OpenRoaming

What is OpenRoaming?

OpenRoaming is an open industry standard that automates device roaming between different Wi-Fi networks that is automatic and secure much like device roaming on a cellular network. Unlike cellular networks, where operators establish peering agreements between each other OpenRoaming will allow Wi-Fi network operators to opt-in to a neutral global roaming network managed by the Wireless Broadband Alliance (WBA). OpenRoaming is built on three pillars:

1. Global federation of public and private Wi-Fi networks and identity providers who use WBA's Wireless Roaming Intermediary eXchange (WRIX) standards to scale and support various business models. OpenRoaming is also supported by carriers, ISPs, and chipset and equipment vendors.
2. Robust cyber security framework that enables simple, secure and scalable Wi-Fi connectivity among participating OpenRoaming organizations and networks.
3. Network automation that defines an automated roaming consortium codes framework to support policy provisioning on devices and networks.

OpenRoaming removes the Wi-Fi login process at participating venues by matching identity providers (who approve a connection) to the venues providing guest Wi-Fi access. For example, shoppers can move from store to store, automatically connecting to each store's Wi-Fi, while enabling the stores to send notifications for assistance or discounts.

Why is OpenRoaming needed for venues, operators and access providers?

Creating and managing roaming agreements between network operators present inherent challenges when it comes to scaling. The smaller the venue (like a local retail shop) the more challenging the effort.

- **Interoperability:** As a neutral operator approach, OpenRoaming enables organizations of any size to participate—from publicly-traded mobile operators to local hotels and restaurants. The more Wi-Fi networks that are connected, the more robust, widespread and beneficial the Wi-Fi roaming network. This also ensures interoperability between participating organizations. The result is an open Wi-Fi roaming network that can be leveraged by any venue, operator or access provider.
- **Scale:** For larger operators, OpenRoaming helps cost-effectively scale their global roaming services, as it leverages the investment costs made by others to provide quality Wi-Fi.
- **New revenues:** Smaller access providers can generate revenue from larger access providers that pay for access to their network.

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TECHNOLOGY BRIEF

Why is OpenRoaming needed for end users?

Wi-Fi use is growing—fast. As of the second quarter 2020, it accounted for nearly half of all mobile traffic in the U.S. From 2018 to 2023, the number of global Wi-Fi hotspots is projected to grow at a 30 percent CAGR, going from 169 million to | 628 million. OpenRoaming creates a vast and interconnected Wi-Fi ecosystem that makes staying connected automatic and safe.

- **No login:** Users can roam between compliant Wi-Fi networks securely without needing to login through splash pages or sign-in screens.
- **Global reach:** OpenRoaming creates a ubiquitous blanket of Wi-Fi coverage hosted by participating carriers, enterprises, public institutions, municipalities and more.
- **Enhanced security:** Identity providers secure public Wi-Fi connections through the use of public key infrastructure (PKI Radsec), Passpoint and existing security standards. This eliminates the bad practice and security risk posed by publicly-shared access passwords often used in stores, restaurants and other public spaces.

Are there alternatives to OpenRoaming?

Yes. There are vendor-lead instead of industry-lead initiatives that use adopted standards along with private operator agreements to recreate a similar program. But, given the challenges of negotiating with thousands of independently-run Wi-Fi operators, these vendor-specific alternatives are not likely to be widely adopted.

What is the difference between OpenRoaming and Passpoint?

OpenRoaming leverages Wi-Fi CERTIFIED Passpoint, an industry standard that streamlines access to Wi-Fi hotspots and eliminates the need for users to authenticate with a network each time. While Passpoint is focused on authentication to a carrier's or network's own RADIUS server, OpenRoaming uses globally coordinated (federated) cloud directories to allow participating compliant networks to authenticate users. Both OpenRoaming and Passpoint work collectively to enable interoperator Wi-Fi network roaming without direct network partnerships, while allowing direct network partnerships when necessary.

Does CommScope RUCKUS® network infrastructure support OpenRoaming?

Yes. The RUCKUS® SmartZone portfolio supports the technical capabilities required to become an OpenRoaming access provider. Additionally, SmartZone supplies streaming performance telemetry which can be used to qualify OpenRoaming networks for quality.

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