

Streetwifi Wireless Access Gateway (WAG)

WiFi services are evolving on a daily basis. There is a very good reason for that.

WiFi is becoming the basic building block of modern communications. Runs on an unlicensed frequency on a global scale, its performance improves year after year, offers the best price-performance ratio and supports a wide range of business models.

At Streetwifi we see all these advantages of the technology, but more importantly we deeply sense the needs of CSPs and end users, and our Streetwifi WAG was designed and built with those two key players in mind.

The Streetwifi WAG offers Communications Service Providers (CSPs) a simple, scalable, carrier-grade WAG solution ideal for community Wi-Fi environments such as homespots, Multi Dwelling Units (MDUs) and venue-based public Wi-Fi.

It provides an ARC (*Affordable, Robust and Compact*) platform which delivers top performance per processing unit and adaptability to most business scenarios, ensuring rapid adoption of this technology by CSPs on a global scale.

Highlights

- ✓ ARC software-only platform
- ✓ AP vendor agnostic*
- ✓ Highly scalable
- ✓ Commercially adaptable for all sizes of CSPs

Under the hood

- ✓ SoftGRE / EoGRE tunneling
- ✓ IEEE 802.1q VLAN for SSID segregation
- ✓ FAS Web Service: authentication, accounting and CoA/DM
- ✓ vCPE: pre & post authentication policy enforcement, dynamic captive portal policy per SSID
- ✓ Carrier Grade NAT (IPv4), vertical traffic segregation and processing per SSID, intelligent traffic isolation
- ✓ OSPF

* Most vendors supported.

Designed for multiple applications

01

Community WiFi

Agnostic regarding most vendors, making it a viable solution for billions of residential APs worldwide that do not support Hotspot 2.0.

02

Virtual bridge

Communications for business, enabling a rapid and economic deployment of LANs between business locations.

03

Network backend

Several features to support a long array of business models, including network and service monitoring tools, designable captive portals per SSID, Ad Server advertising in the portal, Walled Garden capabilities and billing per traffic, time or a combination of both.

04

Software only

An ideal alternative to run on premises or in the cloud.

Features and benefits

Scalability

- ✓ One size fits all: from CSPs with a few thousand subscribers to multi-million subscriber CSPs.
- ✓ Scalable not only based on number of subscribers but on CPE vendor and technologies such as HFC, FTTH, WISP and ADSL.
- ✓ Software-only solution, ready to be deployed on premises or on the upstream carrier.
- ✓ Rapid adoption by many CSPs boosts usability and demand for the service.

End user perspective

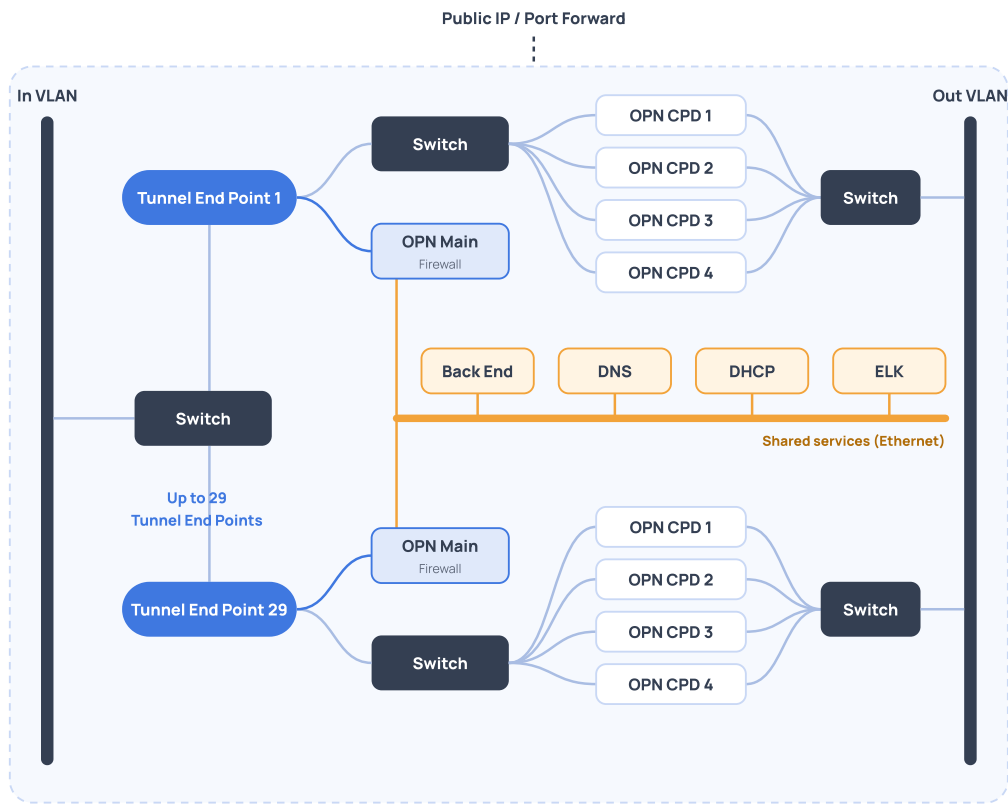
- ✓ For the individual user the main benefit is having many more connectivity options at a lower price.
- ✓ A great chance for 2 billion people under-connected or not connected at all.
- ✓ For the CSP, an excellent chance to create new value-added services and additional lines of revenue.

Affordable, Robust, Compact (ARC)

- ✓ Wide array of possible business models: from licensing for CPE to success-based models. Freemium services. Co-branding. Hybrid virtual operator.
- ✓ High availability, in-service software upgrades, network monitoring.
- ✓ Minimum processing requirements.

Reference architecture

Up to 29 Tunnel End Points, each with its own OPN Main and four OPN CPDs, sharing Back End, DNS, DHCP and ELK monitoring.



Tunnel End Point (from 1 to 29)

- Tunnel End Point
- GRE MAC Monitor
- GRE Onto MySQL
- Elastic Search / Kibana (ELK) for monitoring (on premises or cloud based)

OPN CPD

- Captive portal: supports multiple SSIDs with VLAN tagging
- DNS Masq
- RIP DHCP
- Relay

OPN Main

- OpenVPN
- DNS
- DHCP Relay
- RIP
- GREoIP → Node
- GREoIP → Central Back End

Let's make something great together.

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