WebAccelerator™

Faster Web Application Delivery for Portal, CRM, ERP, and Collaboration

Many organizations embark on multi-million dollar web application deployments only to later discover that their users are unsatisfied with the performance versus their old client server application. Additionally, enterprises are centralizing their servers due to regulation and data security requirements, while web application users are becoming more widely distributed in remote offices and as mobile users.

Unfortunately, WAN latency, errors, and other issues prevent web applications from being delivered quickly. Web application architects and managers are finding it difficult to meet the expectations of their users when delivering Portals, CRM, Collaboration, and other enterprise applications.

F5 WebAccelerator™ is an advanced web application delivery solution that provides a series of intelligent technologies designed to overcome problems with browsers, web application platforms and WAN latency issues which impact user performance.
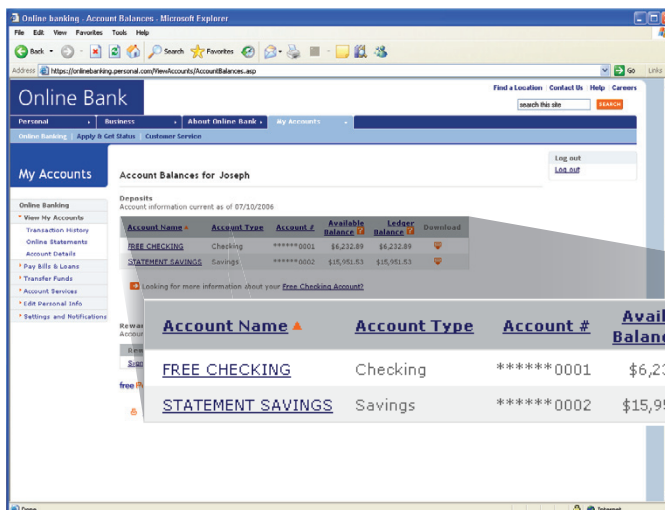
By leveraging F5's Intelligent Browser Referencing (IBR) features, WebAccelerator can often increase interactive user performance up to 10x for web applications, Portal, CRM, and Collaboration such as MS Sharepoint, Oracle Portal, MS Outlook Web Access, Siebel, Hyperion, Peoplesoft, Plumtree, SAP, and other custom and homegrown web applications.

WebAccelerator Accelerates Web Applications

WebAccelerator enhances web application performance from any location to improve interactive performance, decrease download times for static and dynamic data, reduce bandwidth usage, and lower the cost of delivering web applications. The best way to accelerate content is to avoid serving repetitive or duplicate data. WebAccelerator accomplishes this with two groups of functionality: Intelligent Browser Referencing (IBR) and Dynamic Data Offload (DDO).

Intelligent Browser Referencing (IBR)

IBR is a group of capabilities that eliminates the need for the browser to download repetitive or duplicate data, as well as ensuring the best use of bandwidth by controlling browser behavior. By reducing the extra conditional requests and excess data (re)transmitted between the browser and the web application, IBR reduces the effects of WAN latency and errors. IBR also significantly reduces the amount of data downloaded without requiring java applets or making changes to the browser that are common in delta compression methodologies.

Key Benefits

- Accelerates web applications for remote and mobile users by up to 10x

- Significantly reduces bandwidth usage by reducing the amount of data sent (IBR and data compression)

- Improves server capacity by offloading repetitive content serving (dynamic caching)

- Reduces web application deployment and maintenance cost by utilizing validated web application acceleration policies

- Easy to install and manage – requires no browser, user, or web application changes

Why download the entire page twice when only a small area of content has changed.

IBR is comprised of three main functionalities: MultiConnect, Dynamic Content Control, and Dynamic Linearization:

- **MultiConnect** – Enables Internet Explorer to open more simultaneous connections between the browser and web application, allowing increased parallel data transfers. MultiConnect is extremely effective on high latency/high bandwidth networks such as satellite and mobile networks.

- **Dynamic Content Control** – Eliminates the download of repetitive data by ensuring that the browser downloads only the data that is truly dynamic and unique. Eliminates browser "conditional requests" for static data that is incorrectly considered dynamic while ensuring truly dynamic and unique content is freshly served.

- **Dynamic Linearization** – Serves up individual pages of Adobe PDF documents from large non-linear PDFs, allowing for fast first page views of PDF documents. Only the pages that a user is reading are transferred; users no longer have to wait for an entire manual, customer form, design spec, or drawing to be loaded prior to viewing.

Dynamic Data Offload (DDO)

DDO extends server capacity and reduces server processing by offloading repetitive requests for data. DDO includes the ability to perform SSL Acceleration, Dynamic Caching, Dynamic Compression, and HTTP Protocol Optimizations. WebAccelerator devices can be clustered to create very large arrays to scale capacity as your web application acceleration needs grow.
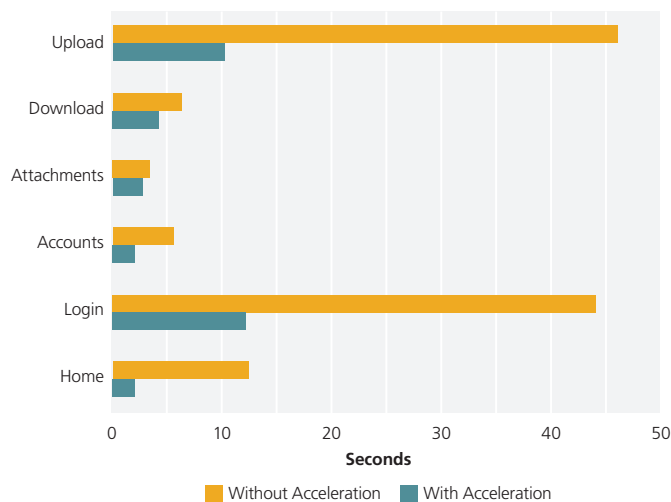
- **WebAccelerator SSL Acceleration** – Offloads the servers from computational-intensive SSL encryption and decryption, reducing server processor utilization by as much as 50%.

- **WebAccelerator Dynamic Caching** – Caches unchanging data that may seem dynamic (contains query parameters, etags, session ids,) but is actually static data or changes in an identifiable pattern. WebAccelerator can cache a higher percentage of data from dynamic web applications while maintaining proper application behavior. It accomplishes this by fully inspecting every aspect of HTTP requests, controlling caching behavior, and invalidating cached data.
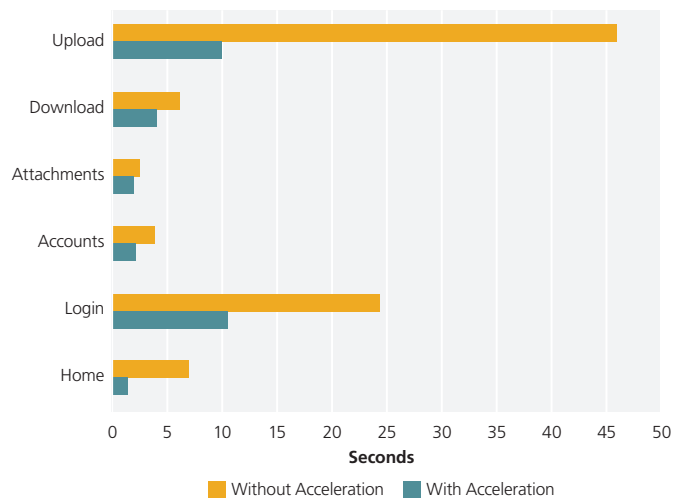
Siebel 7.7 Performance with WebAccelerator
T1 Access with 600ms Latency WebAccelerator Configuration

3x Performance Gain

First Visit User Experience

Category	Seconds
Upload	
Download	
Attachments	
Accounts	
Login	
Home	

0 10 20 30 40 50
Seconds

■ Without Acceleration ■ With Acceleration

Repeat Visit User Experience

Category	Seconds
Upload	
Download	
Attachments	
Accounts	
Login	
Home	

0 5 10 15 20 25 30 35 40 45 50
Seconds

■ Without Acceleration ■ With Acceleration

- **WebAccelerator Dynamic Compression** – Allows WebAccelerator to compress dynamic data from web applications. WebAccelerator Dynamic Compression is different from standard compression implementations because of its compression efficiency and its ability to avoid widespread browser compression bugs. Further enhancements are utilized when serving dynamic, unique, or modified requests for compressed data from the cache. Even dynamic content requiring unique session ids within every link on the page can be delivered and compressed with zero compression overhead.

- **HTTP Protocol Optimizations** – Allows WebAccelerator to maintain high levels of user performance by optimally tuning each HTTP and TCP session for each user's connection conditions. Furthermore, optimizations for Microsoft's NTLM authentication protocol enhance access to protected resources.

Validated Acceleration Policies

By partnering with application vendors to test, tune, and validate specialized acceleration policies, F5 has delivered pre-defined acceleration policies for the most popular web application platforms. These validated application acceleration policies allow you to quickly configure and deploy WebAccelerator to accelerate your web applications.

Validated Web Application acceleration policies that are shipped with WebAccelerator include:

- Microsoft Sharepoint
- Oracle Portal
- Microsoft Outlook Web Access
- Siebel 7.7
- Plumtree (BEA Aqualogic)
- Hyperion Financial
- and many others…

These policies can be used as templates so that you can create custom policies for your own custom or homegrown implementations and web applications. Additionally, these policies contain in-depth knowledge of the interoperability issues between specific browsers, web applications, and network environments to avoid problems specific to your environment.

Remote Office Acceleration

For organizations that have remote offices or target groups of users connecting through slow links, WebAccelerator offers an additional symmetric deployment option. A WebAccelerator Remote can be deployed in a remote office or near remote users to gain additional performance increases and bandwidth reductions.

Visibility and Reporting
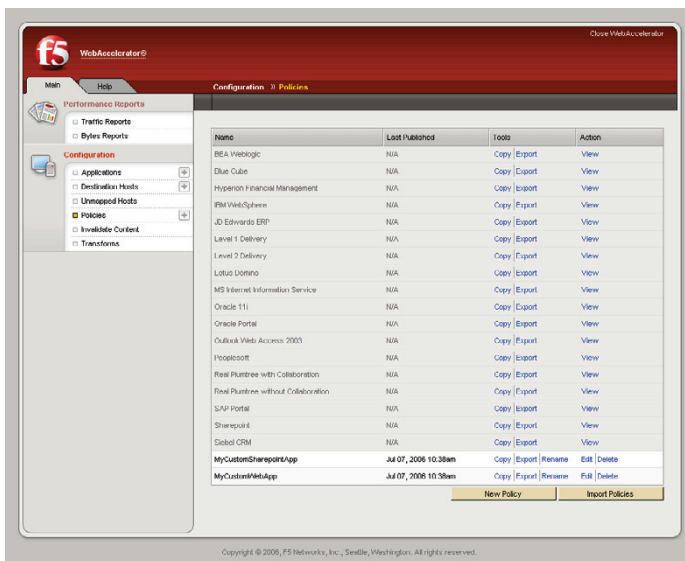
Examples of WebAccelerator validated web application acceleration policies.

WebAccelerator provides a comprehensive set of reports, graphs, and logs which allow both Network Administrators and Web Application Managers to monitor their web application performance.
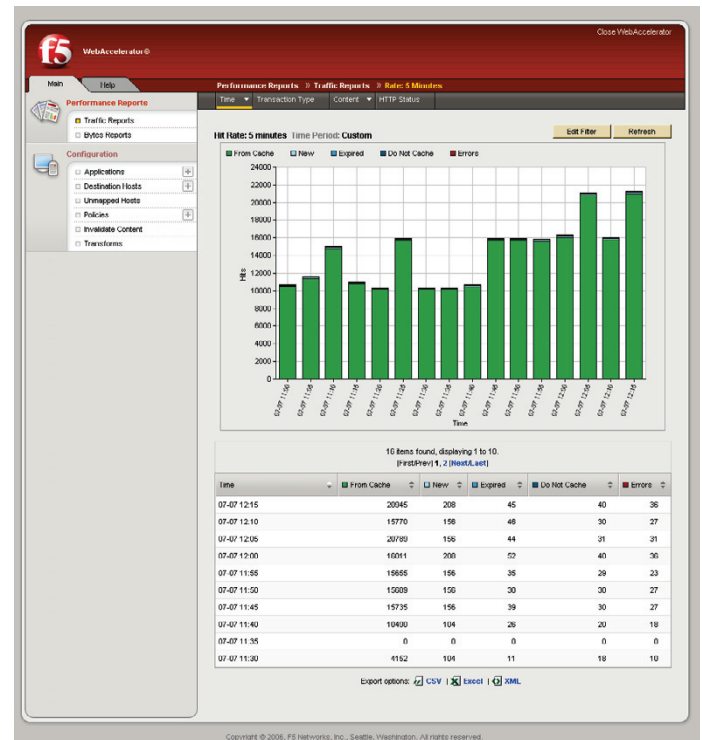
WebAccelerator Reporting provides full monitoring of web application performance.

Physical Specifications

WebAccelerator 4500

F5 WebAccelerator ships and comes complete with:
- 2 x Power Cable
- CAT5 Ethernet cable
- CAT5 Crossover cable
- Console Cable RJ45
- EC Declaration of Conformity
- Rackmount hardware kit

Form Factor: *2U Rackmount Platform*

Dimensions (WxHxD):
426x88.8x550 mm (16.7x3.5x21.6 in)

Weight: *14 kg*

Power Source: *1+1 Redundant 460W each – Input AC 90~264V@47~63Hz full range*

CPU: *Dual 3.2GHz Xeon CPUs*

RAM: *8GB DDR DRAM*

RAID: *RAID1 Mirroring – 150GB total mirrored HD capacity*

Hard drive: *Dual, hot-swappable Western Digital 150GB, SATA, 10,000 RPM reliability-enhanced hard drives (with hard drive trays already)*

Connectivity:
Two 10/100/1000 Mbps Ethernet (data)
One 10/100/1000Mbps Ethernet (management)
One RJ-45 serial port (console)

Manageability:
One USB 2.0 1 port & Front Panel LCD

Temperature, ambient operating: *0°C ~40°C*

Temperature, ambient storage: *-20°C~70°C*

Humidity (RH), ambient operating and non-operating:
5 ~ 95%, non condensing

Approvals & Compliance: *CE, FCC, RoHS*

BIG-IP Web Accelerator Module (WAM)

WebAccelerator is also available as an integrated software module on selected BIG-IP Local Traffic Manager platforms (6400, 6600, 8400, and 8800). When combined with the BIG-IP Local Traffic Manager, the BIG-IP WebAccelerator module provides additional acceleration technologies such as Intelligent Browser Referencing and Dynamic Data Offload to provide an extended-level web application acceleration as an integrated solution. The BIG-IP WebAccelerator module is specially suited for web applications such as Portal, CRM, ERP, Collaboration, and others. The module includes Validated Acceleration Policies from the most popular web application vendors.

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