

Performance How to solve

DrupalCamp Sydney 2014

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WhoAmI

- Tine Sørensen / tinefin
- Acquian, Technical Architect, APJ
- Based in Brisbane, Australia
- In IT since 1999 (sysadmin, developer)
- Drupalista since 2008, Developer
- Performance focus area the last year



What I will not tell you

- Server setup
 - But please set up so processes don't kill the box
- Varnish, VCL writing - others do that better
- Front end performance
 - But do move javascript to after
(Document.ready ?)

Drupal evolving

- Enterprise ready
- Larger sites
- SAAS
- Drupal as a framework
- Complexity

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Experts at everything?

- OPS
- DevOps
- Performance
- Developers
- Themers
- Designers

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Areas

- Server
 - Tuning
 - Load on web, database
- Page load times
 - Page processing ← APPLICATION
 - Front end performance

Pet Peeves

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Pet Peeves

Collect the **DATA**

Solve from **APPLICATION**

Penny wise but **DOLLAR STUPID**

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Collect The Data

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Collect the data

- Symptoms
- Site profile
- Server
- Software - Memcached, APC, Varnish, Search, etc
- Application
- Rinse and repeat.



Penny wise but dollar
stupid

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Penny wise but dollar stupid

- USE the data
- Devs and low hanging fruit
- Apply effort where it corresponds to payoff
- Performance is 80/20. Sometimes 99/1.
- Remember you need to maintain this
- Complexity entry level vs gain



Solve in application

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Don't start here

- Hardcode DB queries?
- Double hardware?
- Rewrite Drupal cause it's stupid?
- Solve in JS?
- ESI?

Approach to defining and solving

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Approach to solving

- Use the data
- Analyse
- Visibility - what is actually happening
- Choose where to apply effort
- based on facts!
- Prioritise low hanging fruit + major payoff areas.
- Rinse and repeat.

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Analyse

- Use your knowledge - what looks odd here?
- Low hanging fruit
- What are we solving?

Examples

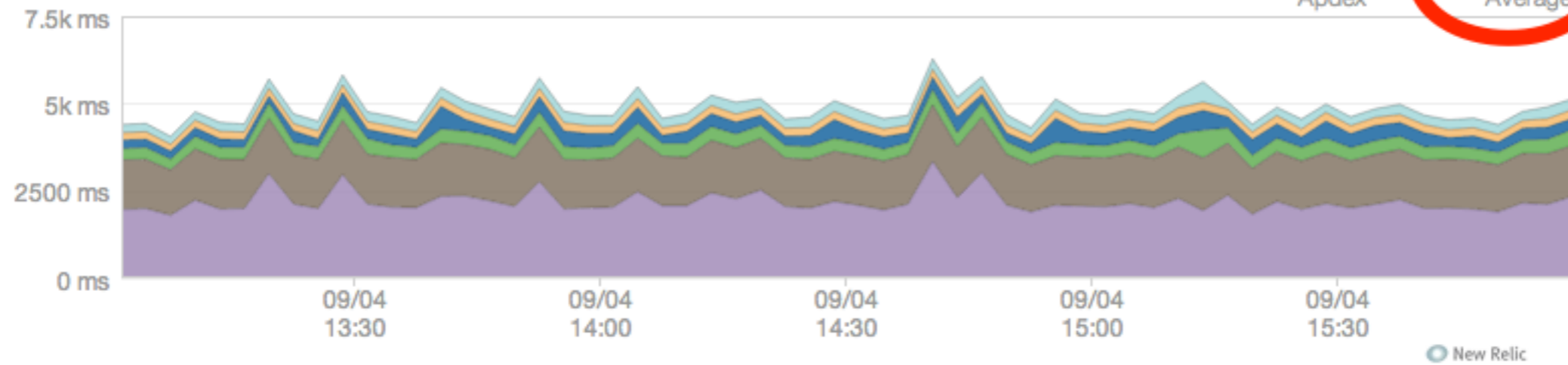
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Examples

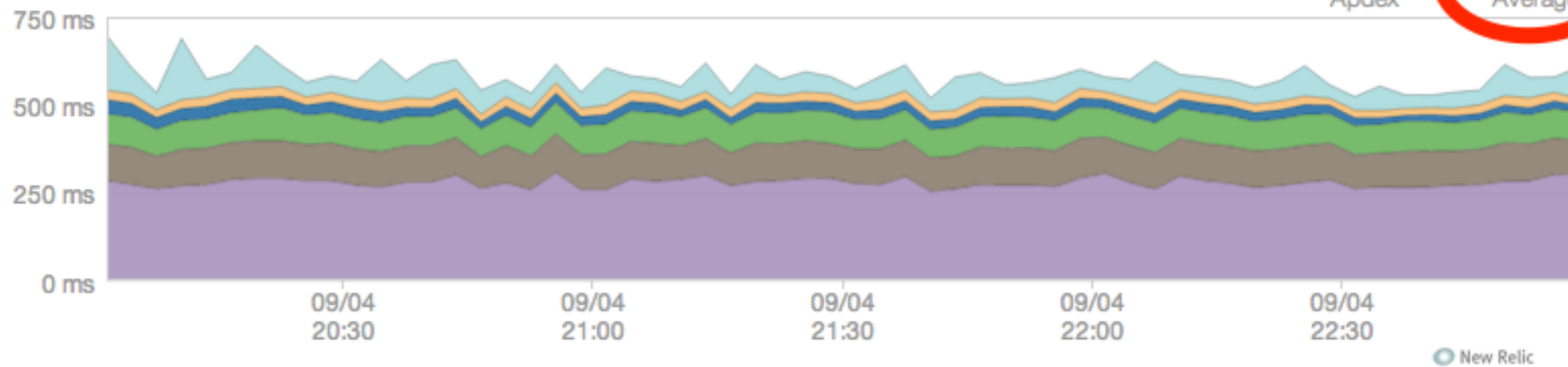
Action	Result
All blocks rendering on all pages	4sec less page processing time
Views - reconfigure	1sec less query time
GD to Imagecache	110Mb less php memory
Views UI	80Mb php memory
Caching 1 panel + 1 view	Brought site up again.
Switching GD, tuning server, disable views UI, caching views	4 x amount of processes / efficiency on the same hardware

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App server breakdown



App server breakdown

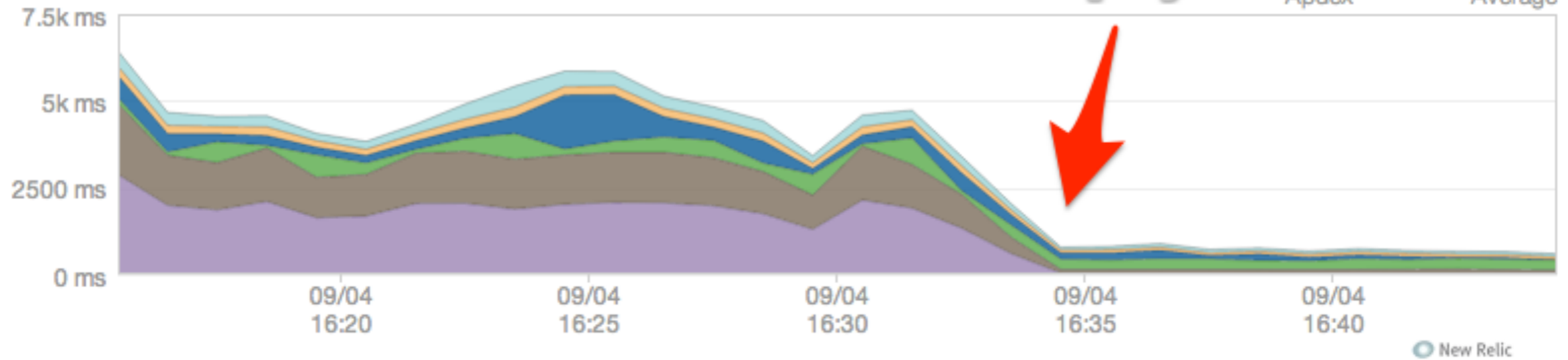


App server breakdown

Deploy

1.0
Apdex

2,790 ms
Average



New Relic

Collect the data?

#WTF ??

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Symptoms

- Slow pages?
- DB failing over?
- Web server dying?
- Extreme hardware needs?

Site profile

- Authenticated vs Anonymous traffic
 - Different caching methods
- Modules
 - Node access? (block caching)
 - OG?
- Custom code?
- Acquia Insight report



Application caching

- Application - caching
 - Caching enabled?
 - Caching report (views, blocks, panels)
 - Maximum / minimum cache lifetime
 - Pages not cached?

Best Practices

- Statistics module
- DB logging
- Views / Fields / Rules UI (etc)
- Devel enabled? (krumo)
- Drupal search?
- Modules
- GD vs ImageMagick
- views_litepager, fast_404, entitycache, etc
- Caching correctly - expire, purge, views_content_cache



Server

- Caching
 - Memcached evictions and statistics (memcache admin)
 - APC statistics and % memory used (apc.php)
 - Varnish statistics and headers (varnishstat, varnishlog, etc)
- Memory profiler (module: memory_profiler)
- Mysql query caching statistics
- Php error setting / php.ini / my.cnf
- Logs (php error log, etc)
- Load tests (module: blazemeter + blaze meter free account)

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APM

- New Relic - for overview
 - Transactions - most time consuming
 - Latest slow requests - almost gives you XHProf, but for friendlies
 - Drupal modules
 - DB queries
 - External requests
 - Slow views
- THEN move to XHProf

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Custom code

- variable_set
- cache_clear_all
- loops with no default
- Errors
- hook_init
- Hacked modules
- Amount of custom code
- Amount of modules - actually used?



Traffic

- Traffic Reports
 - High number of 404s?
 - Pages that shouldn't be here?
- Google analytics
 - Top pages?

Server tuning - OPS'ish

- Php memory vs Processes vs Server size
- Number of processes - Memory limited
 - Php memory vs Processes vs Server size
- Number of processes - cpu limited
- Memcached size
- APC size
- php-fpm vs ph-cgi

How did we do this
again?

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Solving performance issues

- Collect the data
What is actually happening - visibility
- Analyse
Use Drupal knowledge
- Choose where to apply effort
- based on facts!
- Prioritise low hanging fruit + major payoff areas.
- Rinse and repeat until happy



Questions?

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