SlowShop.com → SuperShop.com
A practical example of how FusionReactor v5 can identify 10 common problems in ColdFusion applications.

INTERGRAL
information solutions

Intergral Information Solutions
David Stockton
Senior Technical Consultant
☎+1 (978) 496-9990 (USA)
☎ +44 (0)207 193 1212 (UK)
☎ +49 (0)7031 221 471 (DE)
✉ david_stockton@intergral.com

Agenda

1. About me

2. End User Experience

3. If a tree falls in the woods...

4. Practical Examples

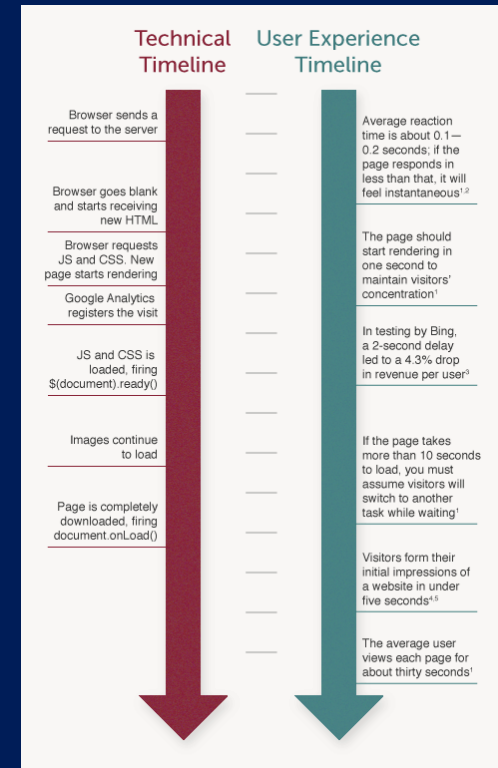5. Key Points to take away today

6. Further Reading

About Me

- Technical Consultant at Intergral (the makers of the Fusion Product Suite)
  - Assisting our clients with a wide range of issues
    - 3rd level Fusion product support
    - Enterprise client technical pre-sales
    - Architecting solutions
    - Installation, configuration & tuning of platforms (OS, DB, App)
    - Training
    - Entire platform support & tuning
    - Custom Development
- 13+ years Enterprise CF experience
  - E-Commerce, Publishing, Enterprise Search, Social Networking, Corporate Portals, Financials and Knowledge Management

End User Experience

What happens when you browse to a website?

1. DNS lookup
2. Network / Routing
3. Firewall
4. TCP handshake
5. Load Balancer
6. Web Server
7. HTTP
8. Web Connector (ISAPI / Apache Module)
9. JRun Proxy / AJP (Tomcat/CF10)
10. ColdFusion Server
11. CFML Code
12. DB / WebServices / Back-end
13. ... Then don't forget the client-side asset (CSS, JS, IMG) retrieval, rendering and execution!

Technical Timeline | **User Experience Timeline**

Browser sends a request to the server — Average reaction time is about 0.1—0.2 seconds; if the page responds in less than that, it will feel instantaneous[1,2]

Browser goes blank and starts receiving new HTML

Browser requests JS and CSS. New page starts rendering — The page should start rendering in one second to maintain visitors' concentration[1]

Google Analytics registers the visit

JS and CSS is loaded, firing $(document).ready() — In testing by Bing, a 2-second delay led to a 4.3% drop in revenue per user[3]

Images continue to load — If the page takes more than 10 seconds to load, you must assume visitors will switch to another task while waiting[1]

Page is completely downloaded, firing document.onLoad() — Visitors form their initial impressions of a website in under five seconds[4,5]

The average user views each page for about thirty seconds[1]

End User Experience

- We're all great, pro-active engineers right?
- So you have
  - Internal monitoring
    - ColdFusion monitor or perhaps FusionReactor v4
    - Can see page generation time (and some back-end operations with FusionReactor v4)
  - External monitoring
    - Pingdom/Gomez/etc
    - Can see how long HTML takes to be retrieved or in some cases how long assets are downloaded & processed.
  - Perhaps you have alerting when your site fails and an on-call engineer list?
- GREAT! You can leave now... Or can you?

Wouldn't it be nice...

- to have all your data in one place?
- to know what your end users are really experiencing?
- to know the impact of each element making up the end to end performance (DB, network, CPU, DOM processing...)
- to be alerted – and better still automatically react – when problems start to happen but BEFORE the server fails?
- to compare business metrics in the same interface as technical metrics (eg revenue *vs* page views *vs* CPU)?
- to have a unified monitoring solution across all your Java applications (WebSphere, Oracle AS, JBoss, etc)
- to have detailed, ColdFusion specific metrics (eg do you know how many connections CF has open to each DB right now? do you know how many templates CF has in its cache?)
- log, archive and manage data retention for post-mortem analysis & auditing

If a tree falls in the woods...

... and nobody is there to hear it, does it make a sound?

Without FusionReactor you probably don't know about these problems. Worse still, you're probably loosing a lot of business.

Web performance is directly proportional to revenue.

Performance is directly proportional to revenue

- 47% of users expect a page to load (in its entirety in < 2s)
- +1s → -7% conversion rate
- €100,000, +1s → €2.5 million lost sales / year

- Bing
  - +1s → -4% revenue
- Google
  - 0.4s to 0.9s → -25% searches (-$2.5 billion revenue!)
- Firefox
  - -2.2s download → +15% downloads (+1.7m/year)
- ShopZilla
  - -5s → +7-12% revenue AND -50% hardware
- Wallmart & Amazon
  - 100ms → 1% revenue
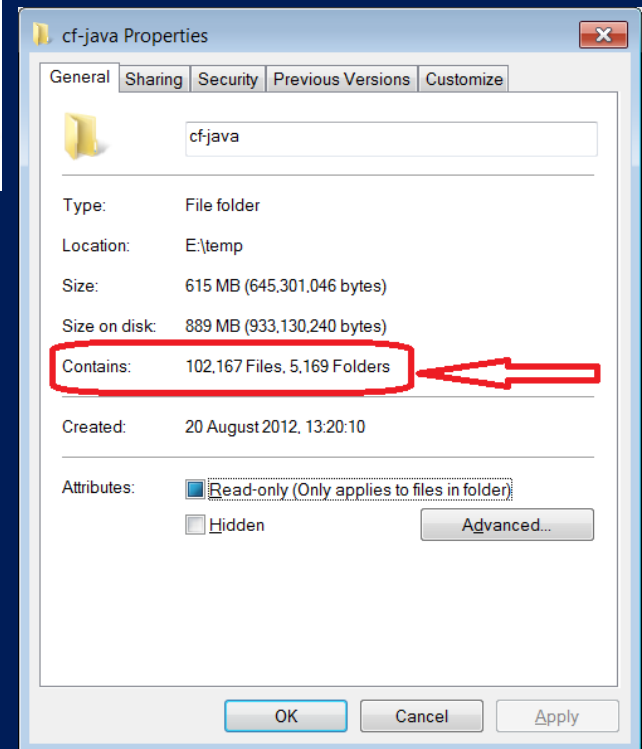
Great for New or Existing Platforms

- **New**
  - Load Testing
  - Version Comparison
  - Regression Testing

- **Existing**
  - Stability
  - Performance
  - Don't blame previous developers – you don't know the circumstances under which they were working!

Practical Examples

1. High CPU utilization (Request History)
2. High memory usage (Session vs Heap)
3. High query volume (DB)
4. Slow CFHTTP/WebService calls (Transaction)
5. Un-handled page errors (Resonse Code)
6. Slow network connectivity (Longest Requests)
7. Slow database requests (Longest JDBC)
8. High crawler/bot activity volume (User Agent)
9. Slow JavaScript/DOM processing (UEM)
10. Correlating technical and business metrics

Key Points

- Performance is directly related to revenue

- For a full Application Performance Monitoring (APM) solution it's critical you have end user experience and business metrics

- FusionReactor solves the APM problem for all Java based platform – especially ColdFusion

- FusionReactor can make YOUR life easier, earn your company more £€$ and make YOU an engineering rock star!

Further Reading

...and finally...

- Promotions
  - All ColdFusion licenses discounted
  - Buy Adobe ColdFusion Ent; get 3x CF Builder FREE
  - Buy Adobe ColdFusion Std; get 1x CF Builder FREE
  - Plus 50% off FusionReactor subscrition licenses purchased at the same time!
  - Upgrade from SeeFusion – 30% trade in

- New FusionDebug release (on the website very soon)
  - Full support for ColdFusion v10 & Railo v4

- FusionAnalytics v2.0.4 just released – download now

...and finally...

- Any other questions?

- Contact
  - Intergral (Fusion Products)
    http://www.fusion-reactor.com – Fusion Products

    http://www.cfconsultant.com – Consulting

    ☎ +1 (978) 496-9990 (USA)
    ☎ +44 (0)207 193 1212 (UK)
    ☎ +49 (0)7031 221 471 (DE)