

# Data Experience Solution

Market Offer Datasheet  
Making connections  
through **WiFi offload**



## A seamless data experience is critical

With the explosive growth in mobile data traffic and the introduction of new bandwidth-intensive applications, service providers need the ability to control how they manage network congestion and provide their subscribers with the **best possible connection** over every available network.

Successfully transitioning users to Wi-Fi networks in real time comes with several challenges, such as ensuring a transparent access experience for subscribers when they are offloaded, and making sure existing subscriber information stored in the network can be leveraged for seamless service access. Operators also need to provide support for multi-access networks, making sure their subscribers get the same experience on Wi-Fi that they get over the 3G or 4G network. Maintaining a seamless and consistent data experience is critical requirement for a successful offload implementation.

## Amdocs Wi-Fi offload market offer

The Amdocs Data Experience Solution – which includes an optional subscriber authentication and management function, features a pre-integrated Wi-Fi Offload market offer that allows service providers to transparently offload their 3G and 4G data traffic to available Wi-Fi hotspots, alleviating network congestion where needed, and providing support for innovative data plans to subscribers.

## Benefits

- Reduce costs by alleviating the traffic load on the 3G and 4G networks
- Maintain a transparent and cohesive data experience for subscribers across 3G/4G and Wi-Fi networks
- Boost revenue by offering attractive Wi-Fi bundles for different market segments
- Gain a competitive edge by implementing intelligent offload policies quickly
- Manage network congestion effectively while still providing a superior data experience

The Wi-Fi Offload market offer allows service providers to manage network resources flexibly by offloading certain data users during periods of congestion, thus maintaining a superior data experience for all users. The Wi-Fi Offload market offer provides mobile operators with multi-access, carrier-grade authentication to ensure a transparent and secure single-sign-on experience for subscribers.

By implementing multi-access solutions such as Wi-Fi Offload today, service providers are preparing for their 4G future with solutions that work across access technologies and balance network traffic efficiently.



## Key features

- Federation of subscriber authentication profiles from the Home Location Register – the Data Experience Solution leverages existing subscription information and stores it for fast re-authentication on the Wi-Fi network
- Single-sign-on functionality – storing of subscriber profiles so users don't have to sign on to Wi-Fi hotspots each time they connect, allowing for a transparent subscriber access experience
- Common subscriber authentication and authorization – the carrier-grade Service Controller functions as a 3GPP AAA in WLAN deployments and provides AAA services for multiple networks
- Flexible offload rules – offload subscribers based on data plans and service entitlements to ensure network reliability at all times and offer subscribers the best data experience possible

## Functional components

The Wi-Fi Offload market offer leverages the following functional components of the Data Experience Solution as shown in Figure 1.

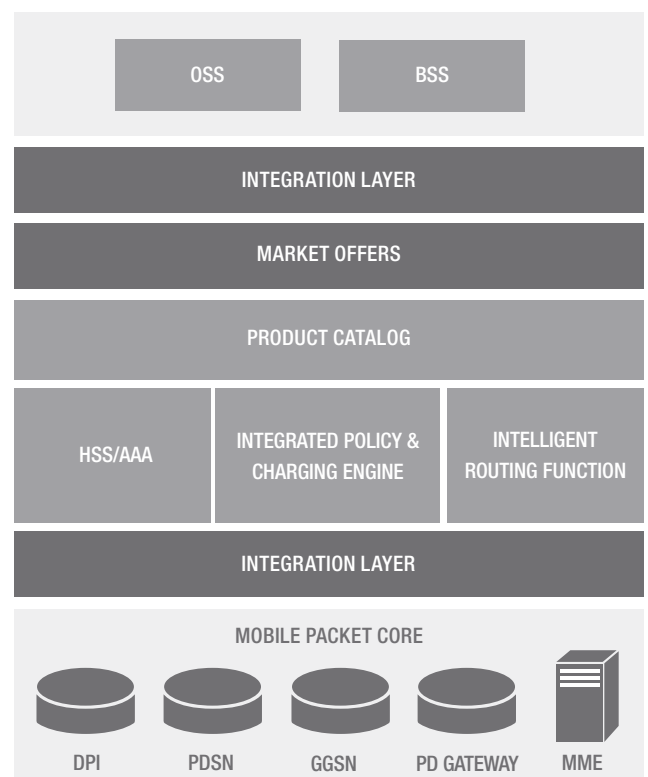
### Product Catalog

The Product Catalog enables a common service definition for data plans across multiple networks, including 3G, 4G and Wi-Fi. Subscriber offload options are also defined in the Product Catalog, including time-of-day and quality of service.

### Authentication, Authorization and Accounting

Authentication, Authorization and Accounting provides carrier-grade authentication for subscribers as they are offloaded from the 3G or 4G network to the Wi-Fi network. Depending on deployment requirements, this component can also process accounting records and generate call data records (CDRs).

FIGURE 1: THE AMDOCS DATA EXPERIENCE SOLUTION



### Integrated policy and charging engine

The integrated policy and charging engine enables operators to apply rating information to Wi-Fi data access, allowing them to create attractive pricing bundles and provide incentives for subscribers to use Wi-Fi networks when the 3G and 4G networks are congested. If Wi-Fi access is not included in a monthly plan, this component can provide real-time rating and balance management for Wi-Fi usage.



### **Intelligent routing function**

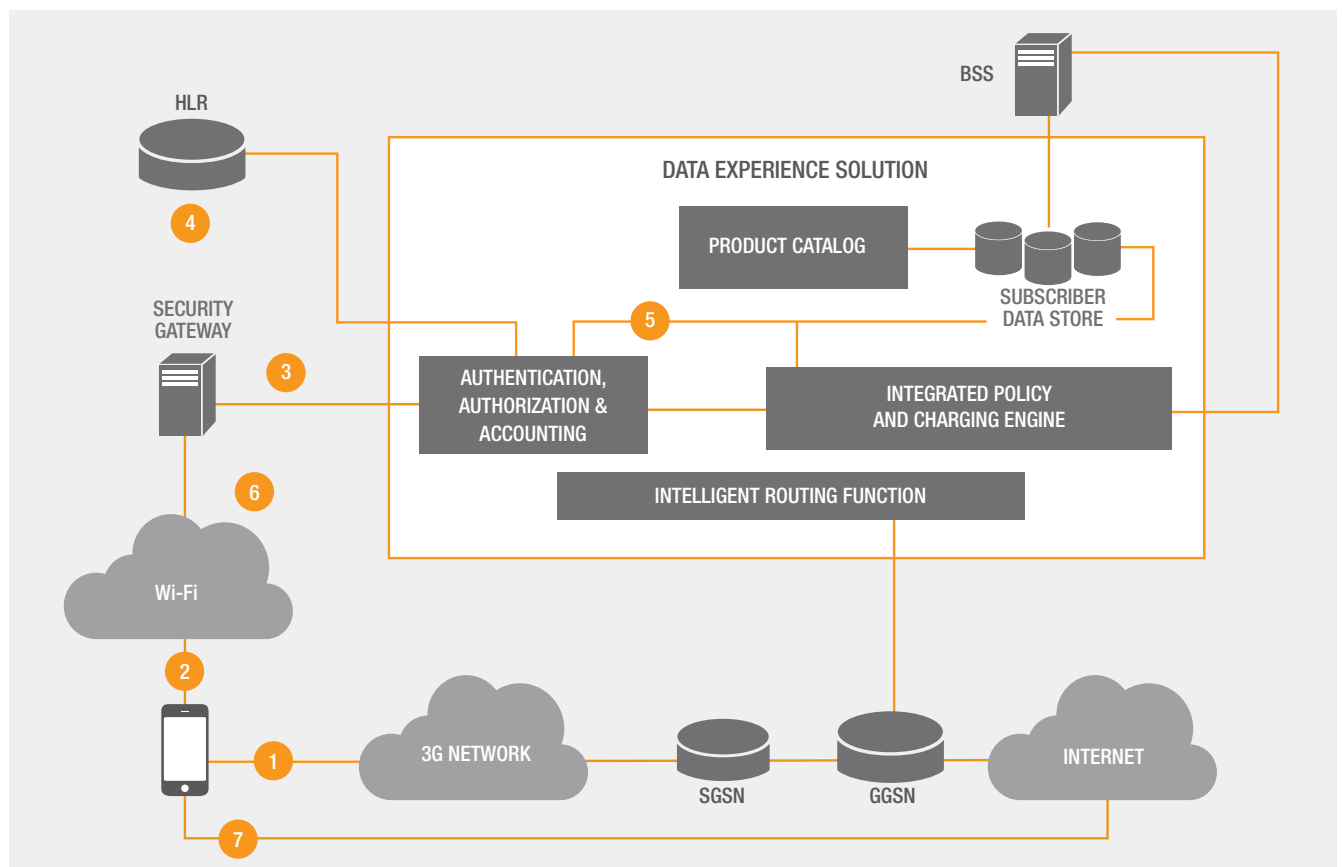
The intelligent routing function provides a single Diameter interface to the 3G and 4G packet core network. When the Data Experience Solution sends a real-time policy or charging control to the network, this component acts as the common Diameter interface to all devices in the network and provides routing and load balancing capabilities.

### **Configuration options**

Using the Wi-Fi Offload market offer, service providers can offer flexible, attractive data plans with Wi-Fi bundles to meet the needs of their subscribers, while still managing network resources and ensuring a consistent user experience for all. Service providers can customize data plans with optional Wi-Fi access or pre-determined offload rules that will automatically offload subscribers to Wi-Fi networks depending on location, network congestion or subscriber entitlements. The Wi-Fi Offload market offer can also apply different charging rates to data over Wi-Fi, providing users with added incentives to use the Wi-Fi network or special pricing promotions when needed.

## How it works

1. The subscriber device is connected on the 3G network.
2. The device detects a Wi-Fi network.
3. The Security Gateway sends an authentication request to the Amdocs Service Controller (AAA).
4. The Service Controller retrieves authentication vectors from the HLR to authenticate the user. It caches authentication vectors for fast re-authentication
5. The Service Controller retrieves a WLAN profile from the Subscriber Data Store to assign a QoS profile.
6. Service Controller authenticates the user against service entitlements from the HLR
7. The subscriber connects to the Wi-Fi network transparently without having to log in separately.



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