Learning To Fly: How Angry Birds Reached the Heights of Store Performance
Learning To Fly: How Angry Birds Reached the Heights of Store Performance

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It’s a boy!

Janine

that’s me

Fiona
AOE media, a Magento Gold Partner and leading provider for Open Source-based Portal development, Web Content Management and e-Commerce with its headquarters in San Francisco, California and Wiesbaden, Germany and more than 120 people in seven offices world-wide.
Lessons Learned
...from running a High Performance Magento Store

original title of this presentation!
Plush toys, shirts, ...

PC games (download)
Social Media Impact

> 24.000.000 likes  > 500.000 followers
1.000.000
unique visitors. per day.
5,000 concurrent users.
Orders per second.

Yes, per second!
Downtime

Number of lost carts

Number of lost sessions and logins
Stores

...and GeoIP redirection!
Themes

- Space Theme
- Default Theme
- Mobile Theme
- Star Wars Theme
- Bad Piggies
- US Theme
- Huge Post-Holiday Sale
- Angry Birds Official Merchandise
- Angry Birds Official Website

Help Us Improve Snow Bird! Answer Our Survey!
Growing Data

Trimming the fat!

- Aoe_CacheCleaner
- Aoe_QuoteCleaner

Logs
- Recently viewed,
- Visitors
- Expired cache entries
- Old quotes
- Unarchived orders

Product catalog
- Customers
- Orders
- Promotions
- cms / banners
Protecting Magento

more traffic, more stores, more products, more urls,…

Varnish Reverse Proxy

less requests hitting Magento!
Varnish Tweaking

Cache Hitrate

90%
Varnish Tweaking

Cache Hitrate

80%
Varnish Tweaking

Cache Hitrate

98.6%
Request a page (HTTP Request)
Reduce Number of Requests

Do ajax requests instead of full page loads!
» Add to basket
» Displaying the mini cart

Don’t do ajax requests!
» Login status and username
» (Number of) cart items
» Geo location

Cache 404 pages and redirects!

Normalize urls!

... hitting Magento

Use cookies or localStorage
Aoe_AsycnCache
Aoe_VarnishAsyncCache
Updates

Cache in Magento

Cache in a Cache

Varnish

Magento
Bottleneck Database
This is not an iPhone!

"High-Memory Quadruple Extra Large DB Instance"

db.m2.4xlarge
Provisioned IOPS Storage
Percona Toolkit
Database Splitting

Cache Backend

RDS (MySQL)

RDS (MySQL)
Bottleneck
File I/O
Number of *.php files by location

- Community
- Core
- Lib
- Local

Less file operations
Solution File I/O

Magento Compiler

Aoe_ClassPathCache

...also check Magento 2!
Don’t try this at home! on production

Report Generation

Read Replica

Delta Pre-processing

Background Process

Graph
Aoe_Scheduler with multiple cron groups

SCHEDULER_WHITELIST='a,b,c'
cron.sh  cron2.php
SCHEDULER_BLACKLIST='a,b,c'
cron.sh

cron.php

will block other crons

performance issues, race conditions!
Don’t let them bring you down!

3rd party Modules

Uh-Oh!
Code Quality Modules

- Not enterprise ready
- Not production ready
- Not cloud ready
- Bad performance
- Security
Continuous Quality Assurance

Everything sounds better with “continuous”

Code Reviews
Profiling, stress tests

Question everything!

Automate

Part of the dev process!
Broken Testcases

Nobody pays attention to test results

Switch to Selenium 2
Lesson Learned
Plan extra time!

Number of unexpected problems

Number of components
What’s next?

- Less bigger instances vs. more smaller ones?
- MySQL? MongoDB?
- Web server
  - NGINX + php-fpm + PHP 5.4
  - EC2 instance sizes
- Move quotes
- Cache Backend
  - Amazon DynamoDB
Thank you, Team!

You’re awesome!

AOE media
the open web company
Come and visit us!
Booth #49

Thank you!
Any questions?

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