



Flattening and Reducing Monthly CDN Costs

Fee or subscription-based CDNs (Content Delivery Networks) are often the best solution to the problem of delivering web-based information to end users in geographically dispersed locations. The CDN is a clear alternative to the often costly solution of establishing multiple points of presence to address the performance problems that are inherent in delivering web-based content on a global scale. In addition, the CDN offers a solution for end users to whom broadband access may not be available or viable.

While CDNs may be appropriate for addressing performance problems related to a geographically dispersed consumer base, the “burst” or “variability” of the monthly bill that accompanies that performance boost is not only undesirable, but often unanticipated. CDN services typically charge customers based upon traffic, or “hits,” that are re-directed to the CDN server network and, in turn, delivered to the end user. These costs are the variable component of a monthly CDN bill, which are in addition to the monthly baseline rate charged. The more traffic processed by the CDN, the higher the monthly bill; there is a direct correlation between CDN performance and cost.

It’s a financial quandary. The CDN improves performance and thus increases customer satisfaction, which is a soft benefit but an important one nonetheless. The variability of the monthly cost, however, can wreak havoc on budgets and make it more difficult to determine the real value of CDN services. The desired solution is one that flattens the monthly CDN charges, making the cost predictable without impacting the performance benefits enjoyed by the end user.

To flatten CDN charges, traffic routed to the CDN must be removed or significantly reduced. By deploying an F5 BIG-IP® WebAccelerator™ within the data center, traffic that would otherwise have been routed to the CDN (and incur additional charges) is cached appropriately in WebAccelerator and, according to configured policies, in the user’s browser cache. By taking advantage of the dynamic caching features available in WebAccelerator, the variability portion of a monthly CDN bill can be significantly reduced, if not eliminated entirely. WebAccelerator offers equivalent or better end user experience, resulting in the same level of improved performance at a much reduced cost.

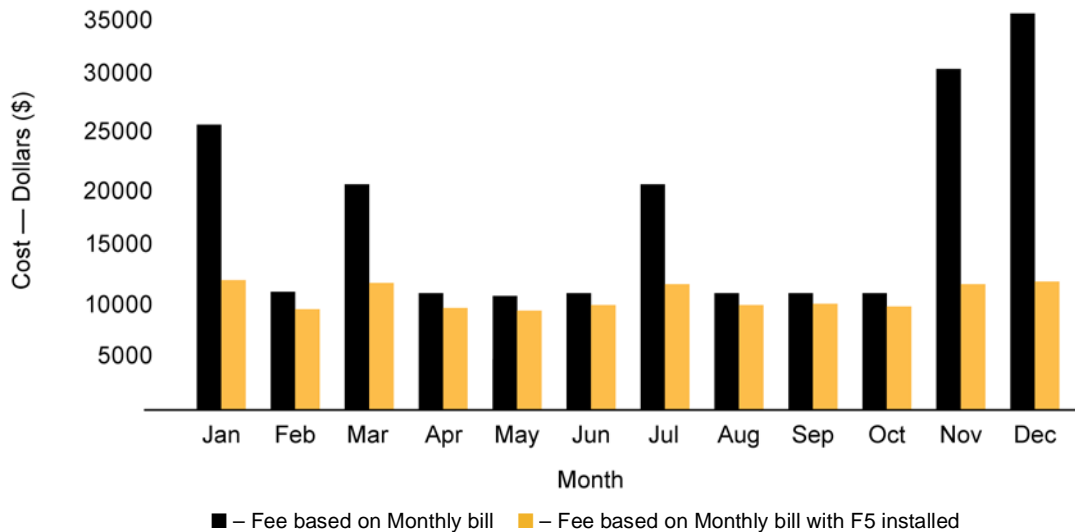
Some benefits of an F5 BIG-IP WebAccelerator solution are:

1. **Simple** – The solution is based on proven web delivery methodologies that work to keep web content delivered quickly and efficiently. BIG-IP WebAccelerator is an appliance with no software installed on the client, server, or application and there is no need to modify anything in your environment. There are also no changes required to support any web application, and WebAccelerator includes validated application policies that instantly provide a boost in performance for many popular packaged applications such as Microsoft SharePoint and Exchange, SAP, Siebel, PeopleSoft, and more. Custom web applications are easily supported as well and WebAccelerator can correct inefficiencies within poorly written web applications and platforms without touching the application’s code base.
2. **Cost Effective** – Depending upon the environment and application infrastructure, only one or two BIG-IP WebAccelerator appliances might be necessary. Once installed, the only recurring fee is software/hardware maintenance, which is typical for network devices and not variable. Depending on the amount of traffic previously routed to the CDN, this solution can pay for itself in less than three months or one significant traffic burst event.



3. **Reduce Traffic on the Fee-based CDN** – A BIG-IP WebAccelerator solution examines application data and makes decisions as to how to deliver that data most quickly and efficiently based on configured policies. By serving content from WebAccelerator, traffic is offloaded from the CDN and back-end web application infrastructure, resulting in lower monthly CDN bills and the ability to delay web server infrastructure upgrades due to increased capacity.

Typical Fee Based Monthly CDN Bill



Per-hit fee-based CDN monthly bill burst vs. flattened bill with F5 installed

BIG-IP WebAccelerator offers features that the CDN cannot deliver:

1. **“Stand-in” Capability** – Delivers content continually, even in the event of a server failure. In the case of an e-commerce site, WebAccelerator has the ability to keep shopping carts alive and hand purchases off to the financial transaction servers for processing.
2. **MultiConnect** – Enables Internet Explorer to open more simultaneous connections between the browser and web application, enabling increased parallel data transfers. MultiConnect is extremely effective on high latency/high bandwidth networks such as satellite and mobile networks.
3. **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.
4. **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.

Introducing an F5 BIG-IP WebAccelerator can significantly reduce the variability of a fee-based CDN while offering additional performance enhancements not available from traditional CDN vendors.

For more information on F5 BIG-IP WebAccelerator, and other F5 products, visit www.f5.com.