

I. IDENTIFICATION DATA

Thesis name:	Light-weight Packaging System for a Linux Distribution
Author's name:	Denis Shcherbakov
Type of thesis :	bachelor
Faculty/Institute:	Faculty of Electrical Engineering (FEE)
Department:	Department of Computer Science
Thesis reviewer:	Ing. Petr Císař
Reviewer's department:	NVision ICT Czech Republic, a.s.

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment	ordinarily challenging
<i>Evaluation of thesis difficulty of assignment.</i>	
The assignment requires a good knowledge of OS Linux and C programming language. While it requires a good deal of invention, there is still plenty of information on this subject available on the Internet, such as libraries to download or code examples solving various functionalities or problems.	

Satisfaction of assignment	fulfilled
<i>Assess that handed thesis meets assignment. Present points of assignment that fell short or were extended. Try to assess importance, impact or cause of each shortcoming.</i>	
The thesis fulfills the assignment completely. From functional point of view, I would expect the packaging system to include at least some basic way of dealing with customized configuration files of the software contained in the packages, but there is no such requirement in the assignment.	

Method of conception	correct
<i>Assess that student has chosen correct approach or solution methods.</i>	
The approach of solution chosen by the student is good and in line with common practice. Obviously, the student has gained all the necessary knowledge needed to solve this kind of low-level programming tasks. The code is readable and it is divided into smaller block in a meaningful way. Also I appreciate the minimalistic use of available SW libraries, in line with the assignment. I have just a small objection regarding consistent use of obsolete and insecure string functions in the code, such as strcpy or strcat. These function are susceptible to buffer-overflow errors and they may cause the application to crash. For real usage, I would suggest to replace these functions with their variants that allow to define the size of the target buffer.	

Technical level	A - excellent.
<i>Assess level of thesis specialty, use of knowledge gained by study and by expert literature, use of sources and data gained by experience.</i>	
The student has clearly a good knowledge of the subject of programming and the operating system. Also, he has been able to gather and select the relevant information needed to create the program.	

Formal and language level, scope of thesis	A - excellent.
<i>Assess correctness of usage of formal notation. Assess typographical and language arrangement of thesis.</i>	
The thesis is easy to read and understand.	

Selection of sources, citation correctness	A - excellent.
<i>Present your opinion to student's activity when obtaining and using study materials for thesis creation. Characterize selection of sources. Assess that student used all relevant sources. Verify that all used elements are correctly distinguished from own results and thoughts. Assess that citation ethics has not been breached and that all bibliographic citations are complete and in accordance with citation convention and standards.</i>	
I have no comments nor objections to this aspect of the thesis.	

Additional commentary and evaluation

Present your opinion to achieved primary goals of thesis, e.g. level of theoretical results, level and functionality of technical or software conception, publication performance, experimental dexterity etc.

The thesis has been well done, including the practical part. The resulting program seems to be almost ready for practical use. For that, I would suggest to complete following two steps:

- To replace the obsolete string functions
- To introduce at least some basic mechanism of configuration file handling during upgrades or reinstalation, such as a choice "keep existing"/"replace by the package files"

III. OVERALL EVALUATION, QUESTIONS FOR DEFENSE, CLASSIFICATION SUGGESTION

Summarize thesis aspects that swayed your final evaluation. Please present apt questions which student should answer during defense.

Overall, it is a good thesis. The student has proven his ability to work independently and use the available information to support his own creation, while the result follows the common practice. The code is well written and it is not far for being ready for practical use. I appreciate the minimalistic approach where the less use of pre-created SW libraries requires more coding effort and more knowledge. I have no further questions on the thesis.

I evaluate handed thesis with classification grade **A - excellent**.

Date: **26.5.2022**

Signature:

