



ViaSat Web Accelerator

Overview

ViaSat's **Web Accelerator Gateway** is a high performance standalone software/hardware product used to accelerate web access over satellite. This gateway installs in any satellite network as a Hub-side component. It houses an application layer pre-fetch and pre-push Web acceleration mechanism (patent-pending) based on a variation of a current market-proven version. Its unique technology directly interacts with the client-side browsers without the need for client-side software or hardware. Microsoft's ISA Server software works as the web proxy, providing an application layer firewall solution, web caching, and VPN mechanisms, in addition to web acceleration, in an all-in-one integrated platform. The web acceleration feature also supports GZIP compression to further improve web access over satellite.

Description

HTTP 1.0 or HTTP 1.1 (without pipelining) is a sequential request/response protocol. Typical browser operation is to first send a GET request to the origin web server, which then sends a page response. The browser parses the response, sends out a request for the first non-cached page object, waits for the completion, then sends out the request for the second non-cached page object, and so on. In certain browsers, this process is load balanced by opening a small number of simultaneous TCP connections, however the basic steps remain the same. The sequential-access-over-satellite network delay significantly degrades user browsing experience due to very high page load times. This product aims to resolve these issues.

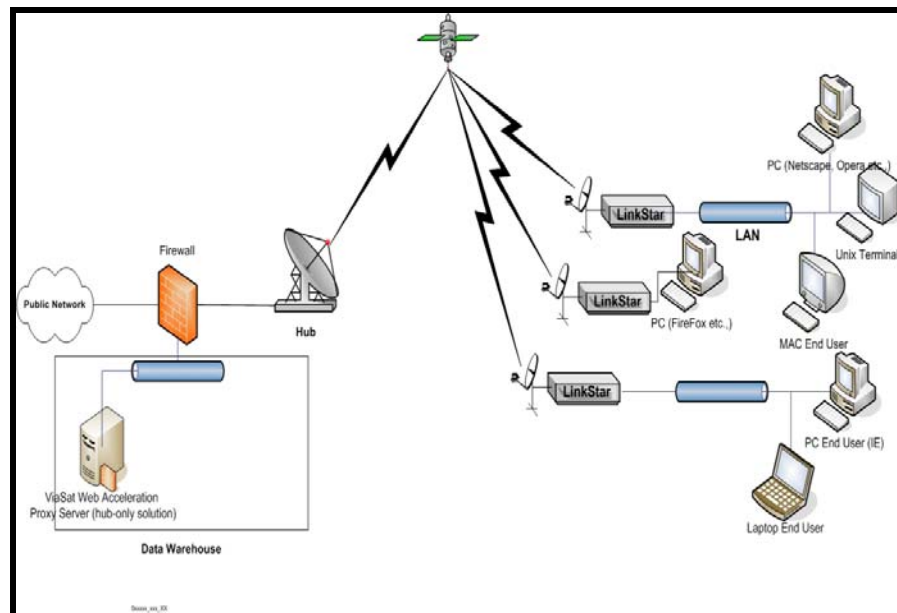
Features

- Hub-only solution does not require any client-side software or hardware components. **Note:** Client side browsers need to point to the proxy server. Automatic browser configurations are possible.
- Rack-mountable 1U hardware platform is cost-effective, scalable, and highly reliable in both redundant and non-redundant configurations.
- Intelligent solution based on the market-proven pre-fetch and pre-push web acceleration technology.
- Readily deployable in any satellite network and fully transparent to any satellite network access technology.

- A unique RFC standards-based formatting solution that specifically improves access over Microsoft's Internet Explorer (IE) browsers (versions 5.5 and above)—with IE comprising around 90% browser market share[1]. Accelerates htm, html, cfm, xml, asp, aspx, jsp, and php extension web pages.
- Supports GZIP compression that sends compressed data directly to all browsers, including popular MAC- and Unix-based browsers that support "gzip" encoding (all the latest versions of IE, Netscape, and other browsers).
- Intelligent web-caching available through Microsoft's ISA server software.
- Can also be configured for multi-layered firewall security and for VPN provisioning through Microsoft's ISA server software.
- Specifically tested to work transparently with ViaSat's line of VSAT products.

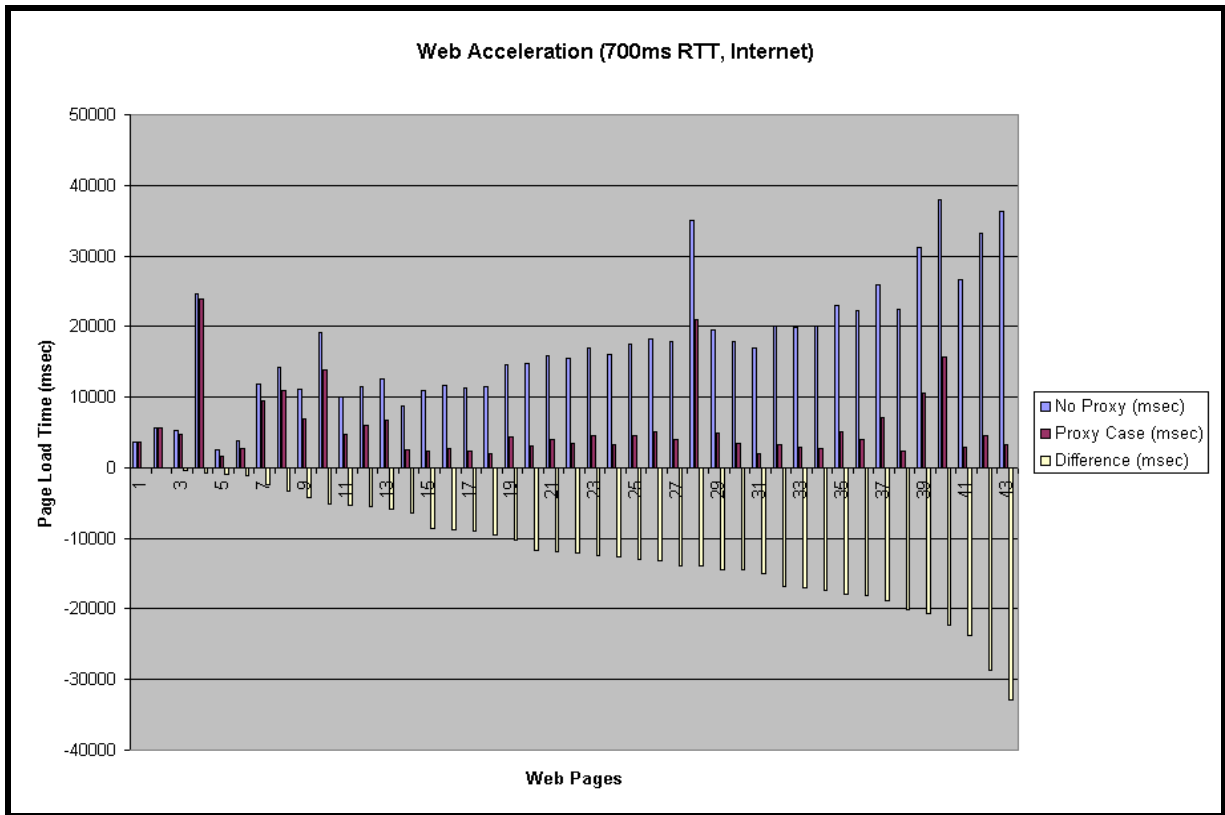
Typical Applications

The diagram below illustrates a typical satellite network using the ViaSat Web Accelerator Gateway. This diagram shows a non-redundant configuration. Redundant and other configurations are also possible.



Performance

The following graph demonstrates the typical page load time improvements using the ViaSat Web Accelerator over standard web access across typical satellite links with round trip time RTT = 700 ms. All measurements were performed on a demo LinkStar system with IE web browsers on the client-side PCs accessing live Internet servers. With the Web Accelerator enabled, an average of 40-50% reduction in page load times was observed.



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Publication Information

Revision Number	Date Released	Comments
000	September 17, 2004	REQ-009141
001	September 20, 2004	CO-016930

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