

Spring Boot meets HashiStack

2-LINER Description: Build a robust Spring Boot application platform using the HashiCorp toolsuite according to the Infrastructure-as-code principles (including monitoring run-time metrics)

[Description of the assignment]

- Spring Boot at this point is one of the most popular frameworks to develop Java microservices
- The Spring Boot framework also provides integrations with many tools of HashiCorp, that enable builds and deployment of so-called Cloud-Native applications.
- We'd like to combine Spring Boot and the HashiCorp toolsuite by building a platform on which developers can start up Spring Boot applications easily with the goal of enabling operators to easily gain insights on the health of these applications.

[Goals]

- Define and implement a Production-readiness requirement for a Spring Boot applications
 - Learn the principles of Infrastructure-as-code with tools such as Terraform, Ansible, Cheft,
 - Install these tools in a so-called HashiStack (Consul-Nomad-Vault) on one or more cloud providers (e.g. Google Cloud Platform, Amazon Web Services, Microsoft Azure, ...)
 - Research and install a central logging system (e.g. Elasticsearch-Logstash-Kibana, ...)
 - Research and install a central monitoring system (e.g. Prometheus, InfluxDB, Grafana, ...)
 - Research and install a distributed tracing system (e.g. Zipkin)
 - Demonstrate your setup with a Spring Boot microservice architecture

[What will you gain?]

- You'll learn to work with a framework such as Spring Boot
- You'll experience what a production environment for a Spring Boot application entails
- You'll get a taste of one or more cloud providers
- You'll be an expert at Infrastructure-as-a-code

[What do you need?]

- Basic Linux knowledge
- Knowledge of Java and basic Spring Boot is a plus

[Location of the assignment]

- Veldkant 33B, 2550 Kontich

Your mentor:

- Johan Siebens – Business unit manager OnTheSpot

[Technologies you'll be using]

- HashiCorp Consul
- HashiCorp Nomad
- HashiCorp Vault
- HashiCorp Terraform
- Ansible, Chef, Puppet
- ELK, ...
- Prometheus, InfluxDB, Grafana, ...
- Zipkin, OpenTracing, ...