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Chris Chatterton
Vice President
Network Engineering

DoubleClick Triples Capacity with F5's BIG-IP Local Traffic Manager 8400 Platform

Industry:

Digital Advertising and Marketing

Challenges:

- 35-50% annual traffic growth
- 10 billion digital transactions per day
- 100% uptime required

Solution:

F5 BIG-IP® Local Traffic Manager and iControl™ for HP ProLiant DL385 dual-core servers

Benefits:

- Infrastructure scalability to meet growing traffic demands
- SSL offload frees over 10% of dedicated server capacity
- Cost avoidance
- Increased manageability

Overview

Since 1996, DoubleClick has empowered the digital advertising industry, helping agencies, marketers, and publishers to profit from their online marketing investments.

DoubleClick is known for its innovation in digital marketing, where reliability and a wide reach enable clients to improve productivity, increase revenue, and enhance advertising results. DoubleClick's suite of technology products and strategic services is designed to meet the needs of the buy- and sell-sides of digital marketing. On the buy-side, DoubleClick serves the needs of agencies, advertisers, and marketers. On the sell-side, DoubleClick serves the needs of web publishers, networks, and media websites.

Over the past few years, DoubleClick has experienced annual traffic growth volumes between 30-50%. With billions of digital transactions per day, and growing, server capacity was diminishing. DoubleClick needed a cost-effective solution to enable continued growth.

After choosing F5, DoubleClick now experiences premium ad performance and increased server capacity to meet the growing need

for their mission-critical ad services.

F5 also delivers a streamlined management approach to handle DoubleClick's expected growth in an operationally efficient manner.

Challenge

With DoubleClick's customer base growing so quickly, the number of impressions being delivered was dramatically increasing. Server processing was enduring significant strain.

“I was getting internal calls once a week concerned that we were running out of server capacity,” explains James Braun, Vice President of Global Operations at DoubleClick.

For DoubleClick and its customers, every single transaction has monetary value. With a peak ad delivery rate of 250,000 per second spread across North America, Europe, and the Asia-Pacific regions, and over ten billion transactions per day overall, reducing server strain became a top priority for the team managing DoubleClick's technological infrastructure.

Moreover, for 2007, DoubleClick anticipated about a 35-50% growth in traffic. This significant growth—combined with high demand for ad availability and reliance on ad traffic volume for revenue—prompted the





digital marketing company to search for a robust, highly available, and manageable application delivery networking solution.

Solution

DoubleClick chose F5's BIG-IP Local Traffic Manager (LTM) 8400 platform to secure and accelerate their ad-delivery application running on HP ProLiant DL385 dual-core servers. F5's BIG-IP LTM offers DoubleClick increased server and network infrastructure capacity, significant application performance improvement, lights-out availability, and enhanced network manageability.

"We currently run over 10 billion transactions per day through the BIG-IP 8400s," says Braun, adding that initial tests showed competitive products didn't match up to DoubleClick's transaction throughput needs. "From our perspective, F5's robust and reliable application traffic management capabilities are key. With billions of transactions per day, we don't want that product performance stability going away."

DoubleClick also leverages F5's iControl technology. iControl offers the industry's only open application program interface (API) and software development kit (SDK), which allows companies to programmatically control F5 devices via their own custom

applications or 3rd party management software.

DoubleClick uses iControl to increase the visibility into, and manageability of, their F5 gear. This has saved DoubleClick a significant amount of time in terms of infrastructure management.

Benefits

"We had about a 3x jump in traffic capacity by going with the BIG-IP 8400," says Chatterton. "We've also been able to increase the number of ads per second delivered from the previous limit of 20,000 per second on older application traffic management technology to 65,000 per second on the BIG-IP 8400."

DoubleClick is leveraging BIG-IP LTM's SSL offload and acceleration capabilities as well. F5's SSL offload feature removes CPU-intensive SSL processing from ad servers. Through offloading SSL encryption, decryption, and processing from servers onto the BIG-IP LTM, DoubleClick is diminishing the need to purchase additional ad servers and gaining further headroom to handle the expected 50% transaction growth in the upcoming year.

Says Chatterton, "Prior to using F5's SSL capabilities, we were dedicating servers exclusively for SSL processing, which constituted 10% of our overall ad traffic. Now we can move SSL processing onto

the BIG-IP LTMs, which frees up server resources and allows those servers greater efficiency in performing their job."

In fact, high performance SSL and network processing offload via F5's BIG-IP 8400s, combined with an upgrade of its ad servers to HP ProLiant DL385 dual-core servers, has enabled DoubleClick to significantly reduce their number of ad servers from 900 to 300. The difference represents less infrastructure management, mitigated need for additional server purchases, and the ability to scale their infrastructure to meet growing traffic demands.

Finally, F5's strong customer support has given DoubleClick a comfort level and trust they haven't experienced with other vendors.

"Our relationship with F5 has been very positive, and that's not always the case when it comes to companies we work with," says Braun. "We deal with a lot of companies, but we have been treated very well with F5."

Chatterton agrees. "Our business model is completely different than many other companies. F5 took an active interest in DoubleClick, wanting to learn about our business and how we function, while working hard to accommodate our needs. That's gone a long, long way."

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