SCALE AND FUNCTIONALITY TESTING THE HAULERADS TRUCK-SIDE ADVERTISING SOLUTION ON CENGN'S INFRASTRUCTURE

HaulerAds is a Toronto based company that has taken traditional truck-side advertising and transformed it into a measurable advertising channel using IoT technology. The company has just completed a CENGN project to test the functionality of their solution's reverse geocoding feature, as well as scale their solution to discover the resource requirements necessary to grow their platform.

HaulerAds was founded in 2015, and currently consists of a small team focussed on growing the adoption of their solution. They have developed a platform that allows advertisers and truck companies to come together in a profitable and trackable way. The truck side advertisements allow advertisers to reach up to 2 million people per month with a single ad, while the HaulerAds devices installed in the vehicles provides them with the ad's exposure patterns, analytics and other data. HaulerAds also gives truck drivers a simple way to make extra income on their truck side real estate by giving them easy access to advertisers, with the choice in the ads they promote.

Figure 1: A HaulerAds vehicle scans for nearby mobile devices

THE CHALLENGES OF OUT OF HOME (OOH) ADVERTISING

In the advertising world, success is measured by cost per conversion. The amount one can spend on ads is endless, so it is essential for advertisers to understand how effective their promotional campaigns are to justify the expenditure. This is one of the reasons online advertising has become so popular, as cost per click tracking and measurement of impressions is both manageable and reliable.

With OOH advertising it is much more difficult for advertisers to gain insight on whether their promotional efforts are working and reaching their target audience. Marketers using normal truck billboard advertisements have no idea where their advertisements are, and if people are viewing it. The HaulerAds solution uses IoT devices to bridge the gap between OOH advertising and online marketing, allowing the advertiser to track the exposure of their truck ads on communities and continue to stay engaged with pushed mobile advertisements.

The HaulerAds solution is a win-win for both sides. Traditionally, truck companies must do the groundwork to find advertisers for their vehicles. Once a truck company is partnered with HaulerAds, they gain a list of advertisers connected to the platform, giving them the ability to decide which ads to accept without changing their route or main job functions.

Figure 2: HaulerAds scanners detect mobile devices near the OOH advertisment and send data through the mobile backhaul to the HaulerAds platform

EFFICIENT AND TRACKABLE ADVERTISEMENT

HaulerAds performs through equipping each truck with a MAC scanning device. Using Wi-Fi, the HaulerAds device scans for MAC addresses to identify mobile devices operating in the vicinity of the truck, recording the timing and location of where the bystander devices were through HaulerAds reverse geo coding feature. By identifying the devices in the vicinity, advertisers receive a real-time estimate of their ad's exposure.

For advertisers, HaulerAds provides a tracking analytics dashboard to view this data and gain an understanding of the effectiveness of their advertisement as it moves through different routes. Beyond tracking impressions, HaulerAds takes advantage of its scanned MAC addresses through targeted push ads. Device holders in the vicinity of the HaulerAds scanner can then have mobile advertisments sent to them by the advertiser through their downloaded apps, such as the Weather Network, ESPN, TSN, etc. These targeted mobile ads are also tracked in the HaulerAds analytics dashboard.
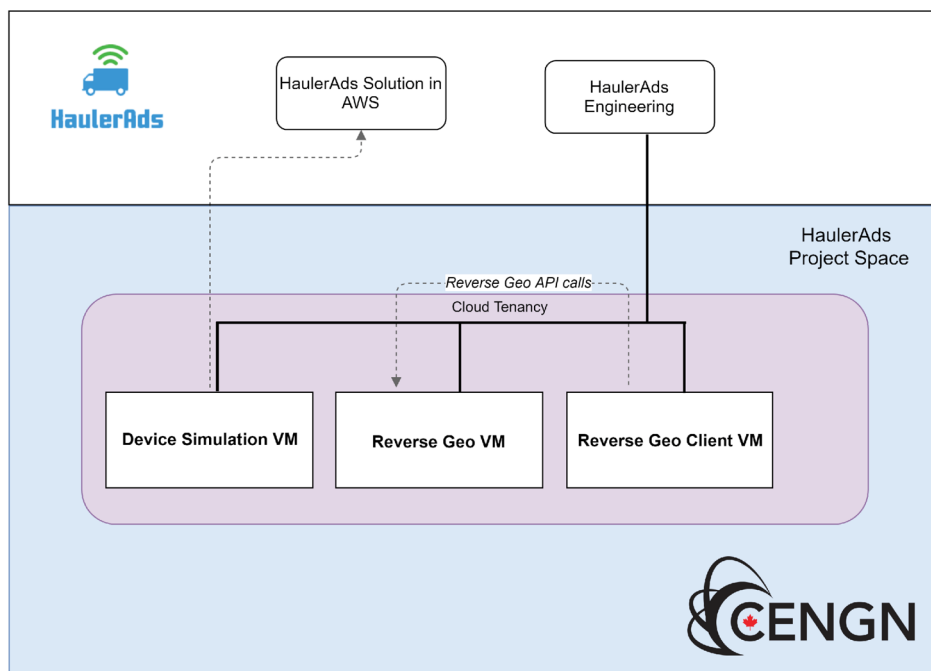

Figure 3: HaulerAds dedicated project slice

CENGN PROJECT EXPLAINED
Through their CENGN project, HaulerAds wanted to evaluate an alternative to their reverse geocoding platform that would be more efficient and reliable than their current under-performing one. HaulerAds also wanted to scale test their overall platform to ensure it could support the growth of their business.

To carry out the CENGN project, HaulerAds was provided 1 cloud tenancy running 3 virtual machine (VMs). The first VM was used to simulate HaulerAds devices in trucks sending information to the HaulerAds platform in AWS. Simulated devices were incrementally grown to 200, providing HaulerAds with proof that their current platform could handle their devices at scale. This also gave HaulerAds valid and reliable information on the resources needed when scaling up their solution.

The second and third VMs provided functionality testing of the solutions' reverse geo locator feature, which provides data on the exact longitude and latitude information on the mobile devices being identified by the HaulerAds scanners. Through the communication testing between one VM to another, it was successfully verified that the open source tool, Open Street Maps, was the most effective option for the solution's reverse geocoding requirements.

READY FOR IMPLEMENTATION
Through leveraging a CENGN project, HaulerAds was able to push their product further towards successfully supporting the growth of their business. By meticulously scale testing their platform on CENGN's testbed, HaulerAds was able to generate valuable and tangible results which can be used to predictably increase the number and size of clients they provide services for. Through functionality testing, HaulerAds was also able to perfect their push notification services, gaining the knowledge to make this function more reliable.

Additionally, CENGN provided HaulerAds with a more reliable and effective alternative to their previous reverse geocoding platform. The new platform offers more accurate insight into the location of the truck-side advertisement and its exposure to the public.

With these results as well as the technical support, business exposure and infrastructure resources CENGN has provided, HaulerAds is ready to move on to the next stages of commercial growth.

CENTRE OF EXCELLENCE IN NEXT GENERATION NETWORKS

Rick Penwarden, Marketing Manager
rick.penwarden@cengn.ca
cengn.ca/projects

Casey Binkley, CEO & Founder
casey@haulerads.com
http://haulerads.com