Lab Course „RouterLab“

Organization
Tutorial

- **Time**
  - Thursday, 16:00 \textit{st}
  - Except for May 21\textsuperscript{st} („Christi Himmelfahrt“)

- **Room**
  - A 052 (Architekturgebäude)

- **Goal**
  - Give hints on how to solve problems of new work sheet

- **Attendance** \textbf{strongly recommended}
Weekly Events

- Tutorial: Thursday 16:00 st
  - new work sheets

- Debriefings:
  - Room: TEL 103, Telefunken, 1st floor
  - Wednesday 15:00 st - 16:00
  - Wednesday 17:00 st - 18:00
  - Starts: May 6th

- Submission deadline
  - Friday, 08:00 am, weekly
  - > 1 week after handing out work sheets
Accounts

- **RouterLab**
  - Access to routers, switches, loadgens
  - 1 account per team
  - Stepping stone: `cheetah.net.t-labs.tu-berlin.de`
    - Access via SSH
    - See demo later!

- **Where to work**
  - IRB: Telefunken, 1st floor
    - Required: TUBIT account
  - At any place with Internet connection
Submission

- Read FAQ (Frequently Asked Questions)
  - http://www.net.t-labs.tu-berlin.de/teaching/ss09/RL_labcourse/faq.shtml

- Solutions: consists of
  - Main solution: „summary“
  - Configuration of routers/switches/loadgens
  - Output of commands
  - Topology maps

- Submit via script on Cheetah
  - submit-assignment <src_dir> <number>
How to pass this course

- 25% of points for each work sheet
  - 1 exception is allowed
- 75% of total points throughout semester
- Attendance to all debriefings for both team members mandatory!
  - If you can't attend: Keep to the rules described in the FAQ!
- Don't copy from other teams!
- Both team partners must be able to explain the complete solution!
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Work Sheet 1: RouterLab
Introduction
Access devices

- **Which?** Devices that are assigned to you according to table at beginning of work sheet

- **When?** Current time is
  - within your time slot
  - or you reserved extra time via the reservation system (*Labtool*)
    - extra time slots can't be longer than 2 hours!!
Question 2: RouterLab topology
Question 2:

- Get to know the RouterLab topology
  - You have to answer some questions
  - This should be part of the main solution
  - [https://routerlab.net.t-labs.tu-berlin.de/](https://routerlab.net.t-labs.tu-berlin.de/)

- IP connectivity from *Loadgen* to Router *rc1*
  - Which interfaces? Which IP addresses
  - Topology map in PDF (generate with Dia, Visio, ...)
Question 3: Access devices (Demo)

- Linux PCs (Loadgens):
  - SSH as root

- Cisco Router / Switches (Cisco IOS)
  - via console server
  - figure out states

- Juniper router (JunOS)
  - via console server
  - figure out states
Question 4: Labtool

- How to reserve devices
- How to dump configurations of reserved devices
  - Manually: Copy to text file
  - With Labtool:
- Display a dumped configuration
If you have questions

- Read complete worksheet (again)
  - We recommend that you read the complete worksheet before your timeslot starts.
- Check FAQ
- Check other sources
  - Web, Google, ...
- Finally, send e-mail to
  - mailto:praktikum@lists.net.t-labs.tu-berlin.de
  - NOT to individual tutors!
Teams / Time slots

- Forming teams:
  - 16 participants --> 8 teams

- Assigning time slots
  - Each group: 2 time slots à 3.5 hours
  - Extra time can be reserved
    - no more than 2 hours in a row

- Some constraints:
  - Same devices for both timeslots
  - Not 2 time slots for same group on consecutive days
  - ...