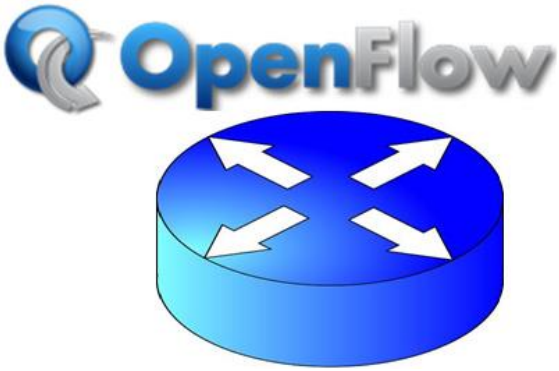
Software Defined Networking

Exercise Organization



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Peer-to-Peer Systems Engineering Lab (PS)

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1. Organizational Issues – Exercises

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- Exercises / Lab Work: Tuesday
  - Time: 16:15 - 17:55 hours
  - Location: S311/006

- Support:
  - Exercises: Leonhard Nobach, Julius Rückert
    - By e-mail [lnobach|rueckert]@ps.tu-darmstadt.de
    - Room: S3|19 7 or 8 (**only upon appointment!**)
  - Lab Work: Jeremias Blendin, Christian Koch
    - By e-mail [jblendin|ckoch]@ps.tu-darmstadt.de
    - Room: S3|19 7 or 8 (**only upon appointment!**)

2. Exercise Overview

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Oct 20	(JR)	Introduction / Exercise 1 Hand-out
Oct 27	(LN)	Exercise 1 Discussion / Exercise 2 Hand-out
Nov 3	(CK)	Lab Work 1 Introduction
Nov 10	(JB)	Lab Work 1 Discussion / Lab Work 2 Introduction
Nov 17	(JR)	Exercise 2 Discussion / Exercise 3 Hand-out
Nov 24	(JR)	Exercise 3 Discussion / Exercise 4 Hand-out
Dec 1	(CK)	Lab Work 2 Discussion / Lab Work 3 Introduction
Dec 8	(LN)	Exercise 4 Discussion / Exercise 5 Hand-out
Dec 15	(JB)	Lab Work 3 Discussion

Christmas Break

Jan 12	(JR)	Exercise 5 Discussion / Exercise 6 Hand-out
Jan 19	(LN)	Exercise 6 Discussion / Exercise 7 Hand-out
Jan 26	(LN)	Exercise 7 Discussion
Feb 2		Consultation hour for the exam (ALL)
Feb 9		Backup

3. Lecture Overview

already announced

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Oct 12	(DH)	Lecture 1:	Organization and Introduction
Oct 19	(DH)	Lecture 2:	Past, Current, and Future
Oct 26	(DH)	Lecture 3:	SDN Relatives and OpenFlow
Nov 2	(DH)	Lecture 4:	Network Virtualization and Slicing
Nov 9	(JB)	Lecture 5:	SDN Hardware and Use Case
Nov 16	(DH)	Lecture 6:	Invited Talk: Dirk Kutscher (NEC)
Nov 23	(DH)	Lecture 7:	SDN Security
Nov 30	(DH)	Lecture 8:	SDN in Wireless Networks
Dec 7	(JB/JR)	Lecture 9:	NOS and Languages
Dec 14	(DH)	Lecture 10:	SDN Applications
Christmas Break			
Jan 11	(DH)	Lecture 11:	Tight Network Control
Jan 18	(DH)	Lecture 12:	Tight Network Control (cont'd)
Jan 25	(DH)	Lecture 13:	Invited Talk: Nic Leymann (Deutsche Telekom)
Feb 1	(DH)	Lecture 14:	Invited Talk: Zoran Despotovic (Huawei)
Feb 8	(DH)	Lecture 15:	Invited Talk: NN (Alcatel-Lucent Bell Labs)

3. Exam

already announced

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- The written exam will take place on **Thu, 10.3.16 (tent.)**
- 90 minutes exam
- Exam material: lecture slides (incl. invited talks)
  - Further reading helps to understand the material better
- Max. 90 points
  - General SDN knowledge questions
  - Understanding and application of basic SDN concepts
    - E.g. completion of signaling scheme for a specific use case
  - Understanding of differences between alternatives
  - Calculations based on specific use case examples
  - Etc.
- *In case of few registrations, an oral exam will be held.*

4. Teaching Resources

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- All resources will be available on the Moodle platform
  - Exercise assignments (typically 1-2 weeks before next exercise)
  - Submission (depicted in Moodle submission – usually 1 week after assignment presented)
  - Solutions (directly after discussion of the solution)

- Location
  - https://moodle.tu-darmstadt.de/
    - Course: Software Defined Networking – 18-hh-2050-vl
    - Direct link: https://moodle.tu-darmstadt.de/course/view.php?id=6349

- You will be registered to the Moodle course automatically
  - After signing up in TUCAN

5. Bonus

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- A maximum of 0.4 grades can be reached
  - Added to the final grade achieved in the exam
  - It is not applied if your grade is >4.0 WITHOUT bonus!
- The bonus is given to each individual person based on the submissions that we receive (upload via Moodle!)
- In order to be eligible for the bonus (minimum)
  - 6 of 7 exercises must be handed in before the exercise discussion

AND

  - 2 of 3 lab exercises must be handed in before the next lab session

5. Bonus – Important Issue

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The bonus *cannot* be applied to turn an insufficient grade at the exam to a sufficient one.

If the result of the exam is a grade >4 then the bonus is not going to help.

6. Grading

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- The bonus will be assigned (indicatively!) as follows:
  - 70% for the submitted theoretical exercises (total 7 exercise)
  - 30% for the submitted solutions to the labs (total 3 labs)

7. Exercise

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1. Theoretical questions
   - Deepen and complement lecture content
   - Help understand key SDN concepts
2. Case studies
   - Apply knowledge to solve realistic problems
   - Propose and discuss design of a solution
     - How does the architecture of the solution look like?
     - What would be design alternatives?
     - What are benefits and costs of your solution?
     - You can draw figures, tables, write text, … (whatever works)
   - Note: different solutions can be valid. Convince us!

8. Exercise Submission

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- Moodle submissions only (no e-mails)
  - Respect Moodle submission deadline!
  - If you have problems submitting: contact us directly!
- No group submissions
  - Working in groups is fine and encouraged
  - Everyone has to submit its own solution
- Bonus
  - Requires fulfilling “6 out of 7” rule
  - It is either given for an exercise or not (0 or 1)
  - We want to see serious effort solving the tasks