



Review report of a final thesis

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Thesis title: Návrh migrace reálné velké firemní sítě na softwarově definovanou síť
Branch / specialization: Computer Networks and Internet 2021
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Evaluation criteria

1. Fulfillment of the assignment

- ▶ [1] assignment fulfilled
- [2] assignment fulfilled with minor objections
- [3] assignment fulfilled with major objections
- [4] assignment not fulfilled

I have no objections.

2. Main written part

80/100 (B)

The text has a slightly non-standard structure as it does not have an introduction and Chapter 1 jumps directly to definition of terms and technologies used. Chapter 2 then goes more in depth but I don't see a change in character between them. To someone not familiar with the technologies, the first part of the thesis can serve as a quick introduction and save them from reading quite a lot of manuals and books, which are found in the references. Some references, such as [16] are not well formatted or missing some information. The second part takes a case study of a company, which is a very generic case with 2 primary locations with a server room, a data center, and several smaller locations. There is nothing specific to a certain business branch and it seems there was no further communication with the company, so the result is a compilation of best practices of network migration to SDN.

3. Non-written part, attachments

100/100 (A)

I see the practical part as superfluous, because it duplicates the work of the previous thesis [47], in which labs for SD-WAN have been created in the Eve-ng simulator. However, this is not a problem of the student but rather of the assignment. I trust that the student learned something while replicating the lab and I keep a high rating of this part. It would

be more interesting to model a case when some branches are still connected via manually configured VPNs and some via SD-WAN.

4. Evaluation of results, publication outputs and awards 90/100 (A)

I think the main contribution of the thesis is the summary of all the terms and technologies used in Cisco SD Access and SD WAN. It also presents the possibilities for migrating from traditional technologies to SDN and chooses a concrete path for the model case.

The overall evaluation 90/100 (A)

I think the first two chapters could be structured better as there was some overlap, but overall the thesis reads well and the breadth of technologies studied goes above the average for a bachelor thesis.

Questions for the defense

In the Figure 5.4 about the migration path to SD Access, there is a firewall device. The "new" path for traffic goes around it. Will it be possible to migrate all firewall rules to Service ACLs and if not, will it be possible to integrate the firewall into the routing path?

Was there an actual company and if yes, how did they like the presented migration plan?

Instructions

Fulfillment of the assignment

Assess whether the submitted FT defines the objectives sufficiently and in line with the assignment; whether the objectives are formulated correctly and fulfilled sufficiently. In the comment, specify the points of the assignment that have not been met, assess the severity, impact, and, if appropriate, also the cause of the deficiencies. If the assignment differs substantially from the standards for the FT or if the student has developed the FT beyond the assignment, describe the way it got reflected on the quality of the assignment's fulfilment and the way it affected your final evaluation.

Main written part

Evaluate whether the extent of the FT is adequate to its content and scope: are all the parts of the FT contentful and necessary? Next, consider whether the submitted FT is actually correct – are there factual errors or inaccuracies?

Evaluate the logical structure of the FT, the thematic flow between chapters and whether the text is comprehensible to the reader. Assess whether the formal notations in the FT are used correctly. Assess the typographic and language aspects of the FT, follow the Dean's Directive No. 52/2021, Art. 3.

Evaluate whether the relevant sources are properly used, quoted and cited. Verify that all quotes are properly distinguished from the results achieved in the FT, thus, that the citation ethics has not been violated and that the citations are complete and in accordance with citation practices and standards. Finally, evaluate whether the software and other copyrighted works have been used in accordance with their license terms.

Non-written part, attachments

Depending on the nature of the FT, comment on the non-written part of the thesis. For example: SW work – the overall quality of the program. Is the technology used (from the development to deployment) suitable and adequate? HW – functional sample. Evaluate the technology and tools used. Research and experimental work – repeatability of the experiment.

Evaluation of results, publication outputs and awards

Depending on the nature of the thesis, estimate whether the thesis results could be deployed in practice; alternatively, evaluate whether the results of the FT extend the already published/known results or whether they bring in completely new findings.

The overall evaluation

Summarize which of the aspects of the FT affected your grading process the most. The overall grade does not need to be an arithmetic mean (or other value) calculated from the evaluation in the previous criteria. Generally, a well-fulfilled assignment is assessed by grade A.