syniverse

Automated Network Reselection

Intelligently handles device mobility management to allow single SIM devices to transition between public cellular and private wireless networks.

Overview

Private wireless networks continue to grow in popularity as their benefits including expanded capacity, increased speeds, improved signal strength, and superior security give organizations with large campuses or facilities with a multitude of connected devices an opportunity to take wireless connectivity beyond the constraints of traditional WiFi and macro wireless networks.

Along with this growth, the need to support the movement of devices between private and public networks has accelerated. Effortlessly supporting a device as it traverses between two disparate wireless networks, such as the situation when the coverage area of the public cellular network overlaps the coverage area of the private wireless network, is increasingly critical as private networks become more abundant (e.g., a private wireless network campus within a public cellular coverage).

Challenge

For mobile devices that enter a private network that resides within a larger public network's cellular footprint, the ability for this device to seamlessly move between networks is essential.

A device activated within overlapping private and public network coverage, may register to the public cellular network and not register to the private network. As a result, users will need to manually register to the private network, a step that may not be possible for IoT devices.

Achieving automated switching from one network to another when appropriate conditions are met and maintaining communication sessions at the application level are key to establishing superior experience levels for the user.
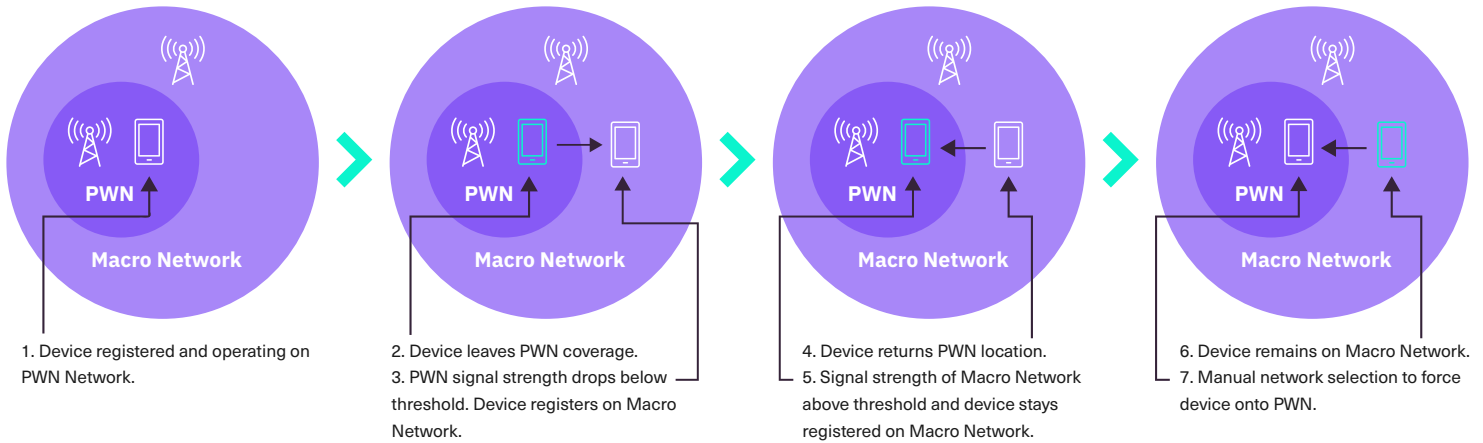
Solution

Syniverse's Automated Network Reselection (ANR) is a technology that enables a mobile device with a single SIM to reconnect to its designated private mobile network upon return from the public macro network. Without need for user intervention, ANR's functionality solves the challenge of network selection when private and public networks have overlapping coverage. The ANR service elements include:
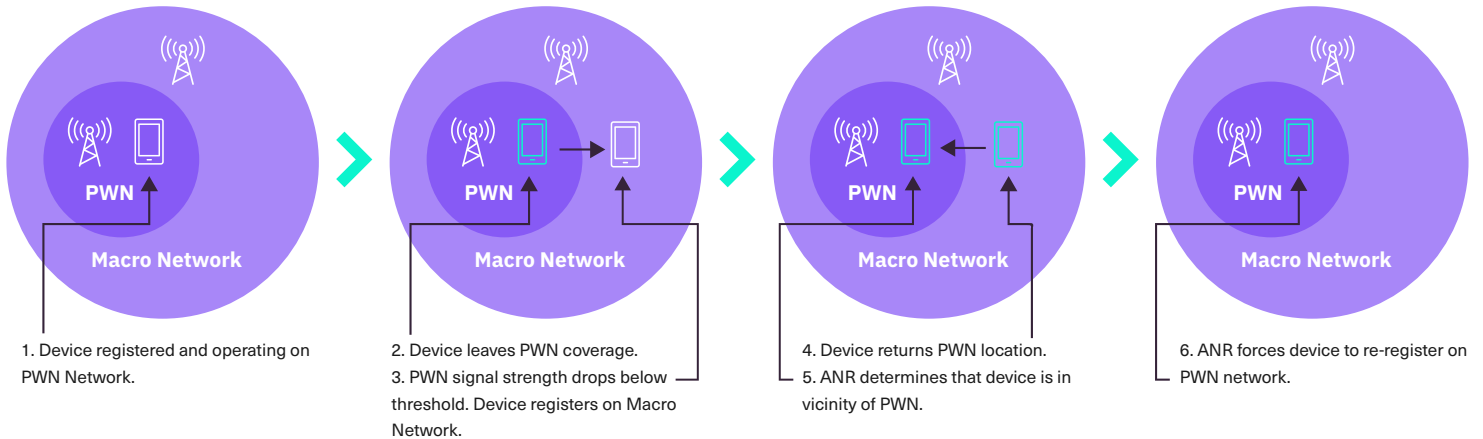
1. Syniverse hosted Home Subscriber Server ("HSS") with ANR functionality.
2. Syniverse SIM card with ANR applet loaded on the SIM card.
3. Private network device with Syniverse physical SIM embedded and provisioned on Syniverse HSS.
4. A managed Network Selection Engine ("NSE") with private network locations and a registration of addressable SIMs/IMSIs in the Syniverse HSS.

Automated Network Reselection

Device Experience without ANR Present

1. Device registered and operating on PWN Network.

2. Device leaves PWN coverage.
3. PWN signal strength drops below threshold. Device registers on Macro Network.

4. Device returns PWN location.
5. Signal strength of Macro Network above threshold and device stays registered on Macro Network.

6. Device remains on Macro Network.
7. Manual network selection to force device onto PWN.

Device Experience with ANR Present and Active

1. Device registered and operating on PWN Network.

2. Device leaves PWN coverage.
3. PWN signal strength drops below threshold. Device registers on Macro Network.

4. Device returns PWN location.
5. ANR determines that device is in vicinity of PWN.

6. ANR forces device to re-register on PWN network.

PWN = Private Wireless Networks

Why Syniverse?

Syniverse delivers reliable network performance and connectivity, through broad global reach, expansive network coverage and establishment of key partnerships.

We offer guaranteed quality- of-service features along with a knowledgeable customer support department with technical expertise, along with an extensive offering of innovative and forward-thinking solutions supporting 4G, VoLTE, private networks and 5G services. We are the only solution supporting patent pending Automated Network Reselection technologies.

Syniverse powers mobile experiences for almost every person and device on earth. The world's largest companies and nearly all mobile carriers rely on Syniverse's global network to seamlessly bridge mobile ecosystems and transmit data, enabling billions of transactions, conversations, and connections [daily].

Building on its 30-year history of innovation to shape the future of communications, Syniverse is focused on harnessing the potential of 5G to transform how businesses engage with customers and help carriers reimagine how far they can reach. www.syniverse.com

**We Make
Mobile Work®**

syniverse®