



Pedagogical Framework and Network Laboratory Management Tool for Practical Network Administration Education

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Abstract

System Administration is an emerging academic discipline, yet there remains no commonly accepted approach to teaching the core skill of troubleshooting system problems. Troubleshooting is considered by many in the field to be the single most important skill for a working professional. The lack of common teaching methodology for this skill has resulted in an on the job training approach to teaching that is not scalable or measurable. This research addresses this gap with an approach that may be developed into a reliable, repeatable, scalable, and, most importantly, measurable approach to teaching the critical system administration troubleshooting skill. The research produced two core results, a proposed Pedagogical Framework to guide the teaching process, and a Network Laboratory Management Tool that is a proof of concept and basis for a more general purpose, practical implementation of the Framework. In this thesis the Framework and Tool are presented in detail and future work is described.

This is abstract of my Research Thesis in Master Programme “Network and System Administration ” at University of Oslo, under Department of Informatics.