

## Digital Energy Data Platform – Testing Scalability on CENGN's Testbed

PICTON, ONTARIO, CANADA, May 5, 2021 /EINPresswire.com/ -- Screaming Power develops and manages two energy industry solutions: Scream Utility and Scream Enterprise. Both are mobile cloud applications that utilize Screaming Power's next generation Energy Data Platform (EDP). Scream Utility allows utilities to easily provide all their customers real-time engagement through mobility to track and forecast energy and Greenhouse



gas (GHG) emissions, as well as a host of related value-added services that meet the evolving digitization needs of utilities. Scream Enterprise provides organizations that have multiple buildings the ability to manage their building energy footprint, including energy data collection, building comparisons, GHG management and energy analysis/reporting.

In order to validate the scalability of the advanced EDP platform, Screaming Power completed a commercialization project with CENGN, Canada's Centre of Excellence in Next Generation Networks. CENGN provides Canadian tech businesses access to its multi-cloud infrastructure testbed for product testing at market scale. The CENGN Testbed provided Screaming Power the proper cloud environment to explore and evaluate its key data flows while considering transaction load on a vendor independent platform. The scalability testing was funded in part by the Government of Ontario's Next Generation Network Program. This program is provided in partnership by OCI (Ontario Centre of Innovation) and CENGN, Canada's Centre of Excellence in Next Generation Networks.

The EDP infrastructure supports securely delivering electronic energy data to users while allowing all parties to securely comply with social, market and legislation requirements. The EDP facilitates energy data silo integration and analysis through mobile/web-based dashboards that provide a better user presentation experience providing instant response times.

Data accuracy, availability and scalability is key for Screaming Power's customers/users, as the platform utilizes machine learning to (a) evaluate data anomalies to speed up data loading and

(b) improve data analysis processes (such as weather normalization), which provides insight into usage and accurate forecasting. For utilities, the platform provides significant operational data efficiencies and savings by allowing users to digitize their Utility relationship and opt out of old processes such as mailing customer bills. For organizations, the EDP platform supports continuous energy improvement projects that save money and reduce GHGs. These methods require ongoing data analysis of big data on-the-fly. The CENGN Testbed was able to simulate multiple cloud environments, allowing Screaming Power to better understand and validate their system's IP and data throughput while creating an extensible toolset to support future growth.

Screaming Power's production platform is housed on Amazon Web Services (AWS). The company wanted to confirm they have the ability to move the platform to other cloud server technologies then test the EDP platform's scalability and identify any bottlenecks found. Daily sampling/processing of (5-minute, 15-minute and 60-minute) meter data was identified as the key processes requiring review because the information is continuously updated and used to accurately analyze, calculate and display. These outputs needed to be tested and validated that they are performing in a reasonable rate while simulating at least 500 concurrent mobile app users on CENGN's advanced computing platform.

"This CENGN project gave Screaming Power the opportunity to prove its EDP can operate in non-AWS environments as well as test the scalability of the platform through simulated customer requirements that represent future projected growth," said Robert McMillan, Business Engineering Manager at CENGN.

Greg Doucette, CFO and Innovation Research Champion of Screaming Power, says, "With the CENGN-provided testbed, we have seen how our energy data platform will perform to scale on a relatively unknown infrastructure and how Screaming Power can quickly replicate their solutions for disaster recovery scenarios. With CENGN, we have explored potential bottlenecks and discovered opportunities to improve performance as we plan to digitize utilities of any size. We gained valuable insights from this project that has already enabled us to scale our energy data processing far beyond our previous daily loads."

Screaming Power investigated and validated the scaling capabilities of the Scream Energy Data Platform (EDP). It scaled its meter sampling load to 400,000 users with 5-minute interval meter data and promptly handled 500 concurrent requests by simulating users on the associated mobile app, even while the EDP was busy on other tasks. Efficient throughput of energy information is a requirement in meeting today's IoT and digitization needs. The complexity of energy information has historically stifled innovation in the industry but Screaming Power is changing that.

## **About Screaming Power**

Screaming Power is revolutionizing customer engagement by providing a mobile platform that connects the energy user, allowing for effective and secure two-way communications to educate,

change behaviour and encourage sustainability. Our extensible Intellectual Property provides a low-cost, digital infrastructure for a self-sustaining Eco-System. Our Scream Utility & Scream Enterprise mobile solutions focus on reducing 'cost-to-service' for utilities while facilitating the delivery of innovation (e.g., connectivity to the IoTs).

## **About CENGN**

CENGN is Canada's Centre of Excellence in Next Generation Networks. Our mission is to drive technology and industry growth in Canada, enabling economic strength and prosperity, as well as innovation and competitiveness in this high-growth global multi-trillion dollar industry. Through our leading-edge technology infrastructure and expertise, and the creation of a globally recognized ecosystem of partners, CENGN helps Canadian small and medium enterprises overcome commercialization barriers and grow. CENGN collaborates with top ICT multinationals, the public sector, financial institutions, and academic partners, to solidify Canada's leadership in advanced networking for the benefit of all Canadians.

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