



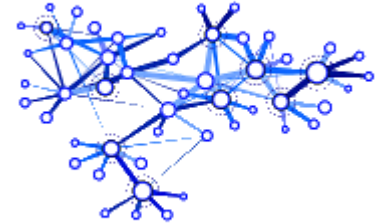
Service management in networks – WS 2018/19 - Profile

Start: Introductory event: Monday, October 1st, 2018.
Internship (practical work): starts on Monday, October 8th, 2018.

Participants: Master CS (H-BRS): Elective, Credits: 6.0 of 12.0
(→ students H-BRS: Need an additional 1 credit)
Master CSN (TH-Cologne): SPEZ-NE, 5, Credits: 5.0 of 10.0

Lecture parts

- Lecture / seminaristic part	German/English
- Internship, practical work:	German/English
- Project	German/English



Expected:

- You are interested in networked systems and **curious**,
- you are accustomed to **working independently** on a topic,
- you like to work in a **small team**,
- you don't shy away from **hard work**.

Previous knowledge: No special knowledge, but helpful is:

- Networks (switch, router, interface, IPv4 / IPv6, MAC address)
- Operation systems (Linux, Ubuntu, command line, bash, ...)

What you lack, you can or must add independently (you are a master student!).



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Content:

- **Basic ideas and philosophy of (micro) services**
- **Container technology as a key technology of networked systems**
 - Container basics
 - Docker
 - Kubernetes
- **Service management technical part → Tools:**
 - GIT
 - Vagrant
 - Ansible
 - Prometheus
- **DevOps as a link between development and operation of a service**
- **Service management organizational part**
 - IT Infrastructure Library (ITIL)



Service management in networks – teaching concept

- **Lecture / seminaristic part**
 - Every Monday (15:15 to 16:45 in room C055)
 - Traditional lecture given by me
 - Presentations given by students
- **Internship, practical work**
 - The internship is divided into a **group A** (13:30 to 15:00 in room C055) and a **group B** (17:00 to 18:30 in room C055).
 - **Working groups** of **two** to an (absolute) maximum of three **students**.
 - One practical task every week.
 - teaching method: flip teaching
 - You prepare everything at home and acquire the necessary knowledge on your own.
 - During the internship we present our solutions.
 - If problems have occurred, we help each other directly during the internship
- **Project**
 - A small/medium project for every working group.
 - If you want, you can choose your favorite topic. Otherwise, I'll make suggestions.



Service management in networks - Organization

- **Schedule + teaching material on my homepage**
<https://leischner.inf.h-brs.de/lehre/servmgmt/zeitplan.html>
- **Information about the network lab (netlab):** <http://netlab.inf.h-brs.de/>

Organizational aspects for the lab work:

- **Contact person (laboratory + content):**
Martina Kannen, Dipl.-Inform., Researcher Assistant, Room C180,
martina.kannen@h-brs.de
- **As a further room for your work (in particular for group work) you can use the lab C015 (registration with Mrs. Kannen)**
- **Continuous active participation in the internship as well as in the project is Prüfungsvorleistung (ULP)**



Very short introduction of the participants

- **Name**
- **At which university do you study? What are you studying? What are you studying? What are you studying?**
- **Do you have previous knowledge in the fields **container technology**, **network**, **internet**, **operation systems**, **programming**, **business management**?**
- **Do you have a special interest for this course?**

*Now:
Complete the participant list.
Short break.*

To be continued:

Concept for the practical part: Building up the home lab.



Building up the home laboratory by "infrastructure as code"

