



RADIATOR™ SIM PACK

YOUR KEY TO SEAMLESS AUTHENTICATION

Radiator™ SIM Pack is the key component for seamless roaming authentication between mobile and Wi-Fi networks that use SIM-based authentication. Radiator SIM Pack also provides all the functions required for a 3GPP AAA Server. There are multiple benefits of using Radiator SIM Pack: SIM authentication is designed for and already used with mobile devices and related infrastructure; the credentials have already been distributed to customers with SIMs; and SIM authentication is easier to use than customer/client certificates or username-password authentication. Radiator SIM Pack also supports IMSI Privacy so that subscriber identity will not be compromised at any point. All of these features reduce the need for customer support and increase usability for the end users.

RADIATOR SIM PACK INCLUDES:

- Full 3GPP AAA Server functionality for Wifi offloading, VoWiFi and VoLTE
- Standalone support for all SIM-based authentication protocols (EAP-SIM, EAP-AKA, EAP-AKA') and Wifi offloading
- IMSI encryption for EAP-SIM, EAP-AKA, EAP-AKA' and 3GPP AAA Server as defined by WBA's IMSI Privacy Protection for Wi-Fi – Technical Specification
- Support for both HSS and HLR interfaces for authentication and authorization

SUPPORT AND PRICING

All Radiator products, including Radiator SIM Pack, are available directly from Radiator Software or from our reseller network. Please see www.radiatorsoftware.com for details.

Our flexible licensing model is designed to suit various customer needs so you will know what you are paying for.

Global support is provided by our own engineers with extensive experience in software and telecommunications engineering. Local consultation and support services are available both from Radiator Software and our partner network.

If you are interested in integrating Radiator SIM Pack into your devices, platforms, or other products, please contact us for licensing information at sales@radiatorsoftware.com

Word from our partner

"Radiator is the only choice in the industry when you need complex and flexible customization without impact on high speed performance. The fact that Radiator Software provides source code allows us to modify core components to suit our application and really do anything we want it to do, and allows integration with anything we want it to integrate with."

A Tier 1 Taiwanese mobile operator uses Radiator for all mobile authentication (EAP-SIM, UAM, and SMS-OTP) in over 50,000 hotspots in Taiwan. A single server Radiator performs almost 1,200 transactions per second (TPS) during busy hours and has never failed in providing a stable and rock-solid performance."

Peter Cheng, President, Acom Networks

TECHNICAL DETAILS

- Supported stand-alone EAP-methods: EAP-SIM, EAP-AKA, and EAP-AKA'
- 3GPP AAA Server with Diameter S6b, SWm and SWa interface support
- EAP authentication support by fetching authentication information with Diameter and MAP/M3UA/SIGTRAN
- EAP authorization support by fetching MSISDN and profile information using Diameter and MAP/M3UA/SIGTRAN
- IMSI encryption for stand-alone EAP methods EAP-SIM, EAP-AKA, EAP-AKA' and 3GPP AAA Server as defined by 3GPP S3-170116 and Wireless Broadband Alliance
- 3GPP Diameter SWx, Wx and S6a interface for EAP authentication
- 3GPP Diameter SWx and S6a for EAP authorization
- MAP for EAP authentication with sendAuthenticationInfo operation
- MAP for EAP authorization with updateGprsLocation and updateLocation operations
- Flexible mapping from IMSI operator information to Diameter or SIGTRAN peering connection for request routing in roaming and multi-operator environments
- Highly configurable MAP/M3UA/SIGTRAN parameters for desired node numbering, type and other parameters
- SCTP multihoming for Diameter and SIGTRAN
- SIGTRAN support for connecting to multiple different operators directly
- TCP and SCTP for both IPv4 and IPv6. SCTP multihoming support
- Support for converting AKA vectors to SIM triplets for lower HSS licensing costs and greater configuration flexibility
- Flexible REST API support for fetching SIM and AKA vectors when Diameter or MAP is not available
- Full RADIUS accounting support
- Full source code supplied
- Can be combined with Radiator Policy and Charging Pack for additional 3GPP OCS & OFCS support.

RADIATOR SIM PACK PROVIDES IMSI PRIVACY PROTECTION

In many high traffic areas such as sports stadiums, shopping venues, or public transport hubs, mobile carriers may partner with the local Wi-Fi providers to improve coverage and user experience: mobile devices can be automatically connected to Wi-Fi instead of congested cellular network. Internationally, Wi-Fi roaming agreements also allow carriers to lower the cellular roaming costs.

EAP-SIM, EAP-AKA and EAP-AKA' are SIM-based Wi-Fi authentication methods used to achieve seamless offloading to carrier and partner Wi-Fi, with International Mobile Subscriber Identifier (IMSI) derived from the SIM card acting as a unique identifier for each user.

In order to provide real user privacy, we have implemented IMSI encryption for EAP-SIM, EAP-AKA and EAP-AKA' authentication for Radiator. As an operator, you can enable IMSI privacy easily: Radiator 3GPP AAA Server handles both encrypted and clear authentication requests. This means IMSI privacy can be offered to devices supporting it without affecting other users.

Radiator SIM Pack supports IMSI encryption as specified in 3GPP S3-170116 document "Privacy Protection for EAP-AKA," and WBA's IMSI Privacy Protection for Wi-Fi – Technical Specification. The feature is already implemented by some of our operator customers to cover their AAA server encryption.

USE CASES

WIFI OFFLOADING

A growing number of operators need to expand their mobile data coverage with Wi-Fi. The main requirement is that only one authentication method is used for both Wi-Fi and LTE networks. Both mobile and laptop users also need to have common charging methods and policies that are easy to manage, such as readily distributed SIM cards.

The technical solutions that make this possible are the EAP-SIM and EAP-AKA standards. They use SIM cards for authentication in Wi-Fi and mobile networks. Support for these EAP methods is included in a number of smart phones, tablets, and other devices. Laptop users can use alternative authentication methods.

Radiator makes it possible to unify Wi-Fi and LTE network authentication with a single SIM card. In the unified solution, the end user can use the same data plan in both Wi-Fi and LTE networks. If you are interested in this kind of solution, our expert team is ready to help.

IN-FLIGHT CONNECTIVITY

For many of our customers we have been implementing WiFi roaming for different use cases: for example, carriers offloading traffic from their mobile network to WiFi hotspots or for providing VoWiFi (Voice over WiFi) calling to their customers.

One case for Radiator is to implement in-flight connectivity for airline carriers, providing authentication to onboard WiFi that is connected by other means (such as satellite connection) to the internet.

In this scenario, Radiator provides the necessary interfaces for WiFi roaming when subscribers of mobile operators are using their phones during the flight. With smooth WiFi roaming provided by Radiator AAA Server Software, end user devices can connect automatically to the in-flight WiFi network, and continue their use based on the roaming policy agreements between mobile operators and in-flight network operators.