

adaptTo()

APACHE SLING & FRIENDS TECH MEETUP
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AEM (CQ5) Performance case study

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ENTERPRISE WEB EXCELLENCE



Agenda



Customer
CQ setup



CQ Author
performance
factors



Performance
analysis
approach



Lessons
learned



Maintenance
& Tuning
checklist

Customer CQ5 setup



Customer CQ5 setup



Users

- 100 content editors – 24/7



Repo

- >13'000'000 nodes, size >300GB



Growth

- 10'000 new nodes added daily



News Feeds

- Proprietary import of XML and media feeds on author master
- Pushed to publishers
- Moderate frequency



System age

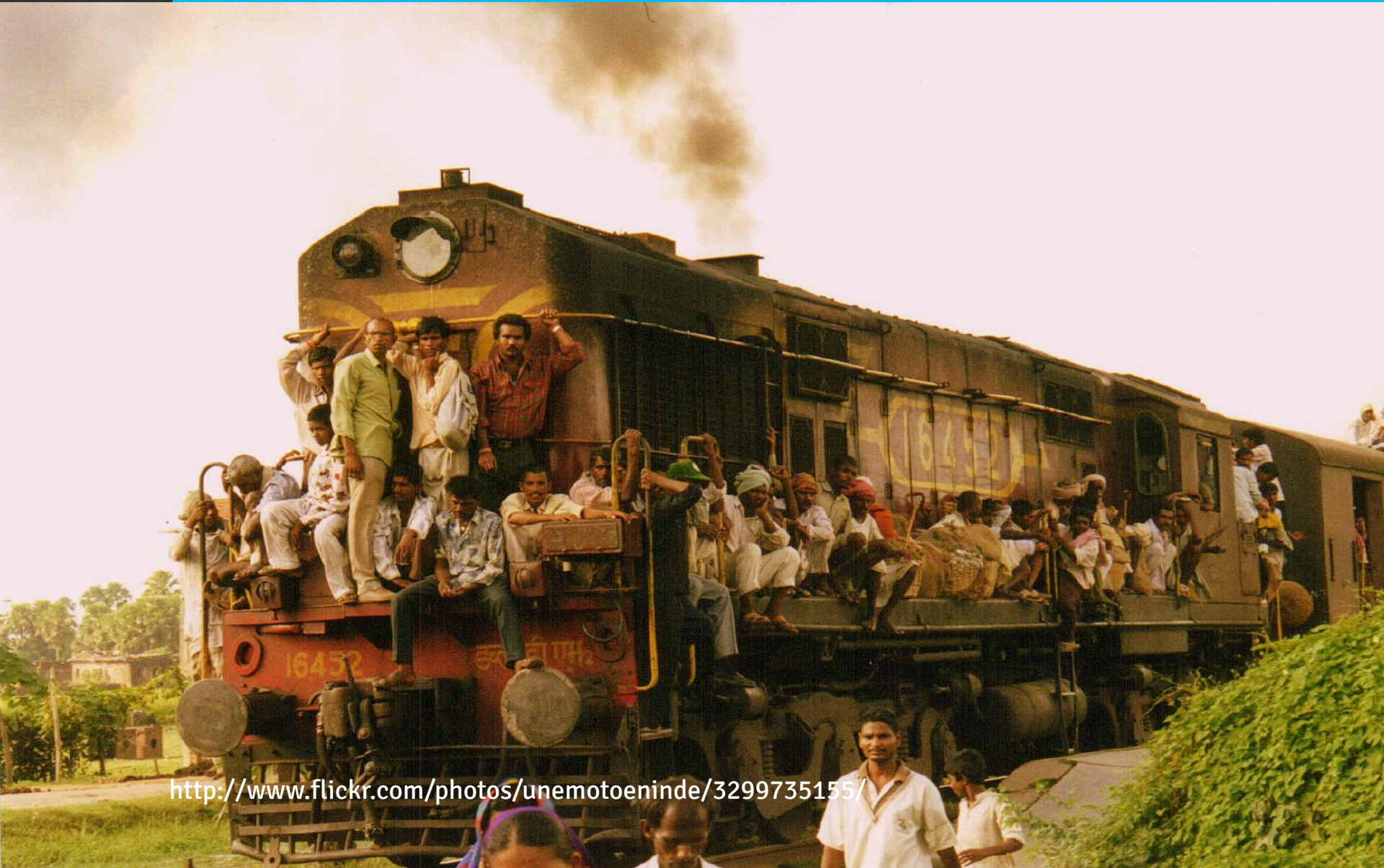
- 2 years
- Feature release every 6 weeks



Deployment

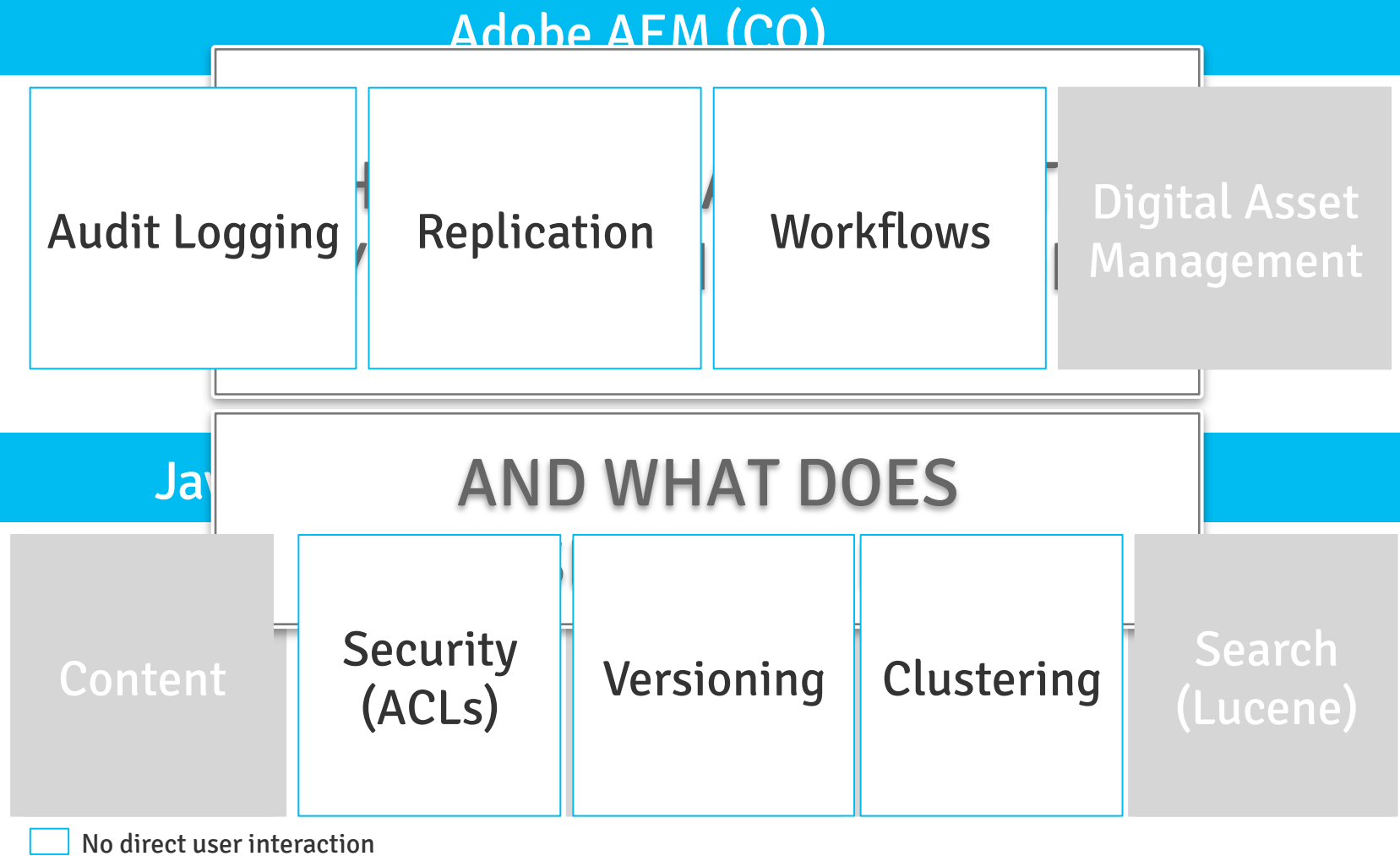
- 2 node authoring cluster
- 4 publishing servers

CQ Author Performance Factors



<http://www.flickr.com/photos/unemotoeninde/3299735155/>

CQ Author Performance Factors #1



CQ Author Performance Factors #2



User Initiated

- Editing

- Batches



Other factors

- Content automation:
Feeds & Workflows

- Deployment:
e.g. Clustering

- Aging effects:
Volume, Versioning, Audit

- Environmental factors
 - Hardware: I/O, Network, CPU, Memory

Performance Analysis Approach



Collect Data: Ask!



Inspect OS resources: CPU, Paging, I/O



Unix : e.g. vmstat 5 5, top



Windows: Performance Monitor



Java Heap & GC

GC logging

jstat

visualvm

Hpjmeter, samurai



Collect JVM Thread Dumps

jstack

kill -3 <cq_pid>

Performance Analysis Approach – CQ

Areas for further drill down

JCR Queries

- JMX stats for slow queries



Workflows stats

- Count, duration, model
 - 5.6.1 JMX Stats, 5.5 logs
 - Instance count, failed, running



Replication

- Duration, payload size, version history size
- Configure own logger: com.day.cq.replication DEBUG



Lessons learned



<http://www.flickr.com/photos/smithsonian/4010665061/>

D&H, WRECK, SEP. 3, 08 SIDNEY, N.Y.

Lessons learned

Automatically Imported Content (Feeds)



Beware of versionable content →
on replication version history grows!

- CQ5.6 configure non-versionable paths

Can queue up your replication queue

- Split agents

Triggering workflows in high frequency

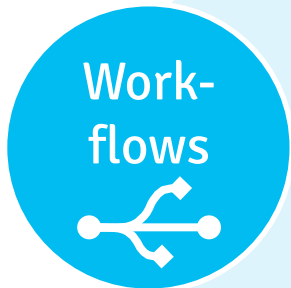
- Examine workflows, reduce

Export Bulk Reports



Users perform large queries
→ resource consuming

- Offload bulk reports to slave instances?



Long running, eat up memory resources

- Monitor duration
 - JMX stats 5.6
 - 5.5 Log entry: **..workflow.impl.job.JobHandler**
- Refactor

Accumulation of stalled workflows

- Identify problematic one
- Purge workflow instances regularly!



Maintenance & Tuning checklist

Tar PM Optimization



http://dev.day.com/docs/en/crx/current/administering/persistence_managers.html#Optimizing%20Tar%20Files

Data Store Garbage Collection



http://dev.day.com/docs/en/crx/current/administering/persistence_managers.html#Data%20Store%20Garbage%20Collection

Version Purging



http://dev.day.com/docs/en/cq/current/deploying/version_purging.html

Workflow and audit purge



<http://helpx.adobe.com/cq/kb/howtopurgewf.html>

Adobe CQ Help /Performance Tuning Tips



<http://helpx.adobe.com/cq/kb/performancetuningtips.html>

Performance Optimization



<http://dev.day.com/docs/en/cq/current/deploying/performance.html>

Monitoring and Maintaining Your CQ instance



http://dev.day.com/docs/en/cq/5-5/deploying/monitoring_and_maintaining.html

The background of the slide is a photograph of train tracks receding into the distance. The tracks are made of dark metal rails on wooden ties, and the surrounding landscape is blurred due to a long-exposure effect, creating a sense of motion. The sky is bright blue with wispy white clouds.

**THANK YOU FOR
YOUR ATTENTION!**
Any questions?