Aicache **Customer Case Study.**	Industry: A major News Web Site
Pre-Aicache Setup.	A well known news web site with significant online presence.
A traditional news web site, covering wide range of topics: politics, economy, health, lifestyle etc. US and international news coverage. Most of content is entered via custom CMS, some stories come from assorted wire services with limited editing. About 170 stories per day are published via CMS along with about 20 video segments.	Custom CMS, search.
A farm of web servers (under 30) renders most of the content on demand, retrieving it from backend DB servers where it stored by CMS. A number of news wire stories is also made available with minimal editing – these are also entered into a DB. Both editorial and new wire stories are indexed for search, using a custom search solution.	Most visitors are anonymous – no login is required to view most of the content. HW footprint - in excess of 60 servers.
As number of hits to the site grew over time, the infrastructure started to show its limit. The front-end web servers, backend DB servers and search servers reported higher utilization, response time started to increase. As search time increased, Indexing jobs started to queue up and now it'd take up to 30 minutes for a new story to become available in search results. During periods of heavy traffic, the CMS too became unresponsive, frustrating content editors.	
A number of exclusive stories went "viral" – leading to significant (2x-4x) traffic spikes in matter of minutes after being published, leading to occasional site crashes.	
An internal estimate proposed nearly doubling of HW footprint in order to deal with traffic growth and traffic spikes during breaking news situations.	
Aicache to the rescue.	Aicache HW: 3 dual-core 64bit Intel-based 1RU servers, with 16GB of RAM.
Upon examining the typical use-cases and HTTP traffic patterns, Aicache was configured to cache home page, section fronts and editorial stories for 60 seconds.	
Output of search results was cached for 10 seconds. The actual news wire stories are still published to DB (subject to the rights restrictions), but are cached for 1hr when they are first rendered.	
Images, javascripts and css was enabled for extended caching – between 1 day and 1 week.	

The results.

As result of Aicache deployment, traffic to the origin server farm was reduced by about 85%. The web, database and search servers have become virtually idle - even when a story on the site went "viral". Search indexing latency has dropped to 4 seconds – from 30 minutes!

After having Aicache in the mix for some time, the customer decided they could afford to actually reduce the HW footprint from the previous number of about 60 servers to under 30. Some servers were shutdown and some are being repurposed to allow for some of community features: user comments for published stories and message boards, with planned Aicache use for both.

The response time was significantly reduced, with near-0 "time-to-first byte " and much more predictable mean response times.

Additional benefits.

Aicache's rich instrumentation was put to good use, allowing for real-time monitoring of user traffic and identification of slower scripts on origin servers. The Aiache's built-in ability to on-the-fly pin-point most requested URL is utilized to watch for most popular stories, so they can be quickly promoted to "most-popular" section, further increasing page-views. Same capability is used for "most-searched" feature.

A custom CMS page is built, allowing for selective content expiration – so that when a new story is published, the pages (such as home page and section fronts) that link to it, can be expired on-demand, allowing for even faster publishing time.

Aicache's SNMP integration is also utilized - the req/sec and response time is now collected, charted and alerted on by pre-existing SNMP monitoring package.

Aicache's selective log suppression feature is configured to not log auxiliary content request, allowing for significant reduction in log file sizes.

Savings:

- **40 new servers at ~U$5000 per: U$200,000.**
- **OS licenses: about U$28K**
- **Server install and setup charges: about U$12K**
- **re-purposing of 20 servers (amortized) and OS licenses for other applications: U$65K**

Total CapEx saved: more than U$300K.