



# GEMS - 2013 - CQ Troubleshooting

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Methodology

Checklists

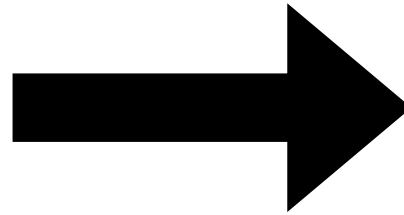
Examples

# Methodology

# Troubleshooting: finding a needle



Methodology:



enlarge needle



# Is it a known problem?

- Documentation
- Mailing list (archive)
- Issue tracker
- Hotfixes
- Google

Business Impact?  
Since when?  
Reproducible?  
Try to reduce  
Info?



# Business Impact?

Since when?

Reproducible?

Try to reduce

Info?

- Production Outage
- Dev Environment

Business Impact?

**Since when?**

- Since installing x

Reproducible?

Try to reduce

Info?

Business Impact?

Since when?

Reproducible?  
Try to reduce

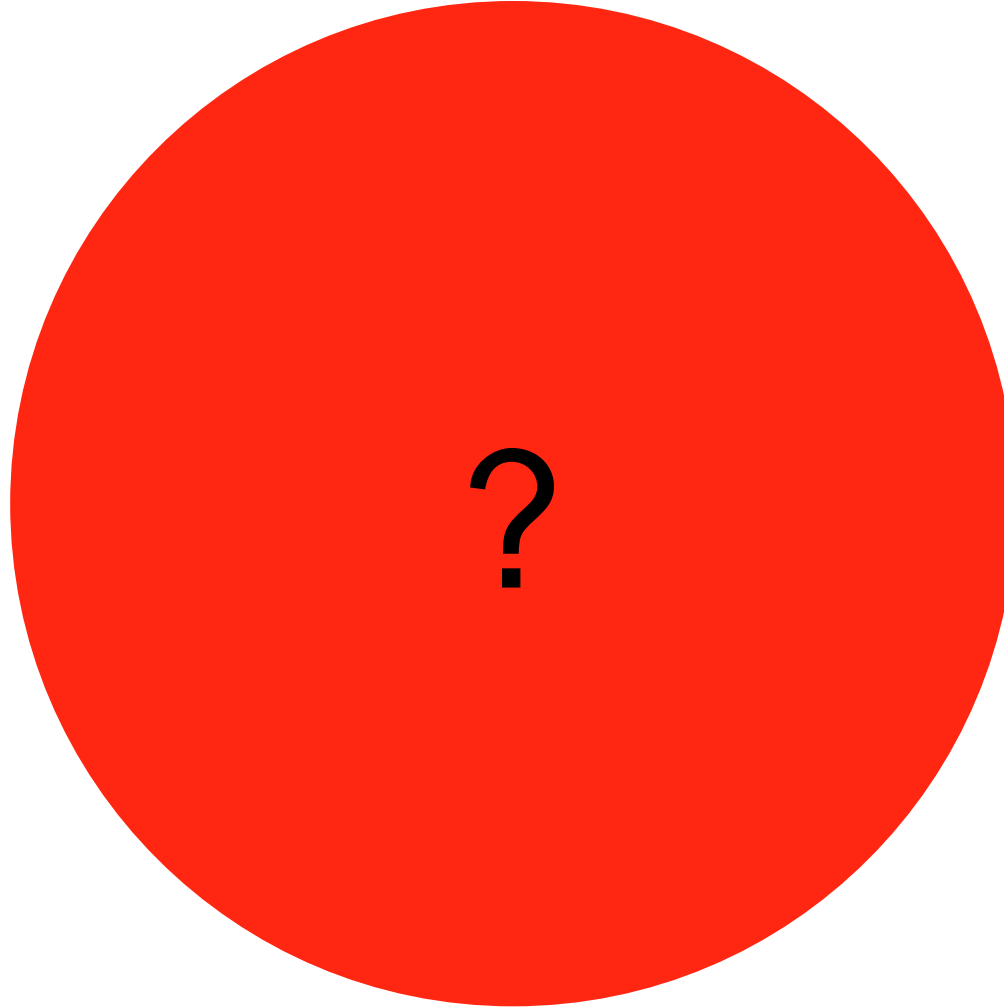
Info?

- What is the cause?
- Depends on browser?

Business Impact?  
Since when?  
Reproducible?  
Try to reduce  
**Info?**

- Versions, Config (files),
- Environment
- Log files, List of files,
- Bundle list,
- Stack trace,
- Memory histogram,
- Profiling info,...

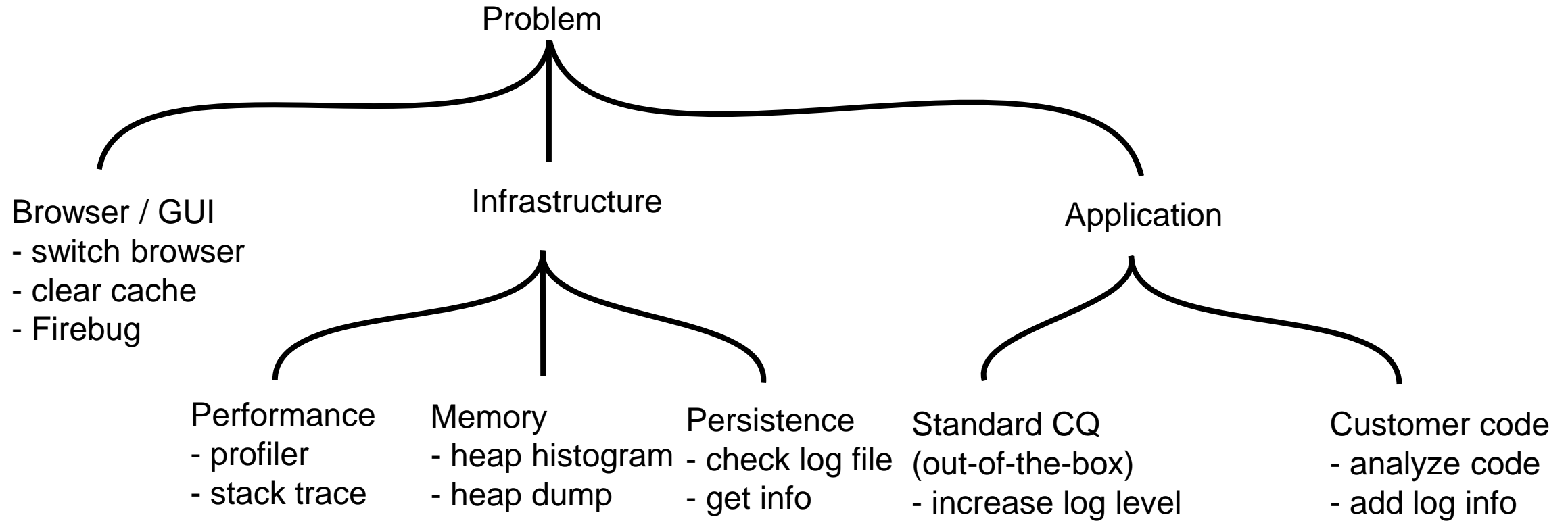
# Methodology: Solve by Elimination



# Methodology: Solve by Elimination



# Methodology: Problem Type



# Methodology: Solve by Elimination



Not  
GUI





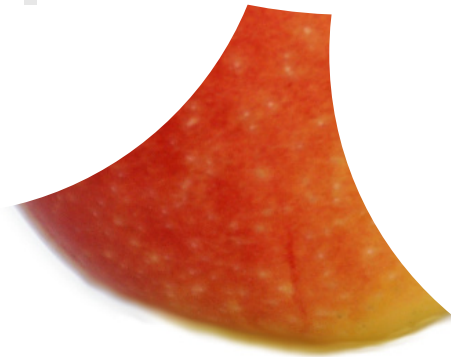
Not  
GUI

Not  
CQ

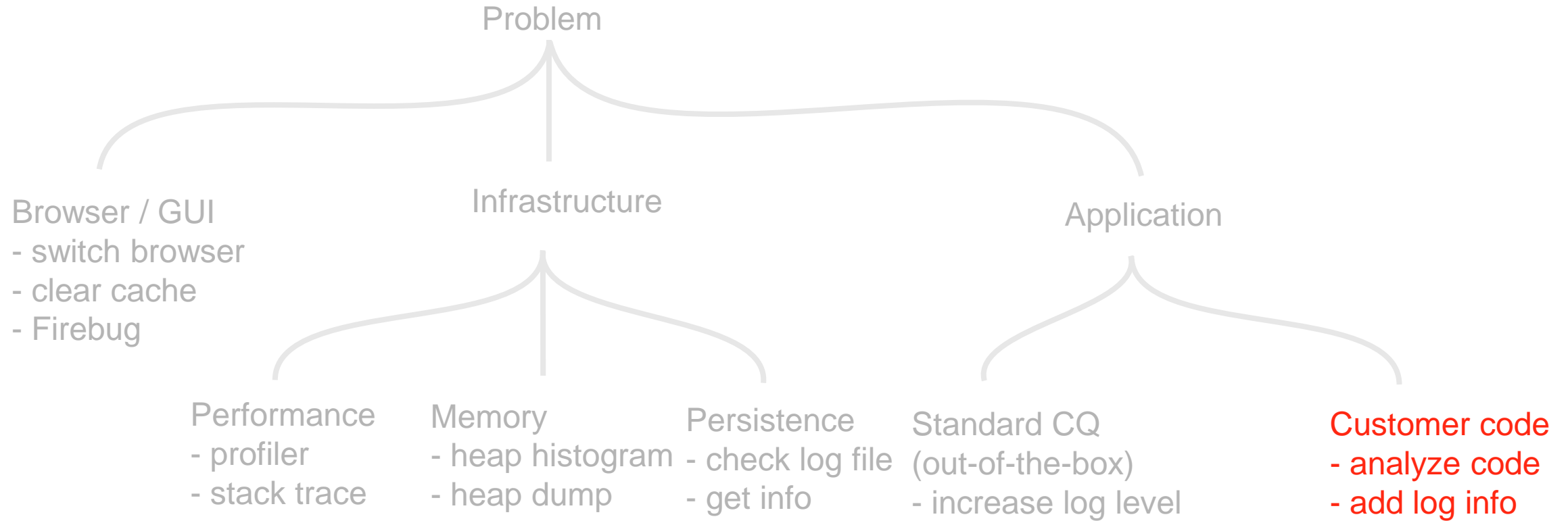
Not old  
version

Not  
GUI

Not  
CQ



# Methodology: Problem Type



# Checklists

## General:

<http://sscce.org>: short, self contained, correct example

## CQ Common Issues:

<http://dev.day.com/docs/en/cq/current/howto/troubleshoot.html>

## CQ Issue Checklist:

<http://helpx.adobe.com/cq/kb/how-to-fully-qualify-a-ticket.html>

## Help Forum:

<http://help-forums.adobe.com/content/adobeforums/en/experience-manager-forum/adobe-experience-manager.html>: large community

# Tools

- debug
- copy data
- gather info
- profiling
- heap histogram
- heap dump

# General Server Problem

- Blocked processes: full thread dumps:

<http://dev.day.com/content/kb/home/Crx/Troubleshooting/AnalyzeSlowAndBlockedProcesses.html>

- Performance problems: use the built-in profiler:

<http://dev.day.com/content/kb/home/Crx/Troubleshooting/AnalyzeUsingBuiltInProfiler.html>

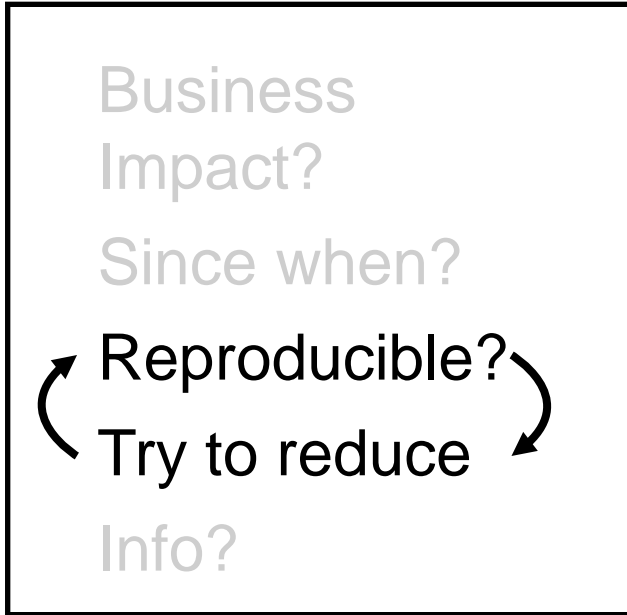
- Memory problems: get a heap histogram:

<http://dev.day.com/content/kb/home/Crx/Troubleshooting/AnalyzeMemoryProblems.html>

- Check log files, versions, config files, directory listing:

<http://dev.day.com/content/kb/home/Crx/Troubleshooting/AnalyzePersistenceProblems.html>

## Checklists: Isolate the problem



- Try in with different environment
  - Use packages as a tool to setup such environment
  - Compare with other similar instances
  - Compare with default installation
- 
- Change log level and check the logs
  - Use a Java debugger if possible, add breakpoints
  - Maybe define a specific logger
  - Use timeline info and thread id to filter data

## Checklists: Isolate the problem

Business  
Impact?

Since when?

Reproducible?

Try to reduce

Info?

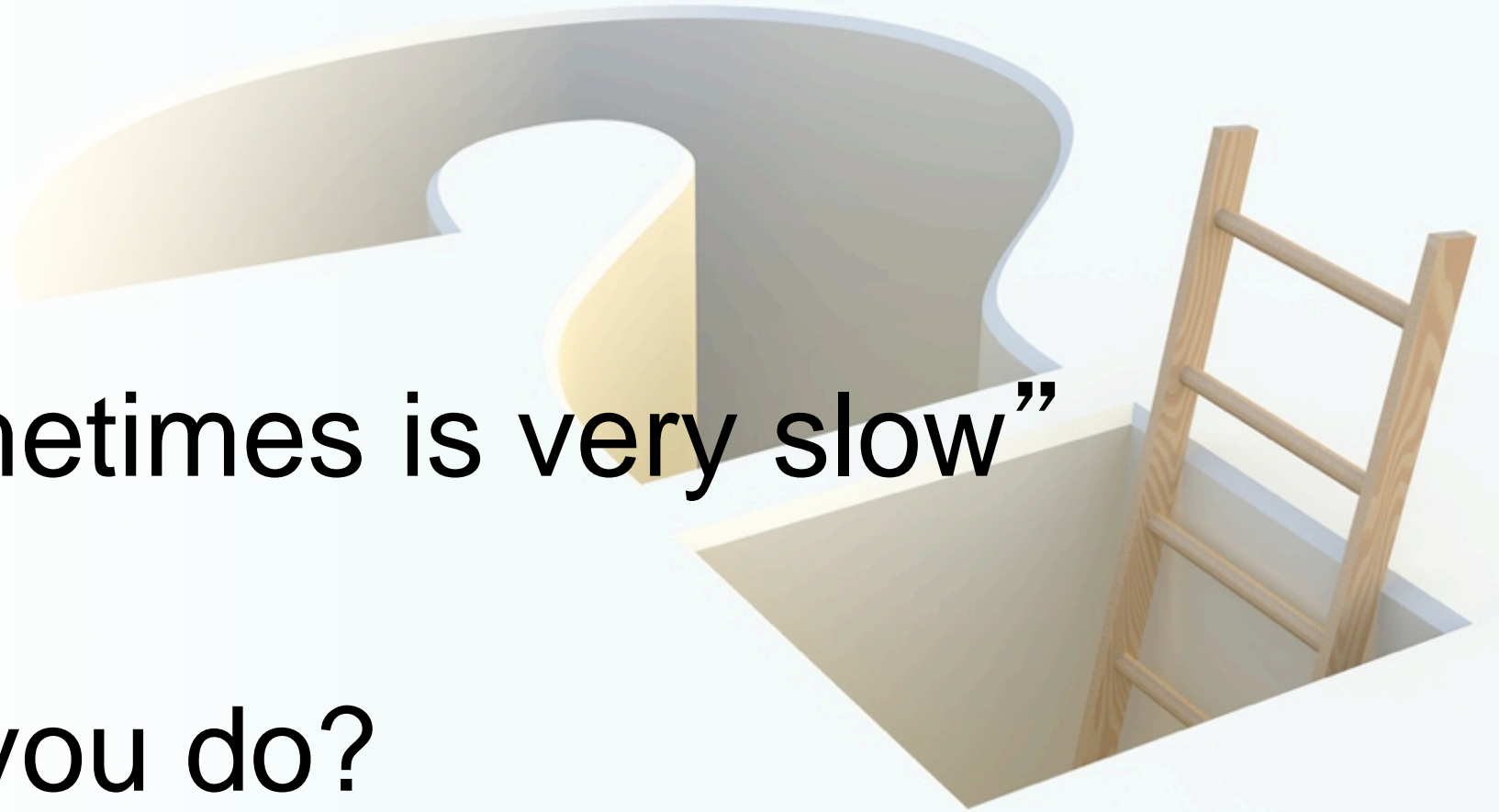
- Log files
- Apache Felix Configuration status and logging
- Package Manager
- Screen recording
- Profiler data
- Thread dump analyzer / Support tools
- Heap histogram (jmap -histo)
- Memory dump analyzer (Eclipse MAT)

# Examples

Problem:

“System sometimes is very slow”

What would you do?



- Ask: since when? What was changed?
  - Use the built-in profiler
  - Get a few full thread dumps
  - Get a heap histogram (near OutOfMem?)

If reading from disk:

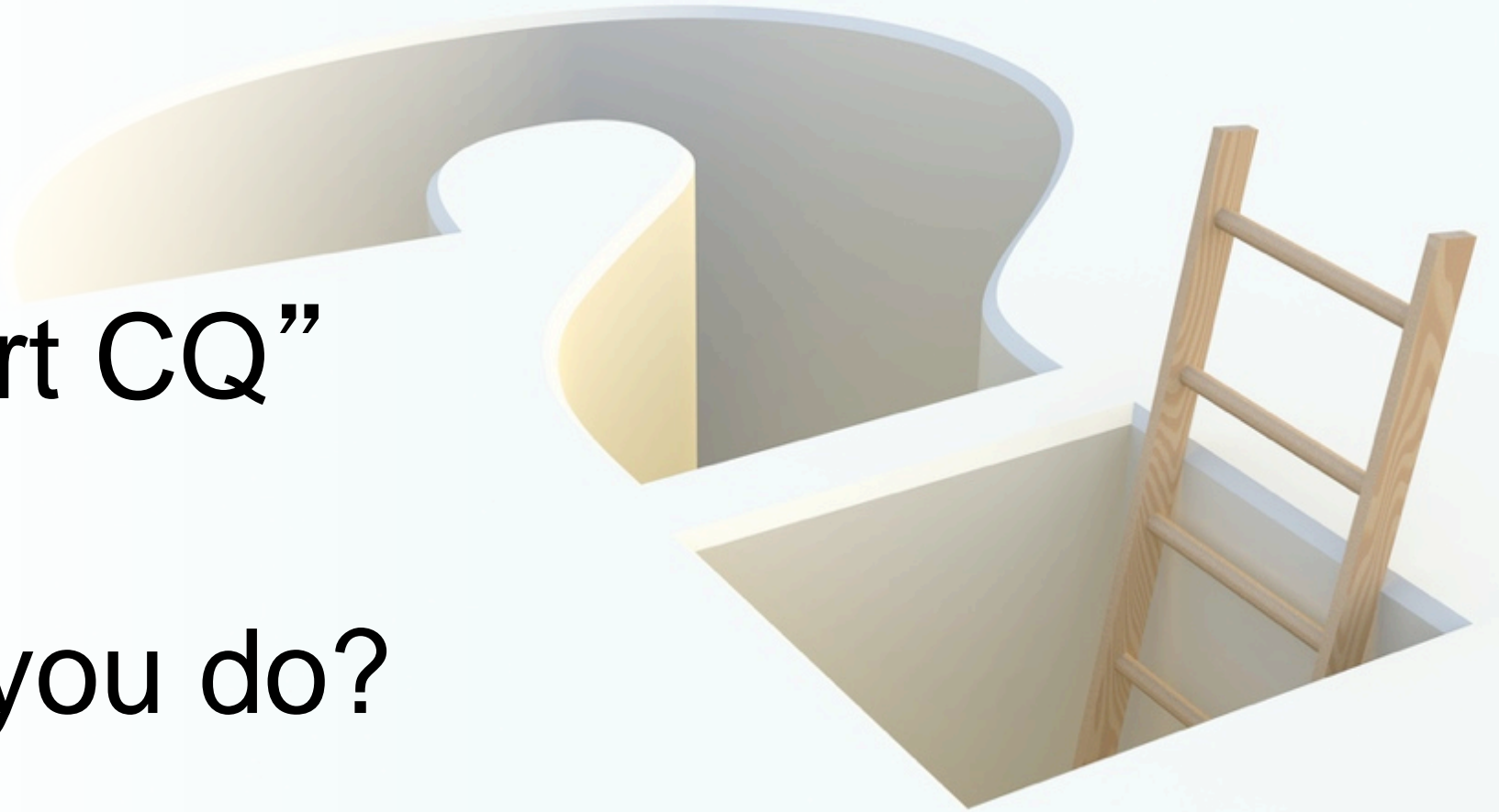
- Look at config files, list of files,  
(for example many journal files or so)
- If you don't know, ask for info

AnalyzePersistenceProblems

Problem:

“Can not start CQ”

What would you do?



Check error.log file

Check if files are read-only

Check bundles

Problem:

“Can not log in with admin/admin”

What would you do?



What I did:

- Restart CQ
- Reinstall CQ(!)
- Downloaded CQ again, tried again
- Restarted computer

Not  
GUI?



The solution was:

Clear browser cache

Take multiple thread dumps

Set global log level to DEBUG

Use profiler

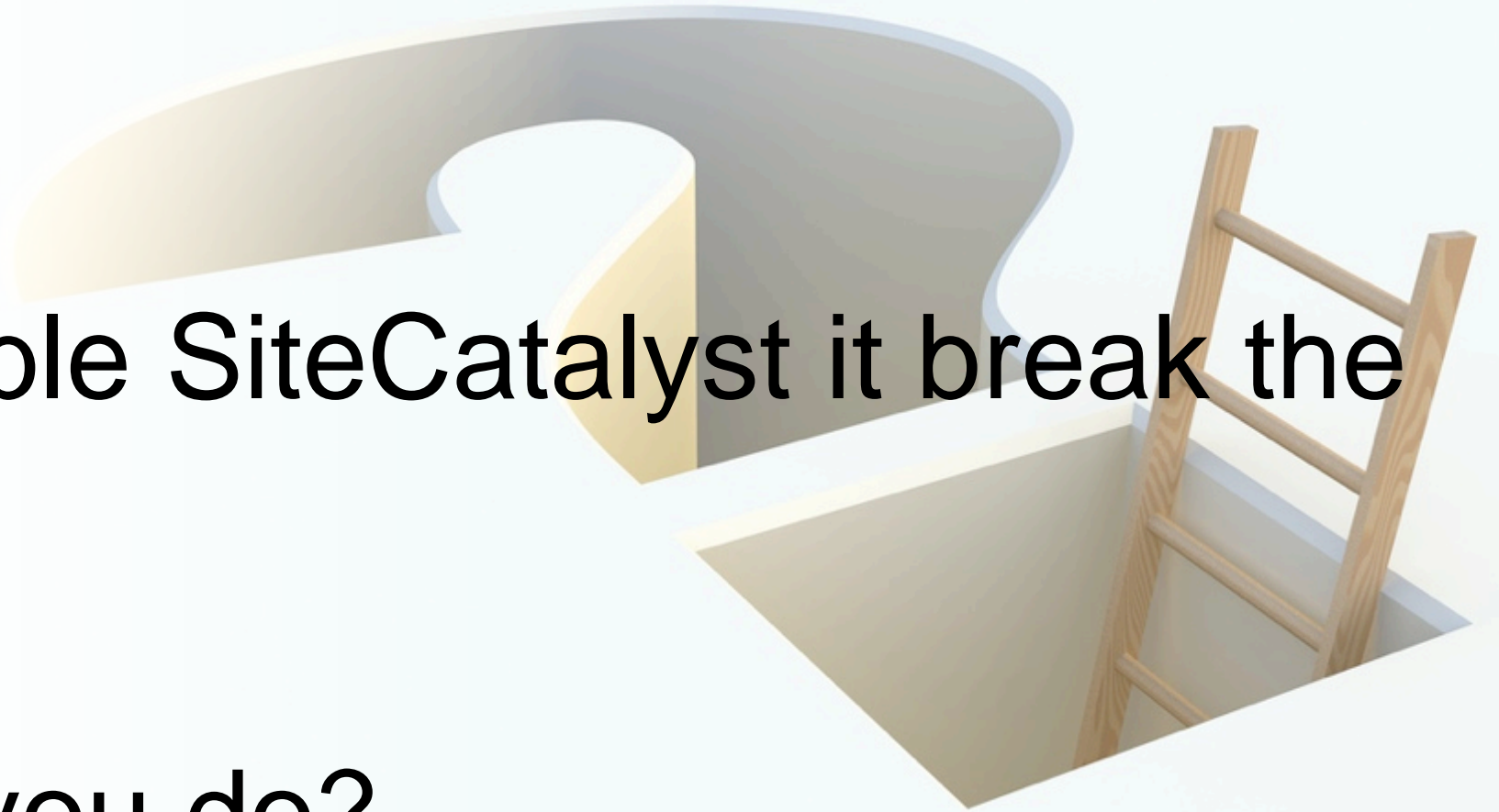
The solution was:

Log level to DEBUG helped me to find the culprit as other methods failed due to the 100% CPU usage, the logs clearly showed the thread that was mainly active and what it was doing.

Problem:

“When I enable SiteCatalyst it break the authoring”

What would you do?



Check in other browser

Check javascript console for errors

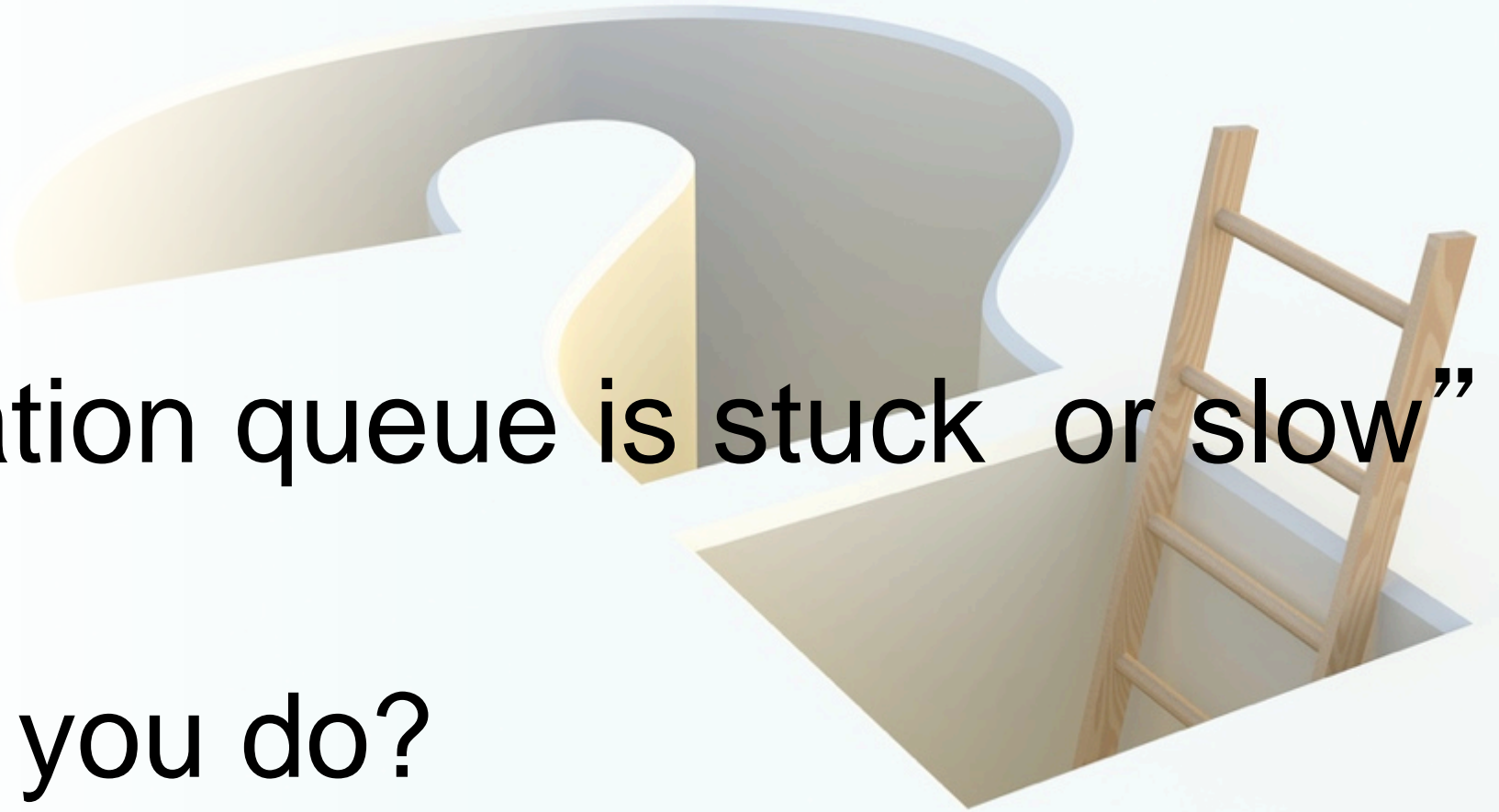
The solution was:

The issue only occurred in Chrome , and only in a specific release of Chrome, updating it to another more recent version fixed the issue

Problem:

“The replication queue is stuck or slow”

What would you do?



Check the logs for errors

Check Sling Eventing (Felix webconsole)

Change log level of Sling Eventing to  
DEBUG

Take thread dumps

Check hotfix status

The solution was:

The issue was due to multiple replication agent pointing to the same publish producing concurrent access

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**Adobe**