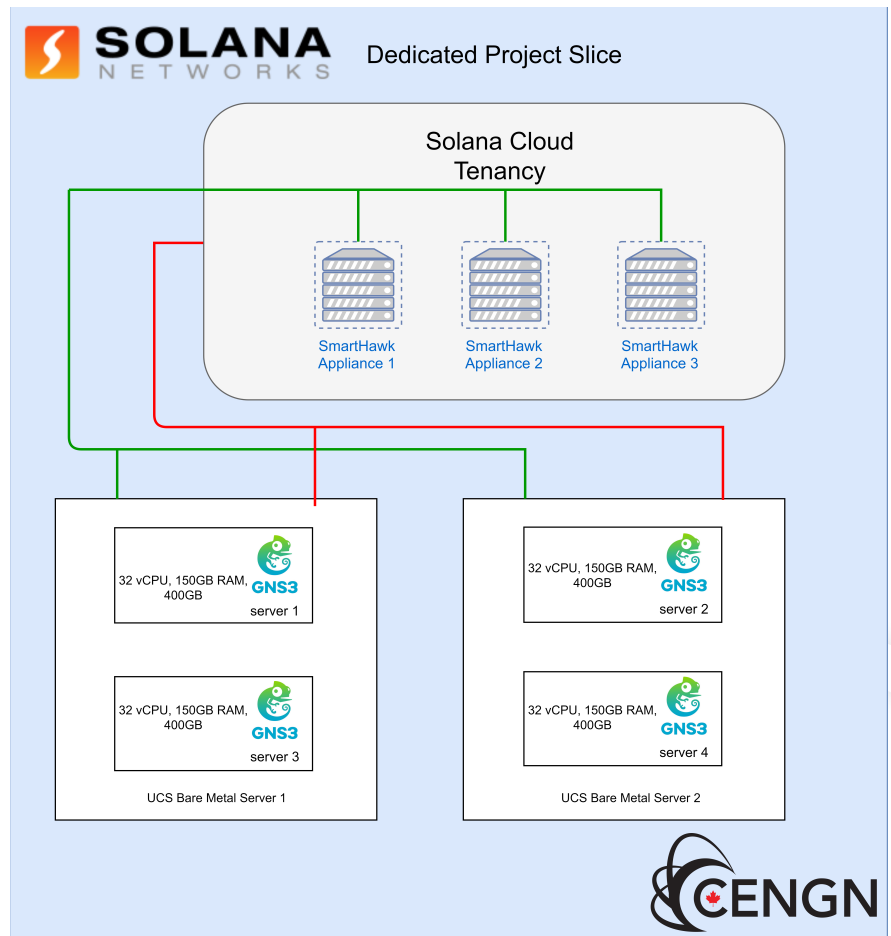


Figure 2: Solana Cloud Tenancy setup at CENGN

## RESULTS AND CONCLUSION

Through this CENGN project, Solana was able to use CENGN's commercial-grade infrastructure and technical expertise to validate the virtual SmartHawk solution at scale, find the platform's bottlenecks, and identify any issues with the technology. Once issues were discovered, the company was able to make product developments, re-test, and then repeat, improving SmartHawk as they scaled up the network and ensuring their solution will be ready for large scale virtual deployments. Now, Solana will be able to provide service offerings to the market as a lightweight virtual appliance. The CENGN team looks forward to keeping up with Solana's future successes!