

### Software solution for Carrier Wifi

Data traffic keeps on growing to meet subscribers' need for mobility and bandwidth demanding applications. The operators' challenge is now to support the endless and expensive expansion of their network, while boosting their ARPU in a fierce competitive environment.

Wifi connectivity is a cost efficient and flexible solution to deliver Internet mobility and generate new revenues. This however requires a tight control of traffic flows to ensure security and quality of experience, integrated with charging capabilities to be able to monetize data services.



Based on the Vedicis Software Service Gateway (SSG) platform, Vedicis Wireless Access Gateway (WAG) allows operators to expand network coverage and monetize Wifi traffic, securely routing IP packets from Wifi access points to MNOs' mobile core or to local internet peer.

Integrating an advanced Deep Packet Inspection (DPI) engine with policy and charging enforcement function (PCEF), Vedicis WAG offers a centralized and cost efficient way to enhance customer experience, generate new revenues and optimize IP traffic management.

#### Key benefits

##### Extend reach & mobile offload

- Carrying traffic from Wifi access points to the mobile core, Vedicis WAG provides a cost efficient way to **offload MNOs' Radio Access Network**.
- As a key component of Wifi deployment, Vedicis WAG allows MNOs to **extend Customer experience** and **improve indoor coverage**.
- Routing the wifi traffic directly to Internet with its **intelligent Local Breakout capability**, it also extends reach for Communication Service Providers including ISPs and MVNOs.

##### Cost effective solution

- Software based business models
- Adaptability to partners' AAA, PCRF, OCS.

##### Value added services & Wifi calling

- Vedicis WAG provides advanced DPI-PCEF capabilities, to enable **Wifi monetization**, including Application based **data packages** and **Wifi Calling service**.

#### Technology highlights

##### Full software solution

- Delivered as **Virtual Network Function (VNF)** or on **COTS Intel servers**
- **Already deployed in Amazon cloud (AWS)**

##### Advanced capability set

- Traffic intelligence with **best of breed DPI**
- **Policy and charging enforcement gateway**
- Secure access
- **Redirect to Web captive portal**
- Traffic visibility for analytics
- Legal requirements compliancy

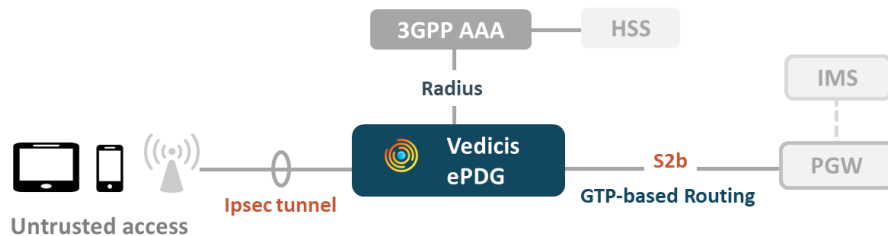
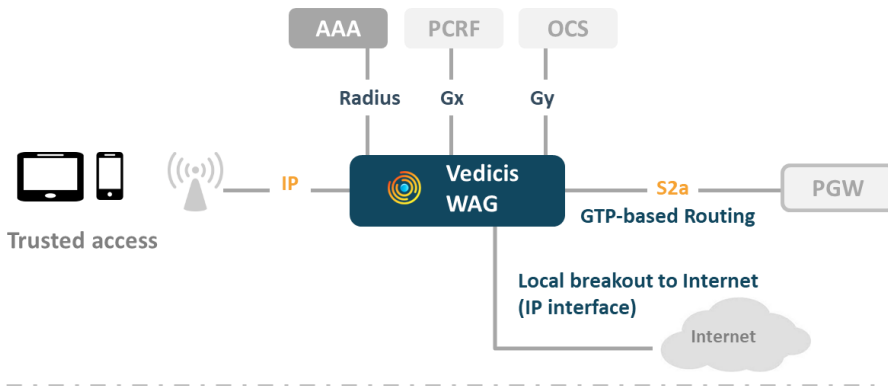
##### Centralized service integration

- **Single point of integration** for policy servers and charging system
- Scalable from 1 to 40 Gbps of traffic per node.



## Wifi access agnostic: Trusted, untrusted

- Managing IP traffic from trusted Wifi access, Vedicis WAG is a **3GPP compliant TWAG (Trusted WAG)**.
- Supporting IPsec tunneling to mobile core, it also serves as a **ePDG (enhanced Packet Data Gateway)** for untrusted access management.



## Deployment and integration overview

### Performance per Intel server and NIC (HPE DL380 G9 or equivalent)

|                     |   |
|---------------------|---|
| Subscribers support | 10 million concurrent subscribers, expandable                           |
| Throughput          | Up to 40 Gbps<br>Packet latency below 20 µs                             |
| Concurrent sessions | 200 000 000 IP sessions<br>500 000 new sessions/s                       |
| Data Records        | 200 000 IP Data records /s<br>Up to 500 counters per User Data Record   |
| Policy and charging | Multiple rating groups and stackable dynamic rules for 100% subscribers |
| High availability   | Active/hot standby node   |
| Software technology | Linux operating system<br>VMWare and Openstack compliant                |

## Gateway functions

### Access management

- IP interface (TWAG)
- IPSec Tunnel support (ePDG)

### Smart routing function

- GTP to PGW
- IP to Local internet access
- Intelligent offloading depending on subscriber or network information

## Traffic analysis

### Subscriber awareness

- Subscriber and IP traffic correlation
- Radius and DHCP support

### Service awareness and DPI

- More than 3000 applications and protocols available in DPI library
- DPI customization module: IP, ports, domain names (http, https).

## Traffic management

### Subscriber policy enforcement

- Controlled by PCRF or embedded policy rule engine
- Wifi Access control
- Traffic shaping
- Per service or service category

### Subscriber traffic metering

- Real time charging enforcement
- Time and volume based
- Multiple rating groups, per service or service category

### Traffic redirection to captive portal

### Aggregated traffic management per Wifi Access point

## Traffic visibility

### Data records

Per IP session, per Subscriber

### Traffic statistics and monitoring

Per configurable period of time  
Per service / service category

## Legal services

- Records
- Traffic interception
- URL filtering.

## About Vedicis

Vedicis provides advanced IP broadband packet management software platform to fixed and mobile Communication Service Providers. With Vedicis PGW, DPI-PCEF and Wireless Access Gateway solutions, CSPs take informed actions for better traffic connectivity, control and monetization.

Vedicis' leading NFV ready platform uniquely enables the technology migration to Software Defined Networks and to reap the benefits of more flexibility, faster integration and better ROI.

Visit [www.vedicis.com](http://www.vedicis.com) or email to [info@vedicis.com](mailto:info@vedicis.com).