



Vimatix WAP-GW

Bandwidth optimizing WAP-GW for Mobile A2P and P2P applications

Product Description

Background

Vimatix WAP-Gateway is a carrier-grade server enabling subscribers access to mobile and web services using their mobile terminals.

The gateway retrieves the content from Web or WAP servers, converts HTML, XHTML and WML markup languages while optimizing the results to match the capabilities of the mobile terminals and finally delivers the content using WAP or IP protocols.

In addition, Vimatix WAP-GW enables multimedia services based on the WAP protocol like MMS and Java application download Over The Air (OTA).

Vimatix WAP-GW scales up to support thousands of concurrent connections and it is based on 3GPP and OMA standards.

Vimatix WAP-GW compliance

Vimatix WAP-GW supports WAP v1.1, v1.2, v1.2.1, v1.3 and v2.0 WAP clients. WAP 2.0 clients are supported with HTTP/TCP (W-HTTP and W-TCP), or the WSP protocol stack.

The gateway was tested to conform with most of the popular WAP and web browsers. MIME-types are configurable. Any character set is supported.

The gateway provides session management and supports session and persistent cookies.

Security, Authentication and Access Control

Vimatix WAP-GW provides for secured and encrypted client-server transactions over SSL/WTLS protocols with RSA/ECC algorithms.

A rule based sub-system controls access of particular subscribers to certain domains. The gateway combines information from subscriber provisioning systems with HTTP_AUTH to control access to certain pages or folders.

Acting as the terminal proxy, the Vimatix WAP-GW can interface a Radius accounting server to fetch user identity information like the MSISDN number and act as an identity server for to services like MMS.

A session timeout parameter controls how long will be the connection maintained for idle clients.

Finally, Push Initiators are authenticated as well.

Content Billing and Session Screening

Vimatix WAP-GW is located in a perfect position to screen all WAP or MMS traffic. Content screening can be used for detection of premium content forwarded by end users to perform:

- **Content protection** (forward lock for non-DRM compatible devices)
- **Super distribution** charge for premium content freely distributed by subscribers
- **Generate CDRs** with usage as well as content provider information

Bandwidth Optimization

Vimatix WAP-GW can feed exiting MMSCs side by side with dedicated MMSCs – the WAP traffic is routed to the right server based on session headers.





The Gateway optimizes data bandwidth usage by inspecting all WAP/MMS traffic and measuring the bandwidth utilized by A2P and P2P transactions. MMX calculates the free bandwidth at any moment and signals back to A2P platforms information about the maximum load they can generate.

For example, with Vimatix MMSC, an A2P dedicated MMS-Center, MMX dictates the number of notifications that can be sent to recipient users for bulk or push messages. This eliminates congestion in the IP network and prevents starvation of P2P transactions.

PPG

The Vimatix WAP-GW comes with a built in Push Proxy Gateway serving Push Initiating services compliant with the PAP protocol. The services have control on the expiration of the message.

Scalability and High-Availability

The Vimatix WAP-GW can be deployed on Unix or Windows 2003 operating environments. As the services are deployed in N+1 scalable, redundant, high-availability Active-Active load balanced fashion. With this architecture, the service is seamlessly scalable eliminating maintenance down-time.

Operation and Management

Vimatix WAP-GW is SNMP compliant and also complies with the VMS web-based management console. The operator can manage and monitor the entire service from any point in the network.

The gateway produces comprehensive log files with an option for detailed trace of any transaction including terminal IDs, URLs, bytes transferred and time stamps.

Reports and statistical information can be dynamically produced by the operator using the VMS console.

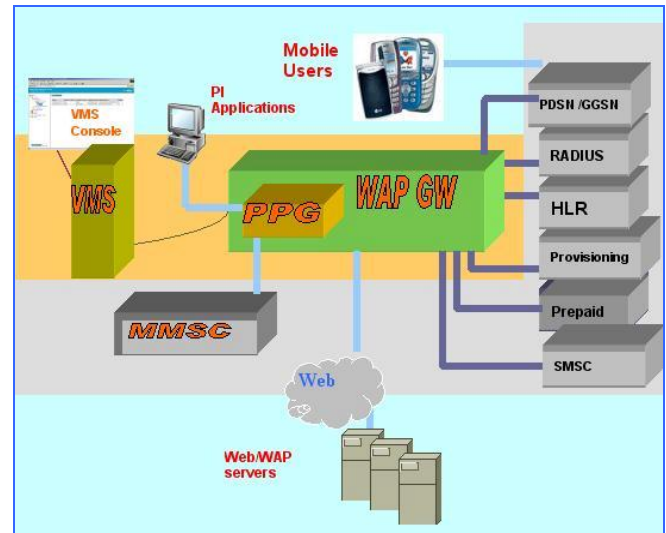


Figure 1: Vimatix WAP-GW Mobile Network Interfaces

Technical Features

Platform

- Solaris 10 or Windows 2003 or higher
- Software: Vimatix WAP-GW, VMS and PPG

Networks

- GSM, GPRS, UMTS, CDMA, W-CDMA

Content and Protocols

- Supports WAP 1.1, WAP1.2, WAP 1.2.1, WAP 1.3, WAP2.0, HTTP and XHTML
- Supports character set adaptation
- Supports OTA provisioning and download, MMS and WAP-Push protocols (MM1, PAP)

Performance

- More than 1000 concurrent connections in a single dual CPU machine
- More than 100 TPS in a single dual CPU machine

Billing and Provisioning interfaces

- Customizable CDRs
- RADIUS and LDAP compliant

Management Interfaces / Protocols

- SNMP Compliant
- LDAP

Architecture

- Distributed and scalable architecture
- Supports High Availability Configurations

