



Ocarina Ecosystem allowed Tagged to significantly reduce costs for image bandwidth and storage, and to improve site web site responsiveness.

Company

Tagged, Inc
San Francisco, CA
www.tagged.com

Industry

Internet, Social Networking

Solution

Ocarina Oca2400 optimizers with Network Appliance, Sun, and white-box storage
Native Format Optimization (NFO)

Key Benefits

- Reduced JPG images by 35%-40%
- Reduced storage and bandwidth cost by 35%
- Improved site responsiveness and improved customer loyalty

"At Tagged, we're expecting to double or triple our infrastructure each year, all while releasing new products and improving site performance. It's a formidable challenge, and Ocarina is an important part of how we get there."

Johann Schleier-Smith, Founder and CTO

The Business

Tagged is the third largest social networking site in the U.S. with 80 million registered users and a daily audience of over 3.5 million unique users. During 2008 and 2009, traffic increased by over 10x, placing Tagged among the fastest growing web sites in the world. As a social networking site, Tagged's major difference over Facebook and Myspace is an emphasis on meeting new friends rather than just leveraging existing networks of friends. Recent growth has been driven by improved site usability and new features including highly-popular social games.

The Challenge

Tagged is a VC-funded startup focused on maximizing subscriber growth, while minimizing cash burn-rate. Subscriber growth is partly a function of end-user-experience, which is maximized by a responsive web experience and rich immersive features. However, annual growth rates in excess of 300% can place serious strain on infrastructure and site performance if not addressed proactively. Since 75% of Tagged's traffic is from International sources, deployment of third party Content Delivery Network (CDN) services from Akamai and Limelight are important to insure a consistent user experience around the globe.

However, continued scaling of infrastructure and deployment of premium CDN services comes at a cost, directly impacting the business plan and funding strategies for the company.

Even though CDNs offload much of their site bandwidth, Tagged operates nearly 1000 servers in upload, web server, database, search, and other application tiers. Database storage is served by a Fibrechannel SAN, while images are hosted from 60TB of NFS-mounted storage from a variety of vendors. Tagged's storage infrastructure doubles in size each year, driven mainly by images uploaded from end-users.

Tagged ingests nearly 1 Million new JPEG images per day, and images represent a large percentage of site bandwidth. Image serving also represents a component with a significant impact on web site responsiveness. Finding a solution that effectively optimizes images without affecting perceived quality was an important requirement.

Implementing Ocarina

Tagged's focus was on mitigating storage costs, while also improving web-site performance. This led them to an evaluation of Ocarina's Native Format Optimization (NFO) workflow option. NFO works by optimizing the compression parameters of media files such as JPEG images, and stores optimized files in their native format, with no additional proprietary encoding or compression. NFO thus allows users to capture compression benefits through the distribution process, all the way to the end-user.

According to CTO Johann Schleier-Smith, "We're very sensitive to image

quality, so our Engineering and Product teams spent a lot of time evaluating Ocarina's compression options and chose a level that delivered 30-40% savings with no perceptible quality loss."

Two Oca2400 1u optimizer appliances were installed in Tagged's datacenter, configured to optimize JPEG images in their primary file storage repository. The pair of 8-core optimizers provided enough compression throughput to process their existing photo repository as well as accommodate the up to 1 Million new images uploaded per day. Furthermore, the Ocarina platform provided policy-based operation that provided substantial manageability advantages over other imaging industry software options.

Successful Results

The implementation of Ocarina provided immediate benefits. Approximately 10 Terabytes of additional free space was created during the compression process, allowing Tagged to defer their next NAS purchase by several months. The lower average image size also meant reduced bandwidth and 15%-20% reduced monthly CDN costs. Because of these cost savings, the ROI for the Ocarina was less than 5 months.

The other crucial benefit to reducing image size was improvements in site responsiveness. "We're sure that using Ocarina to reduce image sizes has helped improve our page rendering times," says Schleier-Smith, "that's a big deal because it creates a better user experience, which means improved customer loyalty and higher market share."

About Tagged

Tagged is the 3rd largest social network in the US, and has over 80 million members worldwide. Members use Tagged to keep in touch with friends and to make new ones. Tagged.com was launched in 2004 by Founders Greg Tseng and Johann Schleier-Smith. The company is located in San Francisco, CA and is backed by Mayfield Fund. For more information visit Tagged at <http://www.tagged.com>

About Ocarina Networks

Ocarina is a leader in online storage optimization solutions. Organizations of all sizes use Ocarina's content-aware optimization technology to reduce their storage footprint and achieve a ten-fold capacity increase on their current storage systems. Based in San Jose, Calif., Ocarina is privately-held and financed by leading investors JAFCO Ventures, Kleiner Perkins Caufield & Byers and Highland Capital Partners. Ocarina delivers hardware and software optimization solutions directly to a global customer base as well as through partners HP, HDS, BlueArc, and EMC.



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