Vedicis PGW
Packet Data Network Gateway

Virtualized and Cloud solution for MVNEs, MVNOs and MNOs

Based on the Vedicis Software Service Gateway (SSG) platform, Vedicis Packet Data Network Gateway (PGW) is a highly performant, cost-efficient, virtualized element of the core network, incorporating DPI (Deep Packet Inspection).

It is designed to address the specific challenges posed by QoS protection and Data traffic monetization, allowing operators the flexibility to scale their network and take advantage of 3G and 4G traffic growth.

Deployed in a cloud, a virtualized 3GPP core network, or as a software product on a COTS server, it enables communication service providers to choose the right steps to leverage software transformation.

Interwork, Optimize, Monetize

For Communication Service Providers to be successful within the Broadband management domain requires constant optimization and adjustment, to keep infrastructure costs under control, monetize internet services and VoLTE, and improve Quality of Experience through service aware session management and monitoring.

Vedicis PGW software provides connectivity to Packet Data Networks like Internet, Intranet and IMS, supporting both 3GPP (3G and 4G) and non-3GPP (i.e. Wi-Fi) access networks. It assigns IP addresses to endpoints and manages packet routing, filtering and forwarding. By hosting the Policy and Charging Enforcement Function (PCEF) with an advanced DPI engine, it simplifies core network deployment, and enables subscriber- and application-based QoS management with advanced charging policies.

Solution benefits

Redefine network costs

- **Software based business model**
  Pay as you grow schemes
  For **Cloud based** MVNO/E
- **Cost effective** platform

Move to software transformation

- **Full Software platform**
- **Cloud ready, deployed in AWS**
- On-demand **dynamic scalability**
- **Virtualized PDN-GW**

Simplify network deployment

- **3G, 4G, and non 3GPP access**
- **Embedded policy rule engine**
- Purpose-built configuration for **IOT and M2M traffic**

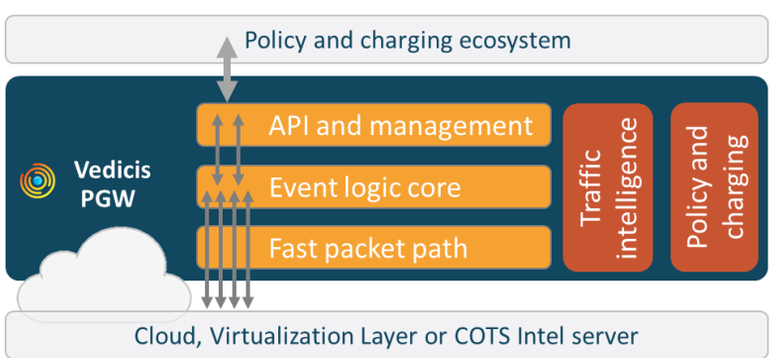
Enhance traffic management

- **Connectivity:** IP, GTP, GRE, VLAN
- **Multi-criteria traffic management**
- Policy and Charging Enforcement Function
- Traffic intelligence with **best of breed DPI**

Technology highlights

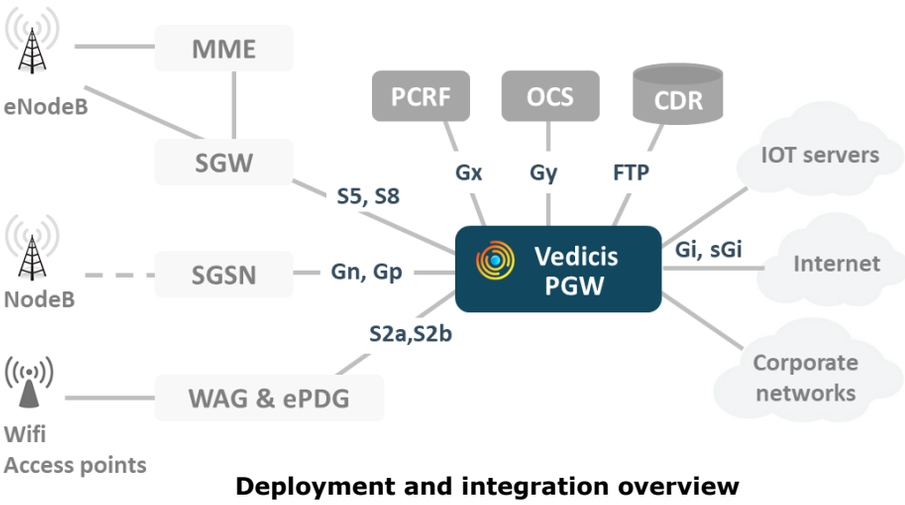
Fully software from the outset, Vedicis PGW performs just as well on hardware or virtual machine, with critical communication components clustered to ensure **scalability** and **robustness** with a centralized APIs and management support for ease of deployment.

Efficiently architected to transform high volumes of packets and data to a smaller amount of high value events and triggers, processing is done just in time, guaranteeing extended control over the traffic with no waste of resources. The **unique event driven core logic** ensures the seamless bridging between the continuous flow of data traffic and the integration points including policy and charging servers.

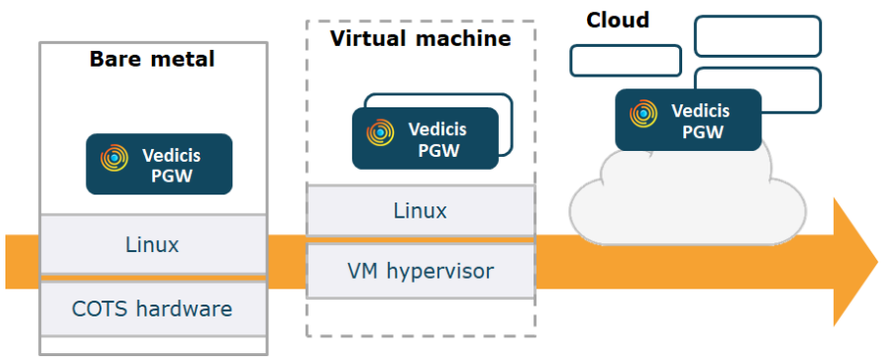


With local actions being taken based on either external or locally learnt conditions, Vedicis PGW perfectly fit in MVNO/E environments, who require additional services to be launched quickly **with no cost and time obstacles**.

Vedicis PGW



Deployment and integration overview



Leverage software versatility to move to virtualization and cloud

Performance per Intel server and NIC (HPE DL380 G9 or equivalent)	
Subscribers support	10 million concurrent subscribers, expandable 30 million concurrent bearers, expandable
Throughput	Up to 40 Gbps Packet latency below 20 µs
Sessions	200 000 000 IP sessions 500 000 new sessions/s
Data Records	200 000 IP Data records /s 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 VMWare and Openstack compliant

Access server function

Gateway functions
- GTPv1 and V2
- GRE, VLANs
- APN Management
- Multi-bearer support

UE IP address allocation: Internal DHCP

Global traffic management

Routing, Blocking, Filtering, Shaping
QCI management, DSCP marking

Service awareness
TFT (Traffic Flow Templates), DPI, VoLTE

Aggregated traffic shaping
Bandwidth and charging policies
Per network criteria such as APN, HNO.

Policy and charging enforcement

Controlled by PCRF or by embedded policy rule engine

Subscriber policy enforcement
- Bearer binding, Shaping, Gating
- Per service, direction (uplink, downlink)

Subscriber traffic metering
- Real time charging enforcement
- Multiple rating groups
- Per service

Traffic intelligence

Best of breed DPI
- More than 3000 applications and protocols available in DPI library
- DPI configuration module

Data records: per User session, IP session, Subscriber.

Traffic statistics, real time monitoring

Legal services: records, interception, URL filtering.

IOT and M2M specific features

NB-IOT and LTE-M networks
Integrated service packages
Device and fleet management

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 cloud 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 or email to info@vedicis.com.