TECH BRIEF – PASSPOINT COEXISTENCE

THE LEVL-IQ PLATFORM AND PASSPOINT ARE COMPLIMENTARY

As MAC address randomization gets increasingly more aggressive with each OS release, network operators are investigating methods to replace the broader functionality of the MAC address. The MAC address can be used for everything from authentication, to providing personalization and network troubleshooting. One proposed solution to aggressive MAC address randomization is using the industry standard Passpoint (also known as Hotspot 2.0). While Passpoint has strengths, it is certainly not designed to support all the use cases that are affected by MAC randomization. On the other hand, the LEVL-IQ platform is extensible to many of those applications. As a result, the two technologies are complimentary in nature.

A QUICK PASSPOINT OVERVIEW

The Wi-Fi Alliance (WFA) introduced Passpoint in 2012, with a goal to transform the Wi-Fi hotspot experience. The initial focus of the technology was to simplify roaming across networks and to enable shifting traffic off the cellular networks onto Wi-Fi. For the past 8 years, Passpoint has very effectively worked in the background to make this happen. To work, it requires credentials, typically in the form of a certificate, be loaded on the device for each network. For cellular offload that is an easy process because the cellular service provider can directly install the certificate on the device. For other networks, the user will have to take action to get the credential on the device. Overall, Passpoint is a highly secure method of user identification and authentication. However, the rollout beyond cellular offload has been limited and there is still significant variation in the process for different device types and service providers.

PASSPOINT AS A SOLUTION TO MAC ADDRESS RANDOMIZATION

More recently Passpoint has been looked at as a solution to some of the problems caused by MAC address randomization. For some applications, such as identification of frequent network users, it is a very strong solution. This is especially so in hospitality wi-fi where a given hotel chain might have over 5000 locations. In such scenario, Passpoint is a great solution for the small but dedicated group of loyalty customers that frequently visit multiple facilities. Generally, there is also a loyalty app that can abstract away some of the details of Passpoint certificate installation, at least on a phone. This however does not cover the following two scenarios: (1) Occasional guests are much less likely to have the loyalty app on their device. They are also much less likely to install something on their phone or laptop for what is likely to be a short, one-time stay. (2) The loyalty program customers, even though more likely to have the loyalty app installed on their phone, many times use multiple devices. For business related

stays the guest might use a company-issued laptop or phone. Many corporate IT departments limit employee installation of 3rd party apps and certificates on company owned devices because of security concerns. This means the guest may have trouble accessing the network for work purposes, something that defies their reason for staying at the hotel. Finally, there are emerging cost and time concerns from hotel brands about the complexity of the integration. Hence, a significant capital expense stands as another hurdle in the path of immediate Passpoint adoption, and many smaller brands may struggle to get Passpoint integrated in a timely manner.

As a result, there is something needed in addition to Passpoint. A technology that can address the different concerns and use case issues with Passpoint. Something that does not require the customer to take specific action. Something that can be easily and quickly deployed. Something that just happens within the network, much like a MAC address does today.

THE LEVL–IQ PLATFORM COMPLETES THE STORY

The LEVL-IQ platform is built to provide network operators device intelligence and device identity while still maintaining user privacy and without requiring any action from the user or her device. The platform is an easy to deploy SaaS system that accurately identifies devices in just a couple of seconds and requires nothing be put on a user device. Overall, this dramatically simplifies and accelerates adoption.

The LEVL-ID is a unique, non-deterministic, device identifier that LEVL-IQ platform creates for each device. It is created, stored and maintained in the network, so no user interaction is required. The LEVL-ID is derived from how the device communicates on the network across all 7 layers of the OSI model. The LEVL-IQ system identifies devices on the system in about 2.5 seconds with over 99.5% accuracy.

Combining the LEVL-IQ platform with Passpoint gives network operators the best of both worlds. For authenticating the most important and frequent network users, Passpoint many times ensures 100% accuracy and very high security. For more casual users and for those that cannot or will not install certificates or Apps on their devices (such as business-related stays) the LEVL-IQ platform provides a simple, secure, and easy to deploy solution for a wide variety of use cases.