

Overview

Vedicis provides its software DPI-PCEF (Deep Packet Inspection—Policy and Charging Enforcement Function) to an ISP in MEA. Deployed in the ISP core network and managing the fixed Data traffic with subscriber and application awareness, Vedicis DPI-PCEF enables to increase the quality of experience for Internet access, and to monetize the data traffic with application based packages.

Situation

ISPs worldwide are facing the growth of Internet data traffic, driven by popular applications and new customers' usage. This Data growth leads to Network congestion with **QoE degradation**, and **unfair network resource distribution**.

They can invest in new network capacity, deploying additional components and links; however for many operators this new investment is not balanced by new revenues, as the ARPU and number of subscribers can remain stable while the data requirement continues to increase.

Deploying a platform to control and monetize the data traffic represents a flexible alternative to manage traffic growth.

Customer profile

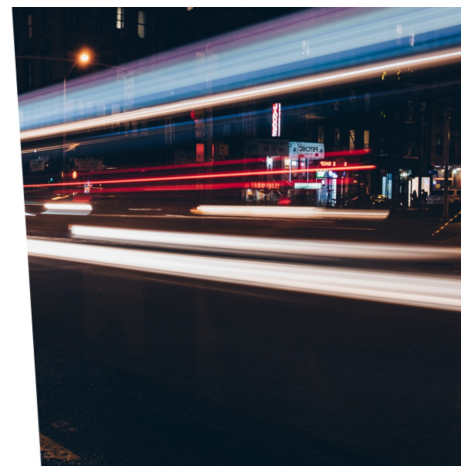
- Internet Service Provider for residential and business customers
- 1 Million subscribers.
- 400 cities, 1400 telecommunication centers
- Advanced data services: hosting, datacenter, dedicated bandwidth.

Challenge

A first level of control and monetization can be done at BRAS/BNG level, which usually support bandwidth shaping or traffic blocking relying on IP address criteria. This proves to be inefficient in most cases, as application awareness is key to prioritize time-sensitive traffic properly. Moreover, bandwidth management needs to be processed in real time without applying pre-defined thresholds, in order to maximize the QoE for the maximum of subscribers.

An additional solution is needed to improve efficiently the QoE and monetize the data traffic. But with expensive and proprietary DPI solutions, there is a high risk that costs will not be covered by business and operational benefits.

How to deploy an efficient solution for traffic management, Without incurring huge costs and impacting existing components?



Vedicis solution and key benefits

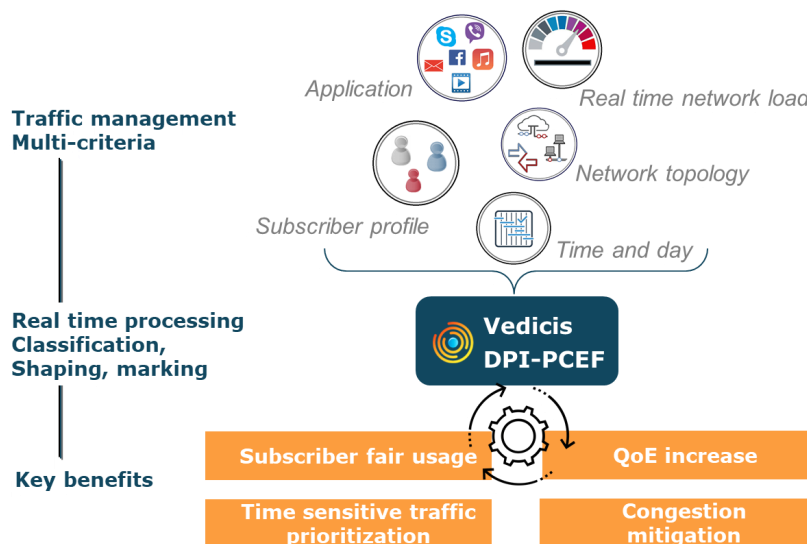
Based on Vedicis Software Service Gateway (SSG), Vedicis DPI-PCEF allows to make the network more efficient, and to monetize the Internet traffic using service differentiation.

How does it Work?

The IP traffic is managed by the DPI-PCEF, deployed in an active mode in the ISP network. The **DPI engine** is used to classify the various traffic types, and a specific module allows assigning a **priority level** to each IP packet. Policies are directly defined on the system, without requiring any additional hardware or integration with a policy server.

Internet traffic is then **blocked, shaped, marked or simply forwarded, depending on different criteria** such as service priority level, subscriber profile and time of the day. As a result:

- **Time-sensitive and profitable traffic is prioritized.**
- Network resource is **shared** in real time between subscribers.



Key figures

- Multi-10Gbps links per 2U Intel server
- Only 4 cores and 64GB RAM per 10G link required
- DPI activated for 100% of the traffic
- 20 micro-second of latency

Project phases and key benefits

• Phase 1: traffic analysis

The Vedicis platform has been deployed in a passive mode, to analyze the IP traffic, and provide statistics and data records. This enabled to make a first diagnosis of QoE issues and define which policies could be defined to improve network efficiency.

• Phase 2: Network QoS optimization

Application and subscriber based policies have been defined, to ensure real time fairness between subscribers, and better QoE for time sensitive applications.

• Phase 3: Data monetization

Integrated with the charging system of the operator, the DPI-PCEF is now used to monetize the data traffic, by supporting various offers such as bandwidth happy hours and application based quota packages.

Key features

- **Traffic management:** Data traffic analysis, real time bandwidth processing, application shaping, DSCP marking.
- **Data traffic monetization:** volume quotas, multi-rating group charging interface.
- **Visibility:** Deep Packet Inspection, configurable Data records, Traffic statistics, .

Full software solution

Vedicis software is deployed on third party servers with a high level of performance. It does not even require **any specific board or resources for the DPI function**. This is key for the customer, who can **source the hardware locally at the best market price**.

About Vedicis

Vedicis provides network gateways and platforms such as Packet Gateway (PGW), Wireless Access Gateway (WAG), Evolved Packet Data Gateway (ePDG), IP probes and Deep Packet Inspection Policy and Charging Enforcement Function (DPI-PCEF) to Communication Service Providers (MNOs, MVNO/Es, IOT Service Providers, ISPs). Vedicis innovative platform enables to analyze, control and monetize IP broadband usage thanks to new data subscriptions, OTT partnerships and new IOT services. These solutions are delivered with a cloud native platform, Vedicis Software Service Gateway (SSG) and leverage both 3GPP and open standards to accelerate telecom digital transformation, so that Telecom operators can reap the benefits of more flexibility, faster integration and better ROI.

Please visit www.vedicis.com or email to info@vedicis.com.