

Bachelor Thesis Review

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Thesis: "Automatic management of pc laboratory with OS Windows based on Puppet technology"

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Personally being a networking engineer I did not meet in my career the Puppet technology, this being a first in my case. The student presents the technology, the requirements for the lab administration, the capabilities, implementation and testing, all of this in a very neat and clear manner.

The main goal of the thesis is a help for the network administrators / system administrators to quickly deploy lab environments for the students, based on precise requirements. Overall this work simplifies the administration of the lab making the teaching process more efficient. Thus, even though the thesis does not bring and new scientific results it definitely brings practical results through the simplification it brings for the administration of the lab. I consider this results as excellent for a bachelor thesis because in a work of this magnitude the student has to be capable of reading and understanding technical documentation, of implementation and testing of a project on a precise basis. All of these are successfully covered in his thesis.

I have to mention some aspects which I personally did not like (more or less objectively):

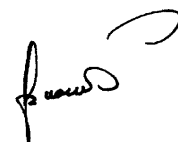
1. Figure 7.1 contains graphic elements strange from the perspective of a network engineer, not standard representations for networked devices.
2. Puppet Manifest (pages 21-22): I totally understand that the student is very familiarised with the code structure of a manifest and of course a reader, spending some time into reading the code, will be able to understand its content, however I would strongly kindly the student not to include code in any work unless strictly necessary. The code written in a language induces uncertainties (especially for someone not proficient in that programming language). Pseudocode or diagrams are way better than dry code. The beauty of code can be fully appreciated in appendixes.
3. The code in paragraphs 7.4.1 - 7.4.3 can be beautifully presented as diagrams and relations. Thus the requirements would have been much more clear for a reader.
4. The same applies for all the code in chapter 8. For example I have no idea if the line "it { should be_installed.by("powershell").with_version("4.0") }" tests something or prints something simply because I do not work with Ruby. However the line in pseudocode could have been written as: "if (installed_powershell is version 4) then continue; else (not ok and inform user)". I doubt that the student knows what "crypto key generate rsa" does on a Cisco router, however in pseudocode like "Router: generate RSA key;" is clear for anyone.

Overall I found the thesis (with the above exceptions) very well written, easy to read and understand its principles, interesting - as I myself stumbled upon a technology which I did not work with. In essence, for its level, it is excellent thus I kindly recommend the committee mark

A - vyborne - excellent

for the student.

in Prague,
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ing. Alex Moucha, Phd