Review of Master's Thesis

Student: Mojžíš Vít, Bc.
Title: SELinux Policy Analysis Tool (id 18601)
Reviewer: Peringer Petr, Dr. Ing., UITS FIT VUT

1.   Assignment complexity   **average assignment**

2.   Completeness of assignment requirements   **assignment fulfilled**
The assignment was fulfilled, but the final results are not very good.

3.   Length of technical report   **almost in minimum requirements**
The text length is 30 printed pages (less than 40 normalized pages). This is not enough for master thesis.

4.   Presentation level of technical report   **60 p. (D)**
The text structure is acceptable, but the quality of text is under average level. There are parts which need more thorough explanation, because SELinux is rather complex matter, mainly for non-experts in security area. Moreover in chapter 5 i miss the description of design of implemented programs (for example there are no UML diagrams). I think, the author should also use formal mathematical approach to specify the operations of the proposed tool.

5.   Formal aspects of technical report   **70 p. (C)**
The text typography is good, except some minor cases (for example on page 17 the first paragraph of 4.2.1 is too narrow). Print quality is not very good, some lines seem to be bolder than other lines, for example line 8 on page 6. The language quality of english text is good (at least from my point of view). There are some other minor problems: missing footnote 4 on page 11; word "lasses" should be "classes" on page 12, and many others.

6.   Literature usage   **65 p. (D)**
The bibliography counts 12 items only. Most items are more than 10 years old. There should be more recent literature used.

7.   Implementation results   **60 p. (D)**
The python source contains 1560 source lines overall (counted by *sloccount* tool). The code seems to be of good quality. I did not test it personally (because I have no system with activated SELinux available for experiments), but the author has demonstrated the main functionality, and it works as presented in the text.
In the source code directory, there is only one file (called "readme") containing name of the author, therefore I can only guess, that all files without copyright remarks are part of the solution written by the author. This is not good style.

8.   Utilizability of results
I expect, that the implemented tools will be used by RedHat developers after some improvements.

9.   Questions for defence
  • Did you consider using GraphViz visualization tool?
  • What is the space and time complexity of algorithms used in the tool?

10.   Total assessment   **60 p. satisfactory (D)**
The work is important to security improvements in Linux based operating systems. Unfortunately the results are rather weak. Because of too short and not very well written text of the thesis and other mentioned problems I propose overall grade **D-**.

In Brno 7. June 2016

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