

Performance and Load Testing in Action by Mieke Gevers



Performance Testing - all about anticipating, controlling and avoiding ...



1. <u>Scope</u>

Response time issues, application slowdowns, bottlenecks, severe non-availability whatever you call them, are among the most challenging issues for IT organizations to detect, monitor, resolve and prevent from happening again. A Performance Test is one of the instruments that can be used to identify these issues, helping to avoid the catastrophic effects of application performance failures. Needless to say that creating and conducting a "good-enough" load test is a challenge on its own and several conditions need to be met. During the years of field work, a methodology has been developed to address this challenge.

This 2-day workshop **Performance and Load Testing in Action** will give you an overview of the performance testing types, addressing the most crucial challenges you might encounter, providing you a Performance Testing methodology and guidelines on how it can contribute to a successful performance test, including "Hands-on" – putting theory into practice! Or in other words answers to: "Where do you begin!", "What are the pitfalls?", "Which resources & when?"...

Bullet Points:

- Introduction into the definitions & terminologies of performance testing and their practical meaning & implications.
- What are testable performance objectives for web and non-web environments, and how to define them?
- The when & where of using performance workload models and their implications
- Overview of the current performance testing tools
- "Which resources & when?"
- What to monitor, root cause analysis and results evaluation
- Tips & tricks about performance testing



Including "Hands-on" – putting theory into practice using a case study and a performance testing tool (e.g. open source tool(s)) within a 3-tier environment

2. Course Outline

Day 1

- 1. What is a load test?
 - Terminology
 - Which are the goals to be covered from a business and QA perspective as well as from a technical point of view
 - Differentiating Network, Computable & Rendered Performance
- 2. Challenges of load testing; e.g.
 - Highlighting the complexity of HW, SW, Network & security
 - How to do User modelling (manual & practical exercise)
 - What are mandatory Resources
 - Where in the Life cycle does the performance test fits into & identifying cost factors (info on making a business case)
 - Giving an overview of the tooling market. Short demo on how performance testing tools & CAST tools in general are working.
 - Addressing Performance Testing in the cloud, Cloud Performance Testing, Mobile Performance Testing, AJAX, SAP, ...& more specific platforms
 - *Performance Testing & Profiling, the what & how this can be an advantage*
 - Tips on choosing a performance-testing tool. Pro's-& Con's including an overview of the Open-Source & Proprietary market
- 3. Methodology based on S.M.A.R.T.
 - 3.1. Phase 1: Analyse factors that could have an impact on load testing, collect & examine the indispensable information needed to setup a good (-enough), but successful load test.
 - 3.2. Phase 2: Planning & Defining and designing the load test, gather the information from previous phase (manual exercise)



Day 2

- 3.3. Phase 3: Build & Record the load test (manual & practical exercise)
- *3.4. Phase 4: Running the base line and the load test (practical exercise)*
- 3.5. Phase 5: Reporting includes analysing the results & root cause analysis (practical exercise)
- 3.6. Phase 6: Re-usability with deployment of the load test & monitor
- 4. Hands-on: "Putting the theory into practice" using a Performance testing tool(s) (Open Source)
- 5. Tips, tricks, Q&A.....constantly during the 2 days of tutorials
- 6. Conclusions

Attendees should be familiar with 3-tier environments, incl. Web server and Internet/Intranet technologies.

3. Trainer: Mieke Gevers, AQIS, Belgium

Has been in the IT industry for +25 years and since 2006, cofounder and managing director at AQIS (Agile Quality in Information Systems).

She has a Bachelor's of Computer Science degree and started her career as a software developer, later moving on to various positions as an analyst, project manager and, ultimately, QA Manager for several different companies in the Benelux region and Germany. Until November, 2006 she has been with Segue Software, Borland for more than eight years rising from Technical Sales Engineer, Technical Manager, EMEA/APAC, and Alliance Architect EMEA/APAC to Solution Architect, and EMEE at Borland.

Having developed special interest in the techniques and processes relating to test environment management and the impact of environmental factors on automated testing, she is a regular speaker throughout Europe, the United States, Asia and Australia. She was also EuroSTAR's country Ambassador for Belgium till 2010 and a member of the Eurostar 2007 & 2009 Program Committee.

Since 2010 she is the program chair of the international testing conference "The Belgium Testing Days".

In 2006, she co-founded "the Belgian Testers Organisation" and recently became a board member of KVIV and BNTQB (Belgian member of ISTQB).

She also has been working with different automatic testing tools, specialising since +15 years on Performance testing and monitoring.