

Tackling global distribution issues for locally hosted learning platforms

Background

HPI is developer and provider of several e-learning platforms such as tele-TASK, openHPI, mooc.house, openSAP, and OpenWHO. The focus is on video-based learning targeting thousands of learners. While addressing a global audience all servers are located at HPI.

Problem

Modern web-based learning applications are consuming a large amount of bandwidth and due to the high amount of interaction need a frequent client-server communication. Also in some target region network quality may be low and the cost of network traffic may be high. Therefore, it's the platform providers duty to respect this shortcoming to provide a good UX while keeping an eye on costs and maintainability.

Goal

Tasks:

- Identifying shortcomings of the current setup
- Sketch an architectural approach to tackle this issue
- Build a prototype as part of our MOOC platform
- Provide a framework for measuring and monitoring
- Evaluate the solution approach

Requirements

Good knowledge of ruby, microservices, image processing, web architectures and cloud services is required. Previous knowledge of the openHPI platform and its web UI is recommended. Feel free to contact us if you are unsure.

Supervisors

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