

Supplementary Module of School of Engineering

Title: Computer Systems Performance

Shortcut: EVA_SYSPERF

Number of credits	3 ECTS
Organizer	InIT Institute of Applied Information Technology
Performance record	Oral presentations
Start date	Start of semester or by agreement
Implementation mode	14 x 3L Seminar and Lecture
Language	English/German
Abstract (max. 300 Chars)	<p>Sound System Performance Evaluation is a very important skill set required in today's evermore complex computer and system environment. Starting from personal PCs and even handhelds, this ranges further over small home deployments up to cloud scale data centers and anything in between. Methodologically correct application of hypothesis establishment, parameters choices, instrumentation, observation, evaluation, and interpretation is essential, not only for identifying root cause of malfunctioning systems but also to optimize return of investments and after all to operate systems with ideal performance and least environmental impact.</p>
Module content and learning objectives	<p>Learning objectives:</p> <ul style="list-style-type: none"> - You learn the foundation of performance evaluation (definitions, terminology, concepts) - You will understand performance criteria for individual components and complete systems - You will be able to systematically define performance evaluation objectives - You know different methods that allow to track and trace performance objectives - You will learn how to select/develop/apply performance evaluation instrumentation - You will learn how to design experimental setups and conduct performance evaluation experiments - You will learn how to collect, statistically correctly analyze, visualize, and interpret performance evaluation data. - You will learn how to identify root causes, bottlenecks, and similar limiting elements and how to propose performance improvements. <p>Module Content:</p> <ul style="list-style-type: none"> - Concepts, Terminology, Methods - Performance Objectives and Parameters

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	<ul style="list-style-type: none">- Experimental Design- Data Collection and Analysis- Performance Enhancements Strategies
Preconditions	Knowledge in Operating Systems/Linux and Cloud Computing
Literature	
Specific regulations	
Contact and information	Prof. Dr. Thomas M. Bohnert, bohe@zhaw.ch