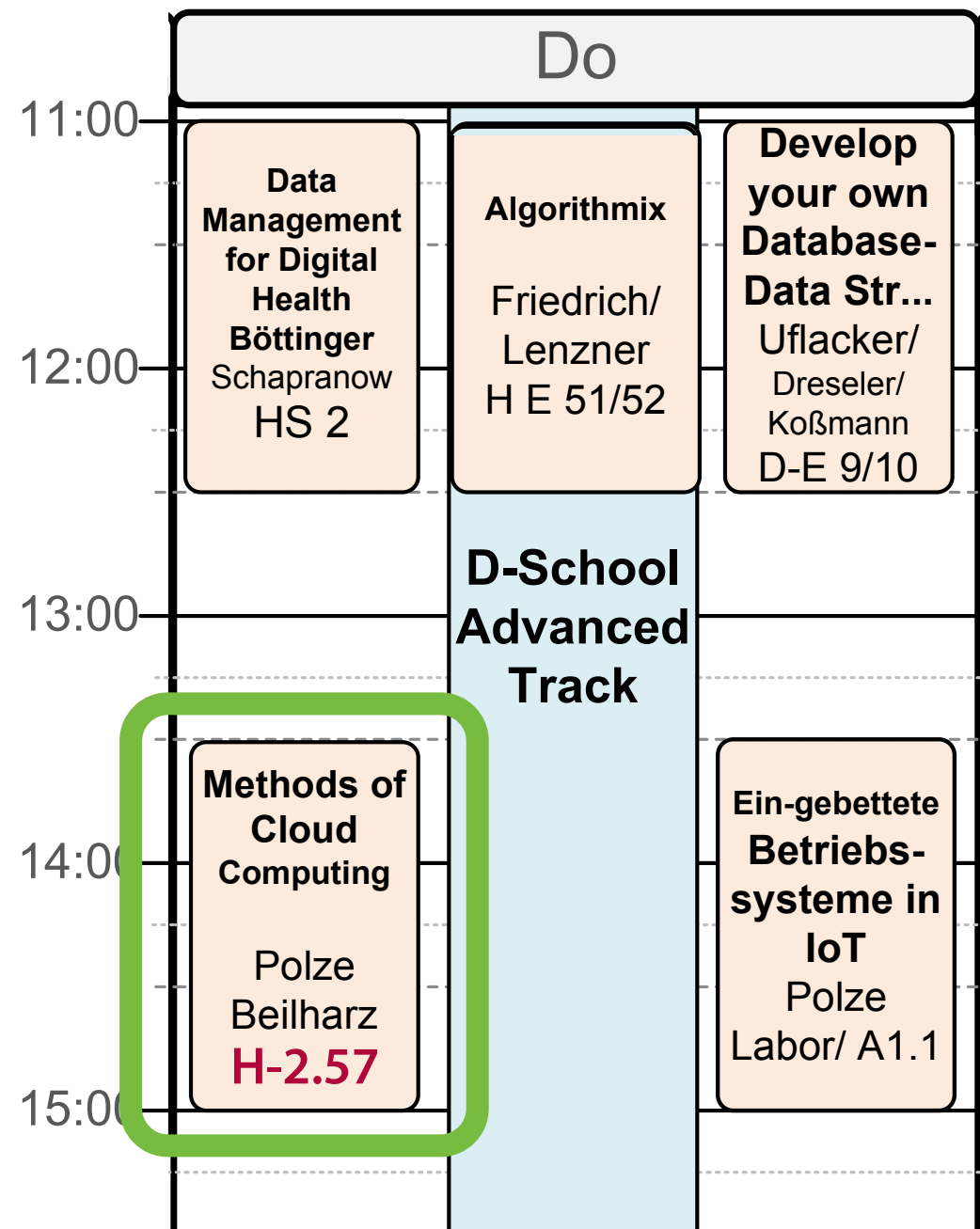


# Moc

Assignment 1

Sven Köhler  
Hasso Plattner Institute  
2018-11-15



15.11.  
06.12.  
10.01.  
31.01.

> 50 % of points per assignment  
for exam submission

# Organization

Each assignment is due 2-3 weeks later.

They involve long-running experiments and registration processes so

**START EARLY**

<https://www.dcl.hpi.uni-potsdam.de/teaching/mocc/#assignments>

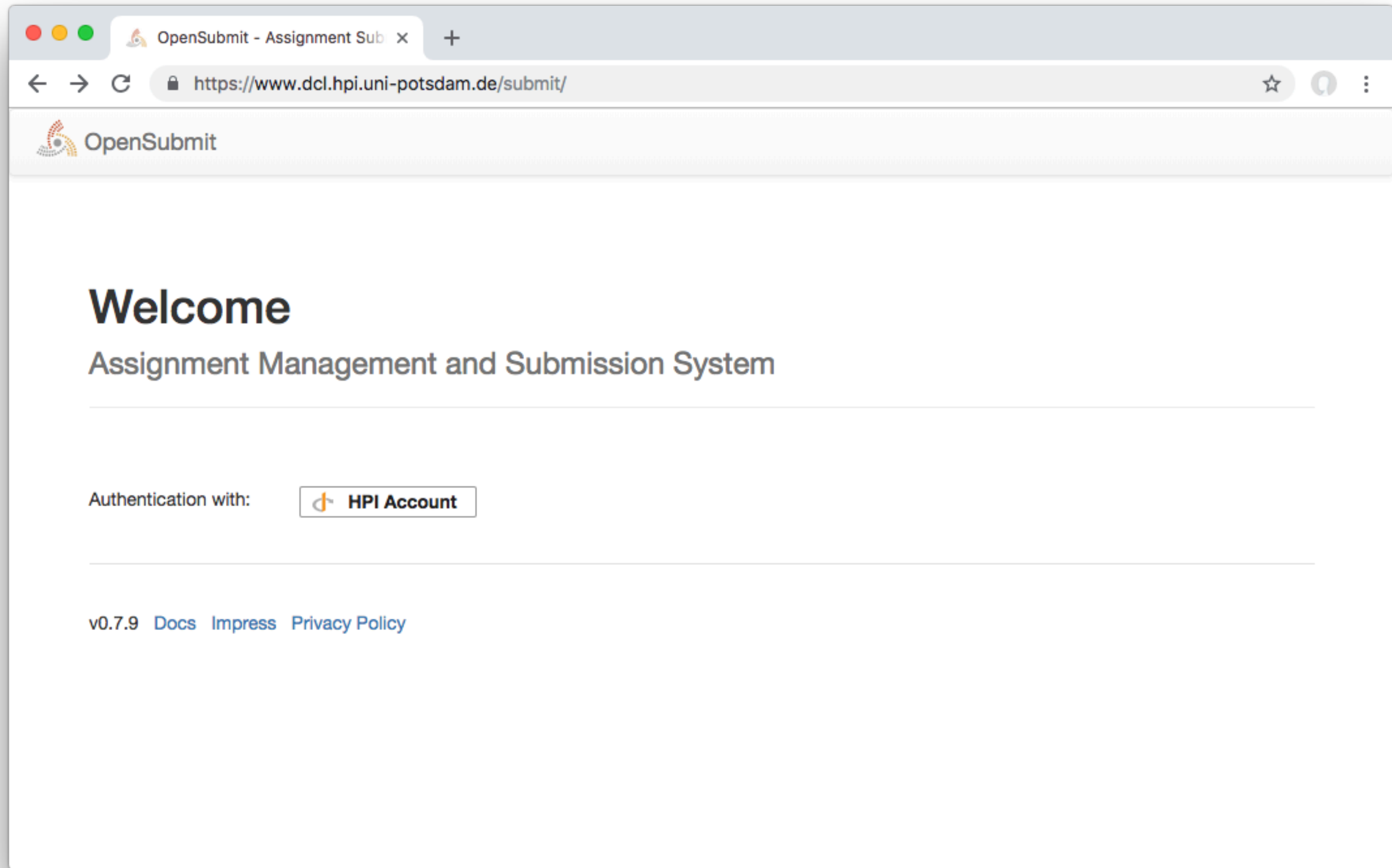
task 1:

# FORM GROUPS

of 2-3 students

level your experience, own at least one credit card.




# Submission System



<https://www.dcl.hpi.uni-potsdam.de/submit>

HPI Identity Provider - Login

https://openid.hpi.uni-potsdam.de/openidlogin

 HPI IDENTITY PROVIDER  BETA 

Login

Log in with your HPI account to get started.

User name:

Password:

---

Build number: 300

[How it Works](#) | [FAQ](#) | [Imprint](#) | [Data Privacy Statement](#) | [Contact](#)

© 2010-2018 Hasso-Plattner-Institut für Digital Engineering gGmbH

Log-In using your HPI-credentials.

OpenSubmit - Assignment Sub x +

https://www.dcl.hpi.uni-potsdam.de/submit/settings/

OpenSubmit

Dashboard Archive Courses Settings Logout

## User Settings

**Username**

svn.koehler

**First name**

Sven

**Last name**

Köhler

**Email**

svn.koehler@student.hpi.de

**Student ID (optional)**

**Study program**

Use **firstname.lastname** and your **HPI mail address**!



OpenSubmit - Assignment Sub x +

https://www.dcl.hpi.uni-potsdam.de/submit/courses/

OpenSubmit Dashboard Archive Courses Settings Logout

## Your Courses

Course	Owner	Open Assignments
<a href="#">POWER Block Course WS18/19</a>	Sven Köhler (sven.koehler@...)	0
<a href="#">Methods of Cloud Computing WS 18/19</a>	Sven Köhler (sven.koehler@...)	1
<a href="#">Betriebssysteme I WS18/19</a>	Andreas Grapentin (andreas.grapentin@...)	4

Courses: 1 selected ✓ Save Changes

Search

- ☐ Datenbanksysteme II WS2018/19
- ☐ Betriebssysteme I WS18/19
- ☐ POWER Block Course WS18/19
- ☒ **Methods of Cloud Computing WS 18/19**

v0.7.9 T

You can filter to only see MOCC assignments

OpenSubmit - Assignment Sub x +

https://www.dcl.hpi.uni-potsdam.de/submit/dashboard/

OpenSubmit

Dashboard Archive Courses Settings Logout

# Dashboard

Sven Köhler <sven.koehler@hpi.de>

## Open

Course	Assignment	Deadline	Group work	Graded	Action
Methods of Cloud Computing WS 18/19	Assignment 1: Benchmark EC2+GCE (Validation script)	Nov. 29, 2018, 11:59 p.m. (2 weeks, 1 day left)	Yes (3)	Yes	<a href="#">+ New Submission</a>

Create new submissions from dashboard

OpenSubmit - Assignment Sub x

https://www.dcl.hpi.uni-potsdam.de/submit/assignments/429/new/

**Authors**

Sven Köhler (sven.koehler@...) ▾

beilh

☐ Jossekin Beilharz (jossekin.beilharz@...)

**Attachment**

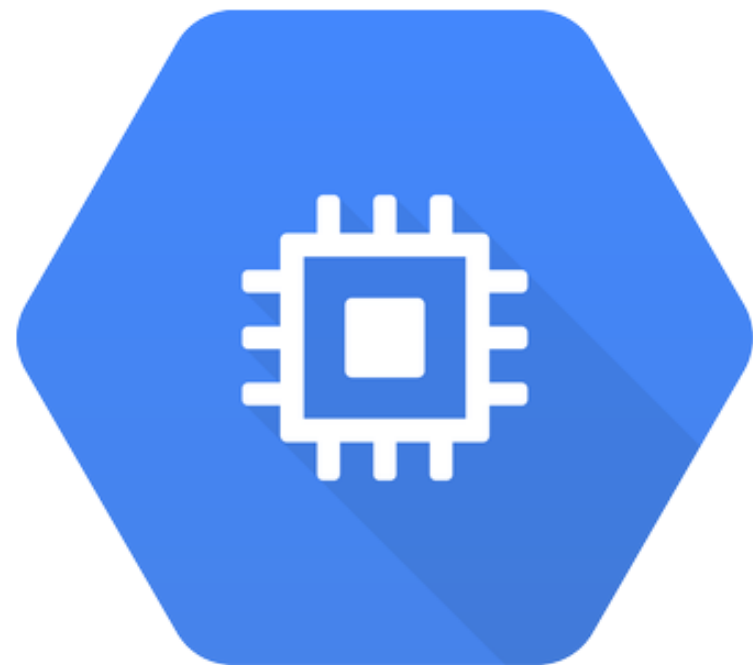
Choose file No file chosen

✓ Save

v0.7.9 [Teacher backend](#) [Docs](#) [Impress](#) [Privacy Policy](#)

Only **one person** submits.

Add your group members when uploading  
your solution.



**Google  
Compute  
Engine**

Assignment

In this assignment you will:

- Set up VMs in Amazon EC2 and Google CE
- Run 48 hours of benchmarks (CPU/memory/disks)
- Document your steps
- Evaluate your measurements

You can find help:

- On the assignment sheets
- In the linked online resources of Amazon and Google
- Stack Overflow/Google
- By asking your fellow students

**due: 29.11.2019**



**pay-as-you-go:** per cpu hour, submitted data, issued requests

## **Recommended: Amazon AWS Educate Starter**

- You receive a small number of credits to use EC2 virtual machines
- Limited feature set, but enough to solve assignments
- (only us-east-1 c region)

## **Alternative: full Amazon AWS Educate account**

- You receive 100\$ AWS credits for FULL AWS usage (more than enough to solve all assignments)
- Requires credit card!

It will not be charged if you follow our instructions. **You are responsible!**

Always **shut down** your VMs when you are done!

You can share an Amazon AWS account using IAM

<https://aws.amazon.com/iam/>

## Google Cloud: Education Grants

We provide **each person** with 50\$ coupons for education purpose. Should be enough for all assignments. But **do not cash in** all coupons in your group **at once**, in case you mess up.

Most newly created accounts receive an additional 300\$ credits. Google Cloud requires a credit card for ID purpose (not charged).

<https://www.dcl.hpi.uni-potsdam.de/teaching/mocc/assignments/gcp-coupon>



# SHUT DOWN YOUR VMS

(if you don't need them to prevent burning your credits)



Setup your VMs using CLI tools

aws  
gccloud

Document your entered commands,  
**mask out** keys/ids/etc.

Tips: script, awk, sed, cut, cron

HELLO, 911? I JUST TRIED TO TOAST  
SOME BREAD, AND THE TOASTER GREW  
AN ARM AND STABBED ME IN THE FACE!

DID YOU READ THE  
TOASTER'S MAN PAGE FIRST?

WELL, NO, BUT ALL  
I WANTED WAS—



Docs linked in the assignment

Pain story:

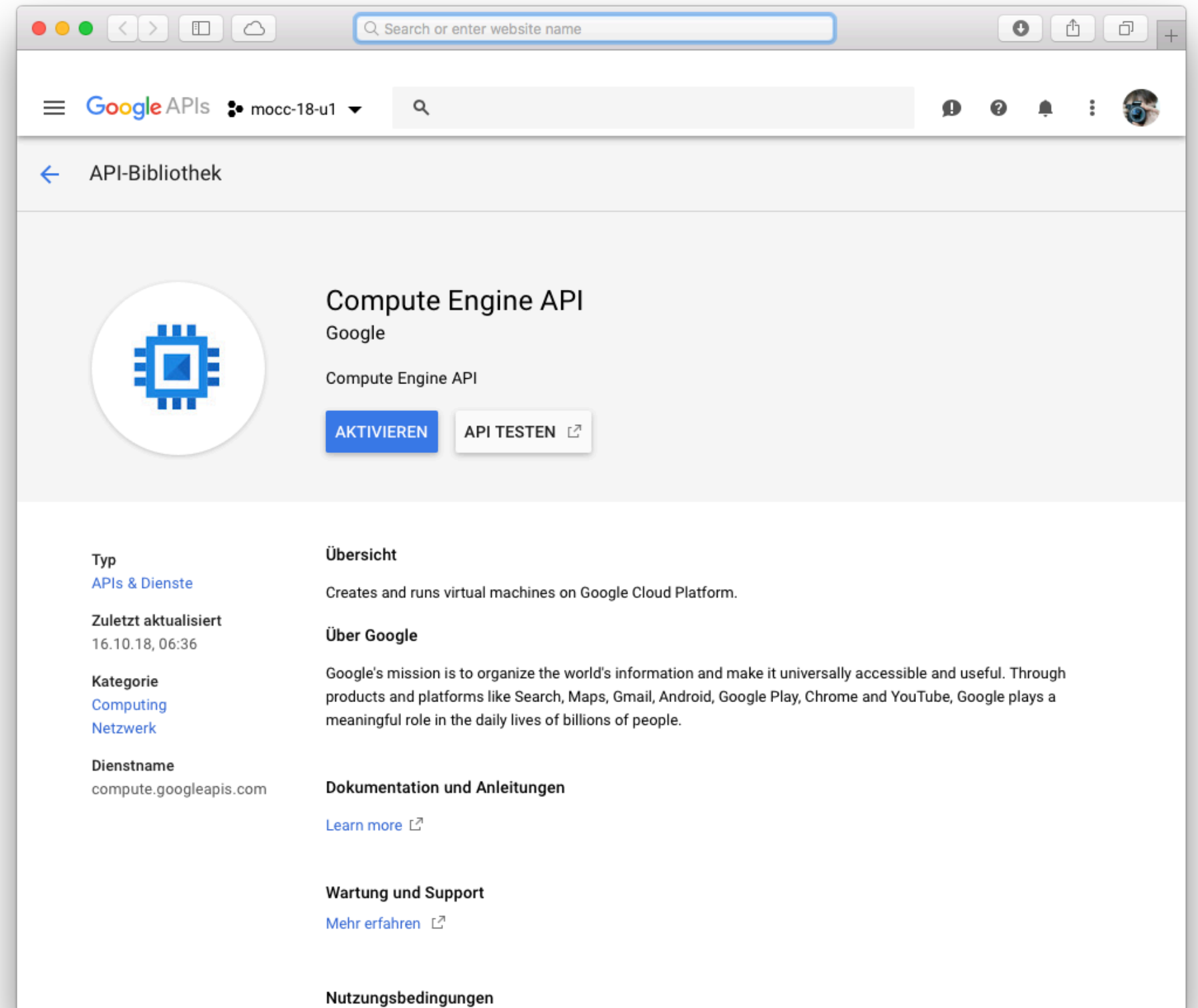
AWS Educate Starter  
is **us-east-1c** only.

## AWS Regions



Pain story:

You need to **explicitly activate** Google Compute Engine in the web interface first.





open questions

# SHUT DOWN YOUR VMS

