

Supervisor's statement of a final thesis

Czech Technical University in Prague

Faculty of Information Technology

Student: Michal Funtán
Supervisor: Ing. Aleš Padrta, Ph. D.
Thesis title: Vytvoření metodiky pro srovnávání softwarových generátorů packetů
Branch of the study: Information Technology

Date: 10. 5. 2017

<p><i>Evaluation criterion:</i></p> <p>1. Difficulty and other comments on the 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 scope and difficulty of the assignment is at standard level for bachelor thesis (gather information about packet generators - theoretical and practical; identify important features; propose methodology for benchmarking; verify functionality of proposed methodology on wide used packet generators; evaluate the results).</p>	<p><i>The evaluation scale: 1 to 5.</i></p> <p>1 = extremely challenging assignment, 2 = rather difficult assignment, 3 = assignment of average difficulty, 4 = easier, but still sufficient assignment, 5 = insufficient assignment</p>
<p><i>Evaluation criterion:</i></p> <p>2. Fulfilment of the assignment</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> All defined particular tasks were fulfilled.</p>	<p><i>The evaluation scale: 1 to 4.</i></p> <p>1 = assignment fulfilled, 2 = assignment fulfilled with minor objections, 3 = assignment fulfilled with major objections, 4 = assignment not fulfilled</p>
<p><i>Evaluation criterion:</i></p> <p>3. Size of the main written part</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 size and information density is adequate for bachelor thesis.</p>	<p><i>The evaluation scale: 1 to 4.</i></p> <p>1 = meets the criteria, 2 = meets the criteria with minor objections, 3 = meets the criteria with major objections, 4 = does not meet the criteria</p>
<p><i>Evaluation criterion:</i></p> <p>4. Factual and logical level of the thesis</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 is logical and the document leads readers smoothly from the problem description to the solution. - All mentioned facts are proved by experiments or referenced.</p>	<p><i>The evaluation scale: 0 to 100 points (grade A to F).</i></p> <p>100 (A)</p>
<p><i>Evaluation criterion:</i></p> <p>5. Formal level of the thesis</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. 14/2015, Article 3.</p> <p><i>Comments:</i> - All formal and typographical requirements of the thesis are fulfilled. - The linguistic aspect is good, but can be improved in some areas such as order of words in some sentences, choice of conjunctions for some secondary sentences, and the style of some paragraphs.</p>	<p><i>The evaluation scale: 0 to 100 points (grade A to F).</i></p> <p>89 (B)</p>
<p><i>Evaluation criterion:</i></p> <p>6. Bibliography</p>	<p><i>The evaluation scale: 0 to 100 points (grade A to F).</i></p> <p>100 (A)</p>

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 choice of sources is adequate for given assignment.
- Own work can be easily differentiated from information acquired from sources.
- The references are in compliance with citation standards and there is no violation of the citation ethics.

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

7. Evaluation of results, publication outputs and awards **90 (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 bachelor thesis is generic methodology for software packet comparison, which is worth publishing.
- The quality corresponds to the time assigned for the bachelor thesis. The methodology can be easily extended in the future.
- All used software and code was used in accordance with the licence terms and copyright.

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:

Proposed methodology will be used in CESNET Forensic Laboratory for identifying proper packet generator for given tasks of stress testing and fuzz testing.

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:

- Student was fully interested in the subject of bachelor thesis, which resulted in his high activity.
- The consultations were on regular basis, student was always prepared and all given tasks were always accomplished in time.
- Student is fully self-reliant. The consultations were used mainly to discuss steps and solutions proposed by the student himself.

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

10. The overall evaluation **97 (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 main result of the bachelor thesis is methodology for packet generator comparison, which will be used in praxis in CESNET Forensic Laboratory.
- All the particular tasks of bachelor thesis were fulfilled and the bachelor thesis meets all formal requirements.
- The attitude of student to the bachelor thesis was exemplary.
- Except minor linguistic issues there is nothing to reproach.

Signature of the supervisor: