



Openwave® Web Optimizer

Optimizing and Accelerating the Web

As off-portal browsing continues to dominate how subscribers consume content, users of smartphones and feature phones expect an internet experience resembling that of their 'wired' PC. The amount of traffic on the mobile broadband network is increasing dramatically, and speed is one of the biggest differentiators in a competitive mobile market.

Openwave Web Optimizer enables service providers to virtually increase the capacity of their network by up to 40%. It reduces costs and maximizes network bandwidth by increasing data transfer rates over wireless data networks while decreasing bandwidth consumption, providing faster browsing and more immediate access to content.

Product Benefits

- **Fast Access** - Reduces service latency to speed up mobile internet access.
- **Cost Reduction** - Reduces or defers network expansion requirements.
- **Improved Customer Satisfaction** - Faster content retrieval drives adoption, increases loyalty and reduces churn.

Product Details

Web Optimizer is available as a standalone product and as an add-on to the Openwave Integra platform.

Fast Access

Mobile service providers can reduce service latency by applying acceleration techniques and advanced traffic management to speed up mobile internet access.

- **Internet Intelligent Caching** brings content closer to the subscriber by mirroring a subset of off-portal content in-house or optimizing elements in the cache for greater efficiency.

- **Intelligent Pre-Positioning** analyzes traffic and positions the optimized version of the most requested sites in the cache for quicker access.
- **Chunking** allows the sender to buffer small pieces of the message — instead of the entire message — without adding much complexity or overhead.
- **Pipelining of HTTP Requests** greatly improves the load time for web pages, especially over high-latency connections.
- **Connection Conservation** reduces latency by reducing the number of connections used by the browser/user-agent and the number of DNS lookups performed by the browser/user-agent.
- **Multiparting** increases traffic efficiency to mobile devices (predominantly feature phones). When a user requests a URL, Web Optimizer creates a compressed multipart-related document to return to the handset.
- **Cascading Style Sheet (CSS) Optimization** minimizes markup and CSS files for speed. CSS optimization methods include redundant white space and comments removal, which works in-line with HTML as well as with external documents.

Cost Reduction

Using Web Optimizer, the network can handle more concurrent interactions with the same resources so fewer network shortages impact billable traffic.

- **Persistent Connections** - uses the same TCP connection to send and receive multiple HTTP requests/responses for increased speed and decreased resource consumption.
- **Server-Side DNS Lookup** - avoids costly over-the-air DNS lookup and uses intelligent sharing of DNS across multiple services.
- **GZIP and Byte Encoding** - improves download speed by reducing the overall amount of data transferred.

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Improved Customer Satisfaction

Web Optimizer provides subscribers with faster downloads that are visually clear and appropriately formatted to their devices.

- Congestion Control - automatic detection of website/server-side unavailability results in temporary suspension of that server only and prevents long periods of perceived inaction on the mobile device.
- Advanced Image Optimization Technology - achieves the reduction in bytes of the transferred images without affecting the content's visual quality, file format or image size.

- Markup Acceleration - removal of unnecessary markup reduces the number of bytes transferred over the air. Markup optimization ensures that no data is sent to the device that is not needed.
- Image Transcoding and Resizing - resizes images based on screen dimensions and known device capabilities, reformatting and converting images to the format most suitable for the device.
- Controlled Software Updates - detects automatic software updates and reschedules them during a non-busy hour.

For more information, please contact sales@openwave.com or visit www.openwave.com.

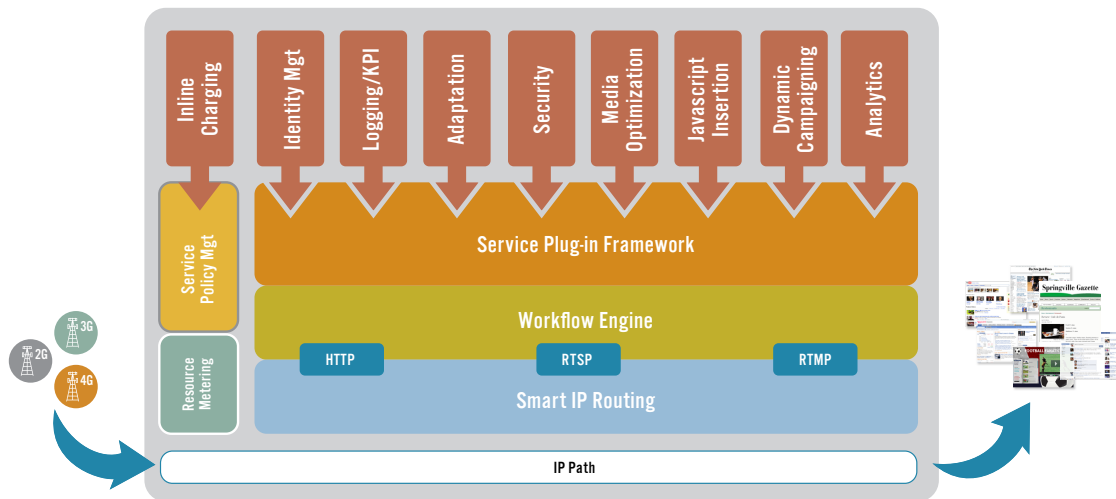


Figure 1: Openwave Mediation Framework.



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