



# Profiler, the better Debugger?



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# Overall Presentation Goal

Provide a different viewpoint on tackling software issues

# Speaker

- Heiko W. Rupp is senior developer with JBoss Operations Network, Jopr and RHQ
- He wrote the first German book on JBoss AS and one of the first German books on EJB3
- He is and has been involved in other Open Source and commercial software projects
- Heiko also gave trainings and was consulting at customers

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If the software does not work we use a debugger.  
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But: is this always the right thing to do?

# Short outline

- Questions to solve
- Differences Profiler <-> Debugger
- Why shall I use a profiler as a debugger?
- Demo
- Conclusion

# Questions to solve

- When working with unknown software
  - Where do I start?
  - What happens when I click here?
- What is really going on in this piece of code:

```
Query q = „SELECT p FROM Person AS p WHERE ...“  
q.getSingleResult();
```

# A look at a Debugger

- Tool to
  - Step through code
  - Look at variable content
- Allows to stop the application
  - On Exception
  - On Breakpoint (perhaps with condition)
- But: issues with timeouts in larger applications

# A look at a Profiler

- Analyzing of
  - CPU usage
  - Memory Usage
- Application runs while profiling
- No view on content of variables
  
- Products (Free and commercial)
  - NetBeans Profiler, Eclipse TPTP, JProfiler, JProbe

# Why a profiler for debugging?

- Start of a call-chain is unknown
  - New, unknown application
- Call stack uses reflection
  - Hard to follow the call tree
- Use of big, complex frameworks
  - Hard to step through a deep call stack
- Transaction timeouts render values invalid

# DEMO

Lets see how to find out what happens „when you click here“

RESOURCES			
Resource Name	Total	Avail	Action
snert	1	✓	▶
File System	4	✓	▶
CPU	2	✓	▶
HttpCheck	1	✓	▶
<b>JBossAS Server</b>	2	⚠	▶
snert RHQ Agent	1	✓	▶
Network Adapter	6	⚠	▶

Example from Jopr/RHQ



# Concluding statement

A profiler can help to view a debugging task from a different angle.

A profiler does not replace a debugger, but can add a lot of value.

# Q&A



# Thanks for your attention!

<http://www.rhq-project.org/>  
<http://www.jboss.org/jopr/>

<http://pilhuhn.blogspot.com/>  
<http://twitter.com/pilhuhn>