



# Supervisor's statement of a final thesis

**Student:** Bc. Martin Černáč  
**Supervisor:** Ing. Aleš Padrta, Ph. D.  
**Thesis title:** Komunikace skrze Captive portal  
**Branch of the study:** Computer Systems and Networks

**Date:** 23. 5. 2018

<p><i>Evaluation criterion:</i></p> <p><b>1. Difficulty and other comments on the assignment</b></p>	<p><i>The evaluation scale: 1 to 5.</i></p> <p>1 = extremely challenging assignment, 2 = rather difficult assignment, <b>3 = assignment of average difficulty,</b> 4 = easier, but still sufficient assignment, 5 = insufficient assignment</p>
<p><i>Criteria description:</i> Characterize this final thesis in detail and its relationships to previous or current projects. Comment what is difficult about this thesis (in case of a more difficult thesis, you may overlook some shortcomings that you would not in case of an easy assignment, and on the contrary, with an easy assignment those shortcomings should be evaluated more strictly.)</p> <p><i>Comments:</i> The difficulty and the scope is appropriate for a final thesis. The goal of the final thesis is to design, implement, and evaluate a software for captive portal bypassing. The main challenge is to achieve maximal throughput - several solutions has to be developed and compared.</p>	
<p><i>Evaluation criterion:</i></p> <p><b>2. Fulfilment of the assignment</b></p>	<p><i>The evaluation scale: 1 to 4.</i></p> <p><b>1 = assignment fulfilled,</b> 2 = assignment fulfilled with minor objections, 3 = assignment fulfilled with major objections, 4 = assignment not fulfilled</p>
<p><i>Criteria description:</i> Assess whether the thesis meets the assignment statement. In Comments indicate parts of the assignment that have not been fulfilled, completely or partially, or extensions of the thesis beyond the original assignment. If the assignment was not completely fulfilled, try to assess the importance, impact, and possibly also the reason of the insufficiencies.</p> <p><i>Comments:</i> The thesis meets the assignment statement.</p>	
<p><i>Evaluation criterion:</i></p> <p><b>3. Size of the main written part</b></p>	<p><i>The evaluation scale: 1 to 4.</i></p> <p><b>1 = meets the criteria,</b> 2 = meets the criteria with minor objections, 3 = meets the criteria with major objections, 4 = does not meet the criteria</p>
<p><i>Criteria description:</i> Evaluate the adequacy of the extent of the final thesis, considering its content and the size of the written part, i.e. that all parts of the thesis are rich on information and the text does not contain unnecessary parts.</p> <p><i>Comments:</i> The extent of final thesis is appropriate.</p>	
<p><i>Evaluation criterion:</i></p> <p><b>4. Factual and logical level of the thesis</b></p>	<p><i>The evaluation scale: 0 to 100 points (grade A to F).</i></p> <p>100 (A)</p>
<p><i>Criteria description:</i> Assess whether the thesis is correct as to the facts or if there are factual errors and inaccuracies. Evaluate further the logical structure of the thesis, links among the chapters, and the comprehensibility of the text for a reader.</p> <p><i>Comments:</i> The structure of the final thesis is logical and the reader can easily follow the flow of thoughts (task specification, analysis of existing information, software design, software implementation, software evaluation, conclusion). The contained information and facts are correct.</p>	
<p><i>Evaluation criterion:</i></p> <p><b>5. Formal level of the thesis</b></p>	<p><i>The evaluation scale: 0 to 100 points (grade A to F).</i></p> <p>85 (B)</p>
<p><i>Criteria description:</i> Assess the correctness of formalisms used in the thesis, the typographical and linguistic aspects, see Dean's Directive No. 26/2017, Article 3.</p>	

*Comments:*

The typography of the final thesis is perfect, except several overfull boxes (too long filenames at the end of the line or too wide tables). From the linguistic point of view, there exists a space for improvement - for example overuse of footnotes, some sentences are very hard to understand, and many parts are not written in style appropriate for the final thesis (the popular-educational style, first person view).

*Evaluation criterion:* *The evaluation scale: 0 to 100 points (grade A to F).*  
**6. Bibliography** **100 (A)**

*Criteria description:*  
Evaluate the student's activity in acquisition and use of studying materials in his thesis. Characterize the choice of the sources. Discuss whether the student used all relevant sources, or whether he tried to solve problems that were already solved. Verify that all elements taken from other sources are properly differentiated from his own results and contributions. Comment if there was a possible violation of the citation ethics and if the bibliographical references are complete and in compliance with citation standards.

*Comments:*  
The set of used (and properly referenced) materials is perfect for the given final thesis topic. The books, research papers, RFCs and other sources were used. The contribution of the student can be easily differentiated because of logical structure of the final thesis and citation standards compliant referencing. No violation of citation ethics is present.

*Evaluation criterion:* *The evaluation scale: 0 to 100 points (grade A to F).*  
**7. Evaluation of results, publication outputs and awards** **100 (A)**

*Criteria description:*  
Comment on the achieved level of major results of the thesis and indicate whether the main results of the thesis extend published state-of-the-art results and/or bring completely new findings. Assess the quality and functionality of hardware or software solutions. Alternatively, evaluate whether the software or source code that was not created by the student himself was used in accordance with the license terms and copyright. Comment on possible publication output or awards related to the thesis.

*Comments:*  
The main result of the thesis is a modular software, which can be used for captive portal bypassing. The four created modules were tested and compared with state-of-the-art tool iodine. The software is well designed and the code is functional. The modularity of the software allows its easy extension in the future.

*Evaluation criterion:* *No evaluation scale.*  
**8. Applicability of the results**

*Criteria description:*  
Indicate the potential of using the results of the thesis in practice.

*Comments:*  
In practice, there are two main areas, where the results can be applied: to bypass captive portals and to test quality of captive portals.

*Evaluation criterion:* *The evaluation scale: 1 to 5.*  
**9. Activity and self-reliance of the student**

*9a:*  
**1 = excellent activity,**  
*2 = very good activity,*  
*3 = average activity,*  
*4 = weaker, but still sufficient activity,*  
*5 = insufficient activity*

*9b:*  
**1 = excellent self-reliance,**  
*2 = very good self-reliance,*  
*3 = average self-reliance,*  
*4 = weaker, but still sufficient self-reliance,*  
*5 = insufficient self-reliance.*

*Criteria description:*  
Review student's activity while working on this final thesis, student's punctuality when meeting the deadlines and consulting continuously and also, student's preparedness for these consultations. Furthermore, review student's independency.

*Comments:*  
The student was capable to work independently and he was always well prepared for the consultations. All the defined deadlines were fulfilled.

*Evaluation criterion:* *The evaluation scale: 0 to 100 points (grade A to F).*  
**10. The overall evaluation** **93 (A)**

*Criteria description:*  
Summarize the parts of the thesis that had major impact on your evaluation. The overall evaluation **does not** have to be the arithmetic mean or any other formula with the values from the previous evaluation criteria 1 to 9.

*Comments:*  
The goals of final thesis were fulfilled and the resulting software can be used in praxis. The parts of thesis are in logical order and describe the whole process from the assignment to the solution. There are some minor linguistic issues.

Signature of the supervisor: