

## Cost-Saving Tools for App Engineers

The Service Tooling research initiative of the Service Prototyping Lab explores novel tools which assist in the launch of new cloud applications and services. The initiative identifies tools and platform services which are straightforward to deploy, easy to use and generic enough to be re-usable in many service scenarios. We cover the entire app lifecycle.

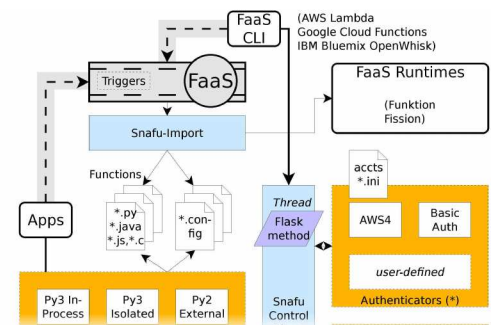
### Objectives of the Initiative

- tools for Serverless / Function-as-a-Service: code decomposition, testing, local execution and migration of functions
- cloud ecosystem tools, e.g. application-level incident management
- stealth computing and other advanced computing paradigms - support Swiss SMEs with leading edge tools and services for cloud applications



### Recent Results

- Snafu: execute functions from AWS Lambda, IBM Bluemix, Google Cloud Functions, Azure Functions, ...
- Lambada: migrate Python apps into AWS Lambda
- Incinux: self-learning application behaviour analysis based on Icinga checks



### Showcase: Podilizer/Termite

- split legacy Java apps into serverless units with Podilizer
- use annotations to control the deployment with Termite
- automate the engineering of composite microservice apps
- open source Java tools with clear business benefits





## Scientific research and development for better cloud applications

*Presenting the Service Prototyping Lab and  
its research initiatives*

### Our Offer

Microservices, APIs, containers, lambda functions, metrics and things: Application developers are increasingly embracing cloud technologies.

Before betting everything on unsuitable stacks, software development companies can now innovate with SPLab to prototype their cloud applications and see how they would work.

Our research staff has the experience, the tools and the testbeds to quickly reach a prototypical solution for any hard problem.

### Our Expertise

Experimental comparison of stacks and frameworks. Provocation and emulation of live conditions, e.g. popularity spikes, failures and malicious interruptions. Decomposition of existing applications. Cloud-aware designs for new applications. Connectivity between services and devices. Multi-cloud applications. Continuous development and deployment of bundled microservices.

The Service Prototyping Lab (SPLab) at Zurich University of Applied Sciences shares its website with the Cloud Computing Lab (ICCLab) at <http://blog.zhaw.ch/icclab>  
Contact us for project proposals at [josef.spillner@zhaw.ch](mailto:josef.spillner@zhaw.ch)

CLOUD applications are supposedly distributed, service-oriented, resilient, scalable and micro-billable for multiple tenants. In practice, many applications are just moved to the cloud without considering these expectations. Subsequently, they do not gain momentum, popularity and eventually revenue.

AT Zurich University of Applied Sciences, the Service Prototyping Lab was founded in 2015 to advance the state of cloud applications and services. The lab's three research initiatives combine investigation of software and systems, service engineering and cloud computing knowledge to yield better software applications and service ecosystems.

- Service Tooling
- Cloud-Native Applications
- Cloud Accounting and Billing
- in conjunction with the ICCLab: Cloud Application Management, Cloud Infrastructure and Cloud Robotics

WITH an applied sciences focus, SPLab transfers knowledge, open source tools, testbeds and cloudification methodologies into Swiss companies. Innovate with us and benefit from federal funds which we bring into projects in addition to our well-qualified research staff.

FOR the next wave of cloud applications and services, SPLab is offering to conduct joint research, innovation and development with SMEs from all over Switzerland and beyond. Benefit from our internal cloud infrastructure and our tools to connect to public cloud providers. Do not hesitate to contact us for a discussion of your cloud ambitions.

Contact for the  
**Service Tooling**  
research initiative:

**Dr. habil. Josef Spillner**  
[josef.spillner@zhaw.ch](mailto:josef.spillner@zhaw.ch)