I. IDENTIFICATION DATA

Thesis title:	**Using Certificate Transparency to detect malware in network telemetry**
Author's name:	**Bc. Jan Karsch**
Type of thesis :	master
Faculty/Institute:	Faculty of Electrical Engineering (FEE)
Department:	Department of Computer Science
Thesis reviewer:	Ing. Jan Brabec
Reviewer's department:	Department of Computer Science

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment	**challenging**
How demanding was the assigned project?	
I believe the thesis assignment is of above-average difficulty due to the requirement to combine domain knowledge in cybersecurity, ability to design a big-data distributed pipeline on Apache Spark and also knowledge in machine learning to design the experiments and interpret them correctly.	

Fulfilment of assignment	**fulfilled**
How well does the thesis fulfil the assigned task? Have the primary goals been achieved? Which assigned tasks have been incompletely covered, and which parts of the thesis are overextended? Justify your answer.	
All the major goals were fulfiled and the thesis provides very useful results.	

Activity and independence when creating final thesis	**B - very good.**
Assess whether the student had a positive approach, whether the time limits were met, whether the conception was regularly consulted and whether the student was well prepared for the consultations. Assess the student's ability to work independently.	
Student was steadily progressing, coming up with new ideas and consulting next steps. He got stuck a few times on lower-level technical issues that could have been perhaps solved independently.	

Technical level	**A - excellent.**
Is the thesis technically sound? How well did the student employ expertise in his/her field of study? Does the student explain clearly what he/she has done?	
I find the thesis technically sound and the student has shown ability to explore the topic deeply and good understanding of the underlying mechanisms. All the important parts are explained in detail.	

Formal level and language level, scope of thesis	**A - excellent.**
Are formalisms and notations used properly? Is the thesis organized in a logical way? Is the thesis sufficiently extensive? Is the thesis well-presented? Is the language clear and understandable? Is the English satisfactory?	
Thesis is organized logically, starting with technical background of the TLS protocol, the need and design of certificate transparency service and progressing to the actual experiment design, implementation and results with discussion. Student's English level is excellent.	

Selection of sources, citation correctness	**A - excellent.**
Does the thesis make adequate reference to earlier work on the topic? Was the selection of sources adequate? Is the student's original work clearly distinguished from earlier work in the field? Do the bibliographic citations meet the standards?	
Student works with references correctly.	

Additional commentary and evaluation (optional)

Comment on the overall quality of the thesis, its novelty and its impact on the field, its strengths and weaknesses, the utility of the solution that is presented, the theoretical/formal level, the student's skillfulness, etc.

III. OVERALL EVALUATION, QUESTIONS FOR THE PRESENTATION AND DEFENSE OF THE THESIS, SUGGESTED GRADE

Summarize your opinion on the thesis and explain your final grading.

I believe the thesis is well-made and it provides important results and excellent summary of the problem landscape. I was satisfied with how Jan worked, and despite few minor instances where he could perhaps work more independently, the grade that I award for the thesis is **A - excellent.**

Date: **20.1.2021**   Signature: