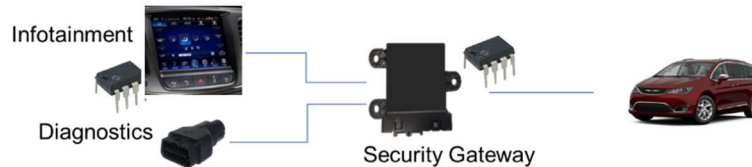


## AutoAuth High Level Overview

### Background

As part of a comprehensive approach to safeguard its vehicles from cyberattacks, Fiat Chrysler Automobiles (FCA US) has implemented a Secure Gateway (SGW) module in the electrical architecture, starting with most 2018 Model Year vehicles. This module functions as a secure firewall that protects external access to the vehicle via the radio and diagnostic connector from the rest of the vehicle network.



The SGW gates all data exchanged between the “outside world” (e.g., diagnostic tools, incoming signals to radio/head unit) and the “vehicle”, and it determines what commands to allow through the Gateway based on an approved list. The SGW does not restrict access to diagnostic data. It restricts the ability of non-registered and non-authenticated users to perform intrusive diagnostics such as bi-directional controls.

The SGW can control the level of access for each user, based on an assigned role determined during an authentication process. A challenge-response protocol is used for Authenticated Access. A similar process is used for FCA US franchised dealerships.



### AutoAuth

AutoAuth is the authentication solution created to give Independent Aftermarket (IAM) Tools the ability to unlock the SGW using the authentication process and perform all applicable diagnostic repairs.

The entire solution consists of two systems: 1) the “User Management System,” and 2) the “SGW Authentication Bridge Server,” that collectively provides the ability for Independent Aftermarket (IAM) Diagnostic Tools, Users (e.g., independent technicians), and Shops to perform an account registration process and the SGW authentication process.

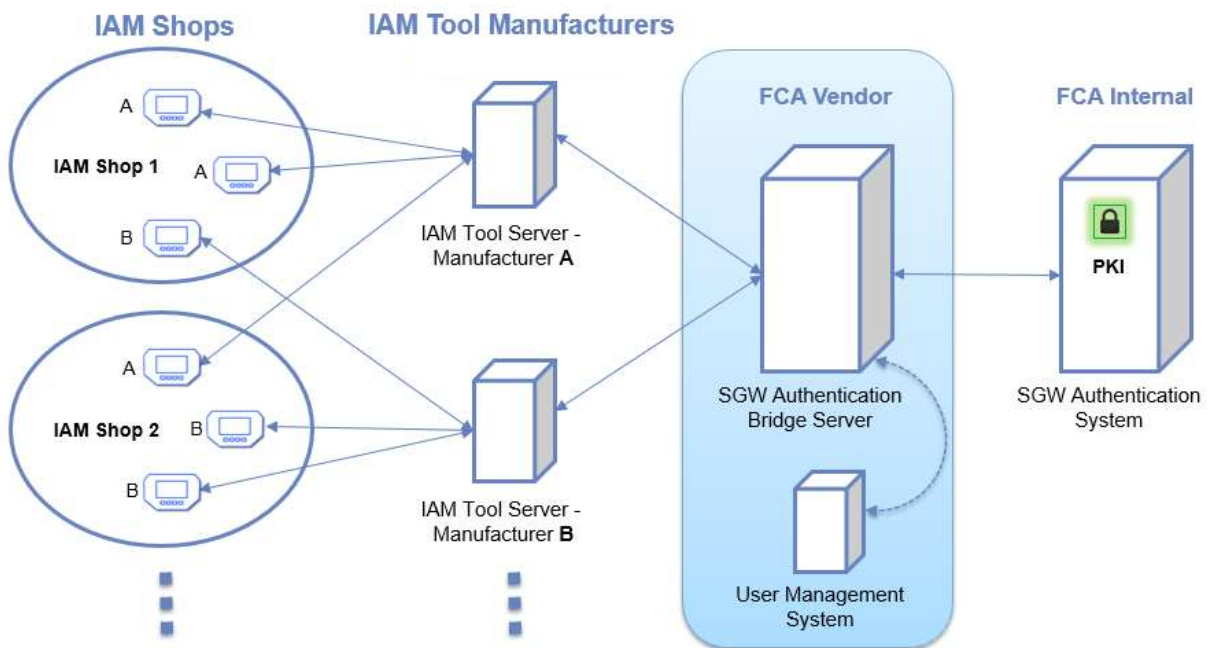
## User Management System

All communication between IAM Tools and the SGW Authentication Bridge Server must have authenticated and authorized user session information for security and traceability purposes. The SGW Authentication Bridge Server relies on the User Management System for user authentication. The system includes a user account management portal for the IAM Tool users to create their accounts. It also includes a portal for IAM Shop administrators to manage their account, including IAM Tool registration and IAM Tool User association.

## SGW Authentication Bridge Server

The SGW Authentication Bridge Server acts as a “bridge” to allow IAM tools the ability to retrieve necessary information from FCA’s Public Key Infrastructure (PKI) to perform the authentication process with the SGW. It provides separation between FCA US internal systems and IAM Tool Manufacturer systems for architecture and security purposes. Only those IAM Tool Manufacturers who enter into the required legal agreements with FCA US, as governed by FCA US MOPAR Technical Service Operations will be allowed to interface with the SGW Authentication Bridge.

## Visual Overview of System



## **IAM Tool/Shop/User Registration**

FCA US has reached out to all aftermarket scan tool companies that currently have an active scan tool license agreement with FCA US to provide them the necessary information to develop an interface with the User Management System and the SGW Authentication Bridge Server. Snap-on® recently announced that it will introduce the Snap-on Secure Vehicle Gateway™ solution that will provide access to secure FCA and other OEM vehicle gateway modules. FCA US is having ongoing conversations with several scan tool companies and is working to help them develop their solution in the shortest possible time. If an IAM tool company is interested in adding this functionality they should contact the Equipment and Tool Institute (ETI).

Equipment and Tool Institute (ETI).

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Each IAM tool manufacturer will provide the instructions to their customers on how to register the tools through AutoAuth.

### **Cost for Shop/User**

There is a yearly \$50 fee per shop for up to five employees, there is an additional \$2 a year charge for each additional employee to use AutoAuth registered scan tools. For individual owners (not shops) the cost is \$50 per year. Individual owners can register up to five other users, beyond five users an additional \$2 a year per additional user is charged.